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NEWS COVERAGE PERIOD JANUARY 25TH TO JANUARY 31ST, 2016

S.E.C. IS CRITICIZED FOR LAX ENFORCEMENT OF CLIMATE RISK DISCLOSURE

DAVID GELLES

International New York Times, JAN. 25, 2016

As recently as 2011, shares in Peabody Energy, the world's biggest private sector coal company, traded at the equivalent of \$1,000. Today, they hover around \$4 each. Over that time, investors who held the stock lost millions.

Peabody, like other coal companies, has been hammered as cheap natural gas erodes the demand for coal. But concerns about climate change are also an issue for the company as customers and investors turn away from fossil fuels.

Peabody saw this coming. Even as the company privately projected that coal demand would slump and prices would fall, it withheld this information from investors. Instead, Peabody said in filings with the Securities and Exchange Commission that it was not possible to know how changing attitudes toward climate change would affect its business.

Peabody's double talk was revealed as part of a two-year investigation by the New York attorney general. In a settlement in November, Peabody agreed that it would disclose more about climate change risks in its regular filings with the S.E.C.

In theory, however, Peabody should have been making such disclosures all along.

In 2010, the S.E.C. told companies how it expected them to address the risks posed by climate change in their regular securities filings.

Wall Street's top regulator was not issuing a new rule. Rather, this was "interpretive guidance" on existing disclosure requirements. The S.E.C. chairwoman at the time, Mary Schapiro, noted then that the S.E.C. was "not opining on whether the world's climate is changing, at what pace it might be changing, or due to what causes," but asking companies to take stock of the risks to their businesses. Among the factors companies should address, the S.E.C. said, were legislation and regulation related to climate change, international treaties on the issue, and the physical impacts of climate change, like flood or drought.

Initially, the S.E.C. appeared to put muscle behind its guidance. In the two years after the interpretive guidance, the S.E.C. issued 49 comment letters to companies addressing the adequacy of their climate change disclosures. But it issued only three such letters in 2012 and none in 2013.

To advocates of more robust climate change disclosure, the impression was that the S.E.C. had taken its eye off the ball.

"They did back it up in the first few years," said Jim Coburn, senior manager of investor programs at Ceres, a nonprofit organization that advocates sustainability in business and that has lobbied the S.E.C. on the disclosure. "But the current chair hasn't shown much interest in this issue."

Some shareholders and lawmakers are trying to change that. Last April, an alliance of 62 institutional investors wrote a letter to the S.E.C. calling for greater scrutiny of climate-related disclosures from energy companies in particular.

"We are concerned that oil and gas companies are not disclosing sufficient information about several converging factors that, together, will profoundly affect the economics of the industry," wrote the investors, which included

Calpers, the California Public Employees' Retirement System; the Connecticut state investment fund; and Calvert Investments.

In a coordinated letter sent to the S.E.C. on the same day, the New York City and New York State comptrollers called for similar accountability. Then in October, a group of Democratic lawmakers added their voices to the debate. In a letter to the current S.E.C. chairwoman, Mary Jo White, 35 members of Congress asked for an update on the interpretive guidance issued in 2010, using the occasion to suggest that the S.E.C. had been asleep at the wheel.

The S.E.C. has been underreacting in the extreme," Senator Brian Schatz, a Democrat from Hawaii and one of the lead authors of the letter, said in an interview.

At the same time, officials in New York and California are investigating whether Exxon understood the risks posed by climate change decades ago, but withheld that information from investors. Exxon denies the allegations.

The investors, comptrollers and lawmakers think that while companies should already be addressing climate change risk as part of their regular disclosures, only a minority are telling shareholders how warming oceans and extreme weather will affect their business.

"Our markets work best when investors are provided with the necessary disclosures, and the S.E.C. needs to take action by enforcing the disclosure rules on the books," Senator Jack Reed, a senior member of the Senate banking committee, said in an emailed statement.

The S.E.C. declined to comment for this article. But in a response to Mr. Reed reviewed by The New York Times, Ms. White said her staff members examined the adequacy of climate change disclosures as part of its routine analysis of company filings, and were looking for instances where energy companies, for example, might need to disclose more. According to people briefed on the matter, the S.E.C. has made staff members aware of the Peabody settlement, encouraging them to be more vigilant in reviewing climate change disclosure.

In her response to Senator Reed, Ms. White said that since the S.E.C. issued its interpretive guidance, "incrementally" more companies were making disclosures related to climate change. Yet many of these are vague generalizations that give investors little to work with.

Chevron, for example, wrote that "incentives to conserve or use alternative energy sources" might reduce demand for its products. Exxon noted that new laws might "reduce demand for hydrocarbons." Neither company made clear to investors what the financial costs might be.

Evidence that climate change issues are already affecting big companies continues to mount. In December, on the first full day of trading after negotiators in Paris agreed to limit greenhouse gas emissions, Peabody shares dropped another 13 percent. This month, President Obama announced new limits on coal mining on federal lands. The next day, coal stocks, including Peabody, plunged once more.

The S.E.C. is now reviewing what it requires companies to disclose, and it could introduce new rules this year. As part of the public comments process, some groups have suggested that the S.E.C. specify that companies address issues such as climate-related legal proceedings, or so-called stranded assets — oil and gas reserves that may never be used. But for now, the S.E.C. has no plans to require companies to be more forthcoming than they are now about climate change.

At a time of upside-down weather patterns, volatile energy markets and mounting climate-related regulatory action, that is simply not enough for many lawmakers and investors, who worry that companies' reticence is costing shareholders.

"We're not asking for anybody to predict the weather or to become climate scientists," Senator Schatz said. "We're simply asking that the S.E.C. acknowledge that there is real risk for companies, and that it ought to be disclosed."

http://www.nytimes.com/2016/01/24/business/energy-environment/sec-is-criticized-for-lax-enforcement-of-climate-risk-disclosure.html?_r=0

COLD SNAP HITS EAST ASIA; 65 KILLED

Dawn, January 26th, 2016

TAIPEI: Unusually cold weather in eastern Asia has been blamed for more than 65 deaths, disrupted transportation and brought the first snow to a subtropical city in southern China in almost 50 years.

Temperatures in Taiwan's capital of Taipei plunged to a 16-year low of 4 degrees Celsius, killing 57 mostly elderly people, according to government officials.

The semi-official Focus Taiwan news website reported that 85 people had died because of the cold.

Most homes in subtropical Taiwan lack central heating, and the cold caused heart trouble and breathing problems for many of the victims, a city official said. Normally, temperatures in Taipei hover around 16 degrees C in January, according to Taiwan's Central Weather Bureau.

The cold snap was blamed in the deaths of 40 people in the capital, Taipei, and 17 in neighbouring New Taipei City. The cold front also left 9 centimetres of snow on Taipei's highest peak. Heavy snow in western and central Japan left five people dead over the weekend and possibly a sixth on Monday.

Kyodo News service said the victims included a woman who fell from a roof while removing snow, a man in a weather-related traffic accident, another man found under a snowplow and a couple that fell into an irrigation channel, apparently while removing snow.

An 88-year-old woman in western Japan's Tottori prefecture died after a landslide hit her house before dawn on Monday, Kyodo and other media reported.

The heavy snow stranded motorists, delayed bullet train service and caused flight cancellations. Most parts of mainland China experienced their coldest weather in decades over the weekend. The southern city of Guangzhou, which has a humid subtropical climate, saw snow for the first time since 1967 on Sunday.

The cold led to at least four deaths — strawberry farmers who died of carbon monoxide poisoning when they turned up the heat in a greenhouse, the Xinhua News Agency reported.

The cold spell coincided with the beginning of the 40-day travel rush for the Lunar New Year, which is on Feb. 8 this year, disrupting cars, flights and trains. More than 11,000 passengers were stranded at Kunming airport in southern Yunnan province.

Temperatures fell 8 to 16 degrees Celsius from Thursday to Sunday in parts of north China, and temperatures in central and eastern China were 6 to 8 degrees lower than average, Xinhua said.

The National Meteorological Bureau forecast that temperatures in southern China would drop another 3-8 degrees on Monday.

Temperatures in the capital, Seoul, fell to minus 18 degrees Celsius on Sunday, the lowest since 2001. On Saturday, Jeju Island received 12 centimetres of snow, the heaviest since 1984, and its airport was closed from Saturday until Monday.

<http://www.dawn.com/news/1235381>

'PAKISTAN RANKS EIGHT AMONG COUNTRIES AFFECTED BY CLIMATE CHANGE'

The Express Tribune, January 27th, 2016.

KARACHI: Pakistan is the eighth country most vulnerable to climate change in the world. The coastal areas are the most emergent threats and hundreds of kilometres area is susceptible to sea intrusion.

This was revealed by Karachi University institute of environmental studies registrar and professor Dr Moazzam Ali Khan during a climate conference on Monday. The event was organised by Youth Parliament.

“Rainfall on the coastal belt has decreased by 20%,” said Khan, adding that exotic species on the coast are also disappearing.

Addressing the young audience, journalist Afia Salam questioned them about their aspirations for future. While many expressed their desires to work in fields such as media, law and business, few to none hands were raised when agriculture and climate was brought into question.

Climate and environment issues are interlinked with all professions, claimed Salam. “We don’t have lawyers on water disputes in the country,” she said. “People here don’t understand it. Instead, we have to hire international lawyers when the local talent cannot fill up such roles.”

Reiterating Moazzam’s point, she said that in the last four years Pakistan’s vulnerability to climate change has increased along with the shrinking of Indus Delta.

Environmental degradation does not only occur due to climate change, said Dr Aamir Alamgir, PhD on climate change. “A lot of the degradation can be avoided if actions are taken on time,” he said.

Balochistan Assembly speaker Raheela Hameed Durrani also questioned the government’s inability to prevent deterioration of the environment. A think tank should be formed that will focus on the climatic challenges faced by all four provinces of the country, she suggested.

“I welcome the youth to step out, we will provide you the opportunity to move forward with us,” she said.

<http://tribune.com.pk/story/1034730/save-our-environment-pakistan-ranks-eight-among-countries-affected-by-climate-change/>

QUAID-E-AZAM SOLAR PARK TO GET 900MW UPGRADE

The Express Tribune, January 30th, 2016.

ISLAMABAD: The government has planned to generate an additional 900 megawatts of electricity from the Quaid-e-Azam Solar Park, which is already producing 100MW of renewable energy.

Of the 900MW, the solar park’s phase-II would generate 300MW and its phase-III would produce 600MW, officials told APP.

In a landmark decision, the National Electric Power Regulatory Authority (Nepra) has already approved upfront tariff for delivery of solar electricity to the purchaser.

Solar energy is clean, environmentally friendly and renewable and also provides carbon credits. The overall cost of such projects is very much competitive.

According to the officials, though per-megawatt cost of solar power is higher at the beginning of a project, a subsequent decline in the cost makes it financially viable in the medium term. Its installation is easy and quick and it could play an important role in addressing the energy crisis.

They said the low operation and maintenance cost of the solar power project was an added advantage, which would mean less reliance on import of fossil fuels and no worry about depletion of domestic natural resources like gas.

They suggested giving each house in far-off villages a solar panel, which would be cost effective and save investment in transmission lines, as connecting such remote areas to the national power grid was very costly.

Many countries such as the US, Germany, Australia, Brazil, the UK, Japan, India, China and Thailand are now generating electricity in bulk through the solar system.

Pakistan receives one of the best solar irradiation in the world and has the potential to generate over 2.324 million megawatts per annum through solar thermal and photovoltaic systems but the potential is yet to be tapped.

The net metering regulations, recently introduced by the federal government, have also paved the way for establishing a flexible regulatory regime where a consumer can install solar panels and sell excessive electricity to a distribution company by following a short, simple and easy process.

<http://tribune.com.pk/story/1036656/a-shinier-future-quaid-e-azam-solar-park-to-get-900mw-upgrade/>

NEWS COVERAGE PERIOD JANUARY 18TH TO JANUARY 24TH, 2016

LAST YEAR WAS HOTTEST ON RECORD GLOBALLY, SAY US SCIENTISTS

Dawn, January 21st, 2016

WASHINGTON: Last year's global average temperature was the hottest ever by the widest margin on record, two US government agencies said on Wednesday, adding to pressure for deep greenhouse gas emissions cuts scientists say are needed to arrest warming that is disrupting the global climate.

Data from US space agency NASA and the National Oceanic and Atmospheric Administration showed that in 2015, the average temperature across global land and ocean surfaces was 1.62 degrees Fahrenheit above the 20th century average, surpassing 2014's previous record by 0.29 F.

This was the fourth time a global temperature record has been set this century, the agencies said in a summary of their annual report.

"2015 was remarkable even in the context of the larger, long-term warming trend," said Gavin Schmidt, director of NASA's Goddard Institute for Space Studies.

The sharp increase in 2015 was driven in part by El Nio, a natural weather cycle in the Pacific that warms the ocean surface every two to seven years. But scientists say human activities — notably burning fossil fuels — were the main driver behind the rise.

"We would not have seen the record warming without the long-term trend," Schmidt said.

The latest El Nio started in late 2015 and will last until spring 2016. It is among the strongest ever recorded but Schmidt and others say the weather phenomenon played just a supporting role in the earth's temperature rise.

<http://www.dawn.com/news/1234276>

2015 WAS HOTTEST YEAR IN HISTORICAL RECORD, SCIENTISTS SAY

International New York Times, JAN. 20, 2016

JUSTIN GILLIS

Scientists reported Wednesday that 2015 was the hottest year in the historical record by far, breaking a mark set only the year before — a burst of heat that has continued into the new year and is roiling weather patterns all over the world.

In the contiguous United States, the year was the second-warmest on record, punctuated by a December that was both the hottest and the wettest since record-keeping began. One result has been a wave of unusual winter floods coursing down the Mississippi River watershed.

Scientists started predicting a global temperature record months ago, in part because an El Niño weather pattern, one of the largest in a century, is releasing an immense amount of heat from the Pacific Ocean into the atmosphere. But the bulk of the record-setting heat, they say, is a consequence of the long-term planetary warming caused by human emissions of greenhouse gases.

“The whole system is warming up, relentlessly,” said Gerald A. Meehl, a scientist at the National Center for Atmospheric Research in Boulder, Colo.

It will take a few more years to know for certain, but the back-to-back records of 2014 and 2015 may have put the world back onto a trajectory of rapid global warming, after a period of relatively slow warming dating to the last powerful El Niño, in 1998.

Politicians attempting to claim that greenhouse gases are not a problem seized on that slow period to argue that “global warming stopped in 1998,” with these claims and similar statements reappearing recently on the Republican presidential campaign trail.

Statistical analysis suggested all along that the claims were false, and that the slowdown was, at most, a minor blip in an inexorable trend, perhaps caused by a temporary increase in the absorption of heat by the Pacific Ocean.

“Is there any evidence for a pause in the long-term global warming rate?” said Gavin A. Schmidt, head of NASA’s climate-science unit, the Goddard Institute for Space Studies, in Manhattan. “The answer is no. That was true before last year, but it’s much more obvious now.”

Michael E. Mann, a climate scientist at Pennsylvania State University, calculated that if the global climate were not warming, the odds of setting two back-to-back record years would be remote, about one chance in every 1,500 pairs of years. Given the reality that the planet is warming, the odds become far higher, about one chance in 10, according to Dr. Mann’s calculations.

Two American government agencies — NASA, the National Aeronautics and Space Administration, and NOAA, the National Oceanic and Atmospheric Administration — compile separate analyses of the global temperature, based upon thousands of measurements from weather stations, ships and ocean buoys scattered around the world. Meteorological agencies in Britain and Japan do so, as well. The agencies follow slightly different methods to cope with problems in the data, but obtain similar results.

The American agencies released figures on Wednesday showing that 2015 was the warmest year in a global record that began, in their data, in 1880. British scientists released figures showing 2015 as the warmest in a record dating to 1850. The Japan Meteorological Agency had already released preliminary results showing 2015 as the warmest year in a record beginning in 1891.

On Jan. 7, NOAA reported that 2015 was the second-warmest year on record, after 2012, for the lower 48 United States. That land mass covers less than 2 percent of the surface of the Earth, so it is not unusual to have a slight divergence between United States temperatures and those of the planet as a whole.

The end of the year was especially remarkable in the United States, with virtually every state east of the Mississippi River having a record warm December, often accompanied by heavy rains.

A warmer atmosphere can hold more water vapor, and an intensification of rainstorms was one of the fundamental predictions made by climate scientists decades ago as a consequence of human emissions. That prediction has come to pass, with the rains growing more intense across every region of the United States, but especially so in the East.

Should have been the last 2 years of our area in CA. COLD and for many, many months. And the heating bills are getting outrageous as well...

Did I miss something. The historical record according to the graphics started in 1880. 136 years ago is not very long ago. Sounds like...

It's easy to deny Global warming when you are sitting at your computer in your air conditioned basement watching a steady stream of Fox News...

term global warming is generally taken to refer to the temperature trend at the surface of the planet, and those are the figures reported by the agencies on Wednesday.

Some additional measurements, of shorter duration, are available for the ocean depths and the atmosphere above the surface, both generally showing an inexorable long-term warming trend.

Most satellite measurements of the lower and middle layers of the atmosphere show 2015 to have been the third- or fourth-warmest year in a 37-year record, and scientists said it was slightly surprising that the huge El Niño had not produced a greater warming there. They added that this could yet happen in 2016.

When temperatures are averaged at a global scale, the differences between years are usually measured in fractions of a degree. In the NOAA data set, 2015 was 0.29 degrees Fahrenheit warmer than 2014, the largest jump ever over a previous record. NASA calculated a slightly smaller figure, but still described it as an unusual one-year increase.

The intense warmth of 2015 contributed to a heat wave in India last spring that turns out to have been the second-worst in that country's history, killing an estimated 2,500 people. The long-term global warming trend has exacted a severe toll from extreme heat, with eight of the world's 10 deadliest heat waves occurring since 1997.

Only rough estimates of heat deaths are available, but according to figures from the Center for Research on the Epidemiology of Disasters, in Brussels, the toll over the past two decades is approaching 140,000 people, with most of those deaths occurring during a European heat wave in 2003 and a Russian heat wave in 2010.

The strong El Niño has continued into 2016, raising the possibility that this year will, yet again, set a global temperature record. The El Niño pattern is also disturbing the circulation of the atmosphere, contributing to worldwide weather extremes that include a drought in southern Africa, threatening the food supply of millions.

http://www.nytimes.com/2016/01/21/science/earth/2015-hottest-year-global-warming.html?_r=0

SNOWSTORM BATTERS EASTERN US, TURNS CITIES INTO GHOST TOWNS

Dawn, January 24th, 2016

ANWAR IQBAL

WASHINGTON: "It has life and death implications, and people should treat it that way," warned Washington Mayor Muriel Bowser as a massive winter storm continued to clobber eastern United States on Saturday.

The storm, called snowzilla by the US media, started on Friday afternoon and will continue till Sunday morning, pounding cities from Washington to New York with snow and gale.

Up to 85 million people are in the storm's path braving up to 14 inches of snow already piled outside their doors and up to 77 mph of winds in coastal area, stirring 20 feet high tides.

But so far authorities have avoided any major disaster as weather pundits predicted the storm on time, giving them a week to prepare.

Ten states — Georgia, Tennessee, Pennsylvania, Maryland, Kentucky, North Carolina, New Jersey, New York, Virginia and West Virginia — declared states of emergency and called in troops to deal with the storm.

The city of Washington was among the first to declare a “snow emergency,” as federal government, private businesses, restaurants, bars, cinemas, museums and education institutions shuttered down.

Despite the precautions, more than a dozen deaths were reported nationwide and more than 200,000 people were forced to deal with subzero temperatures without power.

So far more than 9000 flights have cancelled, although airports are operating.

On the roads, police had to deal with more than a thousand crashes and 800 disabled vehicles in Virginia alone.

But authorities reminded people that the storm was not over yet. “We haven't turned the corner at all,” Baltimore emergency management director Robert Maloney told CNN.

“I wouldn't say we're even halfway there yet.”

Mayor Bowser said Washington had received 13 inches of snow by 10 a.m. Saturday, with another 10 inches possible by Sunday morning. But the pile was higher in some suburbs.

“People should hunker down, shelter in place and stay off the roads,” she said.

New York Governor Andrew Cuomo told reporters they expected 16 to 24 inches of snow in parts of their state.

The Washington Post reported that this storm had the potential to exceed the Knickerbocker Snowstorm of 1922, which dumped 28 inches of snow on Washington.

As of 10am, Reagan National Airport, Washington's official observatory, located in Virginia, had received 14.8 inches, which already places it number 9 in the rankings.

The US National Weather Service issued another warning on Saturday, reminding people that blizzard alert remains in effect until 6am on Sunday.

It predicted snow accumulations: 18 to 24 inches eastern suburbs of Washington and 24 to 28 inches on the west.

“Heavy and blowing snow will continue to cause dangerous conditions and will be a threat to life and property. Visibility will be reduced to near zero at times in whiteout conditions through Saturday night. Temperatures will be in the mid 20s F. Wind chills around 10 degrees F,” the National Weather Service warned.

<http://www.dawn.com/news/1234987>

NEWS COVERAGE PERIOD JANUARY 11TH TO JANUARY 17TH, 2016

CLIMATE CHANGE: ‘AVERAGE GLOBAL TEMPERATURE HAS INCREASED BY 0.70C’

The Express Tribune, January 17th, 2016.

KARACHI: The average temperature of the world has increased by 0.7 degree Celsius since the beginning of the 20th century and it may rise by 1.6 to 4.3 degrees by the end of the 21st century, said Karachi University (KU) vice-chancellor (VC) Professor Dr Muhammad Qaiser.

Dr Qaiser was addressing the local and international delegates gathered at the Sheikh Zayed Islamic Centre at KU for the inaugural ceremony of the four-day 14th national and 5th international conference of the Pakistan Botanical Society (PBS), which is hosting botanists from more than 10 countries. The theme of the conference is, 'Climate Change and Phytodiversity: Challenges and Ppportunities'.

Explaining the topic, Dr Qaiser, who is also a president of PBS, explained that this year's topic is very pertinent as the climate is changing due to unlimited burning of fossil fuel and greenhouse emissions, which results in global warming. "A changing climate means changing of habitat, threatening vulnerable species consequently, which leads to their extinction," he added. He said that humans and biodiversity face new challenges for survival due to climatic changes in the world.

"We are facing more increased heatwaves, intense drought, storms, floods, melting of glaciers and warming of oceans," he said, citing some recent examples. All these changes are harming animals, plants and wreak havoc on livelihoods and communities due to decrease in agricultural yield, diseases and decrease in water supply. "There will be acute shortage of fresh water in the years to come," he predicted, according to some studies.

Addressing the young delegates of the conference who were mostly students of botany, Dr Qaiser said that Pakistan is among the 12 countries that are directly affected by climate change issues. "Pakistan has witnessed devastating floods and unprecedented heatwave last year, which resulted in the deaths of more than 1,500 people," he said.

Pakistan is a land of variation and contrast and no other country in the world of its size has this much variation in topography, he said. "We have some of the highest peaks of the world and our altitude varies from zero to 8,611 metres," said Dr Qaiser. "At present, 6,500 vascular plant species are recorded from Pakistan and about seven to eight per cent of our flora is endemic." He explained why a joint effort is needed to save these natural treasures for our future generations. "Our survival depends on biodiversity and balanced ecosystems," he added.

Encouraging the students to work in the field of botany, Dr Qaiser said, "Such conferences provide an excellent platform for exchanging ideas, sharing knowledge with each other. Particularly, our young scientists will be greatly benefited by the experience and knowledge of their seniors and the scientists coming from abroad."

Unesco senior programme officer Dr Miguel Clusener-Godt was thankful for the hospitality by the Pakistani people as it was his first visit to the country. "Pakistan is one of the founding members of Unesco and one of the most active members to date," he said. "There are 651 biosphere reserves in 120 countries." In his PowerPoint presentation, he emphasised on the immediate actions that needed to be taken, considering the environmental issues like floods and increasing temperatures.

National and international scientists were also present on the occasion, including former KU VC and senior botanist Professor Dr Syed Irtifaq Ali, Pakistan Science Foundation chairperson Professor Dr Muhammad Ashraf and ecological science advisor of Unesco, Dr Benno Boer.

<http://tribune.com.pk/story/1028689/climate-change-average-global-temperature-has-increased-by-0-7oc/>

NEWS COVERAGE PERIOD JANUARY 4TH TO JANUARY 10TH, 2016

PARIS CLIMATE CHANGE MOOT: PAKISTAN TO GET CONCRETE DIVIDENDS

Mian Saifur Rehman, The News, January 04, 2016

One of the rejoicing outcomes of the Paris Agreement on climate change is endowment of due and fair share to adaptation as a key policy instrument of the international climate change policy and as for Pakistan's contribution in

this global exercise, it merits mention that Pakistan played an instrumental role in Paris for securing adaptation that is an essential component of the new agreement.

These views were expressed, during a talk with The News, by UK-qualified Research and Development Economist Bilal Anwar, former office-holder at the United Nations Framework Convention for Climate Change Secretariat in Bonn, Germany that is helping in the implementation of global programme of Clean Development Mechanism of the Kyoto Protocol. Anwar has remained posted in Bonn for ten years and currently, he is affiliated with Centre for Climate Research and Development (CCRD) in COMSATS University, Islamabad. He also participated in the December 2015 Paris moot as a Technical Resource Person in the Pak delegation led by Prime Minister Muhammad Nawaz Sharif.

When asked to explain the Kyoto Protocol and the objectives and achievements of Paris agreement with focus on Pakistan, the expert said, “Broadly, the agreement will be beneficial to Pakistan in dealing with its inherent vulnerability to the harmful effects of climate change as the agreement is based on the principle and ambition of keeping the global average temperature rise between 2 and 1.5 degrees by the end of this century. Low carbon emissions and stabilisation of temperature will diminish the negative impacts on region’s glacial topography on which the survival of Pakistan is so heavily dependent. But at the same time the agreement’s compliance will require a long-term policy perspective aiming at adapting to the inevitable consequences of climatic threats and shifting toward low emission development pathways.

As regards the imposition of global cap on temperature increase, it will require dramatic slow-down of carbon emissions by all countries including Pakistan. Paris agreement has come up with a practical solutions’ package that includes financial assistance, technology transfer and capacity building. In all, these essential and supportive elements of the agreement offer many good opportunities for developing countries. And, they also offer a promising opportunity to Pakistan to fulfill its desperate energy needs through predominantly renewable and cleaner technologies. This would, obviously, require re-designing of our energy policy with clear goals for renewables and having integrated mechanisms of climate finance and technology transfer”.

What did he mean by the term ‘climate finance’? Anwar replied, “With the commitment of 100 billion dollars per year by the year 2020 by the developed countries in place along with presence of policy vehicles of technology transfer, capacity building and loss damage, a lot can be achieved over the period of next 15 years on the adaptation front in Pakistan.

There is much emphasis on adaptation these days while the other important facet is mitigation which means reducing emissions from the atmosphere. But aren’t our farmers facing forced adaptation? The reply was, “Yes, they are facing adaptation like for instance, mango farmers who are facing forced adaptation off and on due to change in weather patterns.

Talking further about the adaptation factor, Bilal Anwar stated, “Adaptation to the climatic impacts has justifiably been one of our key concerns and policy priorities, given our inherent vulnerabilities and low resilience to the prevailing and future threats of climate change.

With adaptation forcefully anchored in the agreement, it opens up opportunities for Pakistan to reach out to internationally obligated technical and financial assistance for undertaking climate-resilient infrastructure development programmes, safeguard our agriculture sector against the new and emerging climatic threats and strengthen our early warning systems”.

Dwelling upon the underlying factors, the expert opined, “Predominantly, climate change is human-induced and concentration of greenhouse gases is causing erratic weather conditions.” What is Pakistan’s contribution toward global warming or bad climate conditions? To this query, the expert said, “Emissions from Pakistan were miniscule, just 0.8 %. However, we receive the impact because we’re vulnerable, being geographically situated below the glacier. Not only that, our farming community has also suffered a lot at the hands of climate change, facing floods, droughts

and smog. Even dengue disease's roots are to be found in adverse climatic conditions, as revealed recently in an American paper presented on climate effects.”

What is the level of research and scientific studies in this area? Answering this query, Anwar said, “Under the United Nations, a full-fledged Inter-governmental panel on climate change is working on a constant footing. It consists of more than 600 scientists whose assessments are considered authentic worldwide. Of late, these scientists have come up with their fifth assessment. Even otherwise, climate change sciences are on a vertical rise. All these are evolving sciences and they include, inter alia, climatology, oceanography, physics and atmospheric etc.

Giving a clear picture of the Paris Climate Agreement, Anwar said, “It turned out to be a historic accord courtesy the grueling negotiations carried out by the nations of the world which finally agreed on this historic and landmark Climate Accord on December 12 last. The Paris Agreement, as its title goes, has been broadly hailed to carry the best chance of addressing the adverse impacts of the climate change for humanity over a long period of time. It is also celebrated to be reasonably balanced in its ambition, scope and obligations for all groups of countries along with required assurances and promises. In this sense, Paris left no one as a big loser and, moreover, the potential for gaining for everyone is very much there. Rather, the Paris agreement largely knocked down the long held divide between rich and developing countries as it imposes responsibilities on everyone. Principle of common but differentiated responsibilities and respective capacities was an intensely debated subject in Paris which consequently got diluted in the final outcome.

Now all member countries that of course include Pakistan would be under the obligation of more intense, elaborated and frequent reporting of their policy actions and measures associated with their greenhouse gas emissions.”

The News then tried to ascertain the key elements of the Accord. The expert informed this scribe, “Intended Nationally Determined Contributions (INDCs) which we attempted to avoid in the first instance (in the previous moots) are a key element of the Paris Agreement. In compliance, all countries shall have to submit their INDCs periodically and in a more elaborate manner. In hindsight this may sound a burdensome obligation for Pakistan but at the same time it would allow us to frame and align our long-term policy frameworks with the international climate change regime and seek maximum benefits from different international mechanisms, for example: financing, technology transfer, capacity building and most importantly claiming compensations under the loss and damage mechanism for damages being incurred by Pakistan due to climate change-related disasters. The good news is that the agreement recognizes the need for technical assistance to the developing countries for preparing and submitting their INDCs.

The Paris agreement also reflects a shift in approach from previous international climate-related legal instruments. It builds on the principle and understanding that with the increasing intensity and frequency of natural disasters it is in the best interest of countries to take domestic actions to address threats of climate change and align these actions with their international commitments under the agreement.”

Talking about Pakistan's representation, Bilal Anwar said, “It turned out to be excellent as adjudged by many foreign delegations and groups which extended wonderful cooperation and collaboration to Pakistani group that participated in Paris under the command of Prime Minister Muhammad Nawaz Sharif. Our contingent was not so big like those of other countries but our people had worked hard and went there fully prepared despite limited resources”.

In the end Bilal Anwar opined further: “Paris Agreement will enhance International Emission Trading System which revolves around carbon credits that Pakistan can easily buy with the assistance of voluminous climate finance.”

Bilal Anwar added that in the agreement there are powerful incentives and motivations to policy and decision makers of Pakistan to mainstream climate change in all aspects of the development planning so that we are not only able to meet our international commitments but also to seek maximum benefits from various supporting mechanisms.

<http://www.thenews.com.pk/print/86265-Paris-climate-change-moot-Pakistan-to-get-concrete-dividends>

CLIMATE CHANGE MAY AFFECT ELECTRICITY OUTPUT, SAYS STUDY REUTERS, Dawn, January 5th, 2016

TORONTO: Climate change could lead to significant declines in electricity production in coming decades as water resources are disrupted, said a study published on Monday.

Hydropower stations and thermoelectric plants, which depend on water to generate energy, together contribute about 98 per cent of the world's electricity production, said the study published in the journal Nature Climate Change.

Shifts in water temperatures, or the availability of fresh water due to climate change, could lead to reductions in electricity production capacity in more than two thirds of the world's power plants between 2040 and 2069, said the study from an Austrian research centre.

"Power plants are not only causing climate change, but they might also be affected in major ways by climate," said Keywan Riahi, Director of the Energy Programme at the International Institute for Applied Systems Analysis (IIASA). "(Due to) climate change it will be increasingly difficult to provide reliable services at affordable costs," Riahi, one of the study's authors, said.

Hydropower plants rely on water to move turbines, while thermoelectric plants, including nuclear and fossil-fuel based generators, need fresh water to cool their systems. Countries and companies need to make power plants more efficient to respond to the potential decline, in what scientists said was the first study of its kind to analyse the global impacts of global warming on electricity production.

The problem will become particularly acute during summer months and other periods of high electricity consumption. These periods usually coincide with higher water temperatures which make it harder to cool down power plants, Riahi said.

<http://www.dawn.com/news/1230821>

CLIMATE WALLFLOWER

Salman Zaidi , The Express Tribune, January 5th, 2016.

With the tinsel dust settling around the recently inked Paris Agreement, the highly anticipated accord that emerged from four years of stiff-upper-lip diplomacy on climate change, it is time for policy implementers to take a hard look at what they negotiated into place at COP21. Developed nations came forward to take responsibility for the carbon crisis and pledged funds for climate mitigation, some of which have been mobilised already. All parties agreed to keep global warming well below the 2°C level, and achieve 'carbon neutrality' by the second half of the 21st century; this has been decried as clever wordplay to mean something close to zero emissions. As for developing countries, the agenda varies depending on individual emission volumes and commitment to the accord.

Where does Pakistan stand in all this? Nowhere, as far as big-ticket debates on 2°C caps or climate finance go. The prime minister made a perfunctory speech at COP21, reflecting Pakistan's wallflower status and handed the climate baton back to those with "deep carbon footprints". Unfortunately, Pakistan's current climate brief makes little contribution to global knowledge other than confirming that the apocalypse has come sooner for some. Does that mean we wait for the grass to grow under our feet until funds arrive for climate adaptation? No, there's plenty to do in the meantime to make ourselves relevant to the international climate debate.

Take cities, for instance. The twin cities of Rawalpindi and Islamabad alone produce a billion tonnes worth of greenhouse gas emissions per annum. Between 1991 and 2010, Islamabad's temperature grew at twice the rate of global temperatures and the change in temperature is projected to be 2.2°C by 2069. Metropolises all over the world are stepping forward to join the Compact of Mayors, in which cities voluntarily commit to creating climate data and enable local climate action through public and private investments. The climate change vulnerability study piloted for Islamabad, jointly undertaken by government bodies and UN-HABITAT, makes a significant contribution to data in

this respect and aids the work being done by civil society organisations. By joining the Compact, the city administration of Islamabad can demonstrate its capacity and sign up to international best practices on adaptation, resilience and reducing vulnerability. It's about time our municipal governments appeared on the global grid to speak about their significant lessons themselves.

Second, we need to start planting trees by the millions to sequester carbon. That's part of every policy framework that the federal government has produced since 1955, but trees haven't been planted in the necessary droves. Other than an ambitious Billion Tree Tsunami campaign in Khyber-Pakhtunkhwa, whose first phase saw 11 million saplings planted over 6,000 hectares at a cost of Rs886 million, there has been no other mass afforestation drive. Pakistan's forest cover is a mere four to five per cent of total landmass, lagging far behind all other South Asian countries other than Afghanistan, and decreasing each year. Experts have called for a complete ban on tree-felling to preserve forests and substituting wood in industry, construction and domestic use. Many large cities have turned to growing urban forests to improve air quality and bring temperatures down. Islamabad's own green spaces have been cut back at an unprecedented scale over the last decade — almost 200 square kilometres of unplanned urban sprawl have been added to the ICT's original master plan between 2000 and 2013, resulting in the development of numerous 'urban heat islands'. Around 45,000 cars are added each year to Islamabad's traffic, whose fuel emissions combine with the transport sector, resulting in three million tonnes of carbon each year. Urban forests of indigenous trees are badly needed to offset this carbon cloud.

Third, citizens and civil society need to take the lead in climate audits. The Paris Agreement requires all countries to report back every five years on mitigation efforts, and civil society groups can undertake a capable audit of implementation in this sphere. Such groups have traditionally led the charge — from disaster management to policy advocacy to research — being closest to the communities that daily experience climate change as well as enabling the nexus between public resources, institutions and vulnerable communities. The Paris Agreement creates new impetus for public-private complementarity, in which both sectors must meet the other half way. There has to be a move away from poster competitions as a means of engaging citizen interest on the one hand, and greater private initiative in mitigation strategies on the other. Tree plantation schemes are a great place to begin for both, and can usher in the gamut of mitigation and adaptation-related processes. This must further be extended to corporate entities whose corporate social responsibility projects are already resourcing climate action in parts of Pakistan, but need to be scaled up with the right messaging campaigns that generate public interest.

The Paris Agreement is built on ambition, tempered by a healthy dose of reality. By signing up to the accord, Pakistan has committed itself to a new frontier of interests and imperatives that must be realised sooner rather than later. There's every chance it can, and should, take ownership and lead the climate debate before the close of five years.

<http://tribune.com.pk/story/1021806/climate-wallflower/>

SPIKE IN QUAKES: 851 SEISMIC DISTURBANCES RECORDED IN 2015

Sehrish Wasif, the Express Tribune, January 6th, 2016.

ISLAMABAD: The number of earthquakes in Pakistan has been rising steadily over the past five years. The Pakistan Meteorological Department recorded about 851 seismic disturbances in 2015.

The figures were shared by Met Office Director General Dr Ghulam Rasool while addressing the media in Islamabad on Tuesday. The National Disaster Management Authority chairman, Maj Gen Asghar Nawaz was also present.

He said the department observed a rapid surge in the number of earthquake jolts over the past five years. There were 543 quakes recorded in 2011, 754 in 2012, 675 in 2013, 771 in 2014 and 851 last year.

Pakistan comes in the South Asian region, which has three large mountain ranges at a junction of seismic fault lines. In the north is the stationary Eurasian tectonic plate. In the south is the moving Indian plate, which makes the zone more prone to earthquakes.

Rasool said since the 8.1 magnitude earthquake of October 26, almost 800 aftershocks had been received. Only about 150 of these aftershocks were above the intensity of 4.0 magnitude.

After the massive 7.6 magnitude earthquake of October 8, 2005, almost 3,500 aftershocks were registered that continued for several months.

“Minor tremors are good for releasing earth’s energy and help against bigger shocks,” Rasool claimed. The Hindu Kush region, he said, suffered more earthquakes with 80% of them hitting the Pak-Afghan and Afghanistan-Tajikistan borders. Brushing aside questions whether or not Pakistan can accurately record earthquakes, the PMD chief said the department was well-equipped to monitor seismic activity.

The PMD and the United States Geological Survey often give conflicting data on the intensity of quakes in Pakistan. The October 26 jolts were recorded at 7.5 on Richter scale by the USGS, whereas, the PMD put the intensity at 8.1.

Rasool clarified the PMD had 20 observation stations in the country besides another 15 centres of the neighbouring countries to accurately calculate the intensity of earthquakes. The USGS has only seven stations in this area. “The Met Office gets reports from 35 stations and calculates the average of the readings,” he added.

NDMA Chairman Nawaz said that after the October 26 earthquake, the authority called upon officials of the PMD, the Atomic Energy Commission, National Engineering Services Pakistan, Pakistan Space and Upper Atmosphere Research Commission, Pakistan Engineering Council and other related departments to analyse the aftershocks.

He said the NDMA was also working on establishing a monthly, online catalogue of earthquakes on its website to facilitate the public.

<http://tribune.com.pk/story/1022634/spike-in-quakes-851-seismic-disturbances-recorded-in-2015/>

February 2016

NEWS COVERAGE PERIOD FROM FEBRUARY 22nd TO FEBRUARY 28th 2016

COUNTRIES HIT BY CLIMATE CHANGE: PAKISTAN RANKED 8TH IN WORLD, NATIONAL ASSEMBLY INFORMED

Business Recorder, February 23, 2016

Federal Minister for Climate Change Zahid Hamid Monday informed the National Assembly that Pakistan has become 8th country in the world, which is being affected by climate change. The minister while replying to questions of the members said that earlier Pakistan was the 10th country in the world now it has reached at 8th number. He said that Pakistan was being severally affected due to climate change in the world adding that it poses a major challenge for us in future.

He said that due to climate change changes are occurring in the seasons and floods are coming in the country. He said that ozone layer of atmosphere is also being affected due to climate change. The Minister said that a process has been initiated to prepare the Climate Change Adaptation Plan in collaboration with the United Nations Environment Programme.

To a supplementary question, he said studies indicate glaciers are melting at Hindukush mountain range while there are conflicting reports about melting of glaciers on Karakoram Range. He said international experts are being approached for authentic studies on the issue.

He said that the government has taken number of steps during the last three years (2013-16) to mitigate the impacts of climate change in the country. He said that a comprehensive policy and frame work is being prepared about climate

change. He said that framework for implementation of national climate change policy – 2014 identifies initiatives to be undertaken by the concerned federal and provincial government departments for both adaptation and mitigation.

The Minister said that his Ministry along with UN Habitat, Capital Development Authority and ICT administration assistance undertook a study “Climate Change Vulnerability Assessment of Islamabad.” He said that the study reveals that the city of Islamabad and its surrounding is exposed to a host of factors accelerating climate change impacts such as erratic behaviour and marked changes in the intensity, frequency and variability of temperature, precipitation, floods, droughts, cyclones etc.

He said that extreme weather events recorded so far in Islamabad include highest maximum temperature of 46.6 C on 24th June 2005 and lowest at 4.3 C on 25th December 1984. He said that in 2001 heaviest rainfall of 621 mm was recorded in 10 hours.

He said that preparation of Pakistan’s Second National Communication (SNC) on Greenhouse Gases (GHG) emission has also been initiated. He said that this will be a three year study leading to stocktaking of all GHG emission in Pakistan with option of mitigation and adoption actions.

<http://www.brecorder.com/top-stories/0/18827/>

SEAS ARE RISING AT FASTEST RATE IN LAST 28 CENTURIES

International New York Times, FEB. 22, 2016

JUSTIN GILLIS

The worsening of tidal flooding in American coastal communities is largely a consequence of greenhouse gases from human activity, and the problem will grow far worse in coming decades, scientists reported Monday.

Those emissions, primarily from the burning of fossil fuels, are causing the ocean to rise at the fastest rate since at least the founding of ancient Rome, the scientists said. They added that in the absence of human emissions, the ocean surface would be rising less rapidly and might even be falling.

The increasingly routine tidal flooding is making life miserable in places like Miami Beach; Charleston, S.C.; and Norfolk, Va., even on sunny days.

Though these types of floods often produce only a foot or two of standing saltwater, they are straining life in many towns by killing lawns and trees, blocking neighborhood streets and clogging storm drains, polluting supplies of freshwater and sometimes stranding entire island communities for hours by overtopping the roads that tie them to the mainland. Such events are just an early harbinger of the coming damage, the new research suggests.

“I think we need a new way to think about most coastal flooding,” said Benjamin H. Strauss, the primary author of one of two related studies released on Monday. “It’s not the tide. It’s not the wind. It’s us. That’s true for most of the coastal floods we now experience.”

In the second study, scientists reconstructed the level of the sea over time and confirmed that it is most likely rising faster than at any point in 28 centuries, with the rate of increase growing sharply over the past century — largely, they found, because of the warming that scientists have said is almost certainly caused by human emissions.

They also confirmed previous forecasts that if emissions were to continue at a high rate over the next few decades, the ocean could rise as much as three or four feet by 2100. Experts say the situation would then grow far worse in the 22nd century and beyond, likely requiring the abandonment of many coastal cities.

The findings are yet another indication that the stable climate in which human civilization has flourished for thousands of years, with a largely predictable ocean permitting the growth of great coastal cities, is coming to an end.

“I think we can definitely be confident that sea-level rise is going to continue to accelerate if there’s further warming, which inevitably there will be,” said Stefan Rahmstorf, a professor of ocean physics at the Potsdam Institute for Climate Impact Research, in Germany, and co-author of one of the papers, published online Monday by an American journal, Proceedings of the National Academy of Sciences.

In a report issued to accompany that scientific paper, a climate research and communications organization in Princeton, N.J., Climate Central, used the new findings to calculate that roughly three-quarters of the tidal flood days now occurring in towns along the East Coast would not be happening in the absence of the rise in the sea level caused by human emissions.

he lead author of that report, Dr. Strauss, said the same was likely true on a global scale, in any coastal community that has had an increase of saltwater flooding in recent decades.

The rise in the sea level contributes only in a limited degree to the huge, disastrous storm surges accompanying hurricanes like Katrina and Sandy. Proportionally, it has a bigger effect on the nuisance floods that can accompany what are known as king tides.

The change in frequency of those tides is striking. For instance, in the decade from 1955 to 1964 at Annapolis, Md., an instrument called a tide gauge measured 32 days of flooding; in the decade from 2005 to 2014, that jumped to 394 days.

Flood days in Charleston jumped from 34 in the earlier decade to 219 in the more recent, and in Key West, Fla., the figure jumped from no flood days in the earlier decade to 32 in the more recent.

The new research was led by Robert E. Kopp, an earth scientist at Rutgers University who has won respect from his colleagues by bringing elaborate statistical techniques to bear on longstanding problems, like understanding the history of the global sea level.

Based on extensive geological evidence, scientists already knew that the sea level rose drastically at the end of the last ice age, by almost 400 feet, causing shorelines to retreat up to a hundred miles in places. They also knew that the sea level had basically stabilized, like the rest of the climate, over the past several thousand years, the period when human civilization arose.

“Physics tells us that sea-level change and temperature change should go hand-in-hand,” Dr. Kopp said. “This new geological record confirms it.”

In the 19th century, as the Industrial Revolution took hold, the ocean began to rise briskly, climbing about eight inches since 1880. That sounds small, but it has caused extensive erosion worldwide, costing billions.

Due largely to human emissions, global temperatures have jumped about 1.8 degrees Fahrenheit since the 19th century. The sea is rising at what appears to be an accelerating pace, lately reaching a rate of about a foot per century.

One of the authors of the new paper, Dr. Rahmstorf, had previously published estimates suggesting the sea could rise as much as five or six feet by 2100. But with the improved calculations from the new paper, his latest upper estimate is three to four feet.

That means Dr. Rahmstorf’s forecast is now more consistent with calculations issued in 2013 by the Intergovernmental Panel on Climate Change, a United Nations body that periodically reviews and summarizes climate research. That body found that continued high emissions might produce a rise in the sea of 1.7 to 3.2 feet over the 21st century.

In an interview, Dr. Rahmstorf said the rise would eventually reach five feet and far more — the only question was how long it would take. Scientists say the recent climate agreement negotiated in Paris is not remotely ambitious enough to forestall a significant melting of Greenland and Antarctica, though if fully implemented, it may slow the pace somewhat.

“Ice simply melts faster when the temperatures get higher,” Dr. Rahmstorf said. “That’s just basic physics.”

http://www.nytimes.com/2016/02/23/science/sea-level-rise-global-warming-climate-change.html?_r=0

CLIMATE STUDY POINTS TO DISASTERS IN MALAKAND, HAZARA

The Express Tribune, February 28th, 2016

Iftikhar Firdous

At least 11 districts in Malakand and Hazara divisions, which have faced devastation amid climactic shifts over the last decade, are in danger of falling prey to this phenomenon once again.

Experts believe if proper methods of risk reduction, mitigation and adaptation are not implemented, these natural hazards will turn into catastrophic disasters. These are the early estimates provided by the Climate Change Advisory Committee nominated by the government to formulate a policy.

In its initial assessment on the impact of climate change in Khyber-Pakhtunkhwa, the committee has shown the effects of changing weather patterns are felt in the province because it is situated in a mid-latitude region.

The Express Tribune spoke to three members of the committee who said there was a dearth of even the most basic awareness regarding climate change.

“We hope the government will take the recommendations seriously and help implement and formulate [a climate change] policy,” an expert on the panel said. “[Such a policy] is a basic need of the province.”

As per the draft policy on climate change, monsoon rain is likely to increase and extend to the northern parts of the province due to warmer temperatures.

In addition, wet regions will receive more precipitation while dry regions will receive less precipitation than before.

Such heavy precipitation patterns will accelerate glacial melting. As a result, flash floods are expected in wet regions and less precipitation in dry regions will trigger droughts.

The main regions of K-P expected to face flood hazards are Buner, Shangla, Lower Dir, Upper Dir, Swat, Chitral, Haripur, Battagram, Mansehra, Abbottabad and Kohistan.

“It is highly likely these regions will experience intense rainfall,” a member of the panel said. “Galiyat, lower Kaghan Valley and southern parts of Kohistan will be especially affected.”

Experts believe DI Khan will be particularly affected by drought. Although the drought will not lead to considerable destruction, it is likely to compromise on food security.

Agricultural land between Peshawar, Mardan, Charsadda, Nowshera, Swabi, Kohat, Hangu in the central valley plain and Bannu, Karak, Lakki Marwat, Tank, DI Khan in the southern districts constitute 1,115,000 hectares of cultivated area. With rising temperatures and decreasing rainfall, these areas are going to be water-stressed in the coming years.

According to experts, high temperatures are likely to impact crop cultivation. Although it will be easier to cultivate some crops, high temperatures will increase evapotranspiration and increase water requirements for most crops. Initial

studies reveal the quantity and availability of groundwater and irrigation water will be vital in determining the extent of water stress in the area.

The draft policy is divided into nine chapters that explain the impact of climate change through a sectoral analysis. According to the draft policy, climate change and its impacts must be taught to students at schools.

“These are just initial estimates of the effects of the climate change,” Environmental Protection Agency (EPA) Climate Cell Deputy Director Afsar Khan told The Express Tribune. “The department was busy getting feedback from all stakeholders involved. The climate change policy has to go through a number of drafts.”

<http://tribune.com.pk/story/1055637/floods-and-droughts-climate-study-points-to-disasters-in-malakand-hazara/>

NATIONAL CLIMATE CHANGE POLICY: PROVINCES, MINISTRIES FAIL TO COME UP WITH ACTION PLANS

The Express Tribune, February 28th, 2016.

Shahzad Anwar

ISLAMABAD: Except for the Azad Jammu and Kashmir (AJK) government, all provinces, ministries and divisions have failed to come up with action plans to tackle climate change issues under the National Climate Change Policy.

The policy provides a framework for addressing the issues Pakistan faces due to changing climate.

At the first meeting of the National Climate Change Policy Implementation Committee (NCCPIC) held in Islamabad on April 23, 2015, provinces, relevant ministries and divisions had been asked to submit their short, medium and long-term plans spelling out adaptation measures and ways and means to tackle climate change issues.

Moreover, provincial governments were also asked to submit their project concept notes related to the United Nation’s Green Climate Fund (GCF). The GCF is a fund within the framework of the UNFCCC as a mechanism to assist developing countries in adaptation and mitigation practices to counter climate change.

The Climate Change Ministry, however, has not received an encouraging response from provinces regarding submission of proposals for the GCF grants.

“The ministry received a total of 27 concept notes on irrigation sector, coastal areas, public engineering, field intrusion of sea water,” an official said adding that except for one almost all the concept notes were rejected for not meeting the GCF criteria.

The official said that the provinces do not have the capacity or expertise and the ministry also lacks the technical know-how to extend help to the provinces to come up with proposals to meet the GCF criteria.

The official said only one \$33 million project for glacial lake outburst floods has been submitted to the GCF board which was likely to be taken up in the board’s next meeting.

“The AJK government has developed its climate change action plan, while Sindh and Punjab are holding meetings with stakeholders to finalise their action plans,” another ministry official said adding that other federating units and ministers were yet to submit their blueprints.

At a second meeting of NCCPIC held on February 24, which was attended by officials of federal ministries, provincial governments, experts and development partners, Climate Change Minister Zahid Hamid only talked about the importance of the National Climate Change Policy and its implementation framework, a source privy to the meeting told The Express Tribune while requesting anonymity.

The source said that representatives of Sindh, Balochistan and Khyber-Pakhtunkhwa expressed their anger over non-serious attitude of Climate Change Ministry officials in extending cooperation regarding different climate adaptation and mitigation programmes.

The three provinces also lodged a complaint with the minister and the secretary stating that the ministry officials never respond to their queries on time. The source said that the secretary told the provincial representatives to directly contact him if they faced any problem in the future, the source said.

Deputy Director Media Saleem Shaikh denied that the provinces have lodged complaint against the ministry officials. He claimed that the ministry was very much serious about coping with climate change issues in collaboration with the federating units.

<http://tribune.com.pk/story/1055722/national-climate-change-policy-provinces-ministries-fail-to-come-up-with-action-plans/>

NEWS COVERAGE PERIOD FROM FEBRUARY 15th TO FEBRUARY 21st 2016

CLIMATE CHANGE 'FORCING SPECIES TO MOVE'

Business Recorder, February 15, 2016

Warming temperatures are causing about half of the world's plants and animals to move location, an international conference in Australia heard on February 10, with every major type of species affected.

Camille Parmesan, an expert from Britain's Plymouth University on how climate change impacts wildlife, said data on thousands of species found that many had shifted their ranges towards the poles or up mountains over the past century.

"The global imprint of warming on life is evident in hundreds of scientific studies," Parmesan told the Species on the Move conference, which is focused on how species are responding to climate change.

"While about half of all studied species have changed their distributions in response to recent climate change, we are starting to see negative impacts for the most vulnerable species."

Other changes had been observed such as plants flowering earlier or migratory birds arriving sooner in the year than previously, she added.

Parmesan said areas most at risk included sensitive systems such as polar regions dependent on sea ice and mountainous forests. "Recovering these vulnerable species under a changing climate may not always be possible," she warned.

Parmesan said studies showed that about half of species have moved their geographical ranges poleward and/or upward while about two-thirds of species studied have shifted towards earlier spring breeding, migrating, or blooming.

Every major group has been impacted including trees, herbs, butterflies, birds, mammals, amphibians, corals, invertebrates and fish.

In Australia, tropical mountain areas were home to a range of species which were unique to those regions and vulnerable to changing temperatures.

"Tree possums have already been heavily impacted by the recent climate change and they are expected to be highly vulnerable to climate change," Parmesan told journalists.

The professor said that globally there were also many species which were unable to move, for example when hemmed in by urban development.

The University of Tasmania, which is jointly hosting the conference in Hobart with the Institute for Marine and Antarctic Studies, said that in Australia heat stress and drought had impacted koalas, wetland birds and platypus.

Conference organiser Gretta Pecl said in south-eastern Australia, sea urchins had also moved south down the east coast while the populations of some fish and octopus were also observed in greater numbers further south.

“Populations shift and change naturally... and it’s very hard to actually determine when a population has had a large move in distribution,” she told the Australian Broadcasting Corporation ahead of the conference. “And some of the things we are seeing now are because we’ve started looking.

“But we do have a significant number of data sets that does show conclusively that animals are shifting.”

<http://www.brecorder.com/general-news/172/16710/>

FIJI ON LOCKDOWN AS HIT BY ‘STRONGEST EVER’ CYCLONE

Business Recorder, February 21, 2016

Fiji was struck by its most powerful ever cyclone on Saturday, according to reports, as the island nation battened down the hatches with a curfew and evacuations. The category five super-storm hit the main island of Viti Levu overnight, according to the Joint Typhoon Warning Center, with flights cancelled and evacuation centres activated earlier in the day. “As a nation, we are facing an ordeal of the most grievous kind,” Prime Minister Voreqe Bainimarama said in a national address.

“We must stick together as a people and look after each other. Be alert and be prepared.” Severe tropical cyclone Winston, with average winds of 220 kilometres (136 miles) per hour and gusts of up to 315 kilometres per hour, was the first ever category five storm to hit the nation, the Fiji Times reported. The storm caused power to fail across the main island after making landfall, according to local reports.

“This mega storm has the potential to cause catastrophic damage across Fiji, an island nation frequented by hundreds of thousands of holiday-goers every year,” said Iris Low-McKenzie, CEO of Save the Children Fiji. “It looks as though the storm could pass over the international airport in Nadi, which, if significant damage is caused, will make the humanitarian response all the more difficult.”

The Fijian government declared a state of natural disaster in the country, which would remain in place for one month. National Disaster Management director Akapusi Tuifagalele told the Fijilive website that 758 evacuation centres had been set up in the nation of about 900,000. Winston brushed by the more northerly island of Vanua Levu on Saturday afternoon, with unconfirmed reports of trees felled and roofs blown off houses. “I’ve never seen such a strong cyclone as this one in 60 years,” resident Zalim Hussein told AFP by phone.

“This is a monster cyclone, without doubt the strongest we’ve ever experienced. We’re all very scared and hope it goes away quickly.” Fiji Airways, Virgin Australia and Jetstar all cancelled flights to the holiday hotspot, which is a popular destination for Australians and New Zealanders. The government imposed a nationwide curfew on Saturday night, with the prime minister warning residents not to go outdoors.

<http://www.brecorder.com/general-news/172/18467/>

NEWS COVERAGE PERIOD FROM FEBRUARY 8th TO FEBRUARY 14th 2016

DELAY IN SINDH’S DROUGHT MITIGATION POLICY

Dawn, Business & Finance weekly, February 8th, 2016

MOHAMMAD HUSSAIN KHAN

THARPARKAR, one of the country's largest arid regions, continues to suffer harsh weather conditions for the last four years. The rain fed area did get scanty rainfall last year but not sufficient enough for cultivation of crops like beans and millet. Child mortality has emerged as a serious issue.

Remedial measures taken by the provincial government were: provision of clean drinking water through reverse osmosis (RO) plants and distribution of free wheat to drought-stricken community and upgradation of health facilities.

And its agenda included the establishment of Thar Development Authority (TDA) and Sindh Drought Mitigation Policy 2014.

A 26-member steering committee of the Sindh provincial assembly has drafted the proposed legislation. Both the documents are pending for the government's approval or vetting by the elected house.

The Sindh Local Bodies Department had modelled the TDA on conventional wisdom not so specific to the Thar conditions. The bill is to be tabled again.

"Sindh Drought Mitigation and Management Policy will help the government handle the situation arising out of drought in any part of the province like Kachho, Nara, deserts in Sanghar, Umerkot and Tharparkar districts," says Dr Sono Khanharani, a social activist and one of steering committee members.

As Thar district has its own dynamics, the TDA will have its board to take decisions for addressing issues before or during the drought period, he argues. "We have covered all important sectors that impact life of common man and even that of livestock during the dry spell," he adds.

The TDA draft lists a number of measures required for sustainable development and environmental management in the wake of looming threat of climate change. Proposed TDA's functions and intervention include: research; supplementing/complimenting the initiatives of different departments; water sector management; provision of irrigation water; water reservoirs; livestock and wildlife sanctuaries; gauchar (pastures) land and fodder bank and checking soil degradation. All these sectors are directly linked with local population's source of livelihood.

Varying mortality figures of newborns continue to pour in from Thar notwithstanding the fact that it is winter. Summer season is still a couple of months away that would ultimately increase drinking water consumption and groundwater remains brackish in desert barring some pockets.

The Sindh government, time and again, has pledged to develop infrastructure and health facilities. Some promises are fulfilled like: upgradation of Mithi district headquarter hospital and distribution of free wheat. Primary healthcare facilities, by and large, remain dysfunctional.

Around Rs5bn was released to Special Initiatives Department for RO plants. Yet Mithi's two million gallons per day plant, billed as Asia's largest, failed to meet required drinking water supplies as envisaged. The problem is yet to be fixed.

Similarly, Thar has around 6.5-7 million livestock population with acute shortage of fodder. The government had announced to establish chiller plants across Tharparkar to collect milk from the community, but they are yet to be set up. Livestock vaccination drive, whose pace accelerated in 2014 when mortality had increased, has somewhat slowed down.

<http://www.dawn.com/news/1238149>

CLIMATE CHANGE BOOSTED 'ONCE-A-CENTURY' FLOODS: STUDY
Business Recorder, February 08, 2016

Man-made climate change significantly enhanced the risk of the severe winter storms that ravaged southern England two years ago, according to a study released Monday.

Global warming amplified the likelihood of the “once-in-a-century” heavy flooding — responsible for some 600 million euros (\$650 million) in insured losses during the winter of 2013/2014 — by more than 40 percent, researchers reported.

“We found that extreme rainfall, as seen in January 2014, is more likely to occur in a changing climate,” said Nathalie Shaller, lead author and a scientist at Oxford University.

The study, published in the peer-reviewed journal *Nature Climate Change*, is part of a growing body of scientific literature seeking to connect the dots between long-term warming and extreme weather events.

It is a difficult case to establish.

The main reason is that climate trends are measured in decades or longer, making it very hard — when trying to tease out cause and effect — to separate natural weather variability from human-induced warming.

In the new study, two-thirds of the additional risk of major catastrophe could be traced to an increase in the water-holding capacity of the atmosphere, and one third to more days with winds coming across the Atlantic from the west, the study concluded.

Climate models predict that both these patterns become more frequent under global warming conditions, the researchers noted.

Unlike previous attempts to link climate change with specific extreme weather events, Shaller and colleagues traced the connections “all the way from the changes in the atmosphere to the impacts on the ground,” she told AFP by phone.

Starting with an analysis of circulation in the atmosphere, they also looked at the additional risk of rainfall, as well as swollen river flows.

The final step, she said, was calculating flood potential in the Thames River Basin, right down to “the number of properties at risk,” she said.

“To our knowledge, this is the first attempt to connect all these factors together.”

Scientists not involved in the study confirmed that it broke new ground.

“It is the first to perform an end-to-end estimate of climate change impacts for an extreme weather event,” said Ted Shepherd, a climate change expert at the University of Reading.

“This study highlights the fact that we need a better understanding of not just how and where climate change is warming the atmosphere, but also how it is changing patterns of wind and rain, in order to best prepare for extreme rainfall and floods.”

<http://epaper.brecorder.com/2016/02/08/13-page.html>

SOUND BYTE: ‘EXPECT MORE EXTREME WEATHER THIS YEAR’

Dawn, February 12th, 2016

Hassan Belal Zaidi

To understand what this phenomenon is and what impact it could have on the climate of Pakistan, Dawn spoke to Dr Fahad Saeed, who heads the Climate Change and Environment Research Unit at the Sustainable Development Policy Institute in Islamabad.

Q: How exactly would an El Nino impact the climate of a country like Pakistan, which is on the other side of the globe?

A: An El Nino is said to impact the weather over a vast part of the globe. Normally, trade winds over the central and eastern Pacific Ocean cause warm water to move from east to west, towards the western Pacific and Indian oceans. However, during an El Nino, the effect is reversed and the trade winds fail to bring warm westwards. When that happens, the western Pacific gets colder than average and the eastern Pacific gets warmer than average.

Colder than average water in the western Pacific and Indian oceans will suppress convection, affecting the formation of the monsoons which bring rain to the subcontinent. The failure of the monsoon generally results in drought-like conditions in India and Pakistan.

In addition, the Western Depression, which brings rainclouds to the northern areas of Pakistan from the Mediterranean, are largely controlled by the sub-tropical jet stream – wind currents that meander the globe around 10km from the surface. If that is blocked, it can shift weather patterns catastrophically.

For example, the 2010 floods occurred due to the blocking of this sub-tropical jet stream. But the same phenomenon manifested itself as a deadly heat wave over Russia, resulting in thousands of deaths in Moscow.

Q: What can be the real-life impacts of this phenomenon in Pakistan?

A: There have been several studies showing links between El Nino and the sub-tropical jet stream. Based on an analysis of global meteorological data, a recent study has also suggested that El Nino may cause excessive precipitation in the Middle East, as well as the northern and north-western parts of Pakistan, in the winter months.

Recent cold and wet conditions in the northern parts of the country may be attributed to the El Nino, but it can also manifest itself in the form of drought-like conditions in the summer months.

The earth's weather system is so complex that although 2014 was expected to be a dry year because of a prevalent mild El Nino, one intense precipitation event in September of that year in Kashmir caused flooding in India and Pakistan. I think Pakistani authorities should expect similarly extreme climatic events this year as well, especially in the summers.

Q: How can Pakistan better prepare itself to cope with the freak weather conditions that El Ninos may cause?

A: The role of the Pakistan Meteorological Department in forecasting such extreme weather events well in advance, is essential. Moreover coordination between the Met Office and disaster management authorities at the national, provincial and district-level is key.

To cope with the possibility of drought-like conditions, authorities should have a contingency plan to combat negative impacts, especially for rain-fed crops. Moreover, we recently witnessed a severe heat wave event in Karachi, which resulted in many casualties.

So from floods, to longer-than-usual dry spells and more heat waves, a variety of weather conditions are expected in the country due to the presence of the enormous El Nino we're currently seeing.

<http://www.dawn.com/news/1238998>

CAPITAL RECEIVES FIRST SNOWFALL AFTER FIVE YEARS

Business Recorder, February 12, 2016

Islamabad received first snowfall spell after five years, the Met Office said on Thursday. It said that the scattered snowfall over the Margalla Hills in the federal capital city was the first spell since 2011. It said that upper Khyber Pakhtunkhwa, north Punjab, Islamabad, Gilgit-Baltistan and Kashmir had received good rain coupled with thunderstorm and snowfall over the hills in the last 24 hours.

“Westerly wave is affecting northern area and likely to affect during next 24 hours,” it said, forecasting mainly cold and dry weather is expected in most parts of the country. However, more rain with snowfall over the hills is expected at isolated places in Gilgit-Baltistan and Kashmir. Foggy conditions are likely to grip plains of upper Punjab in night time and morning hours, it said.

“Rain may generate land sliding in vulnerable areas of Malakand, Hazara divisions, Kashmir and Gilgit-Baltistan on Thursday/Friday,” the office warned. Dir received 98 mm of rain, Islamabad (Saidpur 65mm, Zero Point 64mm, Golra 48mm, Bokra 46mm), Malamjabba 58mm, Rawalpindi (Chaklala 52mm, Shamsabad 30mm), Saidu Sharif and Muzaffarabad 47mm each, Balakot, Rawalkot, Lower Dir and Gariduppata 36mm, Kakul 35mm, Kotli 31mm, Murree 30mm, Pattan 29mm, Peshawar city 24mm, Kohat, and Parachinar 20mm each in the last 24 hours. Each, Malamjabba, Babusar and Top received three feet of snowfall, Gallyat, Kaghan and Naran two feet, each and Murree one feet.

<http://www.brecorder.com/general-news/172/15453/>

PARLIAMENTARY SOLAR SYSTEM GENERATES 80 MEGAWATTS

Business Recorder, February 13, 2016

NAVEED BUTT

Speaker National Assembly Sardar Ayaz Sadiq on Friday announced that parliamentary solar system has generated 80 megawatts electricity out of which 62 megawatts were consumed in the Parliament House and the rest surplus production of 18 megawatts was contributed to the national grid. The speaker made this announcement in the Lower House of the Parliament. He said that the project of ‘Solar Energy’ at the Parliament House was opened alive.

He said that this initiative has made the Parliament of Pakistan the first in the world that has been shifted on Solar Power completely. Earlier, Knesset, the parliament of Israel was also consuming the solar energy but it only generates 10 percent of its total energy needs through solar means, he added.

Sadiq said that Pakistan’s Parliament is the first in the country to have been issued a ‘Net-Metering’ license by the National Electric Power Regulatory Authority (NEPRA). ‘Net-Metering’ mechanism helps in delivering and adding the surplus production of energy to the national grid. This very project is environment friendly as it reduces the emission of hazardous gases which invite global warming.

The speaker acknowledged the assistance of the Chinese government for financially supporting this ‘Solar Project’ of 1 MW/hr. He also thanked the fellow parliamentarians, media and employees of the Parliament for their confidence and support in boosting up the role of the Parliament of Pakistan for an ‘enlightened’ future of the country.

It may also be recalled that the Solar Project was launched jointly by the Chinese President, Xi Jinping, and the Prime Minister Muhammad Nawaz Sharif during the former’s visit to Pakistan last year. Nawaz Sharif is expected to formally ‘Switch On’ the Parliament’s Solar Programme, sometime, later this month.

<http://www.brecorder.com/fuel-a-energy/193/16069/>

NEWS COVERAGE PERIOD FROM FEBRUARY 1ST TO FEBRUARY 7TH 2016

MILLIONS FACING WORST DROUGHT FOR DECADES IN ETHIOPIA: UN

Dawn, February 1st, 2016

ADDIS ABABA: Ethiopia is struggling with its worst drought for 30 years, with millions in dire need of life-saving aid, UN Secretary-General Ban Ki-moon warned on Sunday.

At least 10.2 million people need food aid in Ethiopia, a figure the UN has warned could double within months, casting a fifth of the population into hunger.

Floods and failed rains caused by the El Nino weather phenomenon have sparked a dramatic rise in the number of people going hungry in large parts of Africa, with Ethiopia of special concern.

“People of the country are facing the worst drought in 30 years... the scale of emergency is too much for any single government,” Ban told reporters in the Ethiopian capital.

“Immediate support will save lives and also support the impressive development that Ethiopia has made during the last decade.: Ethiopian Deputy Prime Minister Demeke Mekonnen warned his country had less than half of the \$1.4 billion needed.

“Last year Ethiopia was hit by one of the strongest El Nino events on record... the scale and severity of humanitarian needs have significantly increased,” he said. Food insecurity is a sensitive issue in Ethiopia, Africa’s second most populous nation which enjoys near-double-digit economic growth, but which has struggled to change its image following famine in 1984-85 after extreme drought.

<http://www.dawn.com/news/1236613>

March 2016

NEWS COVERAGE PERIOD FROM MARCH 28TH TO APRIL 3RD 2016

CARBON EMISSIONS HIGHEST IN 66 MILLION YEARS

Business Recorder March 28, 2016

The rate of carbon emissions is higher than at any time in fossil records stretching back 66 million years to the age of the dinosaurs, according to a study on Monday that sounds an alarm about risks to nature from man-made global warming.

Scientists wrote that the pace of emissions even eclipses the onset of the biggest-known natural surge in fossil records, 56 million years ago, that was perhaps driven by a release of frozen stores of greenhouse gases beneath the seabed.

That ancient release, which drove temperatures up by an estimated 5 degrees Celsius (9 Fahrenheit) and damaged marine life by making the oceans acidic, is often seen as a parallel to the risks from the current build-up of carbon in the atmosphere from burning fossil fuels.

“Given currently available records, the present anthropogenic carbon release rate is unprecedented during the past 66 million years,” the scientists wrote in the journal Nature Geoscience.

The dinosaurs went extinct about 66 million years ago, perhaps after a giant asteroid struck the Earth.

Lead author Richard Zeebe of the University of Hawaii said geological records were vague and “it’s not well known if/how much carbon was released” in that cataclysm.

Current carbon emissions, mainly from burning fossil fuels, are about 10 billion tonnes a year, against 1.1 billion a year spread over 4,000 years at the onset of the fast warming 56 million years ago, the study found.

The scientists examined the chemical makeup of fossils of tiny marine organisms in the seabed off the New Jersey in the United States to gauge that ancient warming, known as the Paleocene-Eocene Thermal Maximum (PETM).

UN studies project that temperatures could rise by up to 4.8C this century, causing floods, droughts and more powerful storms, if emissions rise unchecked. Carbon dioxide forms a weak acid in seawater, threatening the ability of creatures such as lobsters or oysters to build protective shells.

“Our results suggest that future ocean acidification and possible effects on marine calcifying organisms will be more severe than during the PETM,” Zeebe said.

“Future ecosystem disruptions are likely to exceed the relatively limited extinctions observed at the PETM,” he said.

During the PETM, fish and other creatures may have had longer time to adapt to warming waters through evolution.

<http://www.brecorder.com/general-news/172/29776/>

PLANTS ADAPT TO CLIMATE CHANGE BETTER THAN MANY THOUGHT: STUDY

Business Recorder March 28, 2016

Plants respond a bit better to global warming than scientists had thought, according to a new study that suggests their potential contribution to worsening global warming is not likely as bad as researcher believed. When it gets hotter, plants breathe harder. And the greenhouse gas carbon dioxide is produced by respiration. That’s why researchers think that as Earth is warmed by CO₂ from people’s activities, plants may add to the emissions and make warming worse.

Plants generally take in carbon dioxide during daytime photosynthesis and release carbon dioxide during respiration at night. But plants take up much more carbon dioxide in photosynthesis than they release in respiration.

But now “with this new model, we predict that some ecosystems are releasing a lot less CO₂ through leaf respiration than we previously thought,” said coauthor Kevin Griffin, a plant physiologist at Columbia University’s Lamont-Doherty Earth Observatory. The study was published on Monday by the Proceedings of the National Academy of Sciences.

The research found that rates of increase slow in a predictable way as temperatures rise, in every region. And the newly defined curve leads to sharply reduced estimates of respiration, especially in the coldest regions.

“What we thought was a steep curve in some places is actually a little gentler,” said Griffin. The biggest changes in estimates are in the coldest regions, which recently have seen warming far beyond that in temperate zones. “All of this adds up to a significant amount of carbon, so we think it’s worth paying attention to,” said Griffin.

Lead author Mary Heskell, of Massachusetts’ Marine Biological Laboratory, said the study would go far toward helping estimate “carbon storage in vegetation, and predicting concentrations of atmospheric carbon dioxide and future surface temperatures.”

<http://www.brecorder.com/general-news/172/29777/>

ALL SECTIONS TO BE TAKEN ONBOARD: SEVERE HEATWAVE MAY HIT KARACHI IN MAY, JUNE

Business Recorder March 29, 2016

KARACHI: Public and private hospitals, ambulance services, scouts and girls guide, departments like Health, Revenue, SESSI, KMC, Water Board, Local Administration, K-Electric and MET Office should be taken onboard to counter the severe heat wave that likely to hit Karachi in May and June this year.

At least three control rooms will be established to monitor the situation and all departments concerned will submit a high level contingency plan to combat heat wave.

This was decided in a meeting chaired by Sindh Health Minister

Jam Mehtab Hussain Dahar at Sindh Assembly Committee Room here, said a statement on Monday. Meanwhile all rehabilitation centers will be linked to a big hospital concerned.

Speaking at the meeting, Sindh Health Minister Jam Mehtab Hussain Dahar directed the officials concerned to launch health alert system through mobile messages with a view to avert loss of life.

Dahar directed DHOs and MSs to enhance capacity building of health care staff, community participation and volunteer services and to establish a task force consisting of PDMA, Health, local administration, scouts / girls guide, MET Office, Traffic Police and private ambulances services etc.

With the implementation of preventative and risk reduction strategies the loss of lives can be curtailed and if we work together whole heartedly we can avert deaths, he concluded.

Secretary Health Dr. Saeed Ahmed Mangnejo, Deputy Commissioners of six districts, all Medical Superintendents (MSs) of Government hospitals, DHOs, representatives of education and other departments also attended the meeting.

Preventive measures were focused in the meeting and it was also decided that short courses, regarding how to treat heat wave patients to be conducted, a massive awareness drive through electronic and print media would also be launched.

The list of rehabilitation centres would be published in the leading newspapers.

Water, ambulances and availability of basic medicines would be provided at these camps and it would be ensured that heat stroke affected patients might be treated at nearest centre and not to refer to big hospital to save time and lives of the patients.—APP

<http://epaper.brecorder.com/2016/03/29/8-page/745198-news.html>

MORE RAINS, SNOWFALL MAY NEGATIVELY AFFECT WHEAT CROP

Business Recorder, April 1, 2016

More rains and snowfall forecast by the Meteorological department may negatively affect wheat crop that stands over an area of 8.99 million hectares in the country, as crop needs dry weather at this stage, agriculture experts said. “Rain will affect harvest ready crop (wheat) especially in Sindh and Punjab provinces. Rain is harmful for wheat crop at this time and a prolonged rain spell especially in April will adversely affect the crop,” they further said.

Dr Shakeel Ahmad, Crop Commissioner, Ministry of National Food Security and Research told Business Recorder that at the moment, a very good wheat crop was expected in the irrigated as well as rain-fed areas of the country; however, the crop could be damaged if the rain spell was prolonged. “Prolonged rain spell will damage wheat crop as strong winds during rains cause lodging of wheat crops which affect production as well as quality of wheat,” he added.

He said harvesting of wheat crop had begun in Sindh and wheat harvesting in Punjab would start mid-April, therefore more rains at that stage would damage the crop.

Hazrat Mir chief meteorologist of Pakistan Meteorological Department while talking to Business Recorder said that rains along with thundershowers/snowfall were expected in the next few days in the north-western parts of the country and that would continue in most parts of the country during April with intervals

. He said the Met Department had issued a detailed advisory for the farmers to enable them to save crops through adopting precautionary measures.

He said rains along with snowfall were expected over high mountains of the country during Friday to Sunday. A westerly wave, presently producing rains over Iran & Afghanistan, is likely to enter Pakistan on Friday (tomorrow).

Under the influence of this weather system isolated rain showers along with thunderstorms are expected in various parts of Balochistan including Quetta, Zhob, Kalat & Sibbi divisions during Thursday evening to Saturday. Rain/dust-thundershowers are also expected at a few places of D G Khan, Multan, Faisalabad, Sahiwal & Lahore divisions on Saturday and Sunday.

Mir said that according to weather forecast widespread rain/thundershowers with isolated heavy snowfall over the high mountains were expected in Malakand, Hazara divisions, Gilgit Baltistan (GB) and Azad Jammu Kashmir (AJK) on Friday evening to Sunday.

Heavy downpours may trigger landslides in the vulnerable areas of upper parts of Khyber Pakhtunkhwa (KP), GB & AJK. Scattered rains along with thunderstorms are expected in Islamabad, Federally Administered Tribal Areas (FATA), Mardan, Peshawar, Kohat, Bannu & D I Khan divisions and Upper Punjab Rawalpindi, Sargodha and Gujranwala divisions from Friday evening to Sunday.

The Federal Committee on Agriculture in October last year fixed wheat production target at 26 million tons for 2015-16 from an area of 8.99 million hectares. Out of 26 million tons, Punjab is projected to produce 19.5 million tons from an area of 6.68 million hectares, Sindh 4.2 million tons from an area of 1.15 million hectares, KP 1.4 million ton 0.75 million hectares and Balochistan 0.9 million tons from an area of 0.4 million hectares.

<http://www.brecorder.com/agriculture-a-allied/183/31463/>

CLIMATE MODEL PREDICTS WEST ANTARCTIC ICE SHEET COULD MELT RAPIDLY

International New York Times, 31 March 2016

Justin Gills

For half a century, climate scientists have seen the West Antarctic ice sheet, a remnant of the last ice age, as a sword of Damocles hanging over human civilization.

The great ice sheet, larger than Mexico, is thought to be potentially vulnerable to disintegration from a relatively small amount of global warming, and capable of raising the sea level by 12 feet or more should it break up. But researchers long assumed the worst effects would take hundreds — if not thousands — of years to occur.

Now, new research suggests the disaster scenario could play out much sooner.

Continued high emissions of heat-trapping gases could launch a disintegration of the ice sheet within decades, according to a study published Wednesday, heaving enough water into the ocean to raise the sea level as much as three feet by the end of this century.

With ice melting in other regions, too, the total rise of the sea could reach five or six feet by 2100, the researchers found. That is roughly twice the increase reported as a plausible worst-case scenario by a United Nations panel just three years ago, and so high it would likely provoke a profound crisis within the lifetimes of children being born today.

The vast West Antarctic ice sheet sits on bedrock that dips thousands of feet below sea level. New computer simulations suggest that the warming atmosphere and ocean could attack the ice sheet from above and below, causing sea levels to rise much faster than previously thought.

The situation would grow far worse beyond 2100, the researchers found, with the rise of the sea exceeding a pace of a foot per decade by the middle of the 22nd century. Scientists had documented such rates of increase in the geologic past, when far larger ice sheets were collapsing, but most of them had long assumed it would be impossible to reach rates so extreme with the smaller ice sheets of today.

“We are not saying this is definitely going to happen,” said David Pollard, a researcher at Pennsylvania State University and a co-author of the new paper. “But I think we are pointing out that there’s a danger, and it should receive a lot more attention.”

The long-term effect would likely be to drown the world’s coastlines, including many of its great cities.

Dr. Clark described the new work as “a really important paper that adds to the growing recognition that in the absence of rapid and strong mitigation of carbon emissions, we are in store for a large sea level rise at rates that may be even faster than has been considered.”

It was his panel that had estimated an upper limit of three feet or so on the likely sea level rise in the 21st century, while specifically warning that a better understanding of the vulnerability of Antarctic ice could change that estimate.

The new research is the work of two scientists who have been at the forefront of ice-sheet modeling for years. They are Robert M. DeConto of the University of Massachusetts, Amherst, and Dr. Pollard, who is a colleague of Dr. Alley’s at Penn State.

In a lengthy interview on Monday, Dr. DeConto recounted years of frustration. The computer program he had built in a long-running collaboration with Dr. Pollard showed increasing sophistication in its ability to explain the behavior of ice sheets, but it had some trouble analyzing the past.

Unless global temperatures were raised to unrealistic levels, the model would not melt enough ice to reproduce the high sea levels known to have occurred in previous periods when either the atmosphere or the ocean was warmer. The ability to reproduce past events is considered a stringent test of the merits of any geological model. We knew something was missing,” Dr. DeConto said.

The new idea came from Dr. Alley. He urged his colleagues to consider what would happen as a warming climate attacked huge shelves of floating ice that help to protect and buttress the West Antarctic ice sheet.

Smaller, nearby ice shelves have already started to disintegrate, most spectacularly in 2002, when an ice shelf the size of Rhode Island, the Larsen B shelf, broke apart in two weeks.

The West Antarctic ice sheet sits in a sort of deep bowl that extends far below sea level, and if it loses its protective fringes of floating ice, the result is likely to be the formation of vast, sheer cliffs of ice facing the sea. These will be so high they will become unstable in places, Dr. Alley said in an interview, and the warming atmosphere is likely to encourage melting on their surface in the summer that would weaken them further.

The result, Dr. Alley suspected, might be a rapid shrinkage as the unstable cliffs collapsed into the water. Something like this seems to be happening already at several glaciers, including at least two in Greenland, but on a far smaller scale than may be possible in West Antarctica.

When Dr. DeConto and Dr. Pollard, drawing on prior work by J. N. Bassis and C. C. Walker, devised some equations to capture this “ice-cliff instability,” their model produced striking results. In contrast to many prior attempts, it suddenly had no difficulty recreating the high sea levels of past warm periods.

The obvious next step was to ask the model what might happen if human society continues to warm the planet by pouring huge amounts of greenhouse gases into the atmosphere.

The answer the scientists got is described in their paper in the dry language of science, but it could easily serve as the plot device of a Hollywood disaster movie. They found that West Antarctica, which is already showing disturbing signs of instability, would start to break apart by the 2050s.

Vulnerable parts of the higher, colder ice sheet of East Antarctica would eventually fall apart, too, and the result by the year 2500 would be 43 feet of sea level rise from Antarctica alone, with still more water coming from elsewhere, the computer estimated. In some areas, the shoreline would be likely to move inland by miles.

The paper published Wednesday does contain some good news. A far more stringent effort to limit emissions of greenhouse gases would stand a fairly good chance of saving West Antarctica from collapse, the scientists found. That aspect of their paper contrasts with other recent studies postulating that a gradual disintegration of West Antarctica may have already become unstoppable.

But the recent climate deal negotiated in Paris would not reduce emissions nearly enough to achieve that goal. That deal is to be formally signed by world leaders in a ceremony in New York next month, in a United Nations building that stands directly by the rising water

http://www.nytimes.com/2016/03/31/science/global-warming-antarctica-ice-sheet-sea-level-rise.html?_r=1

CARBON EMISSIONS HIGHEST IN 66 MILLION YEARS, SINCE DINOSAUR AGE

Business Recorder, April 2, 2016

Alister Doyle

The rate of carbon emissions is higher than at any time in fossil records stretching back 66 million years to the age of the dinosaurs, according to a study last Monday that sounds an alarm about risks to nature from man-made global warming.

Scientists wrote that the pace of emissions even eclipses the onset of the biggest-known natural surge in fossil records, 56 million years ago, that was perhaps driven by a release of frozen stores of greenhouse gases beneath the seabed.

That ancient release, which drove temperatures up by an estimated 5 degrees Celsius (9 Fahrenheit) and damaged marine life by making the oceans acidic, is often seen as a parallel to the risks from the current build-up of carbon in the atmosphere from burning fossil fuels.

“Given currently available records, the present anthropogenic carbon release rate is unprecedented during the past 66 million years,” the scientists wrote in the journal *Nature Geoscience*.

The dinosaurs went extinct about 66 million years ago, perhaps after a giant asteroid struck the Earth.

Lead author Richard Zeebe of the University of Hawaii said geological records were vague and “it’s not well known if/how much carbon was released” in that cataclysm.

Current carbon emissions, mainly from burning fossil fuels, are about 10 billion tonnes a year, against 1.1 billion a year spread over 4,000 years at the onset of the fast warming 56 million years ago, the study found.

The scientists examined the chemical makeup of fossils of tiny marine organisms in the seabed off the New Jersey in the United States to gauge that ancient warming, known as the Paleocene-Eocene Thermal Maximum (PETM).

UN studies project that temperatures could rise by up to 4.8C this century, causing floods, droughts and more powerful storms, if emissions rise unchecked. Carbon dioxide forms a weak acid in seawater, threatening the ability of creatures such as lobsters or oysters to build protective shells.

“Our results suggest that future ocean acidification and possible effects on marine calcifying organisms will be more severe than during the PETM,” Zeebe said.

“Future ecosystem disruptions are likely to exceed the relatively limited extinctions observed at the PETM,” he said. During the PETM, fish and other creatures may have had longer time to adapt to warming waters through evolution.

Peter Stassen, of the University of Leuven who was not involved in the study, said the study was a step to unravel what happened in the PETM. The PETM “is a crucial part of our understanding of how the climate system can react to carbon dioxide increases,” he said.

<http://www.brecorder.com/weekend-magazine/0:/31929:carbon-emissions-highest-in-66-million-years-since-dinosaur-age/>

NEWS COVERAGE PERIOD FROM MARCH 21st TO MARCH 27th 2016

CLIMATE CHANGE CALLS FOR REVISITING IWT

Dawn, Business & Finance weekly, March 21st, 2016

Ashfak Bokhari

THE Senate has passed a resolution asking the government to ‘revisit’ the Indus Waters Treaty signed in 1960 with India, but the government benches opposed the move.

PPP senators, who are in the majority, proposed to make the IWT a part of the ‘comprehensive bilateral dialogue’ with India to make new provisions in the treaty to enable Pakistan get more water for its rivers. The ruling party members, however, indulged more in polemics than stating the government’s position on the issue.

The government has not yet formulated a clear policy on the treaty as is evident from a recent statement of Federal Minister for Water and Power Khawaja Asif that the IWT was heavily tilted in favour of India and the government should revisit it in the greater interest of the country. But he was quick to add that he cannot give his opinion as to whether the treaty should be reviewed or not.

During the interaction with the media, top officials of the Pakistan Commission on Indus Water expressed views which were in conflict with those of the minister and his ministry’s secretary. The additional commissioner of Indus waters was of the view that India was not involved in halting Pakistan’s water and insisted that the hydropower projects that India had built so far on Pakistan’s rivers are not inflicting loss to water interests of the country.

Even the Indus River System Authority (Irsa) chairman was seen going against the traditional narrative that India was responsible for Pakistan’s water woes. Speaking at a meeting of the Senate Standing Committee on Water and Power last July, he said the reports in the media about India getting more water than its allocation is mere propaganda for the neighbour is using water only to produce electricity.

The Hindu recently observed: “New Delhi needs to factor in a new reality: More than Kashmir, it is the accusation that India is stealing water that is rapidly becoming the ‘core issue’ in the Pakistani establishment’s narrative about bilateral problems.”

The fact remains there is no provision in the treaty which allows India to construct a certain number of dams. Nor is there one that prohibits India from making dams beyond a certain number. Therefore, it is an issue outside the scope of the treaty.

In the past, Pakistan has invoked the jurisdiction of the neutral expert where it has failed to get a favourable verdict after lengthy process during which the construction was completed. Pakistan has thus 'lost' cases before the neutral experts who, according to legal experts, never had the legal competence to decide issues on merit.

The fact remains that the treaty was signed in an era when climate change, environmental and ecological changes were not a threat to the planet and countries. It is interesting to note the terms and language used by the neutral expert in his verdict on Baglihar project dispute such as 'new technical norms and new standards', 'state of the art' and 'best and latest practices in the field of construction and operation', the risks of increased floods associated with 'climate change'. It shows that the treaty needs to accommodate the new realities in the Indus basin treaty.

Despite being largely successful and having survived severe tests there are some limitations within the IWT that require review. Michel T Klare, a noted scholar on water resource issues, is of the opinion that the treaty does not allow for joint development of the Indus basin, nor does it eliminate the grounds for conflict over water distribution since it is a plan for the separate development of the basin.

Similarly, it does not create mechanisms to address issues specified in the treaty such as groundwater use, changes in flow due to climate change, changing domestic demand due to population increases. This lack of cooperative sharing of water, he says, has considerable negative consequences for the ecology and societies of the Indus basin and calls for a review of the IWT.

Besides, the Himalayan glaciers are melting at an alarming rate because of climate change. Within the next 50 years, experts believe there will be a 30-40pc drop in glacial melt. A strategy to create more storage capacity for water is the only option available.

As pointed out by Ahmer Bilal Soofi, an eminent lawyer, "We can blame India's conduct as an upper riparian state only up to a point. What of our own conduct and responsibilities? Lamentably, we have been wasting our water resources with almost criminal negligence and abandon."

Hence, there is no escape from building several water reservoirs. Latest official estimates show that per capita water availability in the country has come down to 1,032 cubic metres in 2016 from 5,260 cubic metres in 1951.

It is obvious that Pakistan is feeling alienated from the IWT after repeated failures to get redress of its grievances and, hence, would like to replace it with a new treaty. But India does not need an amended or new treaty. And without its consent, the IWT cannot be revisited. A pragmatic approach would be to hold bilateral talks outside the treaty to remove the lacuna it suffers from.

<http://www.dawn.com/news/1247008>

CLIMATE RESILIENCE: MINISTRY TO REVIEW DEVELOPMENT PROJECTS FOR NEXT FISCAL YEAR
The Express Tribune, March 24th, 2016.

Shahzad Anwar

ISLAMABAD: The Ministry of Climate Change is scheduled to meet on March 29 to review development projects for next fiscal year as part of adaption and mitigation measures to boost the country's overall climate resilience.

The Departmental Development Working Party (DDWP) will review seven projects to be proposed for funding.

The projects to be reviewed by the DDWP include strengthening capacity for effective implementation worth Rs19.52 million and development of taxonomic profile of mammals in support of international agreements costing Rs59.9 million. Each of the projects would run for three years.

The meeting will also consider establishment of climate change reporting unit in the ministry with a cost of Rs41.38 million to be completed in four years, multi-hazard vulnerability and risk assessment and deployment of national disaster risk information system costing Rs59.58 million, and protection and mainstreaming of vulnerable women, children, elderly and disable in disaster management project worth Rs58.04 million.

The national disaster spatial data infrastructure project costing Rs59.86 million to be completed in one year and implementation of human resource development plan on disaster management for capacity building of government and other stakeholders worth Rs34.07 million to be completed in five years will also be considered for proposal ahead of the coming fiscal budget.

The meeting will discuss goals and objectives of the projects and various aspects related to their implementation, sources informed.

In the past, DDWP also proposed projects in similar meetings which could not be materialised due to shortage of funds and weak nature of projects, as the Central Development Working Party only considered projects prepared in sound technical manner.

In the wake of increasing climate induced incidents, the climate ministry has come under strong criticism by parliamentarians for not having a national level awareness and advocacy programme.

Experts are of the view that climate ministry should prepare more projects for adaptation and mitigation and Planning Commission must seriously consider these projects and arrange funds from its Public Sector Development Programme.

At present, only one project on persistent organic pollutants is operating with World Bank funding.

<http://tribune.com.pk/story/1071437/climate-resilience-ministry-to-review-development-projects-for-next-fiscal-year/>

SCIENTISTS WARN OF PERILOUS CLIMATE SHIFT WITHIN DECADES, NOT CENTURIES

Justin Gillis

International New York Times, March 24, 2016

The nations of the world agreed years ago to try to limit global warming to a level they hoped would prove somewhat tolerable. But leading climate scientists warned on Tuesday that permitting a warming of that magnitude would actually be quite dangerous.

The likely consequences would include killer storms stronger than any in modern times, the disintegration of large parts of the polar ice sheets and a rise of the sea sufficient to begin drowning the world's coastal cities before the end of this century, the scientists declared.

“We’re in danger of handing young people a situation that’s out of their control,” said James E. Hansen, the retired NASA climate scientist who led the new research. The findings were released Tuesday morning by a European science journal, Atmospheric Chemistry and Physics.

A draft version of the paper was released last year, and it provoked aroiling debate among climate scientists. The main conclusions have not changed, and that debate seems likely to be replayed in the coming weeks.

The basic claim of the paper is that by burning fossil fuels at a prodigious pace and pouring heat-trapping gases into the atmosphere, humanity is about to provoke an abrupt climate shift.

Specifically, the authors believe that fresh water pouring into the oceans from melting land ice will set off a feedback loop that will cause parts of the great ice sheets in Greenland and Antarctica to disintegrate rapidly.

“Some of the claims in this paper are indeed extraordinary,” said Michael E. Mann, a climate scientist at Pennsylvania State University. “They conflict with the mainstream understanding of climate change to the point where the standard of proof is quite high.”

Despite any reservations they might have about the new paper, virtually all climate scientists agree with Dr. Hansen’s group that society is not moving fast enough to reduce emissions of greenhouse gases, posing grave risks. An agreement reached late last year in Paris seeks to cut emissions, but it is not remotely ambitious enough to limit global warming to the degree Dr. Hansen regards as necessary.

Among Dr. Hansen’s colleagues, some of the discomfiture about the new paper stems from his dual roles as a publishing climate scientist and, in recent years, as a political activist. He has been arrested at rallies, and he has joined with a group of young people who sued the federal government over what they said was its failure to limit global warming.

Dr. Hansen argues that society is in such grave peril that he feels morally compelled to go beyond the normal role played by a scientist and to sound a clear warning.

That stance has made him a hero to college students fighting climate change, but some fellow scientists fear he has opened himself to the charge that he is skewing his scientific research for political purposes.

In 2009, nations agreed to try to limit the planetary warming to 3.6 degrees Fahrenheit, or 2 degrees Celsius, above the preindustrial level. The Earth has already warmed by about half that amount. The climate appears to be destabilizing, virtually all land ice on the planet has started to melt, and the oceans are rising at an accelerating pace.

The paper, written by Dr. Hansen and 18 other authors, dwells on the last time Earth warmed naturally, about 120,000 years ago, when the temperature reached a level estimated to have been only slightly higher than today.

Large chunks of the polar ice disintegrated then, and scientists have established that the sea level rose 20 to 30 feet. Climate scientists agree that humanity is about to cause an equal or greater rise in sea level, but they have tended to assume that such a large increase would take centuries, at least.]

The new paper argues that it could happen far more rapidly, with the worst case being several feet of sea-level rise over the next 50 years, followed by increases so precipitous that they would force humanity to beat a hasty retreat from the coasts.

“That would mean loss of all coastal cities, most of the world’s large cities and all their history,” Dr. Hansen said in a video statement that accompanied the new paper.

The paper identifies a specific mechanism that the scientists say they believe could help cause such an abrupt climate shift.

Their idea is that the initial melting of the great ice sheets will put a cap of relatively fresh water on the ocean surfaces near Antarctica and Greenland. That, they think, will slow or even shut down the system of ocean currents that redistributes heat around the planet and allows some of it to escape into space.

Warmth will then accumulate in the deeper parts of the ocean, the scientists think, speeding the melting of parts of the ice sheets that sit below sea level.

In addition, a wider temperature difference between the tropics and the poles will encourage powerful storms, the researchers contend. The paper cites evidence, much of it contested, that immense storms happened during the warm period 120,000 years ago.

For instance, the paper says such storms might have thrown giant boulders onto coastal ridges in the Bahamas, though other experts think a tsunami might have been responsible.

The idea of a shutdown in the ocean circulation because of global warming was considered more than a decade ago, and while scientists concluded that a weakening of the currents was possible, they said a complete shutdown was unlikely to happen in this century.

That did not stop a distorted version of the idea from becoming the premise of the disaster movie “The Day After Tomorrow,” released in 2004.

The new paper may reopen that debate, requiring scientists to re-examine the idea with the more sophisticated computer models of the climate that are available today. It could take several years for the experts to come to a consensus, though.

Dr. Hansen spent decades heading NASA’s climate research unit in Manhattan, before retiring in 2013. He now heads a center created for him at Columbia University.

He gained fame in 1988 when he warned Congress that global warming had already begun. He was ahead of the scientific consensus at the time, but it became clear in retrospect that Earth had been in the midst of a period of rapid global warming at the time he testified.

Even scientists wary of the specific claims in the new paper point to Dr. Hansen’s history to argue that his ideas need to be taken seriously.

“I think we ignore James Hansen at our peril,” Dr. Mann said.

<http://www.nytimes.com/2016/03/23/science/global-warming-sea-level-carbon-dioxide-emissions.html>

HEATWAVE LIKELY TO HIT BY END MAY OR EARLY JUNE: MET DEPT
The Express Tribune, March 25th, 2016.

KARACHI: The heatwave this year is likely to hit the metropolis in the last week of May or first week of June, warned Pakistan Metrological Department director Abdul Rashid, while speaking at a seminar on Thursday.

Hundreds of fatalities resulting from the unprecedented heatwave last year were apparently due to a lack of coordination between these agencies, participants of the seminar titled ‘Heat Wave Management, A Shared Responsibility’ and organised by the Sindh Environmental Protection Agency were told.

According to Karachi Metropolitan Corporation administrator Roshan Ali Shaikh, coordination problems occur due to the excessive number of municipalities in the city. He pointed out that the city has a number of laws but the government has failed to effectively implement them.

“In Karachi, there isn’t single agency to deal with natural disasters, nor is there any coordination agency,” he stressed.

According to Shaikh, only the Karachi commissioner’s office performs the duty of coordination but it fails to do so effectively. Speaking on the District Disaster Management Authority (DDMA), he said people are usually unaware of the organisation since it is nonfunctional.

“The head of the DDMA is actually supposed to decide when a particular incident can be classified as a disaster,” he said, adding that last year had the DDMA been active, it could have directed K-Electric to cut off power supply to the industries and start supplying to residential areas instead.

Joint executive head of Jinnah Postgraduate Medical Centre (JPMC), Dr Seemin Jamali, said one of the lessons learned from past experiences was that there is no central command and control system during the heatwave and every institution works without coordination.

She pointed out that no awareness campaigns are being held in the city.

“More than 10,000 people were brought to the JPMC in five days of the heatwave,” she said, explaining that a heat wave is an extended period of extreme heat, often accompanied by high humidity.

Dr Jamali said during last year’s heatwave, 84 deceased people were brought to the JPMC, out of which 59 were male and 25 were female. Two hundred and ninety-nine patients died at the hospital, she added.

Talking about coping measures, she advised people to drink plenty of fluids – five to seven ounces every 20 minutes. She said that employees should be provided enough cool, fresh drinking water during working hours and recommended drinking at least four cups per hour for the entire shift.

Pakistan Disaster Management Authority director-general Syed Suleman Shah said temperatures rise due to abnormal weather patterns, high humidity, low air velocity and also dry wind. Speaking on the impact of the wave, he said that 65,533 people were brought to hospitals in Karachi, while, 731 people were brought to the hospitals in the rest of the province.

The total deaths reported, according to him, were 1,233 from Karachi and eight from other districts of Sindh. Shah said that there should be heatstroke treatment centres at all hospitals and awareness of self-care and individual-level prevention from heat stroke should be encouraged.

Shedding light on last year’s heatwave, he said the intensity of heat started from June 19, when the temperature rose to 41 degrees centigrade. It then reached its peak on June 21, at 45 degrees, and started subsiding by June 24, when it dropped to 38 degrees .

He also pointed out that one of the reasons of the high number of fatalities during the heatwave last year was that it came during Ramazan, the month of fasting. He said beggars throng the city during the holy month as people tend to give charity and usually live on the streets [where they are vulnerable to extreme weather].

<http://tribune.com.pk/story/1072321/time-to-prepare-heatwave-likely-to-hit-by-end-may-or-early-june-met-dept/>

NEWS COVERAGE PERIOD FROM MARCH 14th TO MARCH 20th 2016
RECORD LEAP IN CARBON DIOXIDE SEEN IN 2015
Business Recorder, March 14, 2016

The level of carbon dioxide in the atmosphere increased at a record pace last year, US government scientists reported, raising new concern about one of the top greenhouse gases and the effects of global warming. The measurement came from the National Oceanic and Atmospheric Administration’s Mauna Loa Observatory in Hawaii.

“The annual growth rate of atmospheric carbon dioxide... jumped by 3.05 parts per million during 2015, the largest year-to-year increase in 56 years of research,” said a NOAA statement.

Last year also marked the fourth consecutive year that CO₂ grew more than two parts per million.

As of February, the average global atmospheric CO2 level was 402.59 parts per million. This is a significant rise over pre-industrial times. Prior to 1800, atmospheric CO2 averaged about 280 ppm.

“Carbon dioxide levels are increasing faster than they have in hundreds of thousands of years,” said Pieter Tans, lead scientist of NOAA’s Global Greenhouse Gas Reference Network.

“It’s explosive compared to natural processes.”

NOAA said the jump in CO2 is partially due to the weather phenomenon known as El Nino, which warms some parts of the world’s oceans and causes unusual precipitation and drought patterns.

The rest of the growth is driven by continued high emissions from fossil fuel consumption, said NOAA.

The last time a similar jump in CO2 was observed was in 1998, also a strong El Nino year. “The impact of El Nino on CO2 concentrations is a natural and relatively short-lived phenomenon,” said a statement by World Meteorological Organization Secretary-General Petteri Taalas.

“But the main long-term driver is greenhouse gas emissions from human activities. We have the power and responsibility to cut these,” he added.

“This should serve as a wake-up call to governments about the need to sign the Paris Climate Agreement and to take urgent action to make the cuts in CO2 emissions necessary to keep global temperature rises to well below 2 degrees Celsius.”

<http://www.brecorder.com/general-news/172/25436/>

US FORECASTER SEES LA NINA POSSIBLY SUCCEEDING EL NINO

Business Recorder, March 14, 2016

A US government weather forecaster said on March 10 it sees a near 50 percent chance La Nina could develop by the Northern Hemisphere fall on the heels of the El Nino conditions likely to dissipate in the coming months.

The Climate Prediction Centre (CPC), an agency of the US National Weather Service, in its monthly forecast maintained its projections that current El Nino conditions, which have been linked to crop damage around the world, will likely dissipate by late Northern Hemisphere spring or early summer.

“All models indicate that El Nino will weaken and the chance of La Nina conditions increases into the fall,” the CPC said in its report.

Last month, CPC said it saw a chance of La Nina developing later this year, emerging for the first time since 2012. Typically less damaging than El Nino, La Nina is characterised by unusually cold ocean temperatures in the equatorial Pacific Ocean and tends to occur unpredictably every two to seven years.

Severe occurrences have been linked to floods and droughts.

The strong El Nino still underway has had a significant impact globally and is expected to affect temperature and precipitation patterns across the United States in the upcoming months, the CPC said.

The ongoing El Nino, a warming of sea-surface temperatures in the Pacific, has been linked to serious crop damage, forest fires and flash floods.

<http://www.brecorder.com/general-news/172/25437/>

DAMAGING EFFECTS

Dawn, March 17th, 2016

Marc-André Franche

THE year 2015 will be remembered for two landmark global agreements. In September, UN member states endorsed the 2030 Development Agenda and the Sustainable Development Goals. Later, 196 parties to the UN Framework Convention on Climate Change adopted the Paris Agreement at the conclusion of UN Climate Change Conference (COP21) in France.

The year will also be remembered as the warmest on record with temperature rises breaking the one degree Celsius milestone above pre-industrial era average. A heatwave swept the globe including Sindh where 2,000 perished reminding us of the increased intensity and frequency of climatic events and its growing impact on development, particularly the poor and vulnerable.

It has been established that climate change is the consequence of Greenhouse Gas Emission (GHG) and is caused by human activities. The Intergovernmental Panel on Climate Change Synthesis Report of 2014 pointed to an increase in global temperature of 4°C contrary to the initial estimates of about 3.5°C till 2100.

Developing countries are more vulnerable because of their dependence on agriculture and socioeconomic dynamics including their weak capacities to cope with climate change. In 2008, more than 100 million people fell below the poverty line largely due to food price hikes and low agriculture yields.

At the COP21 participating countries adopted the first-ever universal, legally binding climate deal that promises a global action plan to save the world from the effects of climate change by limiting global warming to 1.5 °C.

The COP21 agreement is indeed a diplomatic success. However, the intentions in the Paris Agreement and actual commitments in the form of Intended Nationally Determined Contributions (INDCs) by governments don't connect.

Estimates suggest that the combined impact of all INDCs, if fully implemented, will account for 86pc of the GHG emissions and will still result in global average temperature hikes above the 2°C threshold. Similarly, the intention of developed countries to mobilise \$100 billion per year until 2025 is not only insufficient but also uncertain to be realised.

Pakistan is the eighth most vulnerable country to climate change though it produces less than 0.5pc of global emissions. Events like the 2010 floods which resulted in 2,000 human lives and economic losses equivalent to 7pc of GDP reconfirm that climate change is the most immediate development threat faced by this country.

There is a clear and visible shift in summer monsoons trend from northeast to northwest by a range of 80-100 kilometres, threatening the agriculture sector. Frequency of other extreme weather events like cyclones, droughts and glacial lake outburst floods show that Pakistan is becoming increasingly vulnerable to climate change.

Pakistan is conscious to the threats. The National Climate Change Policy (NCCP) of 2012 outlines mitigation and adaptation actions. Pakistan is one of the few countries to have undertaken a Climate Public Expenditure and Institutional Review (CPEIR) and has established public expenditure and institutional benchmarks.

Post 18th Amendment, climate change has largely become a provincial subject and provinces must now take the lead. It is encouraging to note that some of the provinces have already started initiatives such as the 'Billion Tree Plantation' initiative.

The deficit of vision and action remains widespread however. The INDCs put forward by Pakistan for the COP21 were considered limited and devoid of quantitative commitments and investment requirements for adaptation and mitigation.

Using the CPEIR, Pakistan could have spelled out in detail its vulnerability to climate change. This would have afforded an opportunity to plead climate change-related needs in front of lobbyists, donors and negotiators across the globe. Pakistan can still revise its INDCs.

It needs strong institutions to implement its NCCP. A ‘whole of government’ approach including parliament, finance, planning and sectoral departments is needed. The medium-term budgetary frameworks of ministries should take into account climate change’s effects.

The finance and planning institutions at the federal and provincial level should track related expenditure and progress. Provinces must integrate climate change issues in their growth strategies given its impact on poverty and social development.

Pakistan incurred \$6bn climate change-related losses in 2012. It needs to invest 5.5pc of GDP annually for mitigation and 1.5-3pc for adaptation to address its effects. For a 15pc reduction in GHG, an annual investment of around \$8bn is needed.

Given the global shortfall in financing, Pakistan requires an overarching climate change financing framework which can help streamline budget allocations and ensure holistic response to the challenge.

So far the evidence affirms that no one will remain untouched by the consequences of climate change. Developing countries will be most affected. It is time to act together. As UN Secretary General Ban Ki-moon said, “there is no plan B, because there is no planet B”.

<http://www.dawn.com/news/1246105>

ECONOMIC GROWTH NO LONGER TRANSLATES INTO MORE GREENHOUSE GAS: IEA

Business Recorder, March 19, 2016

PARIS: Global economic growth did not translate into more harmful greenhouse gas emissions from the energy sector last year, the IEA said on Wednesday, a strong indication that growth and increased pollution no longer go hand in hand.

For the second year running, worldwide CO2 emissions stalled in 2015 while the global economy grew by 3.1 percent, after a 3.4-percent rise in 2014, the International Energy Agency said.

A surge in the contribution from renewable energy sources explains the decoupling of growth and CO2 emissions, with clean energy sources accounting for 90 percent of all new electricity generation in 2015.

Wind alone contributed half of all new electricity generation, the IEA said.

“We now have seen two straight years of greenhouse gas emissions decoupling from economic growth,” IEA Executive Director Fatih Birol said in a statement.

“Coming just a few months after the landmark COP21 agreement in Paris, this is yet another boost to the global fight against climate change.”

There have been four instances of falling CO2 emissions year-on-year in the last four decades, three of which coincided with economic weakness, in contrast to the scenario seen these past two years.

The two largest greenhouse gas emitters, the United States and China, both registered declines in CO2 production in 2015.

But this was offset by increased emissions in other Asian developing countries, the Middle East and, to a less extent, in Europe, keeping the overall emissions level flat, the IEA said. Environmental organisation Greenpeace called the IEA's findings "encouraging", saying they were "a sign that national climate and renewable energy policies are working".

But in a statement, it also said that emissions now need to be brought down. "Few steps have been taken to accelerate clean energy deployment so emissions start to decline," Greenpeace International Global Energy Strategist Emily Rochon said in a statement.

"World leaders now need to double down on making sure global temperature increase remains within the limits agreed in last year's Paris Agreement," added Li Shuo, Greenpeace East Asia senior climate adviser.

Greenpeace also noted that "Europe is the only region in the world that saw investments in renewable energy, particularly wind and solar, decline in the last five years".

The 29-nation IEA provides analysis on global energy markets and advocates policies enhancing the reliability, affordability and sustainability of energy.—AFP

<http://epaper.brecorder.com/2016/03/18/12-page/741859-news.html>

NEWS COVERAGE PERIOD FROM MARCH 7th TO MARCH 13th 2016

CLERICS, PRIESTS TO ADDRESS CLIMATE CHANGE

The Express Tribune, March 11th, 2016.

ISLAMABAD: Leaders of different faiths pledged to play a role to sensitise communities about the negative impacts of climate change.

They were speaking on Thursday at a seminar titled "What can religious actors do about climate change? Protecting God's creation through interfaith action," organised by Norwegian Church Aid (NCA) — a faith based organisation which provides humanitarian assistance and work for long term development.

Speakers emphasised that climate change should be addressed Friday mosque sermons and Sunday church services besides introducing regular lectures in seminaries.

Ghazali Education Trust Pakistan European Coordinator Mian Muhammad Tayyib said, "Men and women must serve their Creator by taking good care of themselves and the environment. The Creator shaped the earth and will be watching our actions," adding that proactive action to save our planet is no longer a matter of choice but an imperative upon us all.

Pakistan Ulema Council Chairman Tahir Mehmood Ashrafi said God created the universe in balance, but mankind disturbed the balance out of greed. He said that no prophet had allowed for the misuse of natural resources. He said religious leaders should be educated on climate change issues so that they could convey a decisive message to the people during their respective sermons.

Luther Seminary Professor Emeritus Dr Charles Amjad-Ali said COP 21 in Paris agreed to limit carbon emissions, but in a non-binding agreement which has yet to be ratified. "There is no system for its implementation. The climate change agreement is still human-centric, when it should be eco-centric or earth-centric," Ali said.

He said that all development should be participatory and sustainable. NCA Adviser on Climate Change Justice and Energy Ingrid Naess-Holm shared his experience with the interfaith climate change network in Norway. Church of Norway Deputy General Secretary Rev Einar Tjelle and others also spoke.

<http://tribune.com.pk/story/1063657/interfaith-warming-clerics-priests-to-address-climate-change/>

US, CANADA AGREE ON STEPS TO FIGHT CLIMATE CHANGE

Dawn, March 11th, 2016

WASHINGTON: The United States and Canada agreed joint steps on Thursday to fight climate change, including cutting methane emissions from oil and gas operations and signing last year's Paris climate deal "as soon as feasible."

The agreement was announced as Canadian Prime Minister Justin Trudeau and President Barack Obama met at the White House. Methane, which can leak from pipelines and valves, is a powerful greenhouse gas, with up to 80 times the potential of carbon dioxide to trap the planet's heat.

The agreement can do "even more to protect our countries and our communities, especially in the Arctic, from climate change," Obama said during a welcoming ceremony for Trudeau.

The two countries are seeking to improve relations after Obama last year rejected the Keystone XL pipeline, which was aimed at transporting heavy Canadian oil to the United States. Environmentalists had long opposed the project, which had been under review by Washington for years. Trudeau, a Liberal, had expressed qualified support for Keystone in his campaign. The project had been heavily promoted by his predecessor, Stephen Harper, a Conservative from Alberta's oil patch.

On Thursday, the two countries committed to cutting emissions of methane by 40 to 45 per cent below 2012 levels by 2025, to take steps to fight climate change in the Arctic, and to speed development of green technologies.

The US Environmental Protection Agency will begin developing regulations for methane emissions from existing oil and gas sources immediately and "will move as expeditiously as possible to complete this process," the joint agreement said.

The EPA will start by collecting emissions data from oil and gas companies before embarking on a rule-making process.

"The new data show that methane emissions are substantially higher than we previously understood. So, it's time to take a closer look at regulating existing sources of methane emissions," EPA Administrator Gina McCarthy said in blog post.

Meanwhile, Environment and Climate Change Canada "intends to publish an initial phase of proposed regulations by early 2017," and put in place national regulations in collaboration with provinces, territories, and indigenous groups.

Environmental groups welcomed Thursday's announcement after years of pressing the EPA to expand its oil and gas sector methane rules.

Mark Brownstein, a climate expert at the non-profit Environmental Defence Fund, said the countries, two of the world's largest petroleum drillers, showed real leadership in "setting a mark for other major oil and gas producing nations." But the EPA should not slow-walk the rule-making process during the Obama administration's final months, added Conrad Schneider, advocacy director for the Clean Air Task Force.

"There is no reason to delay protecting our climate and the air breathed by communities near the still-expanding oil and gas industry," he said.

Petroleum industry interests said the EPA's plan to regulate existing oil and gas operations was overkill.

"Regulations are really unnecessary window dressing" as industry is already reducing methane emissions, said Frank Maisano, a lobbyist at Bracewell LLP.

The countries will also encourage state and provincial governments to share lessons learned about designing systems to put prices on emissions for carbon markets.

<http://www.dawn.com/news/1244877>

PUNJAB GOVT KEEN TO DEAL WITH CLIMATE CHANGE IMPACTS: MINISTER

Business Recorder, March 12, 2016

LAHORE: Punjab Minister for Environment Zakia Shah Nawaz has termed the climate change as a serious threat to livelihoods of millions of people across Pakistan.

"Punjab also facing the same phenomenon and the provincial government is fully aware of the scale of threat and keen to redress the climate change impacts on the communities through various adaptive measures," she said this while speaking as chief guest at a seminar on "Harvesting Global Food Security & Justice in the face of Climate Change," held on Friday under the GROW campaign.

The seminar was arranged by the Indus Consortium in collaboration with Oxfam Novib Pakistan.

The minister assured the participants that the provincial government would take all the possible measures to resolve climate change related issues that are identified by the experts and climate change effected communities.

Earlier, provincial steering committee on climate change presented various recommendations to the government for redressing the threats posed by climate change.

The recommendations were based on the detailed deliberations by members of steering committee with the representation of experts from academia, civil society, concerned officials from government line departments, media and local communities.

The recommendations include various policy measures and administrative actions for climate change adaptation and mitigation.

Ashiq Hussain Bokhari, coordinator of the steering committee said that climate change impacts vary in different localities that include unprecedented rains, floods and drought situation and creating serious situation of food insecurity, especially among local farming communities.

He said that the provincial government needs to take steps to help communities in finding local solutions of the issues under Local Adaptation Plans for Action (LAPAs).

Dr Pervez Hassan, Climate Change Commission Punjab on the occasion said that it is a matter of great satisfaction that climate change and its impacts are not only being discussed but the government and communities have started working together to address these issues.

He said that Climate Change Commission Punjab would welcome communities and civil society organizations to reach at a coherent approach to ensure our agriculture and communities are better protected from the impacts of climate change.

Saadia Sohail Rana, Member Punjab Assembly said that we need to enhance awareness at every level. Senior academician Dr Khalid Saifullah Khan, Anjum Riaz, Chief Meteorologist Food Forecasting, Jamshaid Fareed, Iqbal Hyder and Asim Saqlain also expressed their views on the diverse impacts of climate change on the food security situation, especially in Punjab.

The speakers also highlighted the need of finding climate change impacts on local level in the form of local adaptation plans.

The speakers said that Local Adaptation Plans of Action (LAPAs) around Climate Change issues have been developed in six districts of Punjab by Indus Consortium. They said such mechanisms need to be replicated in all districts of the Punjab keeping in view their specific issues and requirements.

<http://epaper.brecorder.com/2016/03/12/5-page/740114-news.html>

NEWS COVERAGE PERIOD FROM FEBRUARY 29th TO MARCH 6th 2016
RARE WEATHER PHENOMENON OBSERVED OFF BALOCHISTAN COAST
Dawn, March 3rd, 2016

Faiza Ilyas

KARACHI: A spectacular fair-weather waterspout, a rare phenomenon, has been observed off the Balochistan coast, the World Wide Fund for Nature-Pakistan (WWF-P) said on Wednesday.

According to the WWF-P, a fisherman who has been part of the organisation's training programmes reported the waterspout near Sakoni, off Kalamat Khor, in Balochistan.

"There was a large patch of cloud over a clear sky on Feb 28. The waterspout could be seen descending," WWF-P quoted the fisherman, Mahar Gul, as saying.

Gul, who hails from Lower Dir, and his colleagues were looking for tuna about 25 nautical miles from the coastline.

"He (Gul) had observed a similar phenomenon two decades ago near Jiwani, Balochistan. This time, he recorded it on his mobile phone, but avoided coming close to the vortex as it could be dangerous," said WWF-P technical adviser on marine fisheries, Mohammad Moazzam Khan.

The waterspout, unlike what its name suggests, is not filled with water but is a column of cloud-filled wind rotating over the ocean's surface. Mr Khan explained that it descends from a cumulus cloud and the water inside is formed by condensation in the cloud.

"There are two types of the phenomenon: tornadic waterspout and fair-weather waterspout. The former, associated with severe thunderstorms, is the most powerful and destructive waterspout."

According to him, waterspouts are most common in tropical and subtropical waters but there is no authentic record of their occurrence on the Pakistan coast.

"The average spout is around 50 metres in diameter, with a wind speed of 80 kilometres an hour. Most waterspouts last up to an hour, though their average duration is just five to 10 minutes," he said.

A natural phenomenon of rare occurrence, waterspouts can be beautiful but dangerous as they have been known to overturn boats, damage large ships and put lives in jeopardy, he said.

<http://www.dawn.com/news/1243269>

SINDH ASKS LG BODIES TO PLAN AGAINST LOOMING HEATWAVE

Dawn, March 3rd, 2016

KARACHI: The Sindh government has asked all municipalities across the province to devise plans to combat the feared heatwave this summer and ensure coordination between them and the relevant provincial ministries, a senior official said on Wednesday.

“We are ready to successfully combat against any weather challenge similar to what we endured last year,” said Ali Hasan Hingorjo, special assistant to the chief minister for rehabilitation, at a press conference at the office of the Provincial Disaster Management Authority (PDMA).

He said the deadly heatwave witnessed by the city in particular and the rest of the province in general was unprecedented in terms of its duration and lethality, which claimed hundreds of lives last year.

“We are prepared this time around with all resources available with us.”

He said public service messages would be sent with the beginning of summer months in their historical cycle; while all the local government institutions and hospitals had been ordered to prepare for possible weather phenomenon.

“All the LG institutions have been asked to forge coordination among themselves and with the relevant ministries,” he said.

He claimed hospitals in the districts and talukas had started setting up heatstroke emergency centres on their premises.

Besides, he added, the provincial government would launch an emergency helpline service where officials would be attending to the people’s calls round-the-clock.

That helpline service would be functioning as a coordination tool to effectively use resources and manpower wherever it was needed, he added.

“People are largely unaware of how to react against heatstroke. We are planning a widespread awareness campaign against it.”

However, Mr Hingorjo did not elucidate the government’s plans if Sindh faced a heatwave during Ramazan, like it did last year, when food outlets would be traditionally closed.

Sources, however, said the Sindh government was mulling over setting up such emergency outlets in Karachi and elsewhere in the province to ensure that heatstroke victims were provided with required food intake during the fasting month.

“There is a proposal about this for which the Sindh government has sought advice from Islamabad,” said an official.

The meteorological office has forecast light rain with gusty winds in the city in coming 48 hours.

The office said the city maximum temperature was 35 degrees Celsius and minimum 19.5 degrees Celsius on Wednesday. Humidity was 24 per cent.

There were no chances of cold weather in coming days even after the likely rainfall, it added.

<http://www.dawn.com/news/1243136>

April 2016

NEWS COVERAGE PERIOD FROM APRIL 25th TO MAY 1st 2016

CLIMATE AGREEMENT

Dawn, April 25th, 2016

AS the monsoon season approaches, with the prospect of continuing ravages of nature, Pakistan has signed, at the UN headquarters, the climate agreement reached in Paris last year, and has agreed to do its bit in helping keep the global rise in temperatures below 2°C.

The good news is that we have an accord, and one that includes more countries than ever before. The bad news is that Pakistan had very little to bring to the negotiations, or to take away from them.

In effect, we have been little more than a sideshow in the whole affair. The only aspect of significance was that, earlier on, there was a meeting between the prime ministers of India and Pakistan on the sidelines of the Paris summit.

Even the promise of that meeting has petered out with the rise in hostile rhetoric between the two countries.

Each monsoon season has brought a rising arc of destruction to Pakistan as the rains intensify and become increasingly difficult to forecast.

Last year, we saw an entire district ravaged by multiple glacial lake outburst floods in Chitral following a sudden downpour in the district that the Met office was not able to forecast. Then the cotton crop witnessed a massive failure, due at least in part to climatic factors.

Pakistan's susceptibility to changing weather patterns is disturbingly high, whether because of erosion of agricultural productivity or as a result of floods.

Every year since the massive flooding of 2010 has seen some sort of climate-related disaster. The country remains largely unprepared again this year with the monsoon season yet to start.

The weather forecasting infrastructure is outdated and some weather radars are reportedly not functional.

Forecasting techniques are also out of date, with the Met office struggling to provide even the minimal 48 hours' warning.

Given these vulnerabilities, it was surprising to see Pakistan bring a short one-page agenda to the climate deal proceedings, and then deliver a dull speech, with no attempt at playing a leadership role.

The performance was further undermined by confusion over who exactly has the lead role in Pakistan — the Foreign Office, the Planning Commission or the Ministry of Climate Change? The government sent the interior minister, who did little more than make a few pro forma statements, to the signing ceremony.

For a front-line state, Pakistan should show far more robust action on climate change. We can only hope nature is kind to us this monsoon season.

<http://www.dawn.com/news/1254225/climate-agreement>

GENERAL ASSEMBLY SESSION: PAKISTAN STEPPING UP EFFORTS TO PREVENT CLIMATE CATASTROPHE

The Express Tribune, April 25th, 2016

United Nations: Pakistan is strengthening its institutional structures to step up action to stave off the most drastic effects of climate change, Interior Minister Chaudhry Nisar Ali Khan told the international community on Saturday.

Speaking after the signing of the Paris climate agreement at the UN General Assembly, he said Pakistan, a country profoundly vulnerable to global warming, would establish a climate change council and climate change authority, adding that more than 5% of its annual budget was allocated to climate change activities.

At the same time, the minister emphasised that adequate resources were critical for climate actions in developing countries. Noting that trillions of dollars were needed globally to effectively respond to climate change impacts, he said the bulk of this amount has to be spent in developing countries.

“Fulfillment of financial obligations, particularly meeting the \$100 billion target by developed countries is extremely important,” Nisar said.

Leaders from at least 175 countries signed the Paris Agreement on climate change.

Calling it a ‘defining moment’, Nisar said “we have now an action plan to deal with the greatest development emergency of our times.”

“We must implement it fully and faithfully,” he added.

The minister said Pakistan joined the consensus in Paris because its objectives aligned with those of the Climate Change Convention. Temperature in Pakistan has risen and its 5,000 glaciers are receding faster than those in any other part of the world, he said, adding that the country was already water-stressed.

<http://tribune.com.pk/story/1091091/general-assembly-session-pakistan-stepping-up-efforts-to-prevent-climate-catastrophe/>

INTENSE HEATWAVE LIKELY TO HIT COUNTRY FROM MAY

The Express Tribune, April 28th, 2016.

Sehrish Wasif

ISLAMABAD: This summer temperature in certain parts of the country is expected to climb to around 50 degree Celsius as a heatwave, more severe than the previous year, is likely to hit Pakistan next month. The hot weather is likely to continue till the first week of June.

“It is expected that the mercury will rise to 50 degrees Celsius in central and southern parts of Pakistan in May this year and there are hardly any chances of rain [in these parts of the country] which will further aggravate the situation,” said Met Office Director General Dr Ghulam Rasool on Wednesday. He said it is expected that the intensity of heatwave will be more powerful as compared to the previous year because of change in wind directions which will ultimately cut off the sea breeze.

“These extreme weather events are on increase due to climate change and Pakistan is under its influence for the past few years,” he said.

He said considering the current situation it was expected that the weather would also remain hot and dry during the first week of Ramazan, adding that the pre-monsoon showers were expected to begin in the mid of June which would help bring down the temperature to some extent.

The official advised residents of central and southern parts of the country should take precautionary measures.

However, places like Islamabad, Rawalpindi, Hazara Division, Kashmir and Gilgit-Baltistan will receive sporadic rains next month. "In the beginning of the pre-monsoon, there will be less rain but later it will increase once the monsoon season sets in," he said.

The National Disaster Management Authority's (NDMA) spokesperson Ahmed Kamal said the NDMA is working closely with the Met office and has directed all its provincial departments to remain on alert in order to deal with any untoward situation.

He said the NDMA is currently working on a few short documentaries which will be broadcast on different TV channels in order to create public awareness regarding natural calamities such as earthquake, landslides and floods etc.

<http://tribune.com.pk/story/1093342/scorching-summer-intense-heatwave-likely-to-hit-country-from-may/>

SINDH GOVT TO SET UP CLIMATE CHANGE, ENVIRONMENT, COASTAL DEVELOPMENT DEPT

Dawn, April 29th, 2016

Habib Khan Ghori

KARACHI: The Sindh government has decided to establish a department to handle all functions relating to environment, coastal development and climate change.

All the other departments have been directed to cooperate and support the newly created department, which will be called Climate Change, Environment and Coastal Development Department, as well as the environment protection agency (EPA) for clean and healthy environment.

The directives were issued by Sindh Chief Minister Syed Qaim Ali Shah while presiding over a meeting on climate change and environmental issues on Thursday.

The meeting, which was held at CM House, was attended by provincial ministers Dr Sikandar Mandhro, Jam Mehtab Dahar, Jam Khan Shoro, chief secretary Siddique Memon, additional chief secretary (development) Mohammad Waseem, principal secretary Alamuddin Bullo, senior member of the board of revenue Rizwan Memon, health secretary Saeed Mangnijo, finance secretary Sohail Rajput, EPA Director General Naeem Mughal and others.

The chief minister further directed the EPA to work out a comprehensive plan to control smoke-emitting vehicles, stop disposal of domestic and industrial waste into Phuleli canal and disposal of industrial waste into the Lyari and Malir rivers and its onward release into the sea.

"We all are responsible for destroying our clean and healthy atmosphere, the industrial affluent and domestic waste is being released into the Arabian Sea in Karachi and a similar attitude has been adopted in Hyderabad where Phuleli Canal has been polluted.

"Today, the province of Sindh, particularly the major industrial cities are facing serious environmental issues because the industrialists have not adopted the environmental safety measures. We have to be responsible not only for ourselves but for our children and future generations," he added. Mr Shah also expressed concern over the felling of trees in the city.

"What are the local agencies doing and why do the police remain tight lipped on this matter?" he asked and directed the relevant authorities to ensure that no tree is slaughtered without solid reasons and their prior permission.

Sindh Minister for Environment Dr Sikandar Mandhro despite being the environment minister, he was helpless because the drainage system belonged to local government, industries were governed by the industries department, land in coastal areas was owned by the forest department only.

“Industrialists are uncooperative and there is lack of coordination among different departments and agencies,” he complained.

Expressing his displeasure over the current state of affairs, the chief minister said there should be close coordination among the departments concerned. For this, he said, Climate Change, Environment and Coastal Development Department would be created so that all the functions relating to environment and climate change could be handled by one department only.

Earlier, Mr Waseem said a combined effluent plant with five units had been proposed to be set up at the cost of Rs11 billion. He said this would help stop disposal of untreated industrial waste into the sea. “This scheme will be taken to the federal planning commission for approval,” he added.

He said the government was taking initiatives for the implementation of National Climate Change Policy. In this connection, a provincial implementation committee and working group had been constituted comprising all relevant departments, he said.

The additional chief secretary added that 176 combat climate challenges had been identified.

<http://www.dawn.com/news/1255074/sindh-govt-to-set-up-climate-change-environment-coastal-development-dept>

INVESTING IN CLIMATE RESILIENCE

Dawn, April 30th, 2016

Ali Tauqeer Sheikh

THE Paris Agreement is a historic milestone. Last week, Pakistan joined the world community as one of 171 countries to sign the agreement. Having signed the first major multilateral agreement of the 21st century, we now need to prioritise its implementation — and grasp opportunities that are staring us in the face.

These opportunities can accelerate economic growth by helping us to become inclusive and pro-poor in our budgetary allocations. Investments at the local level in climate resilience, adaptation and mitigation will open new fronts for long-term sustainable growth.

Our transition towards a low-emissions economy can send positive signals to entrepreneurs, businesses and both domestic and international investors. Focusing on green sectors will help create jobs and generate better trading opportunities with our major trading partners.

Effective implementation mandates that the national and provincial governments recognise four key points:

Climate change is an economic growth issue, which cannot be left to global climate modellers alone. The cost of economic development is accelerating due to damages and disasters triggered by climate change. This government’s Vision 2025 aspires for Pakistan to become a middle-income country by increasing per capita income to \$8,160.

But a recent Organisation for Economic Cooperation and Development study suggests that if global temperatures rise higher than two degrees Celsius it will be difficult for the country to cross the \$6,526 threshold. Pakistan cannot cope with this per capita differential loss of \$1,634 on its own, and therefore needs to look at climate change through an economic lens.

The ministries and departments of finance, economic affairs, and planning and development need to take the lead, and work closely with the international community to access financing for climate compatible development.

Climate change is a provincial issue, which has been left to the federal government for far too long. Global negotiations or reporting are no substitute for a domestic agenda on climate change.

The provinces need to develop their own climate change policies and action plans, launch their own climate change centres, and design their own green growth funds in collaboration with the private sector. Punjab, Sindh and KP are already developing climate policies. Others need to follow; the provincial peculiarities are too important to be overlooked.

Sea-level rise and frequent threats of cyclones and tsunamis require that Sindh have preparedness and evacuation plans for its urban and rural coastal populations, particularly for cities like Karachi.

The province also needs heatwave-management plans given that ‘urban heat islands’ are expected to increase the frequency of heatwaves. The World Bank estimates the environmental cost to Sindh could go as high as Rs372 billion — more than 15pc of the provincial GDP — a severe blow to its economy.

Each province has its own complex climate challenges — ranging from glacier melt to recurring droughts, from frequent flooding to depleted groundwater. Add changing monsoon patterns to this daunting list, and patterns of trans-boundary flooding emerge. Only provincial policies can effectively bring these challenges to the forefront. Provincial budgets will need to include (sooner rather than later) line items and allocations for climate-related spending at the district and sub-district levels.

Climate is an energy access issue. While Pakistan’s share of global emissions is minuscule, as the sixth largest population in the world we have major responsibilities. We struggle to meet present energy demands, let alone provide reliable and clean energy to our fast-growing population and economy.

Luckily, credible alternative sources of energy have become viable. Homes, commercial units and industrial enterprises are switching to off-grid solutions. Many countries have already introduced reverse metering; energy generated by private renewable sources is sold to national grids, which reduces the burden of generating energy from a few central locations.

For Pakistan, this is a good way to attract private investments, provided an incentives regime is introduced in the next fiscal budget. Many private-sector companies, cities, even countries, are announcing plans to become carbon neutral. The shift is visible and irreversible. Pakistan’s friends and foes, regional and otherwise, are all racing to avail new economic and investment opportunities.

The provision of equitable access to energy in Pakistan poses a far greater challenge than seeking investments for energy generation and transmission lines. It should plan a progressive transition, instead of dirtying its hands with coal; the China-Pakistan Economic Corridor should not allow private Chinese companies to dump their dirty technologies here. With China’s remarkable leadership in global renewable markets, we have the potential to develop a clean CPEC — linking the entire region in clean energy trade.

Climate change is a disaster risk reduction issue, which Pakistan is ill prepared to cope with. Both fragile and disaster-prone, we are often told that Pakistan is one of the 10 most vulnerable countries in the world. Hardly an enviable position, it is as embarrassing as pointing out Pakistan’s position in the global Human Development Index. It is obvious that Pakistan has not made sufficient investments to reduce its population’s vulnerability to climate-induced disasters.

It is time to rectify this, and move from basic disaster management to investing systematically in risk reduction. This requires that the roles and responsibilities of existing institutions at all tiers of governance be revisited. There is a case to be made for an annual allocation of 5pc of (national and provincial) budgets for risk reduction — countries that invest a percentage of their budgets on risk reduction are better equipped to tackle climate challenges.

This can help initiate a process of undertaking climate-resilience audits of our infrastructure. Climate change is a very long-term threat. Luckily, about 70pc of the infrastructure in this country has yet to be constructed; offering a ripe

opportunity to move down a climate resilient path. There is no better use of 5pc of our budgets than to invest directly in neighbourhoods and communities to reduce climate vulnerability.

Signing the Paris Agreement acknowledges Pakistan's sense of climate responsibility. Availing ourselves of this occasion, we should submit our Intended Nationally Determined Contributions, which we promised to the world in November last year.

<https://www.dawn.com/news/1255238/investing-in-climate-resilience>

CLIMATE CHANGE MINISTRY BUDGET LIKELY TO BE SLASHED

The Express Tribune, May 1st, 2016.

Shahzad Anwar

ISLAMABAD: The Ministry of Climate Change (MoCC) is likely to get less than 12 per cent of what it has demanded in the development budget for fiscal year 2016-17.

The ministry has sought an allocation of Rs343.085 million in the public sector development programme (PSDP) but the Planning Commission is not willing to allocate more than Rs40 million, saying the ministry has underutilised its resources over the last three years.

This emerged at a meeting convened by the Planning Commission to discuss the ministry's development proposals for the next year.

Sources privy to the meeting told The Express Tribune, on the condition of anonymity, that Planning Commission raised serious objections on the National Disaster Management Authority (NDMA)'s budget proposals due to underutilisation of the funds in the current fiscal year.

The Planning Commission advised NDMA to carry out flood-related activities through its regular staff instead of hiring separately. "NDMA tried to convince the Planning Commission but they did not endorse their demands," sources said.

MoCC presented a total of 12 projects together with two ongoing projects including establishment of Geomatic Centre for Climate Change, and Sustainable Land Management Programme (SLMP) to combat desertification.

The ministry is seeking an allocation of Rs18 million for the Geomatic Centre which had been designed to collect carbon emissions and sinks data at the national level. The project was launched in July 2013 by the Pakistan Environmental Protection Agency (Pak-EPA), an attached department of MoCC.

However, the project has not made any headway over the last three years, allegedly due to ban on recruitment by the federal government, which was lifted almost a year ago. Funds allocated for the project have also remained underutilised.

Pak-EPA is now seeking extension in the project time frame.

The geomatic centre is aimed to provide technical input and data for climate change policies and plans.

Due to dismal performance and non-utilisation of funds, the Planning Commission was adamant to allocate only Rs15 million for MoCC. However, the commission agreed to raise allocation to Rs40 million after continuous persuasion of MoCC.

MoCC has also proposed Sustainable Land Management Project (SLMP) Phase-II, which would be implemented in 14 'dry land' districts of the four provinces.

<http://tribune.com.pk/story/1094796/climate-change-ministry-budget-likely-to-be-slashed/>

NEWS COVERAGE PERIOD FROM APRIL 18th TO APRIL 24th 2016

CLIMATE CHANGE AND CROPS' AGRONOMY

Dawn, Business & Finance weekly, April 18th, 2016

Dr Zuhair Hasnain

CLIMATE change potential vulnerabilities in Pakistan are serious, but the national focus on addressing the challenge is weak. Major risks include rise in the sea level, glacial retreat, floods, higher average temperature and frequency of droughts.

All these have direct impact on the agrarian economy with 21pc share in GDP. Our farmers are still unaware of how cropping patterns will drastically change in the coming 20-30 years because of rising temperatures. Cultivators are stuck in space and time.

Almost 50pc of the country's agricultural land area is under threat of climate change. Pakistan, for that matter any country, may not be able to endure such degradation of precious resources. The country is in heat surplus zone of the Earth.

Scientists believe that climate change in the Indo-Pakistan sub-continent may result in erratic and intensive monsoon rains, dry winters, late winter rains (observed this year too), and prolonged dry spells. This will lead to acute water shortages especially for winter crops, and the decline in water levels in reservoirs. The season for wheat growing will become short, but more time will be available for land preparation for summer crops.

Waterlogging and salinity will increase along with incidence of insects, pests and diseases. With changes in climatic conditions, winter crops' (wheat and other cereals) yields might increase due to carbon fertilisation but the increase will be offset by reduced growing season and water shortages. Summer crops' (rice, cotton, sugarcane etc.) yields might also increase due to carbon fertilisation and improved land preparation, but the excessive heat and water shortage will offset the output increase.

In order to address the existing conditions, we need to minimise the natural resource degradation particularly land. This requires enhancing skills and capacity of farming community for sustainable management of natural resources. Besides, we must develop and introduce regulatory mechanisms to manage and store summer water overflows (new reservoirs would be needed).

Encouraging and adopting high irrigation efficiency systems, methods and techniques for farming will help to improve this problem. For rabi crops, geneticists must develop the short duration and stress tolerant varieties of wheat, sugarcane, rice, maize, cotton etc.

Mechanistic crop growth models have the potential use for crop management so crop simulations models must be applied in field crops research. Capacity building of farming communities is required for swift adjustment to changes in cropping seasons and patterns.

By devising national policies and incentives combined with national level capacity programmes to encourage demand-oriented conservation the problem of climate change can be minimised. There is a need to establish comparative advantages in agro-based industries in light of the changing climate scenarios at regional and national levels.

<http://www.dawn.com/news/1252681>

MET OFFICE WARNS OF MORE LANDSLIDES

Business Recorder, April 18, 2016

LAHORE: The Meteorological department said on Sunday that a westerly wave is affecting central and upper parts of the country and likely to persist during next 2 days. Due to scattered rain-thunderstorm, there is risk of more landslides in Malakand, Hazara divisions, Gilgit-Baltistan and Kashmir during Sunday to Wednesday.

<http://epaper.brecorder.com/2016/04/18/3-page/752038-news.html>

PROVINCES ADVISED TO PREPARE FOR HEATWAVES THIS YEAR

Dawn, April 21st, 2016

Ikram Junaidi

ISLAMABAD: The Ministry of Climate Change has issued an advisory to the provinces, asking them to prepare for the upcoming heatwaves and suggesting seven steps to be taken to avoid the human casualties observed in the previous year.

The advisory, issued on the directives of Federal Minister for Climate Change Zahid Hamid, warns that the heatwave that claimed the lives of over 1,000 people in Karachi in 2015 is predicted for this year as well. All the provinces should prepare themselves against heatwaves, says the letter.

It adds that the domain of the ministry is limited to coordination and facilitation and the power to implement and take practical action against any calamity rests with the provinces.

“Last year, the ministry took a pro-active approach to investigate the heatwave issue and constituted a committee comprising experts of the weather phenomenon. A report was issued by the panel, which comprised Dr Qamaruz Zaman Chaudhry, Dr Ghulam Rasool, Ahmed Kamal, Munir Ahmed Mangrio and Shabaz Mahmood.

The findings were based on thorough research of the causes and effects of the drastic weather and also contained recommendations on how to avoid such a situation in the future,” the advisory says.

The provinces have been asked to increase the capacity of individuals and communities to respond to the heat stress by organising a heat health awareness campaign before the onset of the season.

Subjects on disasters due to different natural hazards and their management may be included in the curriculum at the school and college levels. Green spaces may be increased by tree plantation in the major cities on an emergency basis.

Provinces are further suggested that the heat island effect can be counteracted slightly by using white or reflective materials to build houses, roofs, pavements and roads, thus increasing the overall albedo of the city.

“Green roofs are another method of decreasing the urban heat islands effect. Green roof is the practice of having vegetation on a rooftop. The plants increase the albedo and decrease the urban heat island effect,” the advisory informs.

It is also recommended that proper town planning rules and regulations may be observed for all ongoing and future townships.

The provinces have been suggested to establish “Cool Centres” with provision of drinking water, fans etc at public places and along main avenues, beside protecting and developing tree shaded rest areas.

<http://www.dawn.com/news/1253464/provinces-advised-to-prepare-for-heatwaves-this-year>

2016 ALREADY SHOWS RECORD GLOBAL TEMPERATURES

International New York Times, April 21, 2016

Tatiana Schlossberg

This year is off to a record-breaking start for global temperatures.

It has been the hottest year to date, with January, February and March each passing marks set in 2015, according to new data from the National Oceanic and Atmospheric Administration.

March was also the 11th consecutive month to set a record high for temperatures, which agencies started tracking in the 1800s.

With the release on Tuesday of its global climate report, NOAA is the third independent agency — along with NASA and the Japan Meteorological Association — to reach similar findings, each using slightly different methods.

The reports add a sense of urgency at the United Nations, where world diplomats are gathered this week to sign the climate accord reached late last year in Paris, when 195 nations committed to lower greenhouse gas emissions and to stave off the worst effects of climate change.

Since the initial agreement was reached, other global anomalies have been reported that punctuate the threat of climate change, including troubling trends on Arctic sea ice, floods, drought and carbon dioxide levels in the atmosphere.

Some of these — warm temperatures and heavy rains in particular — can be explained in part by this year's El Niño phenomenon, which scientists predicted would release large amounts of heat from the Pacific Ocean into the atmosphere, causing irregular weather patterns across the globe

But the effects of the current El Niño have been exacerbated by global warming, a result of emissions of greenhouse gases by humans, said Jessica Blunden, a climate scientist with NOAA and lead author of the report.

El Niño is on its way out, and ocean temperatures in the tropical Pacific peaked in November, said Kevin Trenberth, a senior scientist at the National Center for Atmospheric Research.

But the heat the ocean had stored had to go somewhere: "It's come out and been distributed around the world," which helps explain record warm temperatures and wildfires in the Southern Hemisphere, Mr. Trenberth said.

To get an idea of how much of the record heat is caused by El Niño and how much by global warming, Dr. Blunden said that scientists at NOAA compared this El Niño to the last strong one, in 1997-98, which was also record-setting for its warmth. This one has pushed past those records by raising global temperatures an additional 0.8 degree or so, Dr. Blunden said.

The high temperatures in March probably signaled the last gasp of El Niño, and surface temperatures across the globe are likely to begin to fall this year. Often, El Niños are followed by La Niña storm systems, which can usher in cooler periods, Dr. Blunden said.

But after more than two record-setting hot years — 2014 and 2015 and an extremely warm few months in 2016 — many of the devastating effects of the one-two punch of global warming and El Niño may be inescapable, setting the world on a course for an extended period of rapid global warming, after a period of relatively slow warming that began in 1998 and lasted for about a decade.

Dr. Blunden said that the Arctic was seeing some of the most abnormal weather on earth, with temperatures about 6 degrees warmer than the average over all. These highs could lead to record melting of Arctic sea ice this summer; the ice cover is at its lowest since measurements began to be taken in the late 1970s.

Dr. Trenberth said that these conditions did not represent “a new normal” and that it was difficult to determine the long-term consequences of this El Niño on both global temperatures and Arctic sea ice cover.

He is not sure if 2016 will prove to be as warm as 2015 — “I’m betting it’s a tossup,” he said — but added that it’s not the record heat that comes as a shock.

The magnitude of the jump “is indeed surprising,” Dr. Trenberth said.

A central feature of the Paris climate agreement was to hold the increase in the global average temperature to less than 2 degrees Celsius (3.6 degrees Fahrenheit) warmer than preindustrial levels, and to try to limit the increase to about 1.5 degrees Celsius.

As global temperatures are already nearing the 1.5-degree threshold, and some months have been about 1 degree or more above average, this goal might be difficult to achieve, Dr. Trenberth said.

“I don’t see at all how we’re going to not go through the 1.5 degree-number in the next decade or so,” Dr. Trenberth added.

<http://www.nytimes.com/2016/04/20/science/2016-global-warming-record-temperatures-climate-change.html>

LIBERAL BIASES, TOO, MAY BLOCK PROGRESS ON CLIMATE CHANGE

International New York Times, April 21, 2016

Eduardo Porter

Are liberals impairing our ability to combat climate change?

That may sound like a strange question, particularly to readers of The New York Times. Today conservatives are the ones decidedly blocking any effort by the United States to curb its emissions of greenhouse gases.

And yet even as progressive environmentalists wring their hands at the G.O.P.’s climate change denial, there are biases on the left that stray just as far from the scientific consensus.

“The left is turning anti-science,” Marc Andreessen, the creator of Netscape who as a venture capitalist has become one of the most prominent thinkers of Silicon Valley, told me not long ago.

He was reflecting broadly about science and technology. His concerns ranged from liberals’ fear of genetically modified organisms to their mistrust of technology’s displacement of workers in some industries. “San Francisco is an interesting case,” he noted. “The left has become reactionary.”

Still, liberal biases may be most dangerous in the context of climate change, the most significant scientific and technological challenge of our time. For starters, they stand against the only technology with an established track record of generating electricity at scale while emitting virtually no greenhouse gases: nuclear power.

Only 35 percent of Democrats, compared with 60 percent of Republicans, favor building more nuclear power plants, according to a poll by the Pew Research Center.

It is the G.O.P. that is closer to the scientific consensus. According to a separate Pew poll of members of the American Association for the Advancement of Science, 65 percent of scientists want more nuclear power too.

Ted Cruz’s argument that climate change is a hoax to justify a government takeover of the world is absurd. But Bernie Sanders’s argument that “toxic waste byproducts of nuclear plants are not worth the risks of the technology’s benefit” might also be damaging.

Highlighting the left's biases may seem like a pointless effort to apportion equal blame along ideological lines. But it is critical to understand how they have come into being. It suggests how difficult it will be to overcome our scientific and technological taboos.

Research suggests that better scientific knowledge will not be sufficient, on its own, to overcome our biases. Neither will it be mostly about improving education in STEM fields. To defeat our scientific phobias and taboos will require understanding how the findings of science and their consequences fit into the cultural makeup of both liberals and conservatives.

Joel Mokyr at Northwestern University, an expert on the history of science and technology, notes that the ease with which people accept scientific knowledge depends on how straightforward the proof is

Einstein's theory of relativity was readily accepted despite the fact that few people understood it because there were a couple of experimental results no other theory could explain. Natural selection is trickier.

"It is awfully hard to find a smoking gun" to prove evolution, Professor Mokyr told me. "This is by definition because the process is so slow."

The evolution of scientific knowledge is messy, too. It does not neatly converge on truth along a smooth line, but rather jumps around as new knowledge disproves old certainties. Scientists' understanding of the speed, intensity and implications of climate change is substantially different from what it was only a couple of decades ago.

But perhaps the most important snag to the diffusion of scientific knowledge is motivation. The average American has little at stake riding on whether the general theory of relativity is right or not. Evolution, by contrast, is a body blow to evangelical Christians' worldview.

Only 48 percent of respondents agree with the proposition that humans evolved from other beings, according to the General Social Survey, a broad survey of American attitudes and beliefs. But when the question is prefaced with the qualifier "according to the theory of evolution," agreement with the proposition rises to 72 percent.

Responses aren't necessarily driven by ignorance. "Where there is a sacred value that empirical science contradicts," science will have trouble making headway, notes Jonathan Haidt, a social psychologist at the Stern School of Business at New York University.

And the value doesn't even have to be sacred.

A few years back, Dan Kahan of Yale Law School, Hank Jenkins-Smith of the University of Oklahoma and Donald Braman of George Washington University Law School performed experiments testing how values affected people's agreement with scientists about climate change, the disposal of nuclear waste and allowing concealed possession of handguns.

"The problem, it seems, is not that members of the public are unexposed or indifferent to what scientists say," they concluded. "They disagree about what scientists are telling them."

People identified as more egalitarian and more open to government interventions to address social ills — the left, as it were — were much more likely to say that most scientists agree global warming is happening and that it is caused by human activity. Most also said scientists either disagreed or were divided on the safety of storing nuclear waste.

On the right, people identified as individualistic and wary of Big Government responded differently: In their view, the scientific consensus said the opposite. How could they think that? They manufactured the expert consensus they wanted by defining as experts only those who agreed with their ideological position.

It is not hard to figure out the biases. People on the right tend to like private businesses, which they see as productive job creators. They mistrust government. It's not surprising they will play down climate change when it seems to imply a package of policies that curb the actions of the former and give a bigger role to the latter.

On the left, by contrast, people tend to mistrust corporations — especially big ones — as corrupt and destructive. These are the institutions bringing us both nuclear power and genetically modified agriculture.

“When science is aligned with big corporations the left immediately, intuitively perceives the technology as not benefiting the greater good but only benefiting the corporation,” said Matthew Nisbet, an expert on the communication of science at Northeastern University.

So when assessing the risks of different technological options, the left finds the risk of nuclear energy looming the highest, regardless of contrary evidence.

This doesn't affect only beliefs about climate change and energy policy. The research identified similar distortions in people's beliefs about the scientific consensus on the consequences of allowing concealed handguns. Biases also color beliefs in what science says and means across a range of other issues.

In the context of climate change, this heuristic presents an odd problem. It suggests that attitudes about climate change have little to do with education and people's understanding of science.

Fixing it won't require just better science. Eliminating the roadblocks against taking substantive action against climate change may require somehow dissociating the scientific facts from deeply rooted preferences about the world we want to live in, on both sides of the ideological divide.

<http://www.nytimes.com/2016/04/20/business/economy/liberal-biases-too-may-block-progress-on-climate-change.html>

HOT! HOT! HOT!

The Express Tribune, April 22nd, 2016.

Roland DeSouza

The statement, ‘It's the humidity, not the temperature’ is a popular way of describing hot weather. Actually, it is both.

The ‘heat index’ (much like the ‘wind chill factor’ for cold), also known as the ‘apparent temperature’, is used to define human-perceived equivalent temperature — how hot it would subjectively seem if the humidity is high. For example, when the temperature is 40°C with 55 per cent relative humidity, the heat index can be about 58°C (a value in the shade: full sunshine can increase the temperature by another 8°C).

Elevated ambient temperatures result in an increase in mortality. When the body is subjected to extreme heat, it fights to maintain its ideal temperature of 37°C. It sweats and pumps blood closer to the skin, but high temperatures and increased humidity can defeat these cooling mechanisms.

Since the heat emanating from the body depends on the temperature difference between the body and the ambient, heat transfer is lessened or eliminated at higher ambients. Additionally, evaporation of sweat, which carries away heat from the body, is reduced when the air is very humid, i.e., already heavy with moisture.

If the internal human temperature rises above 40°C, vital organs are at peril and if the body cannot be cooled, death follows. Heatwaves are silent killers preying on the elderly, the very young, the persistently ill, and the poor and marginalised in society.

Experts warn that such deaths are likely to escalate as the earth warms and extreme weather events become commonplace. They state that heatwaves are seldom given adequate attention although they cause more deaths than lightning, rain, floods, tornadoes, and hurricanes combined.

The World Meteorological Organisation recognises a heatwave “when the daily maximum temperature of more than five consecutive days exceeds the average maximum temperature by 5°C, the normal period being 1961-1990”.

Most of us may be surprised to learn that during one week in late-August 2003, in one of the most technologically advanced and politically organised areas of the world, Europe, more than 70,000 died in a heatwave. Contingency plans for a variety of natural and man-made disasters were in place, but extreme temperatures had not been projected as a hazard.

Additionally, the calamity took place in a holiday month in which many people (government officials, ministers, doctors, etc) were away. The general populace, especially the elderly living alone, did not know how to react or adapt, and suffered the consequences.

A number of interesting facts emerge. One, part of the mortality observed during a heatwave can be attributed to a so-called ‘harvesting effect’, a short-term forward mortality displacement. For some heatwaves, there is a compensatory decrease in overall mortality during subsequent weeks, as some persons may have already been so ill that they would have died anyway.

Two, electricity demand increases with ambient temperature (with air-conditioning use), while utility generation and transmission/distribution capacity decreases — resulting in inconvenient brownouts and failures.

In May 2010, Ahmedabad in Gujarat experienced a major heatwave (47°C) resulting in 1,344 additional deaths registered. The Municipal Corporation developed a Heat Action Plan in 2013, so that inter-governmental agency action, preparedness, and community outreach could save lives — which it did in the following three years.

This excellent plan has four key strategies: building public awareness and community outreach, initiating an early warning system and inter-agency coordination, capacity building among healthcare professionals and reducing heat exposure, and promoting adaptive measures.

Karachi (45°C) and Sindh (42-49°C) suffered a similar fate in mid-June last year — and we were unable to respond effectively. The Met department warning was belated, the government health and emergency services were not geared for prompt action, NGOs were overwhelmed, and the public information network (press, TV, radio) broadcast advice on what to do after the crisis week had passed.

The situation was aggravated as many were fasting, and did not cool themselves by drinking water. A prominent cleric eventually put out a fatwa that if a Muslim’s “life is threatened due to the heat”, he can eat during the day during the holy month of Ramazan.

Reportedly, 40,000 people in the province were adversely affected and the death toll rose to 2,000, most of it in Karachi where the humidity was high. Nearly all who died were the elderly, the weak and the homeless, including drug addicts, labourers involved in hard labour outdoors and the illiterate.

Karachi is, potentially, faring better this year. The government’s crystal-ball gazers have predicted the possibility of a heatwave by end-May or early-June. The former commissioner, Shoab Siddiqui, had initiated a proactive approach, learning from Ahmedabad’s experience in mobilising government and private resources.

The provincial Disaster Management Authority and the Health Department (under Minister Jan Mehtab Dahar and Secretary Dr Saeed Mangnejo) are presently setting up control stations, rehabilitation centres, heat-stroke treatment courses, public awareness drives, and organising government agencies to rapidly assist in time of need.

The media, educational institutions, industrial and commercial employers, NGOs, religious leaders, political parties and others in contact with the public can do much by disseminating information (especially pertaining to staying indoors and on fluid re-hydration) and setting up rest and treatment facilities.

K-Electric could also do its bit by reducing the amount of power outages during heatwaves in vulnerable/disadvantaged areas, as the rich have standby generators and can protect themselves.

<http://tribune.com.pk/story/1089416/hot-hot-hot/>

CHINA, US JOIN RECORD UN SIGNING OF PARIS CLIMATE DEAL

The Express Tribune, April 23, 2016

UNITED STATES: A record 175 countries, including the world's top polluters China and the United States, signed the Paris climate deal Friday, boosting hopes of quick action on combating global warming.

French President Francois Hollande was the first leader to put his signature to the accord during a ceremony at the United Nations, followed by leaders from island-states hardest hit by climate change.

US Secretary of State John Kerry came to the podium cradling his two-year-old granddaughter Isabelle and triggered warm applause from delegates as he signed the historic deal.

It was the largest ever one-day signing of an international agreement.

Held on Earth Day, the ceremony comes four months after the hard-won deal was clinched in Paris and marks a first step toward binding countries to the promises they made to cut greenhouse gas emissions.

“This is a moment in history,” UN Secretary-General Ban Ki-moon told leaders gathered at the UN General Assembly.

“Today you are signing a new covenant with the future.”

Holdout countries still have a year to sign the deal, but the focus has now turned to swift ratification and entry into force before the target date of 2020.

The Paris agreement will come into force when 55 countries responsible for 55 percent of the world's greenhouse gases have ratified it.

Together the signatories at the UN ceremony account for 93 percent of global greenhouse gases, according to calculations by the World Resource Institute.

France's parliament will give final approval before this summer, Hollande said, urging the 28-nation European Union to “lead by example” and ratify the deal before the end of the year.

Momentum is building to ensure the agreement enters into force quickly.

China and the United States said they will ratify this year and are pushing for others to follow suit so that the agreement becomes operational possibly as early as late 2016 or in 2017.

Caught in election-year turmoil, the United States plans to ratify the Paris accord with an executive agreement, bypassing the Senate and setting up a complex process for any future president wishing to pull out.

Canada's Prime Minister Justin Trudeau said he would ask parliament next month to endorse the accord with a vote this year and pledged to help developing countries confront the challenge.

“They shouldn’t be punished for a problem they didn’t create nor should they be denied the opportunities of clean growth,” said Trudeau, drawing loud applause.

Actor and environmental campaigner Leonardo DiCaprio urged leaders on, telling them: “The world is now watching”.

“You will either be lauded by future generations or vilified by them,” he said.

A total of 15 countries or parties, most of them island-states, formally presented the completed ratification to the United Nations.

“Some may say it’s only a small step. We need to make it a huge one,” said the prime minister of the Polynesian island of Tuvalu, Enele Sosene Sopoaga.

Agreed by 195 nations, the Paris deal sets the goal of limiting global warming to “well below” 3.6 degrees Fahrenheit (two Celsius) above pre-industrial levels, by moving to clean energy.

Ban stressed that the window for keeping the global temperature rise in check was rapidly closing.

Last month was the hottest March in modern history and 2016 is shaping up as a record-breaking year for rising global temperatures.

This year’s El Nino — dubbed “Darth Nino” — is wreaking havoc, with droughts, floods, severe storms and other extreme weather patterns.

The signing ceremony was seen as a triumph for Ban, who pushed for the deal throughout his tenure and has listed the agreement in Paris as one of his proudest moments as UN chief.

<http://tribune.com.pk/story/1090228/china-us-join-record-un-signing-of-paris-climate-deal/>

PAKISTAN BOOSTING CAPACITY TO ADDRESS CLIMATE CHANGE: NISAR

Dawn, April 24th, 2016

UNITED NATIONS: Pakistan is strengthening its institutional structures to step up action to stave off the most drastic effects of climate change, Interior Minister Chaudhry Nisar Ali Khan told the international community here.

Speaking after the signing of the Paris climate agreement at the UN General Assembly, he said Pakistan would establish a climate change council and climate change authority, adding that more than five per cent of its annual budget was allocated to climate change activities.

At the same time, the minister said that adequate resources were critical for climate actions in developing countries.

Noting that trillions of dollars were needed globally to effectively respond to climate change impacts, he said the bulk of this amount should be spent in developing countries, because their challenges and needs were enormous.

“Fulfilment of financial obligations, particularly meeting the target of \$100 billion fixed by the developed countries is extremely important,” the minister told the 193-member assembly.

Leaders from at least 175 countries signed the Paris agreement on climate change as the landmark deal took a key step forward, potentially entering into force years ahead of schedule.

The impressive ceremony set a record for international diplomacy: never have so many countries signed an agreement on the first available day. States that didn't sign on Friday have a year to do so.

"We are in a race against time," United Nations Secretary-General Ban Ki-moon told the gathering. "The era of consumption without consequences is over".

Many at the UN now expect the climate agreement to enter into force long before the original deadline of 2020. Some say it could happen this year.

After signing, countries must formally approve the Paris agreement through their domestic procedures. The United Nations says 15 countries, several of them small island states under threat from rising seas, had done that on Friday by depositing their instruments of ratification.

Calling it a "defining moment," Chaudhry Nisar said: "We have now an action plan to deal with the greatest development emergency of our times. We must implement it fully and faithfully."

He said Pakistan had joined the consensus in Paris because its objectives aligned with those of the Climate Change Convention. The temperature in Pakistan had risen and its 5,000 glaciers were receding faster than those in any other part of the world, he said, adding that the country was already water-stressed.

"The frequency of large floods has also increased in recent years causing huge losses to the lives and livelihoods of our people," he told world leaders. "Besides tragic human and material cost, these threats also constrain our ability to promote sustainable growth and development, and ensure economic prosperity for our people."

Pakistan's national priority was to ensure economic growth, while avoiding the "business-as-usual" attitude of increasing emissions. It would present its intended nationally determined contributions, promote the imperative of development and address environmental concerns.

To that end, the minister said, Pakistan's ratification process would hinge on the updated Intended Nationally Determined Contributions (INDC), a process that has commenced. "We will be presenting an ambitious INDC that would both promote the imperative of development and address environmental concerns." He was confident that a comprehensive approach would enable Pakistan to contribute to the global mitigation efforts against climate change.

"We must all live up to these commitments to realise the Paris agreement", he said. "This will test all of us but we owe this to our common humanity and future generations".

<https://www.dawn.com/news/1254044>

NEARLY A DOZEN FAINT AS KARACHI SIZZLES AT 40°C

Dawn, April 24th, 2016

Hasan Mansoor

KARACHI: The heatwave that struck the city on Friday compelled many citizens to remain indoors on Saturday when the temperature rose to 40 degrees Celsius, while around a dozen people, including three women, fainted in different neighbourhoods, officials said .

On its first day, this 'mild' heatwave had perished two middle-aged men in Manghopir and Orangi.

Officials at the response centres recently established by the government said that the day passed peacefully though the people, who had fainted in different areas, were shifted to hospitals and dispensaries where they were given first aid and discharged. "We have received some people fainted or fatigued at various first response centres where they were duly treated," said a senior official of the health ministry.

While there were media reports that a heatstroke patient had been brought dead at the Civil Hospital Karachi, doctors denied the reports. Speaking to Dawn, an official at the hospital said: “No death has been reported at the CHK due to the heatwave.”

An official at the Jinnah Postgraduate Medical Centre (JPMC), which had received a majority of the heatwave victims last year and recorded most of around 1,300 deaths, said it was a normal summer day with no threat to human life.

The official added: “Unfortunately, panic spread by the media and some officials frightened the general public.”

There were reports that some persons arrived at the Abbasi Shaheed Hospital with complaint of heatstroke and got treatment there, but it was not officially confirmed to Dawn.

To beat the heat people went to the beaches in the evening. Shops selling ice, cold drinks and juices attracted crowds while no traffic congestion was witnessed on roads in the evening rush hours.

Karachi Metropolitan Corporation (KMC) officials said they provided shelter to animals at the zoo and Safari Park to protect them from the hot weather. They said special measures had been taken to keep their cages and enclosures comfortable and cool. Besides, adequate water was being supplied to the animals and birds in captivity, they claimed.

The city administration has already opened 60 of its planned 171 response centres in view of the heatwave. The centres have been set up at government and private dispensaries. Some 500 relief centres will soon be established at public places including parks, bus stands, railway stations and marketplaces to provide water and shelter to the people.

Every response centre has a doctor with paramedics, and contained two beds, fan, towels, ice, ORS and other emergency drugs, the officials said. Besides, they added, ambulances had been made available at the centres to rush patients needing tertiary care to hospitals.

Some 58 tertiary care facilities, 27 in private hospitals, were identified to provide tertiary care to heatwave victims, the officials said.

Also, they added, Rescue-1299 had been asked to coordinate with private ambulance services, which are placing their 812 ambulances on disposal of the city administration to be used during the current heatwave.

<http://www.dawn.com/news/1253951>

NEWS COVERAGE PERIOD FROM APRIL 11th TO APRIL 17th 2016

CLIMATE CHANGE THREATENS HEARTS, LUNGS BUT ALSO BRAINS

Business Recorder, April 11, 2016

NEW YORK: Climate change can be expected to boost the number of annual premature US deaths from heat waves in coming decades and to increase mental health problems from extreme weather like hurricanes and floods, a US study said on Monday.

“I don’t know that we’ve seen something like this before, where we have a force that has such a multitude of effects,” Surgeon General Vivek Murthy told reporters at the White House about the study.

“There’s not one single source that we can target with climate change, there are multiple paths that we have to address.”

Heat waves were estimated to cause 670 to 1,300 U.S. deaths annually in recent years. Premature U.S. deaths from heat waves can be expected to rise more than 27,000 per year by 2100, from a 1990 baseline, one scenario in the study said. The rise outpaced projected decreases in deaths from extreme cold.

Extreme heat can cause more forest fires and increase pollen counts and the resulting poor air quality threatens people with asthma and other lung conditions. The report said poor air quality will likely lead to hundreds of thousands of premature deaths, hospital visits, and acute respiratory illness each year by 2030.

Climate change also threatens mental health, the study found. Post traumatic stress disorder, depression, and general anxiety can all result in places that suffer extreme weather linked to climate change, such as hurricanes and floods. More study needs to be done on assessing the risks to mental health, it said.

Cases of mosquito and tick-borne diseases can also be expected to increase, though the study, completed over three years, did not look at whether locally-transmitted Zika virus cases would be more likely to hit the United States.

President Barack Obama's administration has taken steps to cut carbon emissions by speeding a switch from coal and oil to cleaner energy sources.

In February, the Supreme Court dealt a blow to the White House's climate ambitions by putting a hold on Obama's plan to cut emissions from power plants. Administration officials say the plan is on safe legal footing.

John Holdren, Obama's senior science adviser, said steps the world agreed to in Paris last year to curb emissions through 2030 can help fight the risks to health.

"We will need a big encore after 2030 ... in order to avoid the bulk of the worst impacts described in this report," he said.—Reuters

<http://epaper.brecorder.com/2016/04/11/13-page/749322-news.html>

CLIMATE-RELATED DEATH OF CORAL AROUND WORLD ALARMS SCIENTISTS

International New York, April 11, 2016

Michelle Innis

SYDNEY, Australia — Kim Cobb, a marine scientist at the Georgia Institute of Technology, expected the coral to be damaged when she plunged into the deep blue waters off Kiritimati Island, a remote atoll near the center of the Pacific Ocean. Still, she was stunned by what she saw as she descended some 30 feet to the rim of a coral outcropping.

"The entire reef is covered with a red-brown fuzz," Dr. Cobb said when she returned to the surface after her recent dive. "It is otherworldly. It is algae that has grown over dead coral. It was devastating."

The damage off Kiritimati is part of a mass bleaching of coral reefs around the world, only the third on record and possibly the worst ever. Scientists believe that heat stress from multiple weather events including the latest, severe El Niño, compounded by climate change, has threatened more than a third of Earth's coral reefs. Many may not recover.

Coral reefs are the crucial incubators of the ocean's ecosystem, providing food and shelter to a quarter of all marine species, and they support fish stocks that feed more than one billion people. They are made up of millions of tiny animals, called polyps, that form symbiotic relationships with algae, which in turn capture sunlight and carbon dioxide to make sugars that feed the polyps.

An estimated 30 million small-scale fishermen and women depend on reefs for their livelihoods, more than one million in the Philippines alone. In Indonesia, fish supported by the reefs provide the primary source of protein.

This is a huge, looming planetary crisis, and we are sticking our heads in the sand about it,” said Justin Marshall, the director of CoralWatch at Australia’s University of Queensland.

Bleaching occurs when high heat and bright sunshine cause the metabolism of the algae — which give coral reefs their brilliant colors and energy — to speed out of control, and they start creating toxins. The polyps recoil. If temperatures drop, the corals can recover, but denuded ones remain vulnerable to disease. When heat stress continues, they starve to death.

Damaged or dying reefs have been found from Réunion, off the coast of Madagascar, to East Flores, Indonesia, and from Guam and Hawaii in the Pacific to the Florida Keys in the Atlantic.

The largest bleaching, at Australia’s Great Barrier Reef, was confirmed last month. In a survey of 520 individual reefs that make up the Great Barrier Reef’s northern section, scientists from Australia’s National Coral Bleaching Task Force found only four with no signs of bleaching. Some 620 miles of reef, much of it previously in pristine condition, had suffered significant bleaching.

In follow-up surveys, scientists diving on the reef said half the coral they had seen had died. Terry Hughes, the director of the Center of Excellence for Coral Reef Studies at James Cook University in Queensland, who took part in the survey, warned that even more would succumb if the water did not cool soon.

“There is a good chance a large portion of the damaged coral will die,” he added.

Scientists say the global bleaching is the result of an unusual confluence of events, each of which raised water temperatures already elevated by climate change.

In the North Atlantic, a strong high-pressure cell blocked the normal southward flow of polar air in 2013, kicking off the first of three warmer-than-normal winters in a row as far south as the Caribbean.

A large underwater heat wave formed in the northeastern Pacific in early 2014, and has since stretched into a wide band along the west coast of North America, from Baja California to the Bering Sea.

Nicknamed the Blob, it is up to four degrees Fahrenheit warmer than surrounding waters, and has been blamed for a host of odd phenomena, including the beaching of hungry sea lions in California and the sighting of tropical skipjack tuna off Alaska.

Then came 2015, with the most powerful El Niño climate cycle in a century. It blasted heat across the tropical and southern Pacific, bleaching reefs from Kiritimati to Indonesia, and across the Indian Ocean to Réunion and Tanzania on Africa’s east coast.

“We are currently experiencing the longest global coral bleaching event ever observed,” said C. Mark Eakin, the Coral Reef Watch coordinator at the National Oceanic and Atmospheric Administration in Maryland. “We are going to lose a lot of the world’s reefs during this event.”

Reefs that take centuries to form can be destroyed in weeks. Individual corals may survive a bleaching, but repeated bleachings can kill them.

Lurid reports of damaged reefs started coming in from worried scientists in the summer of 2014.

Lyza Johnston, a marine biologist in the Northern Mariana Islands, dived

to the reefs off Maug, a group of small islands: “In every direction, nearly all of the corals were bright white.”

Misaki Takabayashi, a marine scientist at the University of Hawaii at Hilo, surfed the waves above the blue rice coral there: “I could see what looked like bleached white ghosts popping up off the ocean floor at me.”

Cory Walter, a senior biologist at the Mote Marine Laboratory in Florida, peered down from a boat over Wonderland Reef off the Lower Florida Keys: “It almost looks like it snowed on the reef.”

Predicting the duration of the bleaching or forecasting the next one is difficult. The Blob has cooled somewhat, and El Niño, while weakening, is expected to stretch into 2017.

Dr. Eakin, the coral-reef specialist at the National Oceanic and Atmospheric Administration, said he expected the bleaching to continue for nine more months. Scientists will not be able to measure the full extent of the damage until it is over.

What is clear is that these events are happening with increasing frequency — and ferocity. The previous bleachings, in 2010 and 1998, do not appear to have been as extensive or prolonged as the current one.

The 1998 bleaching, which Dr. Eakin said had been set off by a fierce El Niño, killed around 16 percent of the world’s coral. By 2010, oceans had warmed enough that it took only a moderate El Niño to start another round.

Then in 2013, Dr. Eakin said, “a lot of bleaching happened due to climate change, before the El Niño had even kicked in.”

Reefs that were bleached in 2014, like those in the Florida Keys and the Caribbean, had no time to regenerate before suffering further thermal stress from El Niño last year, leaving the coral vulnerable to disease and death.

The reefs in the Florida Keys “are about to go into a third year straight of bleaching, something that has never happened before,” said Meaghan Johnson, a marine scientist at the Nature Conservancy. “We are worried about disease and mortality rates.”

Ove Hoegh-Guldberg, the director of Australia’s Global Change Institute, noted that 2015 was the hottest year ever recorded, both on land and in the oceans — breaking a record set just the year before.

“Rising temperatures due to climate change have pushed corals beyond their tolerance levels,” he said, adding that back-to-back bleaching can be particularly deadly to the corals.

El Niño warms the equatorial waters around Kiritimati Island more than anywhere else in the world, making it a likely harbinger for the health of reefs worldwide. That is why Dr. Cobb, the Georgia Tech scientist who made the recent dive, has been making the trek at least once a year for the past 18 to the tiny atoll, part of the Line Islands archipelago.

Though the atoll sits just north of the Equator, trade winds suck water up from the depths of the ocean, usually keeping the water temperature surrounding the reefs a healthy, nearly constant 78 degrees.

But in 2015, the expected upwelling of deep, cold water did not happen, Dr. Cobb said, speaking by satellite phone after her dive. So water in the atoll was 10 degrees warmer than normal, and never cooled enough to allow coral to recover.

“The worst has happened,” she said. “This shows how climate change and temperature stresses are affecting these reefs over the long haul. This reef may not ever be the same.”

http://www.nytimes.com/2016/04/10/world/asia/climate-related-death-of-coral-around-world-alarms-scientists.html?_r=0

MORE RAIN LIKELY TO TRIGGER LANDSLIDES

Dawn, April 14th, 2016

Intikhab Hanif

LAHORE: A fresh spell of rains is expected to hit the upper parts of the country from Saturday to Monday, bringing along with it the risk of more landslides.

In its latest advisory on Wednesday, the Pakistan Meteorological Department warned that landslides could be triggered by excessive rains in Malakand and Hazara divisions, Gilgit-Baltistan and Kashmir between Sunday and Monday.

It said that the three-day spell of scattered rains and thunderstorms would be generated by a westerly wave that is likely to enter Pakistan on Saturday evening.

Under the influence of this weather system, a rain-thunderstorm, along with gusty winds, is expected to hit scattered places in the Federally Administered Tribal Areas, Khyber Pakhtunhwa, upper Punjab, Islamabad, Gilgit-Baltistan and Kashmir.

Rain-dust-thunderstorm is also expected at isolated places in Sibbi, Bahawalpur, DG Khan, Multan, Lahore, Sahiwal and Sukkur divisions on Saturday and Sunday.

<http://www.dawn.com/news/1251987/more-rain-likely-to-trigger-landslides>

HEAT WAVE PLAN SUBMITTED IN COURT

The Express Tribune, April 14th, 2016.

Naeem Sahoutara

KARACHI: A plan to deal with the expected heat wave in Karachi this year was submitted on Wednesday at the Sindh High Court by the provincial and local government authorities.

The action plan was submitted before the division bench, headed by SHC chief justice Sajjad Ali Shah, during the hearing of identical petitions seeking judicial probe into the deaths of over 1,000 people during the heat wave that struck Karachi last year.

During Wednesday's proceedings, additional advocate-general Ghulam Mustafa Mahesar submitted the compliance report, reflecting proportionate measures adopted by the provincial government to save the people from the expected heat wave, which is likely to hit the city somewhere in May and June this year.

The report contained a statement on behalf of Karachi commissioner Asif Hyder Shah, who said that 171 first response centres with a capacity of 879 beds have been set up in all six districts of the metropolis with the help of the health department. Most of these centres will work round the clock. In addition to this, there are 53 tertiary-care private and government hospitals with the capacity of 1,796 beds.

Under the plan, there will be ambulances, including 126 medically equipped ones, with the capacity to transfer 688 patients. The divisional administration and some private groups have planned to install road side water kiosks (sabeels) at all important points of the city to keep commuters and by-passers hydrated.

The commissioner said the K-Electric has clearly been instructed to minimise the duration of load-shedding during the extremely hot days and ensure uninterrupted power supply to vital installations, such as the Karachi Water and Sewerage Board and hospitals. The meteorological department has also been directed to issue early warnings for the heatwave.

Under the energy conservation plan, lighting on all billboards will be banned from mid-April to mid-August, said the commissioner's report. Commercial markets will be closed by 10pm, except for Ramazan and wedding halls will also be closed early.

The stakeholders also decided to make sure the water board carries out maintenance and forms a back-up plan long before the expected summer days.

Meanwhile, K-Electric management cite a report issued by the meteorological department that the city will see a more intense heat wave this year than the one that hit last year. Keeping this in mind, the power utility said it had taken several special measures to minimise the impact on consumers.

A thorough system-wide analysis had been carried out during which those city areas that had experienced higher frequency of faults or serious faults during and after the summers had been identified as 'hot spots' and given special maintenance attention.

In the past one year, KE claimed that 58 feeders, 2,300 pole-mounted transformers (PMTs) and 119 sub-stations had been added in the system. KE supply system and Dhoraji pumping stations have been upgraded and the water board was requested to improve their water pumps as well, said a KE statement. The fault-prone equipment from the 11KV higher tension cables to PMTs is being replaced to improve system reliability, it added.

KE has also requested the commissioner to allow its teams to work round the clock without any interruption. The number of teams working on ground has been doubled, it added.

A copy of the plan was provided to the petitioner's lawyer, who sought time to go through the details and file a reply. The two judges adjourned the hearing till April 15.

<http://tribune.com.pk/story/1084055/disaster-management-heat-wave-plan-submitted-in-court/>

GLOBAL WARMING: WISHING FOR A COOL SUMMER

Dawn, Sunday Magazine, April 17th, 2016

Amar Guriro

In June 2015, Karachi witnessed one of the worst heat waves in recorded history — temperatures rose to 43.7oC killing more than 1,500 people in just five days. However, experts fear that this year's heat wave may be even worse than the last. Met officials predict that the metropolis will witness two to three heat waves in May, June, and July — where temperatures may reach 44 to 45oC (and shall feel like 50oC).

It won't just be the port city that shall be at risk, but also the plains in north Sindh and south Punjab (Sukkur, Ghotki, Jacobabad and Multan, etc). According to a March 2016 report issued by the National Weather Forecasting Centre, a subsidiary of Pakistan Meteorological Department, the "second half of May and the first half of June is likely to remain drier and hotter than normal [and will] increase the probability of occurrence of heat waves over the plains and the coastal belt of the country".

Pakistan has faced severe flooding, droughts, and heat waves over the past five years, and experts point out that this trend, due to climate change, is set to continue. The think-tank, Germanwatch, ranks Pakistan as one of the 10 countries most-affected by climate change, on the basis of vulnerability to global warming from 1994 to 2013, on its 2015 Global Climate Risk Index.

However, other factors, such as weather patterns and the layout of the city, could make the heat wave more intense. Dr Pervaiz Amir, a well-known environmentalist, points out that the El Nino effect (a natural weather phenomenon that influences the monsoons and sea temperatures), the 'island effect', and the tendency of Karachiites to burn trash outdoors and in the streets, could be the contributing factors.

A recent study at the Aga Khan University (AKU) highlights how the 'island effect' can make the city's residents more vulnerable to the impact of a heat wave: high population density, small living spaces, and buildings constructed close together, tend to trap the heat generated by sunlight, vehicles and factories, etc.

"All types of burning [and heat generating activities] ... including industries, vehicles, power plants, power houses and generators by more than 20 million people in a small place have created a space called 'heat island' due to which the city is witnessing severe heat with every passing year," said Dr Zafar Fatmi, an associate professor who conducted the study and heads the research group, Environmental and Occupational Health and Non-communicable Diseases, at AKU.

The study suggests "increasing vegetation, [conducting] more tree plantation in and around the city as swiftly as possible [to] reduce the effects of increasing heat in urban centres".

After receiving forecasts about a series of intensive heat waves, non-profits have started chalking out plans to cope with the situation. Most of the focus is on awareness campaigns, and programmes aimed at handling the high body count.

The Edhi Foundation (EF), for instance, has asked the city government to dig at least 500 graves in different graveyards around the metropolis, so that people may not face difficulties in finding burial places, as happened last year. In addition, shipping containers have been converted into mobile mortuaries.

"During last year's heat wave, people were carrying bodies of their relatives in ambulances and were searching for burial places, but all the graveyards were full and there was no place even in the cold rooms of the city," pointed out Faisal Edhi, the spokesperson for the Edhi Foundation.

Another non-profit, Chhipa, has been introducing similar measures: "We have introduced this new mortuary where 100 plus bodies can be kept," said Haris Abbas, who is in charge of the welfare organisation's mortuary department.

Both charities have also increased their fleet of ambulances and are looking to improve the transportation of patients. According to Abbas, Chhipa now has more than 600 ambulances at their disposal, while Edhi said EF has added "300-plus new ambulances, and made the operating system central, so that transporting heatstroke patients from their areas to hospitals can be done on an immediate basis".

The EF has launched awareness campaigns in the city since April 1, to explain to people what to do if someone at their home or area suffers from heatstroke. Edhi pointed out that they wanted people to know that they don't need to rush victims to "hospitals; people can start initial treatments of heatstroke patients in their own home".

The Pakistan Medical Association (PMA), in collaboration with the EF and Faroozan Forum, will also be holding a series of awareness sessions and medical camps. "We will also be holding camps across the city during the heat wave crisis," said Dr Tipu Sultan, senior member and former president of PMA.

The city's hospitals have also been working on their own contingency plans, in anticipation of the upcoming heat wave crisis. For them the priority is efficiently handling the patient overflow, and security.

During the 2015 heat wave crisis, Jinnah Postgraduate Medical Centre (JPMC), Karachi's biggest hospital treated 10,000 heatstroke patients in three days, when the JPMC only had 1,400 beds. So this year, the hospital management has come up with a novel solution: the use of wedding halls.

"Heatstroke patients need to be kept in air-conditioned areas where their hydration level is maintained; last year everyone was rushing to hospitals and we were unable to treat every patient, so it [has been] decided to use marriage halls to treat patients who are not in critical condition," said Dr Seemin Jamali, JPMC's joint executive director.

Protecting hospital staff, nurses and doctors is also at the top of the agenda. Dr Jamali pointed out that they faced some cases last year where “family members became violent and attacked doctors” after losing their loved ones. Thus, wireless connections will be provided to the heads of all major hospitals in Karachi, which will be directly connected to concerned deputy commissioners, and will function as a hotline.

The Sindh Education Department has announced that summer vacations will be timed to ensure that schools are closed when the heat waves hit the city, and that school buildings will be made available to the health department to be used as temporary wards if needed.

In addition, Sindh Chief Minister Syed Qaim Ali Shah recently announced that a Rs200 million grant had been approved for the purchase of new and standby machinery at the Pipri water pumping station, and for repairs of old machinery at the Dhabeji water pumping station — the government pointed out that this should ensure better water supply during the heat wave crisis.

Last year saw the authorities struggling to cope with the crisis; they didn’t launch public awareness campaigns, or put in preventative measures, until it was too late. Whether enough has been done this time remains to be seen.

<http://www.dawn.com/news/1252031>

EARTHLY MATTERS: TECHNOLOGY VS CLIMATE CHANGE

Dawn, Sunday Magazine, April 17th, 2016

Rina Saeed Khan

According to Pakistan’s National Disaster Management Authority (NDMA), the recent torrential rains and flooding in the country’s north have killed over 200 people in Khyber Pakhtunkhwa (KP) and Gilgit-Baltistan. These mountainous parts of the country have numerous roads blocked due to landslides and many houses destroyed. There have been two major rain spells in the region in less than one month, and some experts have attributed the extreme weather patterns to climate change.

“Although it is normally difficult to link a single climatic event to climate change, the erratic rainfall occurring in Pakistan these days can easily be linked to climate change; we can expect more erratic weather events in the future,” says Qamar-uz-Zaman Chaudhry, vice president, World Meteorological Organisation.

Other experts say that because of heavy deforestation in the mountainous north, the rains are now taking their toll, with landslides and the rapid erosion of mountainsides. According to Malik Amin Aslam, the vice president of the International Union for the Conservation of Nature, “While climate change is causing enhanced intensity of rainfall, unfortunately deforestation is abetting the mass scale damage”.

Malik Amin is also an advisor to the KP government, which has launched the “Green Growth Initiative” to reverse the trend of deforestation that, Malik Amin points, out has been going on for decades. The KP government is currently undertaking a large-scale reforestation project called ‘The Billion Tree Tsunami’ to plant millions of trees and protect existing forests. Any project that would increase the existing 2.5pc tree cover in Pakistan, according to WWF Pakistan, is more than welcome.

In a copy cat move, the federal government has also recently announced the ‘Green Pakistan Programme’, to be led by the prime minister which aims to plant 100 million trees all over the country in the next five years. The programme, however, is yet to commence implementation on the ground.

According to Federal Minister of State and Chairperson of the Benazir Income Support Programme (BISP), Marvi Memon, who recently visited the rain damaged areas of Kohistan, the local people cut trees in order to meet their fuel needs which results in deforestation. The deforested mountain slopes then enhance the severity of landsliding and

floods. In order to prevent deforestation, she has introduced the making of “bio briquettes” under the ‘Climate Smart Villages’ campaign.

Bio briquettes are an efficient, cheap and environment friendly fuel which is prepared with organic waste. Besides domestic use, the briquettes can also be sold, adding to household incomes. The minister learnt about Bio-Briquetting technology from the International Centre for Integrated Mountain Development (ICIMOD) during her visit to Nepal, and is keen to introduce it to every village in the country under the BISP.

The ICIMOD was created in 1983, and has eight member countries including India, Pakistan, China, Afghanistan, Nepal and Bhutan. There are scientists from all over the region working for ICIMOD, who publish regular reports on the fragile state of our shared mountain ranges, the Hindu Kush / Karakorams / Himalayas.

The ICIMOD has successfully introduced bio briquettes, which are now being used widely in Nepal to light cooking stoves and heaters. Beehive Briquetting Technology (BBT) converts unwanted bio-mass (weeds, paper trash, etc) into charcoal in a charring drum. A mould (the only real cost involved) is used to turn it into solid fuel bio briquettes, which can be ignited easily and produce smokeless burning, thanks to the airflow through the various holes in the briquette. One briquette is enough to prepare a meal for a small family. For many villagers in Nepal, making briquettes is a side business.

There are so many other wonderful technologies that the ICIMOD has successfully introduced to the mountainous areas of Nepal which could easily be introduced to Pakistan’s north to help our villagers adapt to climate change.

Access to fresh water is a recurring problem in the mountains, worsening due to climate change, yet the ICIMOD has perfected rooftop rainwater harvesting, which entails collecting rainwater that hits your rooftop by channeling it into a large tank, which then stores the water for later use in the house and kitchen garden.

This simple but ingenious solution has already been introduced to many households facing water shortages in the Murree area by a local NGO.

The ICIMOD researchers have also introduced what is called Sloping Agricultural Land Technology. This sounds a bit complicated but actually consists of growing different species of trees and plants close together. Dense, double hedgerows of trees or shrub species are planted along contour lines which prevents soil erosion and improves soil fertility. In the long run, this protects mountain communities from landsliding and the flat terraces can be used to grow cereals, vegetables and fruit trees.

Scientists at the ICIMOD have also come up with various methods to improve cooking methods in the mountains — as foraging for fuel wood is a constant problem for villagers, and a cause of deforestation.

They have developed solar cookers and improved biogas plants. In fact, they have proven that one can use biogas at heights of up to 3,000 metres with their new Puxin biogas digesters. These digesters use bio mass such as soft grasses and kitchen waste, instead of the usual cow or buffalo dung, and can run at least one stove and a couple of light bulbs

. All these tried and tested technologies should be introduced to our mountain farmers by the government, as in the near future, climate change is only going to cause more destruction.

<http://www.dawn.com/news/1252037>

NEWS COVERAGE PERIOD FROM APRIL 4th TO APRIL 10th 2016

RIVERS TURN TO DUST AS DROUGHT BITES SOMALIA

Business Recorder April 4, 2016

MOGADISHU: Somalia’s bread basket has become a dust bowl as the life-giving waters of the mighty Shabelle river run dry amid intense drought in the war-torn country.

River-fed farmlands have become parched playgrounds for children who kick footballs beneath a cloudless sky, as one sign among many of the failed rains that the United Nations warns has put more than a million people at risk.

Elders in the Lower and Middle Shabelle regions, where most people rely on farming for survival, said it is the first time in decades they have seen such water shortages in the river.

“I have never dreamt of finding myself walking inside the river,” said Adow Amin, a resident in Afgoye town, just outside the capital Mogadishu, an area famous for its banana production.

“Can you imagine there is no water? The whole area looks like another place, I used to cross this river with a boat,” he said.

Land here should be producing maize, bananas, sesame and other fruits and vegetables, with the once broad waters of the river a lifeline for thousands of Somali families.

“All the villages in the regions rely on water from the river to survive, there are very few wells here and I don’t think life is possible without the flow of water of the Shabelle River,” said Mohamed Idle, an elder in Jowhar district, of the more than a 1,000 kilometre (800 mile) long river that begins in Ethiopia’s highlands.

“This is a nightmare. I never thought of this river running dry, I can see the riverbed and children playing,” said Abdulahi Mursal, another resident. “People will soon start leaving here.” Floods and failed rains caused by the El Nino weather phenomenon have sparked a dramatic rise in the number of people going hungry in large parts of Africa, including in arid regions of the Horn of Africa.

Northern Somali areas, including self-declared independent Somaliland along the Gulf of Aden and semi-autonomous Puntland, are especially hard hit, with some 385,000 people in dire need of food aid, according to the UN, with that figure feared to quadruple without help.

“Severe drought exacerbated by El Nino conditions has hit parts of Puntland and Somaliland, affecting hundreds of thousands of people,” the UN Office for the Coordination of Humanitarian Affairs (OCHA) warned in latest report.

“A further 1.3 million people risk slipping into acute food insecurity if they do not receive assistance... or nearly 40 percent of the 4.6 million people living in Puntland and Somaliland.”

The warning also comes as neighbouring Ethiopia — the source of the Shabelle river — struggles to combat its worst drought for 30 years, with at least 10.2 million people needing food aid.

Getting aid to the people in Somalia is an enormous challenge, especially in southern districts where the Al-Qaeda-linked Shebab remain powerful, fighting government troops and a 22,000-strong African Union force. Last month the UN warned over 58,000 children will starve to death in Somalia without urgent support.

Severe drought and conflict in Somalia caused a famine in 2010-2012 that eventually killed a quarter of a million people. A similar number died during the previous 1992 famine.

El Nino is triggered by a warming in sea surface temperatures in the Pacific Ocean. It can cause unusually heavy rains in some parts of the world and drought elsewhere.

“The impact of the drought in the north is already being felt in southern and central regions,” the UN said recently. “There are concerns on the rapid deterioration of the water situation in Belet Weyne in Middle Shabelle region due to the rapid reduction of water levels.” While the river is seasonal — flooding during intense rains, then nearly drying up in the dry season — residents say the levels are the lowest they have seen in recent memory.

“We are worried as there is serious water scarcity around villages, and many people are now trekking long distances every day to fetch water from wells,” said Ibrahim Adam, a resident in Jowhar, saying people were desperate for expected rains due in April to arrive.

“We don’t know what is happening, we are desperate,” said Mohamed Nur, a farmer.—AFP

<http://epaper.brecorder.com/2016/04/04/13-page/747279-news.html>

CLIMATE CHANGE MAY THREATEN \$2.5TR IN ASSETS

Dawn, April 5th, 2016

PARIS: Trillions of dollars’ worth of financial assets may be under threat from global warming’s effects by 2100, climate economists warned on Monday.

If warming reaches 2.5 degrees Celsius over pre-Industrial Revolution levels by 2100, investments worth some \$2.5tr may be in danger, a team reported.

This was equal to half the current estimated stock market value of fossil-fuel companies. But even if the 2C warming agreed by the world’s nations in Paris last December is achieved, the value of assets at risk would be \$1.7tr, they wrote in the journal Nature Climate Change. Climate change can destroy assets directly through sea-level rise for example, by depreciating their value, or by disrupting economic activities lower down the chain through drought or freak storms.

A lot of research has focused on the oil, coal and gas investments that will be lost if the world turns its back on fossil fuels in favour of sustainable energy. The new study attempts to break new ground with the first-ever estimate of a direct impact of climate change on the value of financial assets themselves.

The projections, using mathematical models, were based on an estimated value of \$143.3tr for global non-bank financial assets in 2013, as determined by the Financial Stability Board watchdog, the team said.

At warming of 2.5C, they wrote, some 1.8pc of assets could be at risk. But this could rise to as much as \$24tr in worst-case-scenario warming.

Scientists estimate we are on course for warming of about 4C or more based on current greenhouse gas emission trends, or about 3 C if nations meet the emissions-curbing pledges.

“When we take into account the financial impacts of efforts to cut emissions, we still find the expected value of financial assets is higher in a world that limits warming to 2 C,” said co-author Simon Dietz of the Grantham Research Institute on Climate Change.

<http://www.dawn.com/news/1249979>

NASA IS FACING A CLIMATE

International New York Times, APRIL 4 2016

John Schwartz

KENNEDY SPACE CENTER, Fla. — The concrete block perches absurdly atop a piling, elevated about 10 feet above the beach sand. Is it art? A bulky milestone?

Carlton Hall pointed to the puzzling object and explained that it was once a tie-down block for securing structures like antenna towers. Dr. Hall, the chief scientist for the space center’s ecological program, said that when he started

working here a few decades ago, the block had been buried. Now the sand that enveloped it is gone, swept away by the forces of coastal erosion and storms.

He gestured toward the waves rolling in nearby and said, “The beach used to be at least 50 yards out.”

On the other side of the dunes, a quarter mile away, sit two artificial hills some 50 feet high. Those are NASA’s two biggest launchpads. And to the south sit several smaller ones.

The space center is about a quarter-mile from the Atlantic Ocean, and rising water is eroding the beach. Credit Melissa Lyttle for The New York Times

This is America’s busiest spaceport, and the water is coming.

Like so much of Florida, the Space Coast — a 72-mile stretch along the Atlantic — is feeling the threat of climate change. Some of the erosion is caused by the churning energy of ocean currents along the coastline. Hurricane Sandy, whose power was almost certainly strengthened by climate change, took a big bite in 2012, flattening an already damaged dune line that provided protection from the Atlantic’s battering.

A rising sea level will bring even greater risk over time — and perhaps sooner than most researchers expected. According to a study published last week, warming pressure on the Antarctic ice sheet could help push sea levels higher by as much as five or six feet by the end of this century. Its astronauts also help build awareness of the growing urgency of climate change. Astronaut Scott Kelly, who recently returned from nearly a year in space, took hundreds of photographs that could seem like abstract art or a dire warning; in an

email interview just before his descent, he said that he had seen changes in the planet even since his previous mission in 2010

NASA isn’t just a victim of climate change. It contributes to climate science in many ways, and not only in the data from the many satellites that orbit the planet after leaving Earth from here.

Its astronauts also help build awareness of the growing urgency of climate change. Astronaut Scott Kelly, who recently returned from nearly a year in space, took hundreds of photographs that could seem like abstract art or a dire warning; in an email interview just before his descent, he said that he had seen changes in the planet even since his previous mission in 2010

“It seems to me there is more pollution in India and China than what I saw last time,” he said. “Definitely noticed the fires this summer in the U.S.A.; sometimes, could see the smoke all the way to Chicago.”

“Weather systems where they are not supposed to be obvious,” he added. “The fragility of the atmosphere always apparent.”

NASA, which has at least \$32 billion worth of structures and facilities around the country, has been considering the possible effects of climate change for nearly a decade, said Kim W. Toufexis, a strategist who leads the master planning program for the space agency.

NASA, after all, is in the business of risk management. By 2007, “we had to acknowledge that we should recognize climate change and extreme weather as a formal risk that we should be actually managing,” Mr. Toufexis said

With all of its expertise and its ability to make forecasts based on data, Mr. Toufexis added, “shame on us if we are not capitalizing on that.”

In fact, NASA's climate risk extends far beyond Florida. About two-thirds of the land that NASA manages is within 16 feet of mean sea level, and much of it is near the coasts. "We are tremendously linked to the drink," Mr. Toufectis said.

Johnson Space Center in Texas sits by Clear Lake, an inlet of Galveston Bay and the Gulf of Mexico. The surge from Hurricane Ike in 2008 caused power failures and debris pileup that shut down the center for a week.

The Michoud Assembly Plant, which built the enormous orange tanks used by the space shuttle, sits at the eastern end of New Orleans, and narrowly missed being inundated in Hurricane Katrina in 2005. Ames Research Center is near San Francisco Bay.

The agency's Climate Adaptation Science Investigators working group, which evaluates risks for all federal agencies, has predicted that sea level rise of five inches to more than two feet by 2050 could cause widespread problems for the five coastal NASA sites.

Coastal floods that might now occur once every 10 years could happen twice as often at Johnson, twice to three times as often at Kennedy and 10 times more often at Ames.

"NASA coastal centers that are already at risk of flooding are virtually certain to become more vulnerable in the future," the working group wrote in a 2014 report.

The agency brought together the managers for each center to learn directly from NASA scientists about climate change risks. They took field trips to the vulnerable areas in 2009.

At Kennedy Space Center, of course, the elements are always a challenge. The air off the sea attacks delicate equipment and rusts structures. Hurricanes occasionally come through, as well. In 2004, Hurricane Frances tore hundreds of siding panels off the gargantuan Vehicle Assembly Building, requiring extensive repairs. Storms in 2007 and 2008 battered the shore.

Then in 2012, Hurricane Sandy sent a surge that hit the coast like a scouring pad, leveling about a mile of dune protection and leaving the landscape stretching toward the launchpads covered with sand.

Already, NASA has spent much of a \$3 million appropriation to rebuild a long dune to replace protective sands that have been washed away.

NASA sits in the middle of a vast wildlife refuge, so replacing the dunes was a more delicate job than simply sending in bulldozers and piling up dirt.

Those doing the work had to be considerate of the wildlife, like the endangered gopher tortoise, with its high-domed shell.

The sand that NASA brought in had to resemble the sand that had been washed away, so the tortoises would be comfortable rebuilding burrows and sea turtles would be able to return to the site to nest. Workers took cuttings of plants from the old dunes, grew them and put in 180,000 individual plants to secure the new dunes. Now they are growing thick with grasses, sea oats, purple-flowered railroad vine and palmetto.

No one doubts, however, that more storms will come, and the warmer air and water brought by climate change are likely to lead to more destructive storms. As climate change threatens, NASA has options that include hardening facilities against the rising seas with barriers and structures adapted to storms and flooding, or if adaptation is not possible, to strategically retreat. Any such strategies will be expensive — though how expensive at this early stage is anyone's guess.

Retreat, however, is hardly an option any time soon for an agency that would need billions of dollars for new buildings and equipment alone — not to mention the need to relocate staff with extensive expertise.

One thing is certain: Pads will still be needed. Kennedy Space Center will be the home to NASA's next-generation human spaceflight vehicles, and its pads are being used by private space companies like SpaceX and United Launch Alliance.

In fact, the Space Coast is enjoying a revival since the dire years after the space shuttle program was mothballed in 2011.

Christopher J. Ferguson, a former astronaut who now heads Boeing's efforts to develop a new crew capsule for future launches, said he was excited to see the renewed activity. Communities along the Space Coast, he said, "went through very trying times."

Housing values plummeted and commerce ebbed. Even Shuttles, the space-themed restaurant and bar nearby on Merritt Island, shut down. Now the cold beer and cheeseburgers are back.

Which leads to another obvious question: Why build billions of dollars worth of launch infrastructure on a risky coast in the first place?

Safety and physics tell the tale. Launching over water is safer than over land and people. Also, rockets are best launched from sites closer to the Earth's fat Equator, where the greater diameter of the planet provides a slingshot effect that gives each rocket more bang for the propulsion buck. The Air Force was already firing missiles from Cape Canaveral when NASA showed up.

The idea of firing from Florida preceded space travel by nearly 100 years. In 1865, Jules Verne foresaw launches from Tampa in "From the Earth to the Moon."

Verne, in fact, even envisioned a competition for the launch site between Florida and the Gulf Coast of Texas, with a pitched political battle for the plum program. In real life, Florida got the launches, and coastal Texas got the Johnson Space Center, home to mission control and astronaut training.

Special barges from Michoud carried the oversize shuttle fuel tanks — too big for easy passage on rails or roads — via the Intracoastal Waterway to Kennedy Space Center.

And that is the conundrum for NASA. Water, once the solution to many of the space agency's problems, is becoming its biggest threat.

<http://www.nytimes.com/2016/04/05/science/nasa-is-facing-a-climate-change-countdown.html>

CAN ECONOMIES RISE AS EMISSIONS FALL? THE EVIDENCE SAYS YES

International New York Times, APRIL 5 2016

Coral Davenport

Throughout the 20th century, the global economy was fueled by burning coal to run factories and power plants, and burning oil to move planes, trains and automobiles. The more coal and oil countries burned — and the more planet-warming carbon dioxide they emitted — the higher the economic growth.

And so it seemed logical that any policy to reduce emissions would also push countries into economic decline.

Now there are signs that G.D.P. growth and carbon emissions need not rise in tandem, and that the era of decoupling could be starting. Last year, for the first time in the 40 years since both metrics have been recorded, a study by the

International Energy Agency found that in 2014, as global G.D.P. grew, global carbon emissions leveled off. Economists got excited, but they also acknowledged that it could have been an anomalous blip.

But a study released by the International Energy Agency last month found that the trend continued in 2015. In another study published on Tuesday, Nathaniel Aden, a research fellow at the World Resources Institute, a Washington think tank, found that since the start of the 21st century, 21 countries, including the United States, have already fully decoupled their economic growth from carbon emissions. In those countries, while G.D.P. went up over the past 15 years, carbon pollution went down.

“It’s really exciting, and it suggests that countries can sever the historic link between economic growth and greenhouse gas emissions,” Mr. Aden said.

Of course, even if 21 countries have achieved decoupling, more than 170 countries have not. They continue to follow the traditional economic path of growth directly tied to carbon pollution. Among those are some of the world’s biggest polluters: China, India, Brazil and Indonesia.

And decoupling by just 21 countries is not enough to save the planet as we know it. Over the 15 years that Mr. Aden studied, the decoupled countries lowered emissions about 1 billion tons — but overall global emissions grew about 10 billion tons.

The question is whether what happened in the 21 countries can be a model for the rest of the world. Almost all of them are European, but not all are advanced Group of 20 economies. Bulgaria, Romania and Uzbekistan are among them.

The Paris Agreement, the landmark climate change accord reached in December, commits nearly every country to actions to tackle climate change — and to continuously increase the intensity of those actions in the coming decades.

But absent major breakthroughs in decoupling, governments are likely to be hesitant to take aggressive steps to curb emissions if they mean economic loss.

In the United States, the decoupling of emissions and economic growth was driven chiefly by the boom in domestic natural gas, which when burned produces about half the carbon pollution of coal.

The glut of cheap natural gas drove electric utilities away from coal, while still lighting and powering ever more homes and factories. The decoupling was also driven by improvements in energy-efficiency technology.

The decoupling trend held even in the United States industrial sector. Between 2000 and 2014, Mr. Aden found that energy-related carbon dioxide emissions dropped 16 percent in the American industrial sector, while economic activity increased 9 percent.

But decoupling can hurt. Even as the industrial sector grew over all in those years, a push by American factories to use more energy-efficient technology contributed to a 21 percent loss of industrial jobs, Mr. Aden says.

In smaller economies, decoupling hurts less. Sweden experienced economic growth of 31 percent as its emissions fell 8 percent, continuing a longstanding trend driven by its tax on carbon emissions, instituted in 1991. Today, Sweden gets nearly half of its electricity from nuclear power, which produces no emissions, and 35 percent from renewable sources, particularly hydroelectric.

But in large, industrial economies that are trying to decouple, the change raises thorny questions. For example, will the pollution just move elsewhere? In Britain, emissions fell 20 percent between 2000 and 2014, while G.D.P. grew 27 percent.

That was largely the result of a push to de-industrialize in the country that gave birth to the Industrial Revolution. As Britain's financial and service sectors grew and its coal mines, mills and steel factories closed, some of those industries went to China, which became the world's largest polluter.

According to Mr. Aden's study, China's G.D.P. has increased 270 percent since 2000 and its carbon emissions 178 percent. But there are very tentative signs that even China may be decoupling.

In a paper published last month by the journal *Climate Policy*, two British researchers made the case that China's emissions may have peaked in 2014 and have now begun a modest decline. It's hard to know for sure because China's self-reported emissions data can be faulty.

But if it is true, and China's economy continues on even a modest growth path, it could have profound implications for the future of climate change. "The question with China is if they really have turned the corner and if it can stick," Mr. Aden said.

Decoupling presents another problem. "The countries that have achieved decoupling have de-industrialized — and that has increased income inequality," Bill Cassidy, a United States senator from Louisiana, said in an interview.

"One of the things that has not been analyzed is the job prospects for those families. There's going to be unintended consequences of their livelihoods being curtailed."

Meanwhile, some left-wing economists still say that the dream of decoupling is just that — and that the only way to truly lower emissions will be to bite the bullet and accept a hit to the economy.

"I'm not saying it's impossible to decouple, but we have to be skeptical," said Giorgos Kallis, an editor of the book "Degrowth" and an economist at the University of Barcelona. "I don't believe that an economy powered by solar and renewables can sustain the same level of economic growth. If we are serious about reducing emissions, we cannot do the wishful thinking that the economy will double every 35 years. We have to ask, can we manage without growth?"

But Mr. Aden remains optimistic, saying, "We may be on the verge of a transition where this relationship is finally unhinging."

http://www.nytimes.com/2016/04/06/upshot/promising-signs-that-economies-can-rise-as-carbon-emissions-decline.html?_r=0

SAVE BIODIVERSITY

Dawn, April 7th, 2016

MARINE biologists studying the effects of climate change, ocean acidification and oxygen depletion — caused by overfishing and pollution — have often pointed out that depletion of the ecosystem is dangerous for various fish species.

Consider this: how essential is seaweed, that is known as the 'tree' of the coastal ecosystem?

A nutrient-rich seafood it mitigates oxygen depletion. So, when local fishing communities are trained in conserving marine biodiversity to recognise certain species of seafood as vital for the ocean, their contributions become invaluable.

This was in evidence recently, when a large rhomboid squid caught alive was later released by fishermen in the eastern part of Gwadar district in Balochistan.

Although a rare species found in tropical waters and weighing about 30kg, the fisherman responsible for releasing the squid said he did not sell it for a few hundred rupees.

Clearly, he appreciated the marine creature's role in the ecosystem of offshore waters. One of 50 fishermen trained by the WWF-Pakistan to protect coastal ecosystems, he understands the implications of a stable food chain.

If such vigilance had been exercised in previous years, perhaps the fate of the endangered blue whale washed up on Karachi's coastal shoreline might have been less unfortunate.

In August 2014, a dead 67-foot blue whale had local fishermen scouring its stomach to find its ambergris — the candle-like, rock solid and waxy substance produced in the intestines of the male sperm whales and highly valuable in perfumeries and pharmaceuticals.

Quite clearly, the 'sea gold' that the whale yielded held monetary attractions for them. With 90pc of the ocean threatened by overfishing and 3.5 billion people globally dependent on the oceans for their primary food consumption, conservationists and organisations such as WWF-Pakistan do a commendable job.

But surely, with government help larger numbers of coastal communities could be motivated. Investing in coastal communities to preserve essential fish stocks, while adopting safer zones and methods to increase economic profitability, would also mitigate the effects of climate change.

<http://www.dawn.com/news/1250464>

LANDSLIDES FORCE PEOPLE TO VACATE VILLAGES IN KOHISTAN, SHANGLA

Dawn, April 10th, 2016

MANSEHRA / SHANGLA: The Kohistan district administration issued warning on Saturday asking people living in villages at the foot of mountains to remain alert as residents of Shangla district continued to move to safe places because of growing threat of landslides.

Commuters using Karakoram Highway (KKH) have been asked to remain cautious since landsliding is frequently taking place owing to rain that continued intermittently during the day.

Policemen visited Kuzz Kamila, Sheikh Abad and other villages and asked locals to beware of landsliding or move to safe areas.

Passengers and transporters stranded on KKH between Dasu and Chilas are facing shortage of food as the highway could not be reopened on the eight consecutive day on Saturday.

In Shangla district, more residents of Karora area left their houses for safe places.

Musharraf Shah, a villager, told Dawn that a large number of families had moved to safe places from the areas prone to landsliding.

Tourists from Ireland, England and Australia remained stranded in Besham because of closure of KKH.

Eddy Corllet, a tourist from the United Kingdom, said that they might go back to Islamabad if KKH was not reopened in two or three days.

In Mansehra district, roads leading to Kaghan, Konsh and Siren valleys have been blocked by landslides for a couple of days.

The district administration issued warning to people living along river banks to be cautious of flooding or shift to safe places as water level in Kunhar, Siren and Indus rivers had surged following rains.

Work on clearing rocks from roads and repair of water supply pipelines had been suspended due to continuous rain and landslides, according to an administration official.

He said that more than 100 link roads in the district had been blocked.

<http://www.dawn.com/news/1251158/landslides-force-people-to-vacate-villages-in-kohistan-shangla>

May 2016

NEWS COVERAGE PERIOD FROM MAY 23rd TO MAY 29th 2016

'SLEEPING GIANT' GLACIER MAY LIFT SEAS TWO METRES: STUDY

Business Recorder, 23 May 2016

PARIS: A rapidly melting glacier atop East Antarctica is on track to lift oceans at least two metres, and could soon pass a “tipping point” of no return, researchers said on Wednesday.

To date, scientists have mostly worried about the Greenland and West Antarctic ice sheets as dangerous drivers of sea level rise.

But the new study, following up on earlier work by the same team, has identified a third major threat to hundreds of millions of people living in coastal areas around the world.

“I predict that before the end of the century the great global cities of our planet near the sea will have two- or three-metre (6.5 – 10 feet) high sea defences all around them,” said Martin Siegert, co-director of the Grantham Institute and Department of Earth Science and Engineering at Imperial College London, and the study’s senior author.

From the air, the contours of Totten Glacier — roughly the size of France — are invisible because the entire Antarctic continent is covered by a seamless, kilometres-thick blanket of snow and ice.

Last year, Siegert and colleagues revealed that the underbelly of the glacier — most of which sits below sea level — is being eroded by warm, salty sea water flowing hundreds of kilometres inland after passing through underwater “gateways”.

As it does, the portion of the glacier resting on water rather than rock increases, accelerating the pace of disintegration. The new study, published in Nature, used satellite data to map the hidden geological contours of the region.

The researchers found evidence that Totten similarly melted during an earlier period of natural global warming a few million years ago — a possible dress rehearsal for what is happening today.

“During the Pliocene epoch, temperatures were two degrees Celsius (3.6 degrees Fahrenheit) higher than they are right now, and CO2 levels in the atmosphere were 400 ppm,” or parts per million, Siegert said.

Sea levels during the Pliocene peaked at levels more than 20 metres (65 feet) higher than today.

“We are at 400 ppm right now, and if we do nothing about climate change we’re going to get 2C more warming too,” he added.

Indeed, even when pledges by 195 nations to cut greenhouse gases — submitted ahead of the landmark Paris Agreement last December — are taken into account, temperatures are still set to increase an additional two degrees, The United Nations has said.

Other scientists not involved in the research said its findings should be a wakeup call. “Totten Glacier is a slumbering giant,” said Andy Shepherd, Director of the NERC Centre for Polar Observation and Modelling at the University of Leeds in England.

The “strong evidence” that the glacier has been unstable in the past, coupled with signs that it is melting now, are “a clear warning that changes might be on the horizon,” he said.

Up to now, estimates of how much Antarctica will contribute to global sea level rise before 2100 have been conservative.

The latest report from the UN’s climate science panel put that number at about a dozen centimetres (five inches), all of it from a relatively small section of the West Antarctic Ice Sheet, which is itself 10 times smaller than East Antarctica.

The Intergovernmental Panel on Climate Change (IPCC) predicted that total sea level rise from all sources — expansion of warming water, glaciers, Greenland — would probably not top a metre. But the low figure for Antarctica has more to do with gaps in knowledge than differences of opinion.

As recently as 2000, the IPCC forecast that East Antarctica would gain mass, a scenario that few scientists believe today.

Siegert’s greatest concern is that Totten Glaciers, and other massive ice bodies, “could cross a critical threshold within the next century, entering an irreversible period of very rapid retreat.”

<http://epaper.brecorder.com/2016/05/23/15-page/761742-news.html>

PROTECTING THE ENVIRONMENT: CLIMATE CHANGE ISSUE TO BE TAKEN UP AT NATIONAL LEVEL
The Express Tribune, May 27th, 2016.

KARACHI: Pakistan is among the top 10 countries that have been affected by climate change, therefore, the matter will be taken up at national level and the parliament will be asked to address this serious issue, said Senate Committee for Climate Change chairperson Yousaf Badini on Tuesday.

He was addressing the media at Qasr-e-Naz Federal Lodge, along with other committee members. He briefed the media about the committee’s upcoming mechanism to tackle the effects of climate change and sea pollution.

After the 18th Amendment, environmental issues are now provincial matters but the sea is not only limited to the provinces and is a national asset, Badini said.

He claimed that there are several government departments that are involved in polluting the sea and instead of rectifying their mistakes they are indulging in the blame game. “We are trying, together with the ministry of climate change, to draw a mechanism and bring all the relevant departments together on one platform, so that we can stop the increasing sea pollution,” Badini said.

Referring to the recent briefing of Pakistan Navy to the committee, Badini said that 500 million gallons of untreated waste is dumped into the sea every day, which has increased the amount of acid in the sea. He added that this has also caused damage to the ships and submarines of the Pakistan Navy.

Badini believes that more treatment plants should be installed so that the marine life can be saved from these threatening wastes. He said that dumping industrial waste into the sea is also contributing to polluting it and suggested

that the government should ensure that all factory owners must have their own treatment plants. He added that the committee had asked the Sindh government to take measures and control the increasing sea pollution.

Committee's secretary Syed Abu Ahmed Akif said that the Pakistan Navy cannot counter sea pollution and the civic institutions are responsible for protecting the sea from getting polluted. Therefore, he added, the committee wants the provincial government to take effective measures. Speaking about the importance of planting mangroves, senator Nuzhat Sadiq said that these trees act like a wall, stop sea erosion and are the breeding home for many sea species.

<http://tribune.com.pk/story/1111091/protecting-environment-climate-change-issue-taken-national-level/>

CHANGE IN THE AIR?

Dawn, May 29th, 2016

Shazia Rafi

PAKISTAN is severely affected by climate-related devastation — floods, drought, food and water shortage. Scientists working with the United Nations have set the global goal to avoid these disasters including keeping a lid on global temperatures to no more than 2 degrees Celsius above the 19th century average. All countries must reduce their carbon emissions, by switching from fossil fuels to green energy, a costly measure in the short run.

In 2014, China and the United States the two largest greenhouse gas-emitting countries pledged to cut their emission in the US-China accord which became the basis for the global agreement in Paris at COP21 in 2015. On April 22, 175 governments, including Pakistan, signed the Paris Agreement at the UN General Assembly.

Every country is now in the process of preparing their submission to the UN Framework Convention on Climate Change, its Nationally Determined Contributions — the actions, including laws and regulations they will be undertaking by 2023 to meet the target.

Pakistan's Ministry of Climate Change has also commissioned a study on the country's greenhouse gas inventory. Increasing the greenhouse gas inventory will be the 10 new coal plants planned by the government before the 2023 reporting deadline. Bilal Anwar of the Centre for Climate Research and Development, Islamabad, posits that coal-based energy is unavoidable in the short term, but that the government should choose the latest, cleanest coal technology available.

While the Paris Agreement sets a global target, the UN has also been negotiating, parallel to COP21, on the specific goals, targets and indicators of the Sustainable Development Goals which should successfully help us achieve the global target. On Sept 25, 2015, Prime Minister Nawaz Sharif joined other leaders to adopt the SDGs 2030.

From 2014, environmental health advocates have worked tirelessly for strong air quality parameters to reduce air pollution and contamination of air by chemicals. They achieved their inclusion in the SDGs. These targets are crucial for South Asia which has the world's most polluted cities with air-quality levels often four to five times the limits set by the World Health Organisation. The World Bank president Dr Jim Yong Kim warned early this month that Asian plans to build more coal fuel plants would be a "disaster for the planet" overwhelming the Paris agreement.

Since the 18th Amendment and devolution in Pakistan, there has been no national coordination system on environment health. Now the Ministry of Climate Change has to use the global target instead.

The government's Vision 2025 does include several of the SDGs, including major sections on renewable energy, while air quality is currently missing. The planning minister, Ahsan Iqbal, has said that Vision 2025 is a living document and will be up for review this year. Environmentalists should advocate with the ministry to ensure that the quality of air and measures to improve it are specifically delineated in the revised version.

Changing energy systems and bad environmental habits while difficult will benefit agriculture and the economy. Pakistan's national accounts currently do not calculate the negative health costs of environmental pollution. The government should do an opportunity cost comparison — 2015's direct cost in terms of respiratory diseases, working days lost, agriculture losses and how that compares to the cost of expanding green technologies that will get us to SDG 2030 and the goals of Paris.

Agriculture and agribusiness are the basis of Pakistan's economy. While a similar study on Pakistan is currently not available, a recent US National Institute of Health study on Indian agriculture 1980-2010 shows potential losses from 36pc to 50pc in wheat production due to SLCP or short-lived climate pollutants.

The study recommends regional anti-air pollution measures as air pollution crosses borders. What we call 'fog' in winter is actually 'smog' in India and Pakistan. Pakistan's latest figures on agricultural output are starting to show negative effects. Cotton output fell while wheat showed almost no growth.

Coal-fuelled air pollution crosses borders, even oceans; China's position on coal changed after the state of California tied negotiations on trade to reducing coal-based pollution crossing the Pacific. Rand Corporation, based in California, did a study of the annual costs of air pollution in China.

Pakistan will have a similar opportunity to open a new track for negotiations with our neighbours in the July 2016 finance ministers' meeting in Islamabad. India has 88 existing coal plants with many new ones planned. No air purification wall can be built along the border.

We should propose instead a joint Saarc commission to calculate the monetary value of air pollution and greenhouse emissions to each of our economies; review the results publicly and be open to changing our regional fossil fueled energy plans accordingly. The lives and livelihood of a billion and half people depend on it.

<http://www.dawn.com/news/1261304>

EARTHLY MATTERS: SHALL HEATWAVES BECOME THE NORM?

Dawn, Sunday Magazine, May 29th, 2016

Rina Saeed Khan

In Lahore, as temperatures rise to 43oC in the middle of May, driving, let alone walking or cycling, on the treeless 'signal-free' corridor on Jail Road has become intolerable. The asphalt and concrete is burning hot, absorbing the relentless heat of the summer and releasing it like a furnace. No wonder environmentalists from Lahore went all the way to the Supreme Court in vain to stop the slaughter of old trees on Jail Road in the name of senseless 'development'.

How can our ruling political leaders not be aware of climate change, or in more simple terms, global warming? Do they not realise that temperatures are steadily rising all over the world, and that 2016 is on track to becoming the hottest year on record, and probably by the largest margin ever?

According to Nasa figures, last month was the hottest April on record globally — and the seventh month in a row to have broken global temperature records. Scientists are now talking about a climate emergency because of the scale at which records are being broken.

The current blast of hot air around the globe is being spurred on by a massive El Nino weather effect, which is a release of warm water across the Pacific Ocean. Dr Fahad Saeed, who leads the Environment and Climate Change Unit at the Sustainable Development Policy Institute, had told Dawn back in March that due to El Nino and the weather changes it brings, freak heat waves will become more frequent in Pakistan.

Thanks to all the roads being built in urban centres like Lahore at the expense of trees and greenery, Pakistan is now more susceptible to the ‘urban heat island’ effect. This phenomenon refers to urban areas becoming significantly warmer than their surrounding rural areas due to all the concretisation.

According to a policy brief recently published by Dr Saeed, “Considering a high population density in the Punjab, this alarming increase in heatwaves will pose a serious concern not only for the far future but also for the near future [...]”.

A heatwave is a prolonged period of excessively hot weather, which may be accompanied by high humidity. Heatwaves are the most lethal type of weather phenomenon overall. A recent study by the UN Office for Disaster Risk Reduction reported that of the 164,000 who perished when the thermometer dropped or climbed to catastrophic levels in the last 20 years, 148,000 died during heatwaves (most of the deaths occurred in Europe where aging populations could not bear the heat).

India and Pakistan are now also beginning to see increasing deaths due to heatwaves. During the Karachi heatwave of 2015, the number of fatalities directly attributed to heat in the megacity was about 1,257.

The environmental NGO, Leadership for Environment and Development (LEAD) Pakistan along with the Climate and Development Knowledge Network (CDKN) have recently published reports addressing this issue titled Karachi 2015 Heat Wave: A Visual Guide and Heat Wave Management Protocols for Karachi City: Recommendations from Stakeholders.

These include precautionary measures to deal with heatwaves. They define a heatwave (according to the World Meteorological Organisation) as when the daily maximum temperature on more than five consecutive days exceeds the average maximum temperature by 5°C.

According to Pakistan’s Meteorology Department, very hot and dry weather has been predicted during May across the country. They state on their website that the “low elevation agricultural plains of Punjab, KP, Balochistan and Sindh will be at the centre of [the heatwave] where day temperatures will cross over 45°C and central parts will touch a critical level of 50°C. Temperatures in mountainous areas of GB [Gilgit Baltistan] and AJK [Azad Jammu Kashmir] will also rise by 4-5°C above average, resulting in rapid melting of snow and glaciers.”

They advise the public to take care of the dangers of “heat stroke and dehydration”. So what are the health warning signs of heat stroke? The guide provided by LEAD-Pakistan and CDKN lists the following: difficulty in breathing, excessive sweating and panting, increased heart and respiratory rate, vomiting, dizziness, light headedness and the skin becoming hot. The guide also gives tips on how to prevent heat stroke (see image on the right).

The report itself advocates a detailed “heatwave management plan” for the city in which there are forecast and alert systems. This requires close coordination between meteorological and city departments.

The report also points out that public awareness of extreme heat events “is often the difference between a hot day and a tragedy”. Since vulnerable groups, like the homeless, labourers and slum dwellers, have low literacy levels, better dissemination of information is needed through a mix of communication media. The report details immediate actions the city government can take to ensure there are fewer deaths during heatwaves.

Pakistan is a low carbon-emitting country (although our carbon emissions will go up as we install more coal-fired power plants) so we have not contributed to global warming, but we are one of the most vulnerable countries in the world when it comes to the impacts of climate change. Our leaders need to do more to make us more resilient.

Instead, due to the short-sightedness of those leaders, who prefer heat-trapping concrete over cool shade-giving trees, we can expect to see a deeper impact from heatwaves in the near future in our urban centres.

In last year’s Karachi heatwave, more than 1,200 died — yet various high rises continue to be constructed along the seafront and trees are being mercilessly cut down, due to which Karachi has become a concrete jungle.

In Lahore, where even more trees are being cut down to widen roads and build flyovers, underpasses and trains, the city is also becoming a concrete nightmare. And while the urban heat island effect is borne by ordinary citizens, the ruling elite whiz by in their air-conditioned luxury cars and head to their generator-fuelled homes.

<http://www.dawn.com/news/1261037>

NEWS COVERAGE PERIOD FROM MAY 16TH TO MAY 22 ND 2016

CM SAYS SEA INTRUSION DUE TO NON-IMPLEMENTATION OF WATER ACCORD

Dawn, May 16th, 2016

Habib Khan Ghori

KARACHI: Sindh Chief Minister Syed Qaim Ali Shah has said that 2.2 million acres of land in Thatta has been encroached by the sea due to non-implementation of the 1991 Water Accord which calls for release of minimum required 10 MAF water downstream Kotri to help stop the increasing intrusion.

The chief minister expressed these views when a 50-page report/findings of the Senate sub-committee on sea intrusion was submitted to him by Senator Dr Karim Khwaja who called on him here at CM House.

Recalling that he had been continuously pressing the federal government to implement the water accord in letter and spirit, but nobody at the centre was listening to him.

The CM said: "It was the clear report of our Board of Revenue (BoR) that due to acute and constant water shortage downstream Kotri, the sea was intruding and usurping sweet water lands and turning the remaining sweet water along the entire Thatta-Sujawal belt into brackish." That is why the yield of the lands of Thatta and Sujawal was very low than the lands of other areas of province and this had created poverty in the area, he said.

Mr Shah said he would hold a special meeting with his irrigation team. "Environment Minister Dr Sikandar Mandhro has done a considerable study on this subject and he keeps pushing the provincial government on this issue off and on," he said and added that he would ask him to formulate his suggestions in consultation with other water experts to find out its solution.

He said Irrigation Minister Syed Murad Ali Shah had also taken up the issue of full implementation of 1991 Water Accord. "If the federal government decides to release 10 MAF water downstream Kotri, the entire issue of sea intrusion would be resolved.

When water is released downstream Kotri, a natural activity of pushing the sea back by Indus water develops in the shape of delta. Bog holes develop there and it serves as a nursery for Palla fish and fosters various other species," he said.

The chief minister said that ever since the natural phenomenon had been disturbed by controlling water discharge of water in the River Indus, various issues had developed disturbing marine life within the sea and human life on the land.

He assured Senator Dr Karim Khwaja that he would mobilise the Sindh government teams to stop sea intrusion and also press the federal government to play its due role by taking necessary measures as stated in the water accord.

Earlier, Dr Karim told the chief minister that the Sindh government should urge the prime minister to call a special meeting of the Council of Common Interests (CCI) and take up this issue. "This is very serious and must be addressed in the larger interest of poor people of Thatta and Sujawal districts," he said.

He also said the Senate sub-committee had also suggested construction of a coastal-highway from the nearby area of Sir Creek of Thatta to Karachi to stop sea encroaching further. The proposed highway would serve as a retaining wall against sea intrusion.

Load-Shedding: Taking notice of prolonged load shedding, the chief minister in a statement said ever since the mercury had started rising up, the ministry of water and power had started prolonged load-shedding of over 12 hours a day in the entire province, particularly in the upper and central parts of the province.

He asked the federal government to minimise load-shedding at least during the ongoing sweltering weather. “This scorching sun would snatch the life of poor people in the rural areas if you (the ministry) resort to continue the policy of prolonged load-shedding, particularly during the peak hours from 1pm to 5pm,” he said.

He said the people from rural areas mostly complained against the prolonged load-shedding. The chief minister said he had confirmed reports that the Hesco and SESCO authorities deliberately did not replace the transformers of the areas where they were burnt.

This was an inhuman attitude on the part of the people at the helm of affairs and urged the federal government to have mercy on the poor people of Sindh at least during the ongoing hot weather.

Seeks Report: Expressing profound grief on the death of five labourers in a factory of Korangi Industrial area, the chief minister directed the labour secretary to submit a detailed report within three days with recommendation of action against the factory management.

He asked how the labourers were working on holiday (Sunday), what kind of work they were engaged for, if they were covered under social security or not and what safety measure the factory management had taken to protect life of the workers working there.

<http://www.dawn.com/news/1258593/cm-says-sea-intrusion-due-to-non-implementation-of-water-agreement>

‘HEAT EFFECT’ TROUBLES KARACHIITES

Dawn, May 16th, 2016

KARACHI: Although the maximum temperature in the city remained in the mid-30s Celsius, owing to high humidity — amount of moisture in the atmosphere — the ‘heat effect’ was increasingly felt by Karachiites on Sunday.

Responding to queries by Dawn, the weatherman said that the maximum temperature recorded in the metropolis on Sunday was 36 degrees while the minimum temperature was 28 degrees Celsius and humidity was 62 per cent owing to which the people felt extremely hot weather conditions.

He said that the weather in the city on Monday was expected to remain hot and humid and the maximum temperature was expected to remain between 36 and 38 degrees Celsius.

He said that the hottest place in Sindh on Sunday was Dadu where the highest temperature recorded was 45.2 degrees Celsius. Temperature in other Sindh towns was: Larkana (45 degrees Celsius); Moenjodaro and Padidan (44); Rohri and Nawabshah (43.5); Mithi (42.8); Hyderabad (42.2); Mirpurkhas (41.5); Badin (39.5); and Thatta (37).

<http://www.dawn.com/news/1258585/heat-effect-troubles-karachiites>

NEW UN CLIMATE TALKS AIM AT FLESHING OUT PARIS DEAL

Business Recorder, May 17 2016

Five months after ushering in a landmark climate deal, diplomats kicked off a new round of talks Monday tasked with converting a political blueprint into a workable plan. “The whole world is united in its commitment to the global goals

embodied in the Paris Agreement,” the UN’s outgoing climate chief, Christiana Figueres, told the 196-nation UN climate body at the start of a 10-day session in Bonn. “Now we must design the details of the path to the safe, prosperous and climate-neutral future to which we all aspire.” That remains a daunting task, negotiators and experts agreed.

The targets set are hugely ambitious, and the rift between rich and developing countries – sufficiently reconciled to seal the deal in December – remains just beneath the surface. The new goal of capping global warming at “well below” two degree Celsius (3.6 degrees Fahrenheit) means nothing less than weaning the world economy off fossil fuels within a few short decades. It will also require mobilising trillions of dollars to help poor countries green their economies and brace for climate impacts.

Most of the details on how this will happen have yet to be worked out. Voluntary national pledges in the Paris pact to slash carbon pollution – going into effect in 2020 – would still allow Earth’s surface by at least 3 C (5.4 F), a cataclysmic scenario, say scientists. A single degree Celsius of warming since the pre-industrial benchmark has already seen a crescendo of devastating storms, droughts and rising seas. US national scientists said over the weekend that last month was the warmest April recorded – the seventh consecutive month to exceed previous highs.

“The only question is whether we join together quickly and boldly enough to avoid catastrophe,” Thoriq Ibrahim, environment minister for the Maldives and chair of the Alliance of Small Island States (AOSIS) told the plenary.

One of the UN body’s most urgent tasks is orchestrating the ramping up of national plans to cut carbon pollution. The next “political moment” when countries could deepen their commitments is a so-called stocktaking in 2018. At the same time, the developing world is concerned that too much of the 100 billion dollars (88 billion euros) per year promised by wealthy nations starting in 2020 will be spent on curbing greenhouse gases and not enough to boosting climate resilience.

“For our endeavours to be achieved, enhanced and adequate financial and technology support must be provided,” a Thai diplomat, speaking for the 134-nation ‘G77 and China’ bloc said at the opening plenary. Poor countries already reeling from disrupted agriculture and storm-battered coastal cities are also seeking additional funds – under a provision called “loss and damage” – to repair harm done, not just prepare for future impacts.

<http://www.brecorder.com/general-news/172/46654/>

HEAT SPELL SEARS MOST DISTRICTS OF SINDH

Dawn, May 18th, 2016

LARKANA: Several parts of Sindh came under the grip of intense heat wave on Tuesday with temperatures soaring up to 51 degrees Celsius in Larkana, followed by 50 degrees in Jacobabad, 49 in Sukkur, 48.2 in Dadu , 47 in Hyderabad and 46 in Ghotki.

Frequent and prolonged power outages along with water shortage made life further miserable for the residents. People took to streets in Hyderabad to protest over load-shedding. Roads were deserted as most people preferred to stay indoors to avoid the scorching weather.

Only one heat-related death took place in Sehwan while several woman and children fainted in Mirpurkhas. Government hospitals saw a spike in the number of patients particularly older people suffering from gastroenteritis and heat stroke.

According to the local met office in Larkana, the heat spell has been continuing since three days and it would continue to be like this for the next three to four days. The temperature was recorded at 50 degrees Celsius while wind direction remained in South-West with humidity at 35 percent at 8am and eight per cent in the evening, the met office added.

Power outages in Larkana city and Qambar-Shahdadkot town ranged from six hours to 18 hours and 20 hours in villages, said sources in Sukkur Electricity Power Supply Company.

The casualty department of Chandka Medical College hospital said it had seen nearly 70 patients of different age groups with complaints of nausea and diarrhea that are symptoms of gastroenteritis. They had also seen a couple of cases of heatstroke, said a supervisor adding that fortunately no death had been reported so far.

Solar panels vendor Muhammad Ali Shaikh said that in the last couple of days the sale of panels had increased due to non-availability of electricity in town and villages. However, poor villagers could only cool themselves with traditional hand-held fans.

HYDERABAD: In Hyderabad, mostly roads wore a deserted look as people preferred to stay indoors to avoid heat and hot breeze. Only those people were seen on the roads protesting as they were either badly affected by erratic power supply or prolonged long-shedding by Hesco. A big protest was staged outside SSP office where residents of Shah Faisal Colony blamed Hesco for longer power outage. Power supply was later restored following the protest. Hesco spokesman said that it was an issue of burnt transformer due to illegal electricity connections.

People were also seen complaining about non-supply of water by Wasa for last several days while Wasa authorities attributed it to long duration of power cut to its filter plants as both sources of power supplies by Hesco remained without electricity.

“Once both feeders stop supplying electricity we are doomed as far as drinking water supply is concerned. Especially those are worst hit which are at tail-end of our system,” claimed a Wasa officer. Power utility spokesman denied that both sources of power supplies have identical load-shedding schedule.

Meanwhile, people adopted precautionary measures to cope with sizzling heat. Some preferred keeping a piece of onion in the pockets of their clothes and others covered their head with small wet towels. “Our elders have always told us to use onions as it is supposed to keep heat at bay,” said Abdul Majeed, a tailor from Khata Chowk area.

Vendors selling traditional drink such as lassi and a concoction with gur and black salt sold their wares in large numbers particularly to commuters and passers-by.

Only one heat related death of an unidentified 50-year-old-man was reported in Lal Shahabaz shrine, Sehwan.

SUKKUR: In Ghotki district temperatures ranged from 46 to 48 degrees Celsius. In villages of rural areas load-shedding was up to 22 hours and in urban areas it was up to 12 hours. Hospitals in Sukkur division saw a spike in the number of gastroenteritis complaints with most patients being children.

MIRPURKHAS: In Mirpurkhas district, many found the intense weather unbearable and fainted in several parts of the district. They were admitted to civil hospitals with complaints of dehydration, nausea and diarrhoea.

Due to severe water shortage people were seen buying water either from shops or having it supplied to their homes through water tankers. Business activities in the district were suspended due to power outages that increased up to 16 hours.

<http://www.dawn.com/news/1259005>

BLISTERING HEAT TO HIT PAKISTAN THIS WEEK

The Express Tribune, May 18th, 2016.

Sehrish Wasif

ISLAMABAD: Pakistan will continue to swelter in the coming days with hot and dry weather conditions expected to prevail across the country, according to the Met Office.

Daytime temperatures in the plains of Punjab, Khyber-Pakhtunkhwa, Balochistan and Sindh are likely to hover above normal and cross 45 degree Celsius. Some central parts of the country are expected to witness up to 52 degrees.

Temperatures in the mountainous areas of Gilgit-Baltistan and Kashmir will also rise this week, ultimately causing rapid melting of glaciers and snow, the Met Office warned.

Talking to The Express Tribune, a senior meteorologist said the higher temperatures in the northern areas might result in heavy flooding, similar to the last year's experience.

The officer, who wished not to be named, said the daytime temperature in Islamabad was expected to cross 40 degrees in the upcoming week. The temperatures have already been hovering around 39 degrees.

In Larkana and Jacobabad, the mercury level has already touched 50 degree Celsius. It has been fluctuating between 51 and 53 degrees in Mohenjodaro and is expected to increase even more in the upcoming week.

"Prolonged power outages in these areas are making the situation worse, especially during the day. Excessive sweating can result in dehydration, leading to heat exhaustion," said the meteorologist.

Over the next 48 hours, low-intensity showers are expected in isolated places of Hazara, Rawalpindi and Gujranwala divisions, but they are unlikely to bring any respite from the scorching heat.

Asif Shuja, former head of the Pakistan Environment Protection Agency, told The Express Tribune the country would continue to experience such extreme weather conditions over the next few years.

He blamed the El Niño weather phenomenon for the harsh conditions, saying its impact in Pakistan was causing extreme weather patterns.

<http://tribune.com.pk/story/1105613/weather-alert-blistering-heat-to-hit-pakistan/>

HOTTEST APRIL IN HISTORY RECORDED

Dawn, May 19th, 2016

MIAMI: Last month was the hottest April in modern history, marking the 12th consecutive month that global heat records have been shattered, the US National Oceanic and Atmospheric Administration said on Wednesday.

"The globally averaged temperature over land and ocean surfaces for April 2016 was the highest for the month of April in the NOAA global temperature dataset record, which dates back to 1880," the agency said in a statement.

"This marks the 12th consecutive month the monthly global temperature record has been broken, the longest such streak in the 137-year record." The report, issued each month by NOAA, also pointed to a concerning spike in temperature last month, compared to the 20th century average.

The combined average temperature over global land and ocean surfaces for April was 1.98 Fahrenheit (1.10 Celsius) above the 20th century average of 56.7 F (13.7 C).

This marked "the highest temperature departure for April since global records began in 1880". Overall, 13 of 15 of these record spikes, or monthly temperature departures, have occurred since February 2015, signaling that global warming is accelerating.

Unusually warm temperatures were seen across much of the world, but particularly in Russia and Alaska, where temperatures were 5.4 F (3.0 C) or more above average, said NOAA.

An “exceptional heat wave” swept across the Indochina peninsula, and Cambodia, Laos, Maldives, and Thailand also set new national maximum temperature records for April, the report said.

Northern and central South America and parts of southern Europe, western and central Africa, eastern Australia, southern Alaska, and the Caribbean also saw temperatures climb.

Cooler than average weather was seen last month in northeastern Canada and southern South America. Experts say global warming is at least partially to blame for a number of environmental disasters around the world, from the bleaching of the Great Barrier Reef to the wildfires raging across Canada.

Last year marked the hottest on record, beating 2014 which previously held the title.

With 12 months in a row now setting records for heat, 2016 — though not quite half over yet — is on track to be another scorching year.

The World Bank said earlier this week that the global community is not prepared for a swift increase in climate change related natural disasters — such as floods and droughts — which will by 2050 put 1.3 billion people at risk. The El Nino weather phenomenon, which tends to warm up equatorial waters in the Pacific, is on the decline but may have contributed to the record set over the last four months together.—AFP

“A record warm January, February, March, and April resulted in the highest global land and ocean average temperature for January-April at 2.05 F (1.14 C) above the 20th century average,” said the NOAA report.

The last four months were hotter than the same period in 2015, and hotter than 1998, the last time a similar strength El Nino was observed, by 0.8 degrees Fahrenheit (0.45 C).

“Sea surface temperatures across the central and eastern equatorial Pacific Ocean continued to decrease during April 2016, reflecting a weakened El Nino, “added the NOAA report, predicting the cooling trend, known as La Nina, could begin in the second half of 2016.

<http://www.dawn.com/news/1259229>

PAKISTAN SIZZLES IN HOTTEST WEEK OF YEAR

The Express Tribune, May 22nd, 2016.

Sehrish Wasif

ISLAMABAD: Temperatures recorded across Pakistan this week were the highest for the year with the mercury in several cities in the central region hovering around 50 degrees Celsius. On Saturday, the highest temperature of 51 degrees was recorded in Jacobabad and Dadu districts of Sindh.

Throughout Pakistan, the temperature has been fluctuating between 45 degrees to 52 degree Celsius since Thursday and will continue to do so today (Sunday), according to the Pakistan Meteorological Department (PMD). The mercury is even expected to rise by a degree or two as the ongoing heat wave is likely to persist.

While the temperature in Islamabad was 43 degrees centigrade, the thermometer touched 50 in Sibi, Kot Addu, Turbat, Sukkur and Larkana. Daytime temperature in Islamabad is predicted to touch 44 degrees today.

Moenjodaro, Rahim Yar Khan, Bahawalnagar and Bahawalpur witnessed 49 degree Celsius while Padidan, Bhakkar, DG Khan baked at 48 degrees. The mercury touched 47 degrees in Okara, Benazirabad, Rohri, Multan, DI Khan, Khanpur and Kohat.

Talking to The Express Tribune, a PMD official said Pakistan was likely to experience an intense heat wave till the first week of June after which pre-monsoon showers were expected.

The weather department has categorised places experiencing temperatures above 45 degree Celsius as hit by the heat wave.

He added a few showers along with dust storms and gusty winds were expected in Islamabad, Rawalpindi, Azad Kashmir, Hazara and Malakand divisions late Sunday evening. The light rainfall might continue till Tuesday and decrease the temperature by four to five degrees.

“But it will be a temporary relief from the scorching heat, as the mercury will rise once again and cross 40 degrees from Thursday onwards,” said the official.

<http://tribune.com.pk/story/1107818/baking-temperatures-pakistan-sizzles-hottest-week-year/>

NEWS COVERAGE PERIOD FROM MAY 9TH TO MAY 15TH 2016

CAN CANADA’S TRUDEAU SEE THE FOREST FIRE FOR THE TREES?

Dawn, May 13th, 2016

Andrew Nikiforuk

THE horrific wildfire that is consuming large swathes of Fort McMurray, Alberta, has already broken Canadian records for calamities fuelled by climate change. The fire surpassed the economic damage wrought by Quebec’s multibillion-dollar ice storm in 1998 and even southern Alberta’s biblical \$2 billion deluge in 2013.

The boreal inferno, which mushroomed exponentially like some airborne virus, not only forced the perilous evacuation of 80,000 Canadians from the corporate mining outpost, but also consumed nearly 2,400 buildings. Twitchy bankers and nervous insurers now peg the unprecedented firestorm as Canada’s costliest natural disaster.

It is no accident that the fire sprang up amid Canada’s climate change debate in one of the nation’s most disturbed northern landscapes. All around Fort McMurray, pipelines, roads, seismic lines and mining pits occupy huge chunks of the forest like an industrial octopus. Humans most likely started the blaze, but climate change helped propel the flames into a storm that made its own lightning and has left behind an estimated \$10 billion in damage.

The unfolding horror show caught the young government of Prime Minister Justin Trudeau at an interesting juncture. Unlike his predecessor, Stephen Harper — an ideologue who championed pipelines, muzzled climate change scientists and attacked environmentalists with malice — Trudeau has changed the tone. He ended the censorship of scientists and personally played a prominent role at the recent Paris COP21 conference on climate change. But he has not yet departed from Harper’s “drill, baby, drill” national narrative.

He now promotes oil-export pipelines and wind farms in the same sentence. Contrary to overwhelming scientific evidence, Trudeau acts as though sunny rhetoric on curbing emissions will somehow win more markets for what has become an uneconomic crude. At current oil prices, most oil sand miners are bleeding cash.

Even Trudeau’s response to the climate-inspired disaster was somewhat oily, though sadly demonstrative of the business-as-usual attitude. On May 4, he abruptly criticised Green Party leader Elizabeth May for spelling out the obvious: that the fiery consumption of Fort McMurray and the global climate crisis are linked.

“Any time we try to make a political argument on one particular disaster, I think it’s a bit of shortcut that can sometimes not have the desired outcome,” Trudeau countered. “There have always been fires.”

But that’s not true in a world destabilised by an increasingly human-engineered atmosphere. For more than a decade now, Canada’s federal foresters and climate change experts have documented a plethora of bad trends. Warming temperatures have not only increased the area burned by wildfire, but also extended the length of the fire season.

Thanks to climate change, patterns of natural forest renewal by fire have been thrown off-kilter. The more frequent and more disastrous blazes have also bankrupted provincial fire-fighting budgets.

Canada is home to a third of the world’s great boreal forest. It supplies Canadians with \$700 billion worth of life-supporting services each year and remains one of the world’s important climate and water regulators. Yet the hotter and drier it gets, the more easily it will succumb to fire, disease and insects.

As early as 2003, Canadian forestry experts made the inconvenient prediction that “it is unlikely that there will be sufficient resources to respond to increasing fire”. This, of course, all came to pass in the ashes of Fort McMurray.

Anyone who doesn’t work in oil sands grasped the disaster’s smoky irony. The fire consumed sections of the business centre of this dirty industry. Bitumen, a tarry mess trapped in oil sands, has one of the highest carbon footprints of any hydrocarbon on the planet and is more impure than Mexican or Venezuelan sour crudes.

As a consequence, the energy required to extract and upgrade 2.4 million barrels a day of oil sands has made the energy megaproject Canada’s single largest source of greenhouse gases.

Thanks to unchecked growth and the lack of a national carbon plan, forest-drying emissions from the nation’s oil and gas sector recently surpassed those of Canada’s immense transportation sector. Moreover, despite historically low oil prices, the industry now wants to double production, which would worsen emission trends. As a consequence, the oil sands and their climate-denying supporters have become an almost unmovable boulder on the road to constraining national carbon emissions.

The project’s scale also explains why federal promises, made in 2006 to reduce Canadian emissions by 20 per cent by 2020 and 65 per cent by 2050, have all come to naught. “There is no way Canada can come close to meeting its greenhouse gas targets by expanding bitumen production,” says David Schindler, one of Canada’s top scientists. Simply put, there’s no way Trudeau can make a dent in climate change without limiting — and then shrinking — Canada’s chief carbon-maker.

That’s the blunt choice facing the Trudeau government: it can act now to save Canada’s endangered northern forests and honour the country’s commitment to a green future, or it can support a doomed and ruinous crude. It can’t do both.

Any clear-eyed observer would realise that high-cost, high-carbon oil sands extraction must shrink over time. Canada gambled on a resource boom that has fizzled and overproduced a high-risk “garbage” crude. Carbon pricing and climate change — opportunities and risks, respectively, the country collectively denied — point to only one rational destiny for the oil sands: contraction. And so, now Trudeau must act unconventionally, boldly pushing his oil-exporting nation to lead the charge against climate disruption.

<http://www.dawn.com/news/1257988/can-canadas-trudeau-see-the-forest-fire-for-the-trees>

NEWS COVERAGE PERIOD FROM MAY 2ND TO MAY 8TH 2016
EL NINO DRIES UP ASIA AS ITS STORMY SISTER LA NINA LOOMS
Business Recorder, May 2, 2016

Withering drought and sizzling temperatures from El Nino have caused food and water shortages and ravaged farming across Asia, and experts warn of a double-whammy of possible flooding from its sibling, La Nina.

The current El Nino which began last year has been one of the strongest ever, leaving the Mekong River at its lowest level in decades, causing food-related unrest in the Philippines, and smothering vast regions in a months-long heat wave often topping 40 degrees Celsius (104 Fahrenheit).

Economic losses in Southeast Asia could top \$10 billion, IHS Global Insight told AFP.

The regional fever is expected to break by mid-year but fears are growing that an equally forceful La Nina will follow.

That could bring heavy rain to an already flood-prone region, exacerbating agricultural damage and leaving crops vulnerable to disease and pests.

“The situation could become even worse if a La Nina event – which often follows an El Nino – strikes towards the end of this year,” Stephen O’Brien, UN under-secretary-general for humanitarian affairs and relief, said this week.

He said El Nino has already left 60 million people worldwide requiring “urgent assistance,” particularly in Africa.

Wilhemina Pelegrina, a Greenpeace campaigner on agriculture, said La Nina could be “devastating” for Asia, bringing possible “flooding and landslides which can impact on food production.”

El Nino is triggered by periodic oceanic warming in the eastern Pacific Ocean which can trigger drought in some regions, heavy rain in others.

Much of Asia has been punished by a bone-dry heat wave marked by record-high temperatures, threatening the livelihoods of countless millions.

Millions left out to dry

Vietnam, one of the world’s top rice exporters, has been particularly hard-hit by its worst drought in a century.

In the economically vital Mekong Delta bread basket, the mighty river’s vastly reduced flow has left up to 50 percent of arable land affected by salt-water intrusion that harms crops and can damage farmland, said Le Anh Tuan, a professor of climate change at Can Tho University.

More than 500,000 people are short of drinking water, while hotels, schools and hospitals are struggling to maintain clean-water supplies.

Neighbouring Thailand and Cambodia also are suffering, with vast areas short of water and Thai rice output curbed.

In Malaysia, the extreme weather has shrunk reservoirs, dried up agricultural lands, forced water rationing in some areas, and caused repeated school closures as a health precaution. Fisherman Abdul Rafar Matarrh said his daily catch in central Malaysia’s Pahang River has been decimated as the normally broad river has shrunk to a third its size, leaving dead fish to rot in the dry bed.

“Last year I could catch about 20 kilos (44 pounds) of fish a day. Now, to get one kilo is very hard,” said Abdul Rafar, 80, after netting just one small fish in an entire morning under an unforgiving sun.

In India, about 330 million people are at risk from water shortages and crop damage, the government said recently, and blazing temperatures have been blamed for scores of heat-stroke deaths and dead livestock.

Authorities in Palau warned recently the tiny Pacific island nation could completely dry up soon in a “total water outage”.

Things will get worse

As a result, rice prices have risen this year but the UN’s Food and Agriculture Organisation and other experts say a major food crisis is not yet imminent as stocks remain ample.

But warning signs have already emerged – two people were killed in early April in the drought-ravaged southern Philippines when police reportedly clashed with thousands of farmers protesting over food shortages.

With La Nina looming, the situation has laid bare the region’s lack of preparedness for the extreme weather swings expected to result from climate change, said Rajiv Biswas, Asia-Pacific Chief Economist at IHS Global Insight.

“What tends to happen is that they (governments) talk about it in the immediate time there is a crisis and then one year later they forget about it and move on,” he said, adding that “things will get worse.”

More investment is needed in agricultural infrastructure, irrigation and water storage systems, desalination technologies and insurance coverage for farmers, he said.

Calling the global situation “truly alarming”, the UN’s O’Brien said on Tuesday this year’s El Nino spotlights the need for global cooperation to brace against the extreme weather. “We must respond quickly to immediate, life-threatening needs, but we must also help people to become more self-reliant, and build individual and community capacity to respond to future shocks,” he said.

<http://www.brecorder.com/general-news/172/42297/>

PLEASANT DROP IN TEMPERATURE

Dawn, May 4th, 2016

LAHORE: Gusty winds, cloud cover and traces of rain rid people in Lahore of the hot weather on Tuesday, lowering maximum temperature by seven degrees Celsius.

The maximum temperature in Lahore on Monday was 44 degrees C, the highest so far of the season. The gusty winds and clouds gave immediate relief on Tuesday which may extend to Thursday. The maximum temperature dropped to tolerable 37 degrees C. Sky was clear in the evening but wind was strong and soothing.

The Met office said the change in weather was brought about by a westerly wave that was affecting upper and central Pakistan. It also reported Lahore-like weather in several other cities and said the westerly gave light rain over some parts of Balochistan, KP and upper Punjab.

The Met office forecast similar weather conditions in KP, Fata and Punjab till Thursday.

<http://www.dawn.com/news/1256155>

CLIMATE CHANGE POLICY NEEDS INTEGRATION IN ALL SECTORS

Dawn, May 6th, 2016

KARACHI: A two-day capacity building workshop on Sindh’s climate change policy concluded on Thursday at a local hotel where experts discussed ways to link the national climate change policy with the annual development plan and sustainable development goals.

The event was held jointly by Sindh Environment Protection Agency (Sepa), planning and development department of the Sindh government, and Lead-Pakistan, a non-governmental organisation.

In his opening remarks, director general Sepa, Naeem Mughal said that it is the need of the hour to debate and discuss the national climate change policy 2012 at the provincial level and a strategy was developed, accordingly, to tackle the worsening affects of the phenomenon.

“For better and effective implementation of national climate change policy, a provincial action committee and a working group have been formed with the task to prioritise areas facing the threat of climate change,” he said.

Former secretary forest and wildlife Shams-ul-Haq Memon spoke about Sindh-specific environmental issues, provincial geographical zones and unexpected weather patterns being experienced in the province.

He regretted that natural shields, for instance indigenous trees, had been cut down and exotic species had been introduced, which were doing more harm than good to the environment.

He underlined the need for updating curriculum, creating awareness and sensitising officials on climate change.

Nasir Panhwar heading the Centre for Environment and Development said Sindh was experiencing extreme weather patterns including high temperature, dryness, droughts and cyclones.

“Change in climate is also affecting socio-economic conditions of the people across the province. Hence, it is imperative that the theme of climate change is integrated into all sectors at provincial and district level,” he pointed out.

Ibad-ur-Rehman, Arif Rehman and Nadeem Ahmed representing Lead-Pakistan gave a detailed presentation on climate change issues, national climate change policy and sustainable development goals, and their relevance and importance to the public sector development projects.

Dr Noman Ahmed of the NED University of Engineering and Technology was of the opinion that the concept of climate change was still considered vague by many educated people who believed that the issue could be tackled at a later stage.

Gulzar Feroz of the Federation of Pakistan Chamber and Commerce and Industry, senior ecologist Rafi-ul-Haq and Dr Shoukat Hayat also spoke.

<http://www.dawn.com/news/1256553/climate-change-policy-needs-integration-in-all-sectors>

June 2016

NEWS COVERAGE PERIOD FROM JUNE 27TH TO JULY 2 ND 2016

FLOODING DESTROYS STANDING CROPS AFTER DYKE BREACHES

Dawn, June 28th, 2016

Mirpurkhas: Several villages and standing crops over hundreds of acres were washed away when flooding hit two large areas in Mirpurkhas and Jacobabad districts on Sunday evening and Monday. In Mirpurkhas district, the dyke of Doso distry (irrigation channel) developed a 30-foot breach causing flooding in several hundred acres of farmlands near Phuladiyoon town late on Sunday evening.

Gushing water washed away many thatched houses in some villages. Scores of growers and haris hit by flooding rushed to the site of the breach after alerting local irrigation officials and started the plugging work.

Many others helped the affected men, women and children, as well as their animals, to wade through water to reach safe places. Some irrigation officials, along with a work force equipped with relevant machinery, joined in the plugging work at the gate of the distry on Monday.

The affected growers said the flooding destroyed their cotton, chillies and other crops causing them huge losses.

Sukkur: A similar breach occurred in the dyke of Garhi Hassan Shakh (irrigation channel) at Haji Khawind Khoso village near Thull town of Jacobabad district on Monday.

The breach widened to about 20 feet due to water pressure and caused flooding in vast farmlands and washed away many houses in the village.

Residents of the village said they timely informed the local irrigation officials about the breach but no one turned up to help them out.

They said they plugged the breach on a self-help basis after three hours of hectic efforts but lost their standing crops over several hundred acres.

<http://www.dawn.com/news/1267674>

NEWS COVERAGE PERIOD FROM JUNE 20TH TO JUNE 26TH 2016

THAL'S DIMINISHING BIODIVERSITY

Dawn, Business & Finance weekly, June 20th, 2016

Dr. Muhammad Ahmad

Organic matter in Thal's soil is gradually diminishing, as is the micro flora and fauna. Soil productivity is down. The water table is getting lower.

The Thal desert, situated in Punjab, is largely stretched between the Jhelum and Sindh rivers close to the Potohar Plateau. The desert covers the districts of Layyah, Muzaffargarh, Bhakkar, Khushab, Mianwali, and Jhang from the left bank of the river Jhelum.

It is chiefly characterised by its sand dunes, wind cyclones, abundant sunshine and common drought prevalence. Underground water is usually brackish, unsuitable for drinking and irrigation purposes. There is rampant occurrence of torrential, unpredictable and erratic rainfalls in monsoon leaving no chance of infiltration of water for storage.

Weather extremes have diminished the vegetation cover over the sandy soil. Hill torrents, flood havoc and torrential rainfall have massively devastated sandy soil. Wind cyclones have further augmented the erosion process.

The sunshine has accelerated deforestation. Organic matter in soil is gradually diminishing, as is the micro flora and fauna. Soil productivity is down. The water table is getting lower. The application of farm-yard manure and green manuring usually done by women may somewhat ameliorate the severity of the situation.

Temperature fluctuations all day and night adversely affect the pollination process in plants. Scarce pollination means less fruit yield. Honey production has also decreased. Long drought spells due to climate change have increased the chances of disease and insect pest infestation in plants including canker in citrus plants and malformation in mango.

It has also been observed that the infestation of yellow rust in wheat and barley has increased manifold owing to high humidity compared to previous years. Correspondingly, temperature fluctuations may have tremendously increased the infestation of wilt and blight in chickpea.

It has been further observed that even the common species of the desert are not seen in the nomadic life of Thal. Deforestation in Thal has diminished a variety of reptiles, amphibians, birds and mammals which used to feed and live in the habitat of these trees.

Women are unpaid labourer and silent environmentalists working for the conservation of biodiversity deteriorating due to climate change. Their services have never been recognised and sensitised. They store seeds of different plant species (for their herbal use) for the next season's cultivation.

Similarly, women who manage livestock and poultry have no doubt domesticated many rare species of goats, pigeons, chickens and francolins etc. Continuous forestation by women helps the families as timber, fuel, fodder, fruit, and shade protect against harsh weather. Most of the soil and water conservation techniques are conducted by women to improve their livelihood.

However, they are unable to understand the basic principles of engineering involved there. There is a need for the proper guidance, socialisation and sensitisation of women to conserve the flora and fauna.

Some special demonstration techniques may be imparted to women of this region through well-trained female extension workers in collaboration with agricultural engineering and the soil and water conservation departments.

Malnutrition is common in the Thal zone. Women are not aware of the nutritional value of different plants and animals abundantly available in the agro-ecological conditions of Thal desert that could be added to the daily menu. Special nutritional guidance, awareness and trainings may be imparted to women through nutritionists and dieticians.

There is a need for launching a coordinated and comprehensive campaign to create awareness among residents of Thal on how to improve their livelihood. This has to be done under one umbrella organisation integrating the activities of all departments of agri-extension, wildlife, agricultural engineering, plant protection, food and nutrition and forestry. Wildlife parks may be set up in different locations of Thal zone where all diminishing plant and animal species may be reared under controlled conditions.

<http://www.dawn.com/news/1265932>

CLIMATE CHANGE A THREAT TO FOOD SECURITY: UAF

Business Recorder, June 21, 2016

Climate changes have been affecting our agronomical patterns which are resulting in the heavy loss of agricultural productivity and threatening the food security in the country, said University of Agriculture Faisalabad Vice Chancellor Professor Dr Iqrar Ahmad Khan.

He was chairing a meeting of the scientists from Faculty of Social Sciences, UAF organised by US-Pakistan Centre for Advanced Studies in Agriculture and Food Security at Syndicate Room. US-Pak CAS-AFS Chief of Party Dr Bashir Ahmad and other notables also attended the meeting.

Dr Iqrar Ahmad Khan said that Cotton Leaf Curl Virus (CLCV) was nothing to do in the recent drop of cotton production. It was due to the climate changes which reduced the cotton by 35 percent. He said that the university was mapping out a policy for the government to fight the future challenges of the cotton crops. He also sought the research proposals from the scientists that will be carried out under the USPCAS-AFS.

He said that high efficiency irrigation was in the high demands and scope across the globe. But unfortunately, our country was far lagging behind in the area and stressed upon the need to promote the technology. He said that Information and Communication Technology (ICT) should be adopted in order to transfer the agriculture technology on the doorstep of the farmers.

He urged the social scientists to produce the policy paper on the role of print and electronic media in the promotion of agriculture sector that will provide the guideline to improve the situation. He said that lack of awareness and

traditional way of farming was hampering the process of getting the fruits from the potential. He said that poverty alleviation was directly linked to the rural development.

He also directed the scientists to work on irrigation pricing, policy options for enhancing the marketing efficiency of potato and onion crops; investigating malnutrition and maternal issues in Thar Districts (drought areas) of Pakistan; food and nutritional security analyses of pregnant women to ensure food secure next generations; understanding dynamics and determinants of marketing margins of selected fruits and vegetables in Punjab, and opportunities for improving small-scale milk marketing system through dairy co-operatives concept in Pakistan.

Dr Bashir Ahmad gave the presentation on the two rounds of research grants awarding process by USPCAS-AFS and hoped that the scientists from social sciences faculty will take part in policy research grant. He stressed upon the need to take the all possible measures to address the issue of food security. He said that all-out efforts are being made on the part of the USPCAS to address the problem of the agriculture sector.

<http://www.brecorder.com/general-news/172/58872/>

EMERGENCY DECLARED IN SINDH TO FACE 'HEAVY' MONSOON

Dawn, June 23rd, 2016

KARACHI: With a cloudburst predicted to be around the corner, the provincial government has ordered relevant officials to reactivate flood relief control rooms and relief centres across Sindh as a precautionary measure to face the potential threat of flooding in Sindh's urban and rural districts, it emerged on Wednesday.

"All the commissioners, deputy commissioners, relief commissioner and officials of the revenue and relief departments have been asked to stay alert for any emergent situation as monsoon in Sindh is arriving in addition to widespread rains being reported from the country's north," said a senior official in the provincial government while speaking to Dawn.

Health minister Jam Mehtab Dahar, in the meantime, declared a high alert in government hospitals on account of expected heavy monsoon rain.

A government spokesman said the minister had directed all medical superintendents of public sector hospitals to cancel the leaves of doctors and paramedics and ensure their presence round the clock. They have also been asked to stock a good number of medicines in their health facilities.

He feared the potential outbreak of malaria and diarrhoea etc, warranting preparedness to face untoward situations.

"There is no dearth of funds in the health department. We should maintain transparency in purchasing and stocking of medicines. The met department has predicted heavy rainfall this year so we have to be very vigilant because it involves human lives," Mr Dahar said, adding that action was being taken against absent employees of the health department.

Although the province has already received sporadic rain so far which traditionally starts in mid- June, officials however, said with the drifting of the weather trend every year, they had a forecast from the meteorological department warning of forthcoming widespread rains.

"For a couple of years we are receiving rainfall quite late in August, which continues intermittently across the province till late September. But the met department has warned of early downpours this year more than the yearly aggregate in Karachi and the rest of Sindh," said the official.

Sindh has seen floods consecutively every year since 2010 when the country witness floods which affected almost one-third of its landmass and impacted around 20 million people, more than half of them belonging to Sindh.

Sindh's various districts in its south, including those regarded as its food basket like Tando Allahyar, Tando Mohammad Khan and Mirpurkhas, had been flooded because of widespread rains and manmade technical blunders in 2011, while a situation similar to 2010 was reported in its upper districts, particularly Jacobabad, Kashmore and Shikarpur.

Sources in the provincial government said that despite the continued danger of floods every monsoon, authorities failed to invest adequately in the improvement of water management system especially river embankments and dykes, most of which are still regarded as sensitive and vulnerable.

The provincial health department has however, established a control room in Hyderabad and is said to have asked its provincial network to stock life-saving medicines and vaccines, including that of snakebites, to be used during emergencies.

As the provincial authorities claimed of having limited resources to pile up sufficient quantity of medicines and provide medical facilities in case of flooding, it is however, in contact with the World Health Organization and other UN-linked relief organisations, which had played a key role in scaling-up relief efforts during previous floods, to remain in the loop.

The relief department, in the meantime, is contributing by arranging tents for future flood-affected people and has demanded the figures of schools from the education department that could again be declared as relief camps as had been in the past.

Since non-governmental organisations had played a considerable role during previous flood efforts, the government is taking some major local NGOs in the loop as well.

“We have learnt a lot from our mistakes in the past. Now we are fully conscious and attentive about our functions and effective executions,” claimed a relief department official.

<http://www.dawn.com/news/1266600>

KP'S CLIMATE CHALLENGE

Dawn, Sunday Magazine, June 26th, 2016

Rina Saeed Khan

Pakistan is considered one of the most vulnerable countries in the world to climate change — with particular threats to water, energy and food security, according to a recent report by the United Nations Development Programme (UNDP)-Pakistan. In fact, the UNDP's country director says that the economic losses faced by Pakistan due to climate change are significantly higher as compared to terrorism: “Pakistan may be facing \$6 billion losses due to climate change whereas losses due to terrorism may be around \$1b”.

Yet, despite all these losses and the very real threats of glaciers melting, annual devastating floods and damages to crops due to erratic rains and droughts in the near future, most of the country's political leaders are still not talking about climate change at the national level.

The last time PM Nawaz Sharif spoke about climate change at any length was at the Paris Summit back in December 2015; PML(N)-appointed minister for climate change, Zahid Hamid, is now also the law minister, and he is too busy with the Panama leaks to bother about climate change. While the last PPP government, to their credit, did come up with formulating the comprehensive National Climate Change Policy, since then they have largely been quiet on the topic.

The only major exception in the political arena seems to be Imran Khan, chairman of PTI, who is not only talking about climate change but is also increasing spending on trying to tackle it. In fact, the UNDP report appreciated the

Khyber Pakhtunkhwa (KP) province's efforts in making substantial increases in climate-related spending. In this year's provincial budget, the KP government has allocated Rs2b for environment and forests.

Since coming to power in 2013, the PTI-led KP government has, in fact, focused on what it calls its "Green Growth Initiative", which aside from their Billion Tree Tsunami project, also entails the creation of management plans for six national parks and the installation of 365 micro hydel projects in various districts of KP. Last week, Imran Khan gave a press conference in Islamabad exclusively dedicated to climate change and green growth.

He actually refused to answer any questions about Panama leaks as he wanted to devote the time allocated to speaking only about forests, protecting the environment, creating renewable energy and how all this ties to our future well-being.

Addressing the jam-packed news conference, Imran Khan pointed out that the increase in global warming is causing the rapid melting of glaciers, which will have an adverse effect on our future water needs. Pakistan can try to protect its water resources and contribute to mitigation by planting trees and protecting its forests.

"KP has taken important steps to save future generations from the dangerous effects of environment changes", he explained, detailing how the KP government plans to increase the forest cover in the province from 22pc in 2013 to 27pc by 2018 through the billion tree tsunami and the creation of new national parks in forested areas like the Palas Valley in Kohistan.

Imran Khan is currently touring these "undiscovered" valleys of KP in a helicopter, scouting places that could be developed into hill stations, national parks or resorts for tourists. Three new national park sites have already been scoped and will be established this year.

He plans to continue his travels in the next two years, to spot and develop the maximum number of places that will not only attract tourists, but will also benefit the local communities of these remote areas. Documentaries on his trips are being filmed by his media head, Faisal Javed Khan, and the first film will feature the picturesque Kumrat Valley in Upper Dir District of KP.

At the Paris Summit, their Billion Tree Tsunami project had shown enough success to be recognised and registered with the Bonn Challenge, which is a global partnership aiming to restore 150m hectares of the world's deforested and degraded lands by 2020.

According to Imran Khan, "40pc work of the Billion Tree Tsunami Project in KP has been completed" and that an independent monitoring organisation, WWF-Pakistan, has found that the planted saplings have a survival rate of 85pc.

In addition, he declared that the 365 small hydel projects initiated at the village level in KP to provide clean energy would be increased in number to 1,000 in the coming years. In his view, the federal government's proposed coal power plants will only "destroy Pakistan's environment. Why are we not exploring the 50,000 MW potential of clean hydro energy that we have in our north?"

Imitation, they say, is the best form of flattery; despite criticising the Billion Tree Tsunami earlier the federal government, in its new budget, has announced the "Green Pakistan Programme", a forest and wildlife protection and conservation programme, allocating an amount of Rs 2b (for two financial years 2016-17 and 2017-18). Under the directives of PM Nawaz Sharif, a total of 105m trees will be planted across the country.

Imran Khan's efforts to protect the environment and highlight climate change in Pakistan are already paying dividends. Of course, a lot more needs to be done. Peshawar has been ranked amongst the worst cities in the world in terms of air pollution, and the KP government needs to tackle this urgently by taking action against brick kilns and polluting vehicles.

<http://www.dawn.com/news/1266922>

NEWS COVERAGE PERIOD FROM JUNE 13TH TO JUNE 19TH 2016

CLIMATE CHANGE LIKELY TO HIT AGRICULTURE

Dawn, June 15th, 2016

Amin Ahmed

ISLAMABAD: Country's agriculture will be one of the major sectors, likely to be adversely affected by climate change, and a crop simulation model-based study shows that wheat yields will be drastically reduced in irrigated areas as well as arid and rain-fed areas towards the end of 21st century.

Studies showed that wheat yields will be reduced by 3.4 to 12.5 per cent in the semi-arid irrigated areas of Faisalabad and Sheikhpura; 3.8 to 14pc in arid areas of Multan and Bahawalpur, Badin and Hyderabad and up to 16pc in rain-fed areas of Chakwal.

Similarly, in basmati rice tract, the yield is expected to be reduced by 10.4pc, 16.5pc and 17.8pc by 2020s, 2050s and 2080s, respectively. Under a scenario, the yield is expected to decline by 11.4pc, 15.8pc and 21.5pc, respectively by 2020s, 2050s and 2080s.

In general, an increase in temperature will lead to shortening of 'Grow Season Length' (GSL) for wheat and rice crops in all the selected wheat growing districts and basmati tract of the country.

The results suggested that the aggregate impact of climate parameters like changes in temperature and rainfall exerted an overall negative impact on cereal crop yields, given that the management practices and use of technology remain unchanged.

According to the study, negative impact of climate change (increase in temperature) has been observed in neighbouring countries, like India, where reduction in yield of major crops like rice, wheat and maize per one degree Celsius in the temperature is expected to range from 4pc to 20pc (rice), 32pc to 50pc in the case of maize, and 5 to 20pc in wheat.

The study point out that one-fourth of the country's land area, which is suitable for intensive agriculture, is threatened by wind and water erosion, salinity, water-logging, flooding and loss of organic matter.

<http://www.dawn.com/news/1264868>

CLIMATE CRISIS

Dawn, June 17th, 2016

Kashif Shahzada

HUMAN greed and unabashed materialism have begotten a monster which is ready to devour us. Excessive pollution from consuming fossil fuels is disturbing the balance of our ecosystem and threatening to destroy life on the planet.

The spectre of climate change looms large but nobody seems to notice it. Turn on prime time TV in Pakistan and there is hardly a mention of it. Those on the pulpit debate vociferously about trivial matters but this fire which is raging to engulf saints and sinners alike is hardly a cause of concern for them.

Rulers plan economic growth but do not say what use it will be when the planet is no more. Businessmen ignore the environment, seeking interim profit failing to realise that our actions are like a boomerang. They eventually come back to haunt us one day.

Global warming should be taken very seriously. It is a very real danger that threatens our existence. For the sorry state of the planet, we have no one but ourselves to blame. Each one of us individually is responsible for if we do not fall in the category of mass producers responsible for carbon emissions that harm the earth's atmosphere, we definitely are among the mass consumers who drive such mindless economics.

Many of us also fail to realise that looking after the environment is equally the remit of those who believe in God. Polluting the air, poisoning the rivers, cutting trees, destroying flora and fauna will not only have repercussions in this world but also have an impact on the afterlife of the perpetrators.

The Quranic description, "When he turns his back, his aim everywhere is to spread mischief (yufsidu) through the earth and destroy crops and cattle. But Allah loveth not mischief (fasaad)" (2:205) warns that destroying the environment is an act of fasaad (disorder, mischief) and is disapproved by God.

Going against the divine edict to reduce waste, "...[W]aste not by excess, for Allah loveth not the wasters" (7:31), we over-procure, over-consume and waste profusely.

In contrast to the injunction "...Allah ... loves those who keep themselves pure and clean" (2:222), our towns have a reputation for garbage-littered streets and overflowing sewage. Not to mention the havoc created during Eidul Azha, when the gory mess left on the streets is actually a blatant affront to Quranic injunctions emphasising cleanliness.

Who can forget the choking suffocation caused to the elderly and those with respiratory disorders by the smoke enveloping the entire neighbourhood when residents set fire to their rubbish? Or the agony caused by loud music during a celebration in the middle of the night? Or that of a preacher's unsolicited sermon from a loudspeaker? It appears that the divine imperative "...[A]nd do good to ... neighbours who are near, neighbours who are strangers. ..." (4:36) has fallen on deaf ears.

The water we are supplied is unclean, the air we breathe is polluted, the food we eat is adulterated, the sounds we hear are agonising. Parks and green spaces are disappearing. Shopping has become a weekly ritual for shopaholics seen stuffing groceries in plastic bags rushing to and fro from supermarkets, causing excruciating traffic jams and nervous breakdowns with their mad rush.

Take a look at our society; when it comes to managing the environment at a personal level, let us admit we have totally failed. We defy the rule revealed in the divine writ, "In order that ye may not transgress (due) balance" (55:8) with our imbalances while shamelessly flaunting our empty religiosity at every juncture.

This is our life in which we are ever ready to worship materialism. What is it that we have but a mere empty claim to piety and godliness? We need to be educated about green living and how it impacts our future, for without having a proper understanding we cannot take action.

We need to make incremental changes in our everyday life. Actions like aiming to plant trees, keeping possessions to the minimum, recycling materials at home and at work, reduction of waste, and keeping the environment clean on a regular basis need to be a priority.

A commitment to walking for errands instead of driving, opening up windows to make the best use of natural sunlight during the day instead of using electricity, and a lot more can be easily done and should be done. Standards and procedures for sustainability at home or at work need to be written down and put into action.

Study the Quran, and one will discover that care for the environment and welfare of all living beings is a quintessential part of an Islamic lifestyle. Where prayer, fasting and pilgrimage are an Islamic obligation, so are frugal living and an eco-friendly and sustainable lifestyle.

<http://www.dawn.com/news/1265352/climate-crisis>

NEWS COVERAGE PERIOD FROM JUNE 6TH TO JUNE 12TH 2016
WEATHER WORSENS DEGREE BY DEGREE

Dawn, June 6th, 2016

LAHORE: Sunday was the city's hottest day of the season, and the power loadshedding or prolonged breakdowns added insult to injury.

The Met department said the heatwave was extended across the plains of the country. It was likely to further intensify in view of clear sky.

It was hot on Saturday night which was sleepless for many. And sun started throwing fire soon after dawn, producing heat that was intolerable especially for the elderly and children.

The maximum temperature was 46 degrees C and the minimum on Saturday night 30 degrees C.

The Met department said the heatwave affected almost the entire plain area of the country. Larkana, Sukkur, Bhakkar, R.Y. Khan and Noorpur Thal recorded 48 degrees C maximum temperature, Dadu, Sibbi, Jacobabad, Shaheed Benazirabad and Bahawalnagar 47, Okara, Jhelum, Bahawalpur, Joharabad, Sahiwal, Sargodha, Padidan, Moenjodaro, Hyderabad and Rohri 46.

A shallow westerly wave nevertheless gave 18mm of rain in Parachinar and 7mm in Gilgit.

The Met department forecast very hot weather conditions over plain areas of Punjab, central and southern Khyber Pakhtunkhwa, upper Sindh, Sibbi and Makran divisions in the next 24 hours. Rain dust-thunderstorm with gusty winds is expected at few places in Malakand, Hazara, Rawalpindi, Gujranwala divisions, Islamabad, upper Fata, Kashmir and Gilgit-Baltistan.

<http://www.dawn.com/news/1263021>

OCEANS DELAY WARMING OF ANTARCTIC WATERS: STUDY
Business Recorder, 31 May 2016

PARIS: Deep, cold ocean currents from the North Atlantic blunt the effect of global warming on Antarctica and slow the rise of sea levels, according to a study published Monday.

This icy insulation of the snowy continent — covered by a sheath of ice up to four kilometres (2.5 miles) thick — could last for centuries, the research published in Nature Geoscience said.

That's good news to hundreds of millions of people in low-lying regions who are threatened by seas set to rise up to a metre by the end of the century, according to the latest report by the UN climate science panel.

Newer studies suggest the ocean waterline could go up even more, pushed by surface water that expands as it warms, along with runoff from glaciers and two huge ice sheets.

One of those ice sheets sits atop Greenland. The other is on West Antarctica, a sliver of the larger continent that is warming faster than the rest.

If East Antarctica were melting at the same rate, the impact on human settlements along coastlines worldwide would be truly catastrophic.

Scientists have long known that climate change has affected Antarctica's Southern Ocean far more slowly over the last half-century than oceans elsewhere.

They also know why: the sheer vastness of the continent's ice sheet and the reflective sea ice that surrounds it, along with the winds and ocean currents that circle the continent like a buffer zone.

– Timescale of centuries –

But the new study assigns the key role to a conveyor belt of deep ocean currents that transports icy water — barely one degree Celsius (34 degrees Fahrenheit) — from the Arctic region.

“The primary source of delayed Southern Ocean warming is the background ocean circulation,” lead author Kyle Armour, a researcher at the University of Washington in Seattle, and her colleagues wrote in *Nature Geoscience*.

It doesn't move quickly: the water welling up today around Antarctica began its north-to-south trans-Atlantic voyage before the dawn of the Industrial Era, the study said.

But the impact is lasting.

Only over a “timescale of multiple centuries” will the heat-trapping greenhouse gases that are fuelling droughts, superstorms and erratic weather on the rest of the planet have a profound impact on the Southern Ocean, they conclude.

This “good news”, however, is tempered by the fact that even slight warming can do damage — and not just in West Antarctica.

A glacier the size of France atop East Antarctica is rapidly shedding water and could raise oceans some two metres (six feet) in a few centuries, another study reported last week.

Totten Glacier — most of which sits below sea level — is being eroded from below by sea water flowing hundreds of kilometres inland, increasing the portion resting on ocean water rather than rock.

<http://www.brecorder.com/world/europe/299221-oceans-delay-warming-of-antarctic-waters-study.html>

ECONOMIC GROWTH AT COST OF CLIMATE CHANGE: ADB

Dawn, June 7th, 2016

ISLAMABAD: The uncertain global economic outlook threatens to undermine the resolve of countries in Asia to implement the urgently needed investments and policies to help put their economies on an environmentally sustainable growth path, warns a report by the Asian Development Bank.

It notes that Asia's remarkable growth performance has been achieved at the expense of massive environmental degradation and climate change.

“Meeting the challenge of runaway climate change requires a rapid transition to a low-carbon path, but many countries remain ambivalent about this choice because of concerns this will come at the expense of economic growth and shared prosperity,” says Vinod Thomas, director-general of Independent Evaluation.

ADB stakeholder perception surveys over the past several years show environmental degradation and climate change rising in prominence as a threat to development in the institution's 67 member countries. In the latest survey, this placed second in a ranking of nine development threats (after corruption); in 2006, it placed eighth.

The report identifies the most “immediate and serious” environmental threats facing Asia as urban air pollution, lack of proper solid waste management, degradation of fresh water resources, soil erosion, destruction of biodiversity habitats, and the mass extinction of species.

The report notes that Asia's demographic and economic growth is predominantly an urban phenomenon, with cities now accounting for about 80 per cent of the region's gross domestic product. As a result, the adverse effects of climate change and related impacts on air, water, and soil quality are primarily experienced in urban areas.

By 2050, Asia's urban population is expected to nearly double from 1.6 billion in 2010 to 3 billion, putting additional stresses on infrastructure and natural resources.

"As benefits and costs of Asia's economic growth manifest themselves most visibly in cities, addressing urban environmental issues and improving urban resilience is a key challenge," says the report. Yet it notes: "The growing acknowledgement of increasing environmental degradation in Asia has not been matched by sufficient action."

<http://www.dawn.com/news/1263211>

FLOOD WARNING: 524 VILLAGES DECLARED HIGHLY SENSITIVE

The Express Tribune, June 9th, 2016.

MULTAN: The Met Office issued a flood warning on Wednesday for various districts in south Punjab. The districts identified as sensitive are Multan, Muzaffargarh and Rajanpur. The department has declared 524 villages alongside the Chenab River as highly sensitive.

According to the department, the potential flood would be low level but could damage crops on hundreds of acres of land.

District administration officials told The Express Tribune that rehabilitation projects after last year's floods were still underway. "And now a new warning has been issued." A spokesperson of the district administration said that they were aware of potential floods.

"We have been preparing to deal with them for some time and we feel that we are prepared." District Coordination Officer Nadir Chattha has convened a meeting this week to review strategies on how to deal with potential floods, the spokesperson said.

<http://tribune.com.pk/story/1119087/flood-warning-524-villages-declared-highly-sensitive/>

MONSOON SEASON-2016: 20 PC ABOVE NORMAL RAINFALLS FORECAST ACROSS COUNTRY

Business Recorder, June 10, 2016

Abdul Rasheed Azad

ISLAMABAD: Pakistan Metrological Department (PMD) has predicted likelihood of 10-20 percent above normal rainfalls across the country during up-coming monsoon.

According to PMD, more than average rainfall is expected in Punjab, Khyber Pakhtunkhwa (KP), Sindh, Azad Jammu and Kashmir (AJ&K) and Balochistan.

PMD officials informed the participants of Pre-Monsoon 2016 Preparedness Conference arranged by the National Disaster Management Authority (NDMA) here on Thursday. The conference aimed at reviewing all preparatory efforts put in place at federal/provincial level for Monsoon season-2016 and to harmonize all national and provincial plans to cope with the flooding, rescue, relief and post flood rehabilitation.

The conference was informed that some extreme rainfall events are likely to occur in catchment areas of major rivers which may cause floods and there is also a high probability of heavy downpour which may generate flash flooding along Suleman Range.

Some heavy downpour events are likely to cause urban flooding in big cities. Some strong incursions of monsoon currents, coupled with high temperature, may trigger Glacial Lake Outburst Flood (GLOF), landslides and flash floods in upper KP and GB.

Federal Flood Commission (FFC) presented province wise vulnerable points needing special attention, policy for Dam Management, NHA shared progress on preparatory efforts undertaken for various National Highways with focus on KKH, Gilgit-Skardu Road, Dir-Chitral Road, Rawalpindi-Murree-Muzaffarabad Road, Manshera-Naran Road. Pakistan Army Engineers Directorate informed participants about Army's preparedness measures in support of civil administration. UNOCHA shared resource capacities of UN agencies across Pakistan coordination mechanism.

Conference was chaired by Chairman NDMA Major General Asghar Nawaz and attended by senior officials of various federal ministries including Communication, Water & Power and Railways. Officials from WAPDA, Provincial Irrigation Departments, DGs of PDMA/SDMA/GBDMA/FDMA&IRSA, representatives of armed forces, CDA, NESPAK, SUPARCO, Pakistan Red Crescent, UN agencies, Pakistan Boys Scouts Association, Pakistan Girls Guide Association and all other relevant Provincial & Federal Departments also attended the conference.

The NDMA presented the salient features of National Monsoon Contingency Response Directive-2016 and realistically identified the limitations of existing response mechanism within which all stakeholders have to operate. Weaknesses based on past experiences were also highlighted for improvement.

Four contingency scenarios have been visualized by the NDMA based on the Pre-Monsoon forecast issued by the PMD which include "moderately above normal monsoon" (most likely), "intense monsoon (probable)", "erratic monsoon (less probable)", abnormal erratic monsoon (most dangerous).

Participants were asked that national/provincial response for flood fighting / rescue / relief will be configured against "most likely scenario i.e "moderately above normal monsoon" while all concerned must take safeguard against other three scenarios as well.

It was highlighted that monsoon season presents threat of Riverine floods, flash floods, urban flooding and glacier lake floods. The responsibility matrix was also presented which defined the role of each department, i.e. FFC/Provincial Irrigation Department being primarily responsible for Riverine/Flash Flood management while Municipal corporations/ city development authorities / district governments are responsible for Urban Flood Management. NDMA/PDMA and all other Line Departments / Organizations are responsible for flood fighting, rescue, relief, reconstruction & rehabilitation operations within respective domain. Armed forces are to be called for emergency response in aid of Civil Administration as per Contingency Plans.

The NDMA Response Directive outlines major response guidelines which include community early warning through SMS alerts in districts likely to be affected by floods, coordination of relief stocks held with all PDMA/DDMA, resource mapping, completion of flood protection works before June, 30 2016, availability of bailey bridges for critical sections by NHA, placement of earth moving machinery in KP, AJK & GB at isolated zones by respective highway departments, timely evacuations at encroached settlements in river plains, enhancement of Early Warning System for communities in flash flood prone areas and maintenance of flood rescue equipment.

<http://epaper.brecorder.com/2016/06/10/21-page/767306-news.html>

PAKISTAN FAILS TO GET A SINGLE PROPOSAL GREENLIT
The Express Tribune, June 12th, 2016.

Shahzad Anwar

ISLAMABAD: While the Green Climate Fund (GCF) will review eight climate-related project proposals of different countries at its upcoming board meeting, Pakistan has failed to sail through even a single proposal to get funding.

The GCF support projects, programmes, policies and other activities in developing countries using thematic funding windows to assist countries in adaptation and mitigation practices to counter climate change.

Of the total 41 proposals with a funding request of \$2.4 billion, eight project proposals worth \$208 million have been mopped up from GCF's pipeline.

The eight project proposals have been submitted to the United Nations' GCF by African, Asia-Pacific, Latin America, Caribbean and Eastern Europe countries with a focus on activities ranging from energy efficiency investments to building coastal resilience in vulnerable areas.

The three-day GCF Board meeting is scheduled to kick off on June 28 at its headquarters in Songdo, in South Korea.

The GCF is a fund within the framework of the UNFCCC as a mechanism to assist developing countries in adaptation and mitigation practices to counter climate change.

According to information placed on the GCF's website, of the eight proposals, five projects aim to boost the capacity of countries to adapt to the adverse impacts of human-induced climate change, two focus on lowering carbon emissions and one focuses on adaptation and reducing emissions.

The Ministry of Climate Change (MoC) has submitted a \$35 million project for addressing the mounting risk of global lake outburst floods in Pakistan's north where average temperature continues to rise and cause glaciers to melt at a much faster rate. But the project has yet to be included in the list of 41 projects lined up for GCF's consideration.

According to Pakistan Metrological Department, Pakistan's north is home to over 3,000 glacial lakes and 52 of them on the verge of outburst.

At a meeting held at the MoCC on February 24, the National Climate Change Policy Implementation Committee (NCCPIC) was informed that except for the Azad Jammu and Kashmir government, all provinces, ministries and divisions have failed to come up with action plans to tackle climate change issues under the National Climate Change Policy.

During its first NCCPIC meeting on April 23, provincial governments were asked to submit their project concept notes regarding submission of proposals for the GCF grants but MoCC has not received an encouraging response from the provinces, sources said.

Senior officials at the MoCC said that the provinces' lack of capacity to hammer out climate change-related project proposals were the main cause of the country's failure to qualify for the GFC funds.

During the second NCCPIC meeting chaired by Climate Change Minister Zahid Hamid, the meeting was informed that the ministry had received 27 concept notes from federating units on irrigation sector, coastal areas, public engineering, and field intrusion of sea water. But except for one proposal from the AJK government, almost all the concept notes were turned down for not being up to the GCF's criteria.

Sources in the MoCC said that the ministry equally lacks the technical know-how to extend help to the provinces to come up with concrete proposals to meet the GCF criteria.

<http://tribune.com.pk/story/1120890/gcf-board-meeting-pakistan-fails-get-single-proposal-greenlit/>

SUBMERGED: 45-FOOT BREACH IN KORAI WAH FLOODS THREE VILLAGES

The Express Tribune, June 12th, 2016.

SUKKUR: At least three villages and thousands of acres of agricultural land were flooded when a breach occurred on Friday night in the Korai Wah, near Pano Aqil some 45 kilometres away from Sukkur.

The 10-foot-wide breach widened to 45 feet due to lack of action by Sukkur Irrigation and Drainage Authorities (Sida) authorities.

At 2:30am on Friday night, a 10 foot-wide breach occurred in Kori Wah, near village Morr Jo Kando, and the water started gushing towards the villages and agricultural. The villagers immediately informed Sida officials but nothing was done, forcing the residents to try and plug the breach themselves. Strong currents of water foiled, however, their attempts.

By this time, the gushing water had already entered three villages – Morr Jo Kando, Bhelar and Sadhuja. The water had inundated cotton, sugarcane and rice crops sown over thousands of acres of land and was moving towards the National Highway when army soldiers from Pano Aqil Cantonment rushed to the scene and joined hand with the villagers to plug the breach.

Later, Sida director Ghulam Yasin Qureshi and his team also joined them. After 10 hours of efforts, the soldiers, villagers and Sida officials succeeded in plugging the breach. The water also entered the food department's warehouses near the National Highway.

Affected residents spoke to the media and complained of Sida officials' apathetic attitude. They said despite receiving timely information, the officials failed to come to their rescue. An irrigation official requesting anonymity said that many people informed him about the breach but it 'was not his concern' because Sida is responsible for the Ghotki feeder and its offshoots.

"I informed the responsible officials accordingly," he claimed, adding that had the officials rushed to the scene, the breach would not have widened and losses could have been minimised as well.

As the Kori Wah originates from the Ghotki Feeder, which is a feeder of the Guddu Barrage, therefore water discharge in the feeder was reduced from the Guddu Barrage to ease the situation.

An affected resident, Muhammad Arif, told the media that water has entered their houses, due to which their grain stocks have been ruined. "The standing crops of cotton, sugarcane and rice have been badly hit by the strong current of water and resultantly the growers will sustain a loss of millions of rupees," he said. "Had the army jawans not rushed to our rescue, the situation would have gone out of control by now," said Arif.

Meanwhile, the Sida director is blaming lower staff for the breach and has ordered the immediate suspension of 16 daroghas and beldars on charges of negligence. Qureshi was unavailable for comments when contacted by The Express Tribune.

<http://tribune.com.pk/story/1120828/submerged-45-foot-breach-korai-wah-floods-three-villages/>

NEWS COVERAGE PERIOD FROM MAY 30TH TO JUNE 5TH 2016

COMING TO GRIPS WITH CLIMATE ANOMALIES

Dawn, Business & Finance weekly, May 30th, 2016

Ashfak Bokhari

PAKISTAN is experiencing an unusual hot weather these days amidst predictions of stronger heatwaves than last year. The casualty will, of course, be the people's economic well-being, particularly in rural areas, apart from the loss of human lives.

But Pakistan is not alone to suffer the nature's onslaught. India is facing a similar situation and there had been record deaths. What has largely gone unnoticed in the media here is the harsh fact that the months of January, February and March had set new records globally, with both February (1.64°C) and March (1.58 °C) breaching the internationally

agreed 'safe-zone' of 1.5 °C above pre-industrial times set in Paris conference on climate change last year, according to a report of National Oceanic and Atmospheric Administration, US.

The monthly global average temperature went up in the last two months approximately as much as it had in the last 35 years.

So, the West has a scorching summer ahead with a major jump in average temperatures and atmospheric carbon dioxide levels. The big question is whether the earth system is being pushed to the point where the natural sources of carbon emissions will significantly increase. If so, then there is a cause for concern.

Pakistan, despite contributing too little, less than 1pc, to greenhouse gases still ranks second in the list of countries most affected by climate change, according to the Sindh Environmental Protection Agency (Sepa).

But the nature makes no discrimination while delivering its wrath. The Sepa director stated last week that intensity of the problem could be judged from the fact that even the Sindh government has decided to spend an additional amount of Rs10bn on climate-induced health problems.

Temperature in Pakistan is higher than the global average because major part of the country is located in arid and semi-arid regions, which fall in the heat-surplus zone.

Meanwhile, Pakistan ratified the Paris Agreement last month and has thus joined the community of 171 countries who are signatory to it. Now the country is committed to implement the goals agreed in the December moot.

Apart from strengthening the country's preparedness, the implementation of the schemes will also generate a series of economic activities. Investments at the local level in climate projects and adaptation and mitigation measures will offer vast business opportunities.

Some analysts are of the view that climate change is, in fact, an economic growth issue because the cost of economic development has now gone up sharply due to damage and disasters caused by the extreme weather events.

The government's Vision 2025 aims at transforming the country into a middle-income country by increasing per capita income up to \$8,160. But if global temperatures rise higher than two degrees Celsius it will be difficult for the country to cross the \$6,526 threshold.

Pakistan, in such an eventuality, will have to look to the international community for financing of climate compatible development.

A report submitted recently to the National Assembly had described Pakistan being among the countries which are most vulnerable to the climate change but have a very low technical and financial capacity to meet its adverse impacts. Hence, an immediate task for the country is to adapt itself to the climate change.

The report pointed out that Pakistan has, collectively, suffered losses to the tune of \$20bn due to adverse effects of climate change in the recent past. The assessment was carried out with the assistance of UN-Habitat, the Capital Development Authority and the ICT Administration.

Meanwhile, the Sindh government has decided to establish a separate department to regulate the affairs relating to coastal development. It will be called Climate Change, Environment and Coastal Development Department. Such a decision was overdue because sea intrusion in Sindh continues to devastate the ecology of the Indus delta and has not only rendered two coastal towns, Kharo Chan and Keti Bunder, almost extinct, but also destroyed fertile farmlands in Thatta and Badin districts.

During a recent briefing for the members of the Senate Standing Committee on Science and Technology, the government was warned that Badin and Thatta would drown by 2050 and Karachi by 2060 if immediate steps were not taken to address the deteriorating situation.

Sea-level rise and frequent threats of cyclones and tsunamis require Sindh to be ready with evacuation plans for its urban and rural coastal populations, particularly for cities like Karachi. The provincial government has meanwhile made elaborate arrangements to give immediate medical assistance to victims of heatwave.

Numerous relief camps have been set up in Karachi and other cities with the help of private firms. The World Bank estimates the environmental cost to Sindh could go as high as Rs372bn — more than 15pc of the provincial GDP — which will be a severe blow to its economy.

<http://www.dawn.com/news/1261498>

FIVE KILLED AS THUNDERSTORM HITS TWIN CITIES

Dawn, June 2nd, 2016

Aamir Yasin

RAWALPINDI: Five people were killed as thunderstorm hit the twin cities on Wednesday.

As many as 28 people were injured in various incidents during the storm in Rawalpindi while 14 injured were brought to Pims from Islamabad.

According to rescue services, a house belonging to Mohammad Zaman collapsed while Zaman and his family were still inside. Zaman and two women were trapped in the debris, and the victims were moved to the Holy Family Hospital (HFH) where they were pronounced dead. The HFH deputy medical superintendent also reported that 28 others were brought to the hospital after being injured in various incidents.

Four incidents of collapsed walls were also reported in the downtown areas.

Talking to Dawn Deputy Commissioner Islamabad Captain Mustaq Ahmed confirmed two deaths in Islamabad. However, details not available.

Unusually strong winds and heavy rainfall hit the twin cities on Wednesday night, bringing down mercury levels while damaging metro bus stations on the elevated road in Rawalpindi. Sign boards and trees were knocked over, and lightning also caused a fire at Sabzi Mandi, the I-11 fruit and vegetable market. The fire was controlled by the fire brigade.

A Met Office official told Dawn that the speed of the windstorm was reported to be 140km per hour (70 knots) at 8:15pm which reached over 150km per hour by 8:22pm. The windstorm brought the temperature down from 40 to 31 degrees Celsius.

When asked about prior warnings, the official said it was routine for such a storm to occur in the evening in the summer.

“Although we did inform people that a windstorm will occur on Wednesday according to routine, we were expecting it for Thursday noon,” he said. The official added that the intensity of the windstorm could only be reported a few hours earlier.

“Wind entered from the northwest into the upper parts of the country, and will produce more rainfall in the next 24 hours,” a Met official said. He added that the strong winds lasted over an hour, which was unusual, since typically wind blows for less than half an hour.

He said that the heating system did not usually prevail for more than three to four days in Rawalpindi and Islamabad, but continued for nine days this week, which led to the dust storm.

“The rain, accompanied by strong winds, will occur in upper parts of the country in the next 24 hours including in Fata, Khyber Pakhtunkhwa – in the Malakand, Hazara, Peshawar, Kohat, Mardan and Bannu divisions- Islamabad, upper Punjab – in the Rawalpindi, Sargodha, Gujranwala, Lahore and Faisalabad divisions- Gilgit-Baltistan, Kashmir and in a few places in the D.G. Khan, D.I. Khan, Quetta, Zhob and Multan divisions,” he said.

The weather damaged glass panes at metro bus stations on the elevated road from Saddar to Faisalabad, and electricity poles, billboard and trees fell along Murree Road, Peshawar Road and Jhelum Road.

Traffic signals on the Mall were also damaged.

“Teams have been formed to check the damage in various parts of the city and other districts in the division,” Rawalpindi Commissioner Azmat Mehmood told Dawn.

He said there were reports of damage to the metro bus station, and the Punjab Metro Bus Authority would prepare a report of their damage.

The Metro Bus Authority general manager, Uzair Shah, confirmed that glass panes at the stations on the elevated road from Saddar to Faizabad were damaged and said the bus services was halted for a few hours after the winds.

He said a tree near Faizabad and Shamsabad fell on the bus station, but no loss of life or property was reported. Mr Shah added that teams were making reports on the damage, which would be completed on Thursday.

For residents of the garrison city, Wednesday was also a day without electricity, the supply of which was suspended from 11.30am to 7.30pm – before the start of the thunderstorm – in Westridge, Allahabad, Misrial Road, Pirwadhai and Ratta Amral.

After the storm, there was a complete shutdown of electricity between 8pm to late at night.

When asked about load shedding during the day, Islamabad Electric Supply Company Rawalpindi Superintendent Mohammad Kaleem said a fault developed in the 132 KV main line connected with Pirwadhai, the Golra Mor circle and adjoining areas and was repaired in the evening.

“After the thunderstorm, electricity poles fell at Benazir Bhutto International Airport (BBIA), Gulistan Colony, Ayub Park and other areas and it took over four to five hours to restore the electricity in the city,” he said.

Four flights were also diverted while BBIA was plunged into darkness after electricity poles located close to the entrance gate collapsed, and heavy electrical wires fell on vehicles parked below at around 8:05pm, according to a spokesperson for the Pakistan Civil Aviation Authority.

She said PCAA employees and other experts were at the site to clear the entrance and restore power, but while efforts were underway electricity was not restored until late Wednesday night.

However, a duty terminal manager told Dawn that electricity was being provided at the airport through generators.

According to airport authorities, flight operations at BBIA were also disturbed. Pakistan International Airlines flight PK-212 from Dubai was diverted to Lahore, as were two domestic flights PK-352 and PK-370, arriving from Quetta and Karachi, respectively. An Air China flight was kept on hold for some time before it too was diverted to Lahore.

Due to the thunderstorm, the wireless communication system of the police was disturbed when its antenna collapsed at Police Lines. Police checkpoints on Airport Road, Jhelum Road and other parts of the city were also damaged during the storm, but no security or police official was reported injured.

<http://www.dawn.com/news/1262196>

ADAPTING TO CHANGE: CLIMATE CHANGE POLICY SENT TO GOVT FOR APPROVAL

The Express Tribune, June 2nd, 2016.

Iftikhar Firdous

PESHAWAR: The Climate Change Cell working under the K-P Environment Protection Agency (EPA) has completed its climate change policy—the first by any province. It has now been sent to the government for approval and implementation.

A copy of the policy, available with The Express Tribune, explains the short and long-term repercussions of climate change. In 10 chapters, it tries to devise a policy framework to reduce the effects through adaptation and mitigation.

Deducing from the Intergovernmental Panel on Climate Change's report, it says the province will be faced with longer summers and milder winters. It warns of severe monsoon rainfalls and glacial melting in the districts of Buner, Shangla, Upper Dir and Lower Dir, Swat, Chitral in the northern mountain ranges.

It adds the sub-humid eastern mountains and wet mountains of Haripur, Battagram, Mansehra, Abbotabad and Kohistan will also experience similar effects.

However, it warns that because of the increase in precipitation, the alluvial soil of districts from Peshawar to Hangu and Bannu till DI Khan will be affected by massive riverine floods, causing big changes in food production.

Farmers will have to alter the kind of crops they grow depending on the increase in temperatures and depleting water levels.

The policy also takes into account the impact of climate change on biodiversity and changes in the ecosystem of the province. Of 100 widespread species, 90% of them are from K-P, including seven bird specimens and 12 internationally recognised as endangered migratory birds.

Leadership for Environment and Development (LEAD) Pakistan's Hassan Akhtar Rizvi has helped shape the climate change policy. He said the country is not a very high emitter of greenhouse gases – approximately 0.8% of global emissions.

Meanwhile, initiatives based in K-P, such as the Billion Tree Tsunami project, were commendable. However, the effects of climate change still pose a considerable threat to the province. He also said that while adaptation was a provincial subject, mitigation was more federally driven. Pakistan was signatory to 14 international agreements related to the environment of which 13 applied to K-P.

The advisory committee which was asked to review the policy remained of the opinion that there was little that would explain implementation. This was a point taken up by EPA Director Hussain Ahmad, who said many members of the committee did not reply to suggested changes in the policy. "There are gaps that will need to be filled," he said, asking that the policy be reviewed after consultation with stakeholders.

It was suggested that a provincial climate change policy committee be constituted to meet biannually to measure the risks involved and come up with feasible methods for implementation. However, the policy is only a framework that provides a path and it is the job of the government to provide strategy and action plans necessary for implementation.

While the policy touches on green growth and a compatible development, it barely mentions problems faced by thousands of people displaced by climate induced or environmental migration in the last decade. Although K-P is a province faced with mammoth security challenges, the policy does not mention them with relation to changes in climate.

A majority of the recommendations mentioned in the policy require action plans for implementation, but there is no reference if the government is willing to provide the necessary help.

<http://tribune.com.pk/story/1114653/adapting-change-climate-change-policy-sent-govt-approval/>

CLIMATE SENSITIVITY: ALL TALK, NO ACTION

The Express Tribune, June 3rd, 2016.

Shahzad Anwar

ISLAMABAD: The environment paints a worrying situation as the government makes no mention of any concrete programmes initiated by the Ministry of Climate Change (MoCC) and its attached departments during 2015-16.

The survey highlights the country's vulnerability to climate change-induced disasters, but it does not offer information on any serious steps taken by MoCC towards addressing these vulnerabilities.

The survey also shows that the ministry still lacks capacity to hammer out plans which are necessary for enhancing climate change resilience.

The paragraphs have been rephrased with the same inputs reported in last year's economic survey, such as references to projects and programmes to support goals including capacity building, provision of clean drinking water, environmental management, biodiversity, air pollution control, watershed management, urban development, tourism promotion, restoration of lakes and water bodies, environmental awareness, waste management, and wetland management.

The country also still faces desertification and land degradation problems, despite the initiation of the Sustainable Land Management umbrella project.

The second phase of the SLM project is being implemented in 14 districts against an approved cost of Rs1.67 billion.

The survey shows that during the outgoing fiscal year, the government signed the Paris Agreement, established the climate change council and climate change authority — both of which are actually still at proposal level — and the climate change fund and task force on climate change, besides initiating a technology need assessment (CTCN).

To overcome air pollution, the government introduced bus-based mass transit systems in Lahore, Islamabad and Multan. According to the survey, rapid urbanisation, increased industrial activity, and the agriculture sector's dependence on dangerous pesticides and chemical fertilisers have led to water pollution.

The survey said that around 40 per cent of diseases reported in Pakistan can be attributed to poor water quality, further illustrated by the fact that 250,000 Pakistani children die every year from diarrhoea alone.

One positive was that the country initiated afforestation and tree planting campaigns, revised the National Biodiversity Strategy and Action plan, signed the Nagoya Protocol, and initiated a programme for Comprehensive Reduction and Elimination of Persistent Organic Pollutants in Pakistan (POPs). A technology needs assessment committee was also set up, while the targets set for FY 2015-16 are largely the same as in previous years.

<http://tribune.com.pk/story/1115341/climate-sensitivity-talk-no-action/>

July 2016

NEWS COVERAGE PERIOD FROM JULY 25TH TO JULY 31ST 2016

'A BETTER LIFE WITH A HEALTHY PLANET'

Business Recorder, 28 July 2016

Jeremy Bentham

Can Pakistan expect a third year-running of extreme heat?

The heat that saw a spike in deaths last year and graves dug in expectation of a repeat just a few months ago.

The rains may have washed away those thoughts for the moment, but two consecutive heatwaves have no doubt caused some people to think about climate change.

Whether or not they were directly linked with greenhouse gas emissions, most scientists agree that climate change will make extreme weather more likely.

And climate change formed a core part of the discussions at the World Cities Summit in Singapore in recent days.

It is one of the world's biggest challenges. On one hand, ever more people on the planet, and rising standards of living, generating a bigger and bigger demand for energy. On the other, the need to reduce greenhouse gas emissions. And cities are at the heart of the solution.

The global population is growing: from more than 7 billion today, to an estimated 10 billion by the end of the century. And as the number of people swells we expect the growth of cities to accelerate. More than half of the human beings on the planet already live in cities. By 2050, the proportion is on track to be around three-quarters, with half of this growth in Asia alone.

Today cities consume two-thirds of world energy. By 2040 we can expect cities to be using almost 80%.

Demand for energy – the power for people's lives – is rising and rising fast.

Even with heroic efficiency efforts, the amount of energy the world is consuming by the end of the century is likely to double compared to today.

Yet how do we halt the accumulation of greenhouse gases like carbon dioxide (CO₂) in the atmosphere?

The Shell Scenarios team models possible futures and has just published its latest supplement, *A Better Life with a Healthy Planet: Pathways to Net Zero Emissions*.

In it we can see a possible path – challenging though it may be – to a world where emissions of CO₂ are at net zero levels. That means the emissions that remain are offset, or captured and stored below ground. This is not a target for Shell, it is something the world must achieve.

Cities, and how we plan them, will be central to achieving this. They have a huge opportunity to become more energy efficient: through building standards; by using waste heat from power generation to warm homes; by encouraging high-density living to reduce travel and encourage smaller electric or hydrogen-powered cars; by building in high-capacity public transport systems.

The evolving energy mix will be vital too. Natural gas, for example, produces half the CO₂ and one tenth of the air pollution of coal when burnt for power.

Gas power stations also partner well with renewables, providing reliable electricity when there is no sun or wind.

But adding carbon capture and storage (CCS) technology to power stations and industrial complexes will be critical to reduce emissions enough to reach net zero.

Renewables will, of course, continue to grow rapidly as part of the mix, but mainly produce electricity.

Today, electricity accounts for less than one-fifth of the total energy used in the world. For renewables to have a major impact, our scenario shows the share of electricity in the energy mix will need to grow to at least 50%.

This means people must meet the costs of, for example, electric or hydrogen-electric cars. Households and businesses not supplied with waste heat must be warmed with electricity. Food processing and light manufacturing must also go electric.

Yet even with all this change, greenhouse gas emissions will continue to enter the atmosphere for the foreseeable future.

The production of chemicals used in so many of the things we take for granted will continue to rely on oil and gas. Where very high temperatures or dense energy storage are required-such as in the manufacture of iron, steel and cement, or in heavy freight and air transport-we will almost certainly see the continued use of hydrocarbon fuels.

There will also be regions that switch to low-carbon energy at different speeds, for political, economic or demographic reasons.

Continuing emissions will have to be offset. We can plant forests and use agricultural practices that raise the carbon content of the soil, such as ploughing partly burned biomass into fields. We can also burn biomass for power, coupled with CCS. Plants can suck CO₂ from the atmosphere. Using CCS can make sure it never goes back.

Whether in cities or beyond, none of this will be easy. But all of it is possible. If the world starts work right now.

Jeremy Bentham is vice president for global business environment at Shell and head of the Shell Scenarios team.

<http://epaper.brecorder.com/2016/07/28/21-page/780796-news.html>

UN CALLS FOR MEASURES TO REDUCE HEATWAVE DEATHS

Dawn, July 29th, 2016

UNITED NATIONS: Warning of a possible rise in heatwave deaths due to climate change, the United Nations Office for Disaster Risk Reduction on Thursday called for measures to reduce mortality from this natural hazard.

The warning came days after the World Meteorological Organisation (WMO) announced that global temperatures for the first six months of this year reached new highs, setting 2016 on track to be the hottest-ever on record, and the temperature hit 54 degrees Celsius in Kuwait last week.

“Millions of people around the world should be receiving heat-related warnings and advisories if we are to avoid a repeat of the thousands of deaths which occurred last year from heatwaves notably in Asia and Europe,” said Robert Glasser, the UN Secretary General’s Special Representative for Disaster Risk Reduction.

From 2005 to 2014, an average of 25 major heatwaves were recorded each year resulting in an annual average death toll of 7,232.

In 2015, the hottest year on record, there were 3,275 reported deaths from heatwaves in France, 2,248 in India, and 1,229 in Pakistan.

“Climate change is amplifying the impact of many extreme weather events including heatwaves,” he added, stressing the need for disaster risk management to focus more on extreme heat to reduce mortality from this particular natural hazard.

<http://www.dawn.com/news/1273854>

‘HEATWAVES, DROUGHTS, FLOODS ARE ALL ADVERSE EFFECTS OF CLIMATE CHANGE’
The Express Tribune, July 29th, 2016.

KARACHI: Heatwaves, droughts in Thar and floods in Chitral are some of the adverse effects of climate change, pointed out Aamir Amjad of the Friedrich Nauman Foundation (FNF).

He was speaking at a day-long workshop held at Council of Pakistan Newspaper Editors (CPNE) office on Thursday. The event was organised by FNF, Sustainable Initiatives and CPNE to create awareness about the pressing issue of climate change and capacity building of journalists.

The workshop participants were briefed by Sustainable Initiatives executive-director Farhan Anwar and sustainability consultant Nazish Shekha. The two experts engaged the participants to help them expand their knowledge base in order to perform better professionally.

The workshop spanned various sessions and activities and encouraged discussions among the participants on the topic of climate change and the role they could play as journalists.

Anwar traced the history of sustainable development and the rise of the issue of climate change. Defining the current period as the ‘Age of Anthropocene Extinction’, he stated that if not altered immediately human activities will lead the race to extinction. He also urged to increase the plantation of trees informing that forests act as “carbon sinks” and play a positive role in combating the menace of climate change.

Besides, Anwar also encouraged the use of public transportation since he believed that a large percentage of carbon is emitted into the atmosphere by vehicles. The participants were also briefed on the elements of a sustainable city with Anwar emphasising on the three factors which mattered in this regard: economy, environment and equity.

Shekha asked the participants to take a trip down the memory lane to make them realise how much the city has changed in the past few years. One participant, Muhammad Khawar, pointed out that problems related to disposal of trash and waste management were not as severe when he was young. Similarly, another participant Muhammad Ali remarked that due to the poor air quality in the city he has developed breathing problems.

The participants also undertook a brainstorming session to develop ideas for a city wide campaign. One participant, Alam Mahmood, stated that sustainable plantation must be practiced so as to ensure that planted trees survive. He also criticised the halfhearted efforts undertaken in this regard and labelled them as “publicity stunts.”

The participants also agreed that sensitisation of all stakeholders regarding climate change is vital. In this regard the journalists were apprised of the role they could play while discussing the issues that they face on the ground when covering topics related to climate change and environment.

<http://tribune.com.pk/story/1151354/sustainable-living-heatwaves-droughts-floods-adverse-effects-climate-change/>

LATEST EL NINO WEATHER PATTERN IS OVER: UN

GENEVA: The latest El Nino weather phenomenon, which was one of the most powerful on record, has ended but could be replaced by its stormy sister La Nina in the coming months, the UN meteorological agency said Thursday.

“Atmospheric indicators that had shown strong El Nino patterns early in 2016 returned to near-average in June and July,” the World Meteorological Organization said.

El Nino affects rainfall patterns and causes both drought and flooding. As it recedes the Pacific

cooling trend known as La Nina typically begins, often causing increased rainfall, storms and snow across the globe.

“A La Nina event may develop in the third quarter of this year, but it is likely to be weak,” the WMO said. “It is not expected to match up to the moderate to strong La Nina of 2010-2011.”

The first six months of this year were the hottest on record, setting 2016 to be the hottest year despite the likely development of a La Nina pattern.

El Nino occurs every four to five years. The latest version has already left 60 million people worldwide requiring “urgent assistance,” particularly in Africa, Stephen O’Brien, UN under-secretary general for humanitarian affairs and relief, said in April.—AFP

<http://epaper.brecorder.com/2016/07/29/6-page/780880-news.html>

RAIN WREAKING HAVOC

The Express Tribune, July 30th, 2016.

The rains in Khyber-Pakhtunkhwa (K-P) and Punjab have once again caused much havoc resulting in loss of lives and damage to property and infrastructure. Despite the regularity with which rains and flash floods lash different parts of the country, the various federal and provincial authorities as well as disaster management bodies appear to have learnt little and continue to adopt a lacklustre approach to preparing for the monsoon.

Spending on disaster management and infrastructure that can withstand the elements is one of those governmental tasks that does not always yield a lot of publicity and plaudits. Unless it is an election year and the goodwill of a particular region is assumed to be tied to the quality of local infrastructure, the reconstruction of roads, fixing leaky sewage pipes, and unclogging drains is not something any politician usually wants to bring up.

Every year, large parts of Pakistan receive substantial amounts of rainfall during the summer months and every year, without fail, this rainfall causes loss of life and property.

While some damage caused by excessive rains is inevitable, the regularity with which blockage of roads, collapse of buildings and drownings in flash floods occur during the monsoon season should have jolted our authorities into more substantial action a long time ago. It is quite impossible to ensure that accidents will not occur at all during dangerous weather but routinely taking preventative measures could save some lives that are needlessly lost.

Rain-related incidents in K-P and Punjab have resulted in deaths and severe injuries and the tragedy is that such incidents have been happening with a depressing frequency year after year, with the authorities remaining unmoved by the plight of ordinary citizens. Granted that Pakistan has a limited supply of funds to spend.

But it is also a fact that traditionally the focus has been more on flashy, large-scale megalithic projects rather than on the day-to-day maintenance work and upkeep. The building of barriers next to a river or canal to prevent a child from falling in, or the insulation of power lines to prevent outages are not always considered attention-worthy but they are ultimately the precautionary measures which make the life of an average citizen better and accident-free.

<http://tribune.com.pk/story/1151964/rain-wreaking-havoc/>

NEWS COVERAGE PERIOD FROM JULY 18TH TO JULY 24TH 2016

PANIC GRIPS SHANGLA RESIDENTS AS WATER LEVEL RISES IN INDUS

Dawn, July 19th, 2016

Umar Bacha

SHANGLA: Panic gripped the residents of Shangla as water level increased in Indus River after the recent monsoon rains in the region.

The people living along the bank of the Indus River have vacated their houses due to threat of flash flood. The rains during the last one week damaged houses, bridges, schools, roads, mini power stations and other infrastructure in the district.

The water level in the Indus increased during the last two days, forcing the local people to shift to safer places. The residents of Abasindh Colony in Bisham, which was affected by flash flood

Sadam Hussain, a resident of Abasin Colony, told this scribe that last year his house was washed away by flood. He said that the government neither compensated the people nor protected them from more floods. "These days the Indus is in high flood which has panicked the people," he added.

Mr Hussain said that local administration was yet to make announcements about flash flood or rising of water level in the river. He said that it was impossible to sleep at night due to fear of flood.

Sadiq Ahmed, another resident of the area, said that a mosque and at least 27 houses were facing threat of flood. He said that authorities did not construct a safety wall in the area despite their repeated requests. He said that water level in the Indus was rising with each passing day.

Niaz Ahmed, a resident of Dandai, told this scribe that most of the houses along the bank of Indus were at risk. "The residents of the area have shifted to safer places. This year the district administration has not announced any threat of flood and neither provided tents to the affected families," he added.

Local sources said that a middle school in Olander area was washed away by flood. The school was the only educational institution in the entire area, they said. They demanded of the authorities to provide tents to the students so that they could continue their studies.

Routine life in the district was paralysed by monsoon rains that continued intermittently. Many roads were blocked by heavy landslide. The residents of Karora shifted to safer places due to landslide in the area.

Supply of electricity to Bisham city also remained suspended owing to falling of power pylons. The Pesco officials said that work on restoration of power supply was underway but they were short of line men staff.

Meanwhile, Deputy Commissioner Dildar Ahmed has directed the relevant assistant commissioner and revenue officials to start relief operation in the affected areas.

During a meeting here on Monday, he directed all the line departments to remain alert.

He said that officials should contact his office in case of flood or landslide to ensure timely provision of relief to the affected families.

<http://www.dawn.com/news/1271744/panic-grips-shangla-residents-as-water-level-rises-in-indus>

HOW RENEWABLE ENERGY IS BLOWING CLIMATE CHANGE EFFORTS OFF COURSE
International New York Times, 21 July 2016

Eduardo Porter

Is the global effort to combat climate change, painstakingly agreed to in Paris seven months ago, already going off the rails?

Germany, Europe's champion for renewable energy, seems to be having second thoughts about its ambitious push to ramp up its use of renewable fuels for power generation.

Hoping to slow the burst of new renewable energy on its grid, the country eliminated an open-ended subsidy for solar and wind power and put a ceiling on additional renewable capacity.

Germany may also drop a timetable to end coal-fired generation, which still accounts for over 40 percent of its electricity, according to a report leaked from the country's environment ministry. Instead, the government will pay billions to keep coal generators in reserve, to provide emergency power at times when the wind doesn't blow or the sun doesn't shine.

Renewables have hit a snag beyond Germany, too. Renewable sources are producing temporary power gluts from Australia to California, driving out other energy sources that are still necessary to maintain a stable supply of power.

In Southern Australia, where wind supplies more than a quarter of the region's power, the spiking prices of electricity when the wind wasn't blowing full-bore pushed the state government to ask the power company Engie to switch back on a gas-fired plant that had been shut down.

But in what may be the most worrisome development in the combat against climate change, renewables are helping to push nuclear power, the main source of zero-carbon electricity in the United States, into bankruptcy.

The United States, and indeed the world, would do well to reconsider the promise and the limitations of its infatuation with renewable energy.

"The issue is, how do we decarbonize the electricity sector, while keeping the lights on, keeping costs low and avoiding unintended consequences that could make emissions increase?" said Jan Mazurek, who runs the clean power campaign at the environmental advocacy group ClimateWorks.

Addressing those challenges will require a more subtle approach than just attaching more renewables to the grid.

An analysis by Bloomberg New Energy Finance, narrowly distributed two weeks ago, estimated that nuclear reactors that produce 56 percent of the country's nuclear power would be unprofitable over the next three years. If those were to go under and be replaced with gas-fired generators, an additional 200 million tons of carbon dioxide would be spewed into the atmosphere every year.

The economics of nuclear energy are mostly to blame. It just cannot compete with cheap natural gas. Most reactors in the country are losing between \$5 and \$15 per megawatt-hour, according to the analysis.

Nuclear energy's fate is not being dictated solely by markets, though. Policy makers focused on pushing renewable sources of energy above all else — heavily subsidizing solar and wind projects, and setting legal targets for power generation from renewables — are contributing actively to shut the industry down. Facing intense popular aversion, nuclear energy is being left to wither.

As Will Boisvert wrote in an analysis for Environmental Progress, an environmental organization that advocates nuclear energy, the industry's woes "could be remedied by subsidies substantially smaller than those routinely given to renewables." The federal production tax credit for wind farms, for instance, is worth \$23 per megawatt-hour, which is more than the amount that nuclear generators would need to break even.

Nuclear generators' troubles highlight the unintended consequences of brute force policies to push more and more renewable energy onto the grid. These policies do more than endanger the nuclear industry. They could set back the entire effort against climate change.

California, where generators are expected to get half of their electricity from renewables by 2030, offers a pretty good illustration of the problem. It's called the "duck curve." It shows what adding renewables to the electric grid does to the demand for other sources of power, and it does look like a duck.

As more and more solar capacity is fed onto the grid, it will displace alternatives. An extra watt from the sun costs nothing. But the sun doesn't shine equally at all times. Around noon, when it is blazing, there will be little need for energy from nuclear reactors, or even from gas or coal. At 7 p.m., when people get home from work and turn on their appliances, the sun will no longer be so hot. Ramping up alternative sources then will be indispensable.

The problem is that nuclear reactors, and even gas- and coal-fired generators, can't switch themselves on and off on a dime. So what happens is that around the middle of the day those generators have to pay the grid to take their power. Unsurprisingly, this erodes nukes' profitability. It might even nudge them out of the system altogether.

How does a renewables strategy play out in the future? Getting more power from renewables at 7 p.m. will mean building excess capacity at noon. Indeed, getting all power from renewables will require building capacity equal to several times the demand during the middle of the day and keeping it turned off much of the time.

Daily fluctuations are not the end of it. Wind power and sunlight change with the seasons, too. What's more, climate change will probably change their power and seasonality in unforeseen ways. Considering how expensive wind and sun farms can be, it might make sense to reconsider a strategy that dashes a zero-carbon energy source that could stay on all the time.

A report published last month by the White House's Council of Economic Advisers suggests there is space for more renewable energy on the grid. New technologies — to store power when the sun is hot or to share it across wider areas — might allow for a bigger renewable footprint.

But there are limits. "There is a very real integration cost from renewables," said Kenneth Gillingham, an economist at Yale who wrote the report. "So far that cost is small."

In Germany, where renewables have mostly replaced nuclear power, carbon emissions are rising, even as Germans pay the most expensive electricity rates in Europe. In South Australia, the all-wind strategy is taking its toll. And in California, the costs of renewables are also apparent.

Nuclear energy's fate is not quite sealed. In New York, fears that the impending shutdown of three upstate reactors would imperil climate change mitigation persuaded Gov. Andrew Cuomo's office to extend subsidies comparable to those given to renewables, to keep them afloat. Even in California, where nuclear energy has no friends, Diablo Canyon, the last remaining nuclear plant, is expected to stay open for almost another decade.

Still, both New York and California expect to eventually phase out nuclear power entirely. An analysis by Bloomberg puts the cost of replacing Diablo Canyon's zero-carbon power with solar energy at \$15 billion. This sum might be better spent replacing coal.

Displacing nuclear energy clearly makes the battle against climate change more difficult. But that is not what is most worrying. What if the world eventually discovers that renewables can't do the job alone? "I worry about lock-in," Ms. Mazurek said. "If it doesn't work, the climate doesn't have time for a do-over."

http://www.nytimes.com/2016/07/20/business/energy-environment/how-renewable-energy-is-blowing-climate-change-efforts-off-course.html?_r=0

EU EYES RICH NORTH IN SHARING GREENHOUSE-GAS TARGETS
Business Recorder, 21 July 2016

BRUSSELS: The EU on Wednesday unveiled national targets for cutting greenhouse gases by 2030, placing the burden on richer northern countries including exit-bound Britain to help meet the bloc's UN goal.

The plans for the 28 EU member states put the onus on Sweden, Luxembourg, Finland, Denmark, Germany, Britain, France and Austria as the bloc seeks to meet its commitment to cut emissions by 40 percent over 1990 levels.

The countries must now approve the plans by the European Commission, although it is unclear how Britain will react following its shock June 23 referendum vote to leave the EU.

The EU set the 2030 target as its overall pledge in the UN's climate agreement, reached in Paris last December. Climate Commissioner Miguel Arias Canete said in a statement this was "ambitious" but that he was "convinced we can achieve through the collective efforts of all member states."

"The national binding targets we are proposing are fair, flexible and realistic," Canete said. "They set the right incentives to unleash investments in sectors like transport, agriculture, buildings and waste management."

Under the targets, which are based on economic growth, Sweden and tiny Luxembourg must cut emissions by 40 percent over 2005 levels, while Finland and Denmark must cut emissions by 39 percent and powerhouse Germany by 38 percent. Britain and France are asked to cut emissions by 37 percent while Netherlands and Austria should cut by 36 percent, according to the numbers released by the European Commission, the EU executive.

Britain had to be included for legal reasons as it will remain a member of the EU for at least two years after it officially triggers its divorce from the bloc, sources said — adding that the adoption of the targets will be a lengthy process in any case.

In contrast, Bulgaria, the poorest state in the bloc, was given an emissions reductions target of zero percent, while Romania, Latvia, Croatia, Poland, Hungary and Lithuania are all set below 10 percent.

But the system allows for flexibility. Member states can reduce emissions jointly across a range of sectors and over time.

The proposal aims to set binding objectives for member states from 2021 until 2030.

The proposals — which also allow for member states to buy and sell emissions allocations — will be debated by the member states and the European Parliament.

The non-government organisation World Wildlife Fund (WWF) said the proposals fall short of the ambitions Brussels set at the Paris summit.

"Not only is the Commission astoundingly out-of-synch with international climate commitments, but it has also included 'loopholes' in this proposal which will allow countries to cheat their way out of real climate action," said Imke Luebbecke, head of climate and energy at the WWF European Policy Office—AFP

<http://epaper.brecorder.com/2016/07/21/6-page/778174-news.html>

NEWS COVERAGE PERIOD FROM JULY 11TH TO JULY 17TH 2016

FLOODING CAUSED BY DYKE BREACHES WASHES AWAY VILLAGES, CROPS

Dawn, July 11th, 2016

SUKKUR/BADIN: Scores of thatched houses in seven villages and standing crops over several hundred acres were washed away when breaches in the dykes of two canals caused flooding in certain areas of Ghotki and Badin districts on Sunday.

In Ghotki district, three villages — Jaffar Gadani, Kashmir Gadani and Haji Mashool Gadani — were hit by strong currents following flooding caused by a 40-foot-wide breach in a dyke of the Imam Wah (irrigation channel) at RD-16 near Khanpur Mahar town. district Ghotki on Sunday.

Affected villagers and growers said that standing crops, scores of houses along with valuables, as well as stocks of grains were washed away by the flooding that also rendered them homeless. They said they had suffered a collective loss of millions of rupees.

They complained that the irrigation officials concerned did not respond when they were informed of the breach and requested to help plug it. They claimed that the RD-16 point of the dyke was weak and the officials had long been informed of it but no strengthening work was carried out. They alleged that Rs140 million had been released to carry out the dyke strengthening, lining and channel cleaning work but no works were undertaken and the funds were misappropriated.

In Badin district, a 30-foot-wide breach occurred in the dyke of Qazi Wah at RD-17 near Badin city on Sunday causing flooding in several hundred acres of farmlands.

Area people said that thatched houses in four villages — Ajjoo Arbab, Bhalay Dino, Bahoo Halepoto and Qasim Halepoto — were inundated and standing crops over hundreds of acres swept away by gushing water. They said that growers and other villagers suffered heavy losses while the villages were cut off from rest of the areas due to inundation of all link roads within the Mohammed Khan Bhurgari union council.

They complained that the Qazi subdivision of the Akram division had repeatedly been urged to strengthen the vulnerable points of the Qazi Wah dykes but they never heeded their calls.

<http://www.dawn.com/news/1269969>

CLIMATE CHANGE HEALTH IMPACTS LOOM LARGE

Business Recorder, July 11, 2016

The world should brace for potentially devastating impacts on human health due to climate change, top policy makers and officials from around the globe meeting in Paris said on Thursday. Some of these consequences may be avoided if humanity radically curbs its use of fossil fuels in coming decades, but many are already being felt, they said at the opening of a two-day conference run by the World Health Organisation (WHO) and hosted by France.

“Health and climate are inextricably linked because human health depends directly on the health of the planet,” French environment and energy minister Segolene Royal told participants. Royal, also the rotating president of UN-led talks on how best to cope with global warming, said health impacts must play a more central role in future negotiations.

“From now on, I will do my best to ensure that health is integrated into all future climate conferences,” starting with a special forum at the next high-level gathering of the 196-nation UN climate meeting in Marrakesh in November, she told AFP.

The Paris Agreement, inked in December last year, calls for holding global warming to well under two degrees Celsius (3.6 degree Fahrenheit), and helping poor nations cope with its impacts.

A crescendo of scientific studies paints an alarming picture of the human suffering in store due to disrupted weather patterns, rising seas, droughts and climate-enhanced superstorms.

Tropical disease vectors – for malaria, dengue and zika, to name a few – are expanding as the insects that carry them spread following warming climes.

Extreme heat waves set to occur every decade rather than once a century will claim more lives, especially the ill and the elderly.

The WHO estimated in 2005 that killer hot spells claim 150,000 lives annually. More than 45,000 died in Europe alone due to a heatwave in the summer of 2003.

<http://www.brecorder.com/general-news/172/64038/>

CHALLENGES: GOVT TO SET UP CLIMATE CHANGE AUTHORITY

The Express Tribune, July 14th, 2016.

ISLAMABAD: The federal government has decided to establish a Climate Change Authority to effectively tackle challenges in the wake of global warming and environmental degradation in the country.

An official of the ministry told APP that the government was pursuing a multi-pronged strategy including short-, medium- and long-term measures to meet the challenges of climate change.

The Ministry of Climate Change has completed the draft of “Pakistan Climate Change Act 2016”, which will be presented in Parliament for approval soon. He said the aim behind the move is to control the damage caused by natural disasters and hold awareness campaigns, conduct researches and sign agreements with international organisations in this regard.

<http://tribune.com.pk/story/1141369/challenges-govt-set-climate-change-authority/>

VILLAGES, CROPS FLOODED BY CANAL BREACH

Dawn, July 13th, 2016

Ali Jan

DERA MURAD JAMALI: Over a dozen villages and crops standing over hundreds of acres of land were flooded after a 200-foot breach occurred in the Pat Feeder canal on Tuesday.

According to reports, the canal bank developed breach at the junction of Dera Allahyar and Dera Bugti districts, forcing people to rush to safe places.

“Hundreds of people, including women and children, have shifted to safe places, leaving behind their belongings and cattle in their inundated houses,” Rab Nawaz, an affected villager said.

Officials of the district administration and Irrigation Department have reached the place of the breach with heavy machinery and labourers and started plugging the breach.

Meanwhile, monsoon rains are playing havoc in different areas of Nasirabad division as all seasonal nullahs are carrying heavy floodwater. A large number of low-lying areas have come under water.

The administration of the affected districts of Nasirabad division has declared emergency after heavy rains and flood in seasonal nullahs of Bala Nari area of Kuchhi district.

People of Tambo area of Nasirabad district have been asked to shift to safe places as floodwater coming from Bala Nari area has entered several villages and roads have been submerged.

Executive Engineer, Irrigation Department, Nasirabad, Riaz Baloch, said that heavy machinery and labourers were working in the affected areas to stop floodwater from entering villages.

<http://www.dawn.com/news/1270526>

HONEY PRODUCTION SUFFERS AS CLIMATE CHANGE CAUSES SHARP DECLINE IN BEE POPULATION

The Express Tribune, July 13th, 2016.

Hidayat Khan

PESHAWAR: The rising temperatures and erratic pattern of rains have led to a drastic decline in the population of honey bees in Khyber-Paktunkhwa. This has subsequently had deleterious consequences on revenue generation of the province since K-P is the leading exporter of honey. This change in weather has destroyed the livelihood of thousands of honey farmers.

The problem is grave since farmers are out of business in their own areas and cannot move to colder areas of the country to continue their trade since they have been banned from there.

Talking to The Express Tribune, small-scale honey farmer Adnan Ahmad who has lost half his farm since the beginning of this summer said, “The mortality rates of bees have become very high and it is difficult to sustain this business.” He added, “It is only now that this unfortunate thing has occurred because we are constantly changing our surroundings which is affecting every aspect of our lives.”

University of Peshawar (UoP) Zoology department head Dr Inayat Ali Shahjehan told The Express Tribune the temperature of beehive is always more than 40 degrees Celsius. “The ever-increasing temperature of the areas is very dangerous for honey bees and conservation measures need to be adopted to prevent loss of genetic diversity,” he said.

Shahjehan also said their studies indicate that environmental changes have a direct influence on the development, behaviour, physiology and distribution of honey bees. It also affects bees’ interaction with viral diseases which most farmers were unaware of. “Beekeepers are often uninformed about preventing these diseases,” he added.

There are 5,000 registered members of Pakistan Beekeepers Association who believe besides climatic changes, government policies and lack of interest on the part of authorities have prevented honey production to blossom as a full-fledged industry.

“This is perhaps the only sector that earns a great deal for the country but is totally ignored,” Pakistan Beekeepers Association President Naeem Qasmi said.

He said earlier, honey was imported from Europe and Russia but Pakistan had been exporting honey for a long while now. “After Yemen, our honey is possibly of the highest quality.” Currently, farmers in K-P stick to four types of bees which they have bred from past generations. However, these bees are unable to resist climatic changes—heatwaves, untimely rains and water shortages—which have become prevalent in the region today.

Qasmi added farmers needed proper training so they could adapt themselves to climatic changes and continue their businesses. “Species of bees that are more resilient to climate changes must be bred,” he said. “The Billion Tree Tsunami project will never benefit this sector because we have asked them to plant cider trees which are needed in the area,” Qasmi added.

Earlier, farmers used to take their farms to colder areas especially in Kashmir and Naran in Kaghan during summers. However, these areas which have an abundant supply of cider trees have imposed a ban on the entry of honey farms. After negotiation, the administration in Naran lifted the ban, however, it imposed a tax of Rs2,000 on each vehicle carrying honey farms.

“This is not fair but we have no other options,” Haji Imtiaz, an older member of Pakistan Beekeepers Association told The Express Tribune. He said the government of Azad Jammu and Kashmir was still reluctant to allow honey farms into the area.

“The ban was imposed because of growing security concerns,” he said. Imtiaz said beekeepers were now required to register themselves with local police authorities. “Kashmir has a very large number of Palosa trees which guarantee honey production of the highest quality,” he added.

<http://tribune.com.pk/story/1140422/save-bees-pave-paradise-honey-production-suffers-climate-change-causes-sharp-decline-bee-population/>

FLOODS CAUSED \$38BN LOSSES IN LAST 68 YEARS

Business Recorder 14 July 2016

Aamir Saeed & Zaheer Abbasi

ISLAMABAD: Pakistan has suffered a cumulative financial loss of more than US\$38.165 billion due to floods during the past 68 years, but a comprehensive flood protection plan is yet to be formulated.

According to a recent report of Federal Flood Commission, around 12,177 people have lost their lives, some 197,230 villages damaged/ destroyed and an area more than 616,598 Sq km affected due to 23 major flood events so far.

The report says Pakistan has faced consecutive flood events during the past six years: 2010, 2011, 2012, 2013, 2014 and 2015 due to global warming and climate change, while a cumulative financial loss stands at around US\$38.165 billion.

All these economic losses have, however, failed to move the federal and provincial governments to agree on a ten-year flood protection plan to save lives and property of the citizens.

The federal government planned to spend Rs177.61 billion on different structured and non-structured measures to implement the ten-year plan, but it is yet to be approved by Council of Common Interests (CCI). The plan was envisaged to be implemented from 2015 to 2025.

According to a report, prepared by the US-based World Resources Institute think-tank and four Dutch research groups, it is estimated that people being affected by the river-floods in Pakistan could reach up to 2.7 million by 2030. Currently, an estimated 715,000 people in Pakistan are affected by floods every year.

In terms of Gross Domestic Product (GDP) being affected by floods, the report says that annual loss to GDP due to river flooding amounts to 0.98 percent of the country's total GDP which translates into \$1.7 billion.

Federal Minister for Climate Change Zahid Hamid said that the ten-year flood protection plan is on the agenda of the CCI meeting and this would be implemented with the help of all the provincial governments.

He said the provincial governments have made separate allocations in their respective budgets for protection of floods and other natural calamities while the federal government is helping them to save lives and infrastructure. An official of Punjab Provincial Disaster Management Authority (PDMA) claimed that Rs1.557 billion has been allocated for relief and rescue in 2016-17 budget, but he failed to provide details about the allocation.

Director General Khyber Pakhtunkhwa PDMA Amir Afaq said the allocation for flood protection plans in the KP budget was Rs 1 billion in 2015-16 and the same amount has been allocated in 2016-17 budget as well. He acknowledged that the amount is not sufficient to deal with the recurrent natural disasters in the province.

Afaq said the Provincial Disaster Management Authority-KP has prepared a contingency plan to deal with the floods and in coordination with National Disaster Management Authority (NDMA) is actively pursuing a proactive approach to disaster management.

Director General KP PDMA also said that meetings of relevant departments are being held on regular basis on overall preparedness for the floods.

He said the PDMA has declared nine districts including Peshawar, Nowshera, Charrsada, DI Khan, Chitral, Swat, Shangla, Dir Upper and Dir Lower as most vulnerable and additional funds are being diverted to these districts. “We have acquired relief goods of Rs110 million, which will be distributed to the affected districts at the time of emergency,” he added.

The Balochistan government has allocated Rs3.06 billion for relief and rescue activities during the natural calamities, but it is unclear as to how the funds would be made available to provincial PDMA in the event of a natural calamity.

Ajay Kumar Sewani, Assistant Director (Operations) at PDMA-Sindh told Business Recorder that the provincial government has allocated around Rs1.5 billion for flood protection and have made all necessary preparations to deal with any natural calamity.

He said that de-watering pumps and other necessary machinery has been dispatched to all district administrations where floods are expected while the PDMA is in touch with rescue and relief teams as well to save lives and infrastructure.

“Currently, there are no chances of floods in Sindh but we are still preparing for the worst,” he said, adding that there is no dearth of funds and machinery to deal with any untoward situation.

<http://epaper.brecorder.com/2016/07/14/9-page/776193-news.html>

NEWS COVERAGE PERIOD FROM JULY 3RD TO JULY 10TH 2016

CLIMATE CHANGE: THE PERFECT STORM

Dawn, Sunday Magazine, July 3rd, 2016

Syed Muhammad Abubakar

Once again, Pakistan is on the list of most affected countries from climate change. Verisk Maplecroft, a UK-based global risk consulting firm, has ranked Pakistan 22nd in the Climate Change Vulnerability Index 2016 (CCVI); three of its cities are among the 69 considered most at risk from climate change including Lahore (on 7th place), Faisalabad (22nd) and Karachi (25th).

While Pakistan was one of more than 170 countries that ratified the Paris Climate Agreement on April 22, which aims to limit temperature increase to 2°C, and to strive to limit temperature increase further to 1.5°C above pre-industrial levels, much more needs to be done by governments and citizens to mitigate the effects of climate change.

Adil Najam, dean at Boston University’s Frederick S. Pardee School of Global Studies, has no doubt that climate change will continue to be one of the biggest threats faced by Pakistan, unless we act to increase resilience. “For Pakistan, the biggest climate challenges are food production, agricultural productivity; disasters, such as floods and heat waves; livelihood loss and most of all, water and energy. The solution is sustainable development which is less polluting than the alternatives,” he says.

He also highlighted the immediate steps to be taken. “It’s important to recognise that there are a lot of things to be done for climate, which includes mitigation, as well as adaptation. For example, improved energy conservation will not only be good for climate, but even better for Pakistan’s energy and load-shedding woes. Preparations for adaptation in agriculture and water sectors should be made in order to protect these from the impacts of climate change.”

Ali Tauqeer Sheikh, the CEO of Leadership for Environment and Development (LEAD) Pakistan, also views climate change in the same context. “One of the challenges is to convince the policymakers and opinion leaders to deal with climate change as a development issue rather than a scientific issue.”

“Dams and reservoirs must be built to fulfill the larger water needs for agriculture and hydropower, while keeping an eye on ecological requirements. Also, the government should evaluate the magnitude of disaster prone areas with hazard mapping and develop land use planning accordingly along with the implementation of early warning and emergency management plans for heat waves and natural hazards i.e. flash floods, GLOFs [glacial lake outburst floods], landslides and avalanches in the mountain areas,” says Dr Daniele Bocchiola, assistant professor at Politecnico di Milano, Italy.

“In lowland cities,” he explained further, “A surge in monsoonal storms, floods and intense winter can affect people as well as agriculture and food security.” Intense de-glaciation, and the forming of new glacial lakes, can lead to GLOFs, and affect mountain ecosystems, with potential risk of avalanches and landslides. Also, permafrost (permanent frozen soil) may melt, causing problems in mountain areas.

Najam believes that a getting out of the ‘disasters’ mindset is needed, as too many climatic impacts are not about disasters. “Communities have to focus on local response and early response, knowing which issues are the most precarious for them, whereas the role of the individual is to become better educated and more careful in terms of waste, as well as awareness of immediate environment.”

Agreeing that increased water demand for agriculture and acceleration of desertification in many (mostly northern) areas, puts food security at stake, both Bocchiola and Najam emphasised on the importance of early-warning and pre-disaster preparation. “Hotspot areas with heavily increased climate-related risks should be highlighted and interventions be made to reduce vulnerability,” Bocchiola added.

Najam believes that managing water resources, developing sustainable agriculture to warrant food security; controlling deforestation; developing use of renewables; controlling air pollution and discouraging use of fossils; forecasting and managing extreme events, including floods, are all issues that require government support.

“The government needs to work closely with experts and think tanks, while local governments and civil society organisations need to get down to the community level to develop low cost, feasible and sustainable strategies to make them resilient to climate change,” suggests Tauqir.

“At the community level, there should be a choice of best strategies for local healthcare management during heat waves, especially for elders and children in the hottest cities,” Bocchiola points out. “An exchange of knowledge and ideas between local policymakers and local scientific institutes could lead to development of scientifically based strategies.”

“Communities should opt for lifestyle choices that decrease their vulnerability to local climatic hazards, for example, adjusting routines and schedules to avoid exposure to extreme temperature and precipitation, and changing construction practices to become climate resilient,” Tauqir agreed.

Bocchiola proposed that each one of us should use water and energy wisely, deal smartly with solid waste and conscientiously consume reasonably low amounts of meat; use public transport or bicycles to limit traffic emission; and limiting burning of fossil fuels for heating, whenever possible.

“We need to invest in climate-resilient infrastructure and lift the poor above the poverty line by providing livelihood options and increasing income levels,” added Tauqir.

Pakistan’s contribution to global emissions may be low, but this does not absolve it of the responsibility to contribute to the global challenge of reducing climate change. Scientists have given their verdict: human activity is causing

climate change. The experts have spoken: we need to have adaptation and mitigation at the heart of our development agendas. The rest is up to us.

<http://www.dawn.com/news/1268549/climate-change-the-perfect-storm>

A REMOTE PACIFIC NATION, THREATENED BY RISING SEAS

International Newyork Times, July 2, 2016

Mike Ives

TARAWA, Kiribati — One clear bright day last winter, a tidal surge swept over an ocean embankment here in the remote, low-lying island country of Kiribati, smashing through the doors and windows of Betio Hospital and spewing sand and debris across its maternity ward.

Beero Hosea, 37, a handyman, cut the power and helped carry frightened mothers through the rubble and water to a nearby school.

“If the next one is combined with a storm and stronger winds, that’s the end of us,” he said. “It’s going to cover this whole island.”

For years, scientists have been predicting that much of Kiribati may become uninhabitable within decades because of an onslaught of environmental problems linked to climate change. And for just as long, many here have paid little heed. But while scientists are reluctant to attribute any specific weather or tidal event to rising sea levels, the tidal surge last winter, known as a king tide, was a chilling wake-up call.

“It shocked us,” said Tean Rube, a pastor with the Kiribati Uniting Church. “We realized, O.K., maybe climate change is real.”

Pacific island nations are among the world’s most physically and economically vulnerable to climate change and extreme weather events like floods, earthquakes and tropical cyclones, the World Bank said in a 2013 report. While world powers have summit meetings to negotiate treaties on how to reduce and mitigate carbon emissions, residents of tiny Kiribati, a former British colony with 110,000 people, are debating how to respond before it is too late.

Much of Kiribati, a collection of 33 coral atolls and reef islands scattered across a swath of the Pacific Ocean about twice the size of Alaska, lies no higher than six feet above sea level. The latest climate models predict that the world’s oceans could rise five to six feet by 2100. The prospects of rising seas and intensifying storms “threaten the very existence and livelihoods of large segments of the population,” the government told the United Nations in a report last year. Half of the 6,500-person village of Bikenibeu, for instance, could be inundated by 2050 by sea-level rises and storm surges, according to a World Bank study.

The study lays out Kiribati’s future in apocalyptic detail. Causeways would be washed away, crippling the economy; degraded coral reefs, damaged by warming water, would allow stronger waves to slam the coast, increasing erosion, and would disrupt the food supply, which depends heavily on fish supported by the reefs. Higher temperatures and rainfall changes would increase the prevalence of diseases like dengue fever and ciguatera poisoning.

Even before that, scientists and development experts say, rising sea levels are likely to worsen erosion, create groundwater shortages and increase the intrusion of salt water into freshwater supplies.

In response, Kiribati (pronounced KEE-ree-bas in the local language) has essentially been drawing up plans for its demise. The government has promoted “migration with dignity,” urging residents to consider moving abroad with employable skills. It bought nearly 6,000 acres in Fiji, an island nation more than 1,000 miles away, as a potential refuge. Fiji’s higher elevation and more stable shoreline make it less vulnerable.

Anote Tong, a former president who pushed through the Fiji purchase, said it was also intended as a cry for attention from the world. “The issue of climate change is real, serious, and we’d like to do something about it if they’re going to take their time about it,” he said in a recent interview.

But packing up an entire country is not easy, and may not be possible. And many Kiribati residents remain skeptical of the need to prepare for an eventuality that may be decades away.

The skeptics include the rural and less educated residents of the outer islands who doubt they could obtain the skills needed to survive overseas, and Christians who put more faith in God’s protection than in climate models. “According to their biblical belief, we’re not going to sink because God is the only person who decides the fate of any country,” said Rikamati Naare, the news editor at Radio Kiribati, the state-run broadcaster.

As President Tong became a climate-change celebrity, invited to speak at conferences around the world, opponents accused him of ignoring problems back home, such as high unemployment and infant mortality. They derided the Fiji purchase, for nearly \$7 million, as a boondoggle; dismissed his “migration with dignity” as a contradiction in terms; and called his talk of rising sea levels alarmist and an affront to divine will.

Mr. Tong, having served three terms, was not allowed to run for re-election this year, but in March elections the opposition defeated his party. The new president, Taneti Maamau, said he planned to shift priorities.

“Most of our resources are now diverted to climate-change-related development, but in fact there are also bigger issues, like population, the health of the people, the education of the people,” he said during an interview at Parliament, which sits on reclaimed land at the edge of a turquoise lagoon.

“Climate change is a serious issue, but you can’t do very much about it, especially if a big hurricane comes,” he added with a hearty laugh.

The Fiji purchase was not the first effort to address Kiribati’s perilous future. The World Bank-led Kiribati Adaptation Program, begun in 2003, developed water-management plans, built coastal sea walls, planted mangroves and installed rainwater-harvesting systems. The bank says the project, which cost \$17.7 million, has conserved fresh water in Tarawa and protected about one mile of Kiribati’s 710 miles of coastline.

But a 2011 government-commissioned report cast doubt on whether the World Bank project helped Kiribati prepare for climate change. And while the mangroves and water management plans have helped, a 2014 study said the first round of sea walls, made of sandbags, had proved counterproductive and caused more erosion.

“Adaptation is just this long, ugly, hard slog,” said the study’s lead author, Simon Donner, a professor of geography at the University of British Columbia in Vancouver. “The idea that an outside organization can just come in with money, expertise and ideas and implement something easily is naïve. What you need is consistent, long-term funding — the type of stuff that’s hard to pull off with development aid.”

Denis Jean-Jacques Jordy, a senior environmental specialist at the World Bank, acknowledged that “we had some issues” with the first sea walls but said subsequent ones made of rock were better designed.

There is no shortage of ideas to avert Kiribati’s environmental fate. China’s construction of artificial islands in the South China Sea shows the promise of sophisticated island-engineering technology, experts say. Mr. Tong commissioned a study on raising Kiribati’s coastline.

But such measures are financially unrealistic for a resource-poor, aid-dependent country like Kiribati. “It’s not about the place going underwater,” Professor Donner said, noting that some of Kiribati’s islands had actually grown in recent years because of land reclamation or natural coastal dynamics. “It’s about it becoming prohibitively expensive to live in. That’s the real challenge for Kiribati.”

The parallel freshwater crisis is also fixable, at a cost. Clean drinking water is already scarce on several islands, and saltwater from high ocean tides has infiltrated some wells. Many residents of South Tarawa, home to half the country's people, now get their drinking water exclusively from rainwater tanks.

Experts worry that as sea levels rise, Kiribati's fragile groundwater supply will face even greater risks, while the next drought could quickly exhaust the municipal supply and household rainwater tanks. Kiribati could invest in desalinization equipment or ship in drinking water, but this is a country with only one paved road.

It's all doable," said Doug Ramsay, the Pacific Rim manager at the National Institute of Water and Atmospheric Research in New Zealand. "It's just going to be a very expensive exercise."

Another novel response gaining attention lately is the idea of applying international refugee law — largely drafted after World War II to protect people fleeing political, religious or racial persecution — to those forced from their homes because of climate change.

In 2012, a migrant worker from Kiribati, Ioane Teitiota, applied for asylum in New Zealand, arguing that he was unable to grow food or find potable water in Kiribati because of saltwater intrusion. His lawyer, Michael Kidd, said the distinction between environmental and political refugees was arbitrary. "You're either a refugee or you're not," he said in an interview.

The courts rejected the argument, and Mr. Teitiota was deported from New Zealand last year. Mr. Kidd said he had appealed to the Office of the United Nations High Commissioner for Human Rights.

Still, migration may become increasingly important. Mr. Tong said he hoped to prepare his people to move with job-training programs that would meet standards recognized in Australia and New Zealand.

"The science of climate change is not 100 percent precise," he said in the interview. "But we know without any argument that, in time, our people will have to relocate unless there are very, very significant resources committed to maintain the integrity of the land."

Coastal threats are increasingly clear to residents of Buariki, an oceanside village of thatched-roof huts and towering coconut palms on the island of North Tarawa. Erosion along the beach has already toppled dozens of coconut trees. The World Bank estimates that 18 to 80 percent of the village, which sits on a peninsula not more than a few hundred feet wide, may be underwater by 2050.

Some villagers said they were resigned to leaving. "Our government already has land in Fiji for the Kiribati people, so if there are more high tides here, they'll bring people to live there," said Kourabi Ngauea, 29. "But it depends on the government, and if they can support us."

Others see no need to leave. "This is where I belong," Aroita Tokamaen, 76, said as she peeled a coconut on her patio. "I would rather stay."

The tide that damaged the hospital here last winter was an

exceptionally strong king tide, a surge that occurs twice a year when the moon is closest to the Earth. The waves also flooded the thatched-roofed outdoor meeting space of the local branch of the Kiribati Uniting Church.

While some people were alarmed, the pastor, Ms. Rube, said she refused to accept the idea that Kiribati could disappear.

"We are Christians," she said. "So we don't believe that God could have given us this world and then take it away."

www.nytimes.com/2016/07/03/world/asia/climate-change-kiribati.html

MONSOON MAYHEM

Dawn, July 5th, 2016

ALMOST on cue, an unforeseen cloudburst above Chitral has devastated a district, left some 30 people dead at the time of writing, and served up a grim reminder on the eve of Eid that in spite of years of ferocious monsoon weather, Pakistan remains as vulnerable as it ever was to the ravages of climate.

No lessons have been learnt, no preparations have been made, and no capacity to forecast such events has been added.

It has been repeated all through the past few years: the preparation for extreme weather events begins with improving our early warning capability, followed by building a meaningful response plan.

Yet villagers in Ursoon were caught completely unawares when a cloudburst unleashed flash floods, wiping away their hamlet and loved ones, while Bannu and Dera Ismail Khan were hit by ferocious winds and rains that caused widespread damage.

The same episode was witnessed last year, when a cloudburst caused torrential rains which triggered multiple simultaneous glacial lake outburst floods that left the whole of Chitral district devastated. That episode ought to have taught us that Pakistan is susceptible to weather patterns coming from the west as well as the east, and that our weather radars — outdated as they are — that face westward are either not operating or unable to track the development of adverse weather patterns above the mountains.

Currently, the majority of our weather radars are pointed eastward to monitor the arrival of monsoon clouds, which only show up on the radars once they are above Rajasthan. Most floods receive less than 48 hours of warning, woefully inadequate for our times and requirements.

If there is one thing that successive monsoon seasons since 2010 have taught us, it is that each season brings extreme weather events in some shape or form, from the west or the east, and sometimes also from the Arabian sea in the south.

Over these years, it is unfortunate that our weather forecasting system has remained outdated and dilapidated.

The Met office, meanwhile, has been left standing on the door of the government asking for the funds to upgrade the equipment so as to be able to warn the country with more accuracy and better lead times once storm clouds begin to gather. But given the priorities of our government — roads, bridges and highways — the funds have not been released throughout this time period, nor has the government taken any serious note of climate-related vulnerabilities over almost half a decade.

The result is that we find ourselves flying blind into yet another monsoon season, which predictably enough, has opened with ferocious rains causing the loss of life and widespread damage one more time.

What will it take for the government to wake up from its fevered obsession with visible infrastructure projects to realise that strengthening the country's defences against the ravages of weather is also an overriding priority?

<http://www.dawn.com/news/1269081/monsoon-mayhem>

ADDRESSING CHALLENGES: GOVT PLANS TO ESTABLISH CLIMATE CHANGE COUNCIL

The Express Tribune, July 9th, 2016.

ISLAMABAD: The government is planning to introduce a bill to address the impact of climate change and meet the country's obligations under international conventions.

The proposed bill aims to help in comprehensive adaptation and formulation of mitigation policies and projects to address the issue.

Under the proposed bill, a 'Pakistan Climate Change Council' would be established. It would be chaired by the prime minister or a person nominated by him.

The Federal government may appoint federal and provincial ministers, chief ministers, Azad Jammu and Kashmir and Gilgit-Baltistan chief secretaries as members of the council but the number should not exceed 30, of which at least 20 shall be non-officials, including representatives of chambers of commerce and industry and non-governmental organisations, scientists, researchers, technical experts and educationists. National Disaster Management Authority chairman, Pakistan Climate Change Authority chairman, Ministry of Climate Change (MoCC) secretary, who shall also be secretary of the council, would be its members.

MoCC would act as the council secretariat.

Members other than ex-officio members would be appointed for three-year terms.

According to the proposed bill, the council would hold meetings as and when necessary, but not less than two meetings shall be held in a year. It may constitute committees of its members and entrust them with such functions as it may deem fit and the recommendations of the committees shall be submitted to the council for approval.

The council, or any of its committees, may invite any technical expert or representative of any government agency or non-governmental organisation or other person possessing specialised knowledge of any subject for assistance in the performance of its functions.

Functions and powers of the council under the proposed bill would be to coordinate and supervise the enforcement of the provisions of the act, and guide mainstreaming of climate change concerns into decision-making.

Under the proposed bill, the federal government shall also notify the Pakistan Climate Change Authority to exercise the powers and perform the functions assigned to it under this act and the rules and regulations made thereunder. The authority shall be a body corporate with perpetual succession and a common seal and shall be capable of suing and being sued, acquiring or disposing of movable and immovable property, borrowing money, and entering into contracts.

The headquarters of the authority would be in Islamabad, however, it may establish offices at other places, as and when required.

The authority shall comprise the chairperson, member adaptation, member mitigation, member climate finance, member coordination and one member from each province to be nominated by the respective government. The members would be appointed by the federal government.

If the office of the chairperson falls vacant, the senior-most member shall act as chairperson till his successor is appointed.

<http://tribune.com.pk/story/1137959/addressing-challenges-govt-plans-establish-climate-change-council/>

EARTHLY MATTERS: ARE WE RAIN-READY?

Dawn, Sunday Magazine, July 10th, 2016

Rina Saeed Khan

It's that time of the year again when the country braces itself for the annual monsoon rains, dreading the floods that caused extensive damage to crops and homes in different parts of the country in the last few years. And this year seems to be no exception.

Already Pakistan's Meteorological Department (PMD) has stated that we should expect a heavy monsoon this year, as "Prevailing oceanic and atmospheric conditions are giving indications of good summer monsoon rainfall in the country... Summer monsoon rainfall is likely to be 10-20pc above normal all over the country, averaged for three months".

The official warning on their website also states: "Some extreme rainfall events are likely to occur in the catchment areas of major rivers and other parts of the country which may cause floods" and that "some heavy downpour events may produce urban flooding in big cities".

There is more bad news for the mountainous north as the warning adds, "Some strong incursions of monsoon currents, coupled with high temperature, may trigger glacial lake outburst floods, landslides and flash floods in upper Khyber Pukthunkwa and Gilgit-Baltistan".

The question that comes to one's mind after reading these warnings obviously is: are we prepared for the floods? The answer, unfortunately, is no. There are no early warning systems in place to evacuate people and livestock in time.

The director general of the Met department, Dr Ghulam Rasool, has recently admitted to the Senate that there are no weather forecasting systems in 40 districts of the country and to make matters worse, the weather prediction system in the country is over 60 years old. Only seven radars are functional whereas 22 radars are required at the PMD's flood warning centers. We do not have state-of-the art radars to predict disasters and currently, the PMD gets shared data from Chinese satellites!

The National Disaster Management Authority had prepared a 10-year National Flood Protection Plan, which they presented to the government in 2013. Recently, they have demanded Rs16bn for an effective early warning system under this plan.

However, the plan is still waiting for a go ahead from the Council of Common Interests. The plan aims for integrated flood management by focusing on measures such as flood forecasting and early warning, flood risk zoning, watershed management, flood proofing and insurance and disaster management.

According to Dr Qamar uz Zaman Chaudhry, senior climate change expert and lead author of Pakistan's National Climate Change Policy, "Considering Pakistan's high vulnerability from climate change impacts, we need to invest heavily in climate change adaptation measures, which include upgradation of our early warning system, urban drainage systems and ensuring that our future infrastructure is climate resilient".

As for the upcoming monsoon rains, he points out that at present "the water availability in our dams is close to full at the start of the monsoon season and with the prediction of above normal monsoon rains during the July-August, our water managers needs to be extra smart in managing and timely routing of flood water to mitigate the chances of flood buildup".

Management of dams can certainly be helpful in controlling floodwater but long term planning is definitely needed in order to become climate resilient. According to a policy brief on "Hydro Disasters" published by LEAD-Pakistan, a non governmental organisation based in Islamabad, an analysis of disaster management at the federal, provincial and district levels indicates missing links between hazard assessment, preparedness and response among agencies and affected communities at the grassroots level.

"We lag behind in action and implementation at the district, taluka, Union Council (UC) and village levels. This can be linked to a lack of integration, communication and coordination between response agencies and non-engagement of grass root communities and civil society organizations. The Pakistan army has time and again demonstrated its capacity to deploy resources more swiftly than civilian agencies in response to natural disasters".

According to LEAD-Pakistan's policy brief, "Effective preparedness of the government institutions assigned with the responsibility of managing disasters in Pakistan before, during and after phases of disasters is critically important to minimise losses". In addition, the following strategies are recommended to prevent hazards turning into disasters:

“Implementing appropriate building codes, capacity building, introducing risk insurance mechanisms, forestation and alternate renewable energy solutions like solar energy, involvement of local communities”

. In their view, the strengthening of District Disaster Management Authorities is the best solution to optimally cope with hydro hazards as they can implement effective disaster risk reduction plans at the district level with the help of communities and civil society organisations. In other words, the local people of each district should be empowered to be able to help themselves in an organised manner so that they are ready when the flood season arrives each year.

<http://www.dawn.com/news/1269391/earthly-matters-are-we-rain-ready>

August 2016

NEWS COVERAGE PERIOD FROM AUGUST 29TH TO SEPTEMBER 4TH 2016

DRAFT POLICY FOCUSES ON MINIMISING IMPACT OF CLIMATE CHANGE

Dawn, August 29th, 2016

Mohammad Ashfaq

PESHAWAR: The Khyber Pakhtunkhwa environment department has drafted a policy to mitigate the impact of climate changes and scale up public awareness to cope with this phenomenon, according to officials.

They said that the policy would ensure that the issue of climatic change was reflected in all planning and development programmes carried out by the government.

According to the officials associated with preparation of document, it took 10 months during which the opinion of experts, working in leading organisations, was incorporated in it.

Officials said that environment department finalised the policy, which would be sent to Chief Minister Pervez Khattak for approval soon. The policy is focused on various sectors including agriculture and livestock, forestry, human health, water resources and biodiversity.

“The unpredictable weather due to change in climate is threatening the agriculture and livestock sector in Khyber Pakhtunkhwa,” officials involved in the policy making told Dawn.

They said that climate variations affected growth duration, soil moisture, nutrient levels and water availability for crops. These can increase the chance of reduced yields or even crop failure. Heat waves can increase animal mortality, increase prevalence of pathogens, threaten pasture and feed supplies.

Officials said that the draft policy advised the government to revisit agriculture and livestock-related legislations, policies and plans to incorporate climate change considerations.

The policy has urged the government to strengthen regulatory and monitoring mechanisms to reduce the usage of harmful/banned fertilisers and pesticides while incentives should be given on the usage of organic farming techniques, and conservation of water and soil.

Officials said that the policy asked the government to develop research centres to identify the impacts of climate change on productivity of agriculture and livestock sectors and find ways to reduce the impact of climate change.

They said that it was suggested to the government to develop risk management system to assess and manage the extreme temperatures and weather events.

“Climate change not only affects growth and productivity of forests but can also increase the number of forest disturbances,” says the draft policy.

Productivity of forests can be affected by changes in temperature, precipitation and amount of carbon dioxide in the air. Forest disturbances such as weakened health of trees, droughts and storms can reduce forest productivity and change the distribution of tree species.

The policy recommends to the government to conduct research and gather data and information necessary to understand and adequately address impacts of climate change on forestry.

“To this end, employ the latest knowledge on bioclimatic zoning for forest management,” the policy states.

Officials said that the policy urged government to develop mechanisms to ensure sustainable management of all types of forests. “For this purpose, government should develop forest management plans and execute the same through collaborative management agreements with local communities, conservation incentives and equitable sharing of benefits,” they added.

They said that government needed to establish a network of forest protected areas, buffer zones and ecological corridors to conserve biodiversity, particularly in unique types of forests.

To mitigate the impact of climate change, the policy has recommended to the government to promote urban forestry, agro-forestry and on farm tree plantations in the cities as well as irrigated lands.

“Develop non-timber forest products — under a sustainable use practice — to improve livelihoods of poor people inhabiting forest zones,” it says.

Officials said that frequency of natural disasters and disease prevalence, especially waterborne ailments, were likely to rise with increase in temperature.

They said that heat strokes, gastrointestinal problems, respiratory diseases, skin diseases, eye infections, malaria and mortality due to extreme weather events were likely to increase in severity, frequency and intensity.

“Storms, floods and droughts, caused by climate change, can force people to migrate to urban centres of the province,” said officials.

They said that the province was already suffering from high mortality rate of infants, children and women, and inadequacy of public health facilities and service, which were likely to be exacerbated by the impacts of climate change if not addressed effectively.

The policy recommends to the government to conduct research to assess impacts of climate change on human health, its symptoms and diseases likely to affect human health in the province.

“As climate change is accepted worldwide, government should identify the vulnerable communities of the province and improve their access to health facilities,” said officials. The government also needs to make efforts to build their knowledge and capacities to reduce their health vulnerability to climate change.

“Government should inform, sensitise, educate and train health professionals and public about climate change-related health issues, especially for women and children,” said officials.

<http://www.dawn.com/news/1280671>

CLIMATE CHANGE TO DOUBLE HAY FEVER SUFFERERS

Business Recorder, 29 August 2016

PARIS: Climate change and the spread of invasive ragweed are set to double the number of seasonal allergy sufferers across Europe, with similar impacts likely in North America, researchers said on Thursday.

By mid-century, some 77 million people in Europe will be hit by hay fever misery, up from 33 million today, they reported in the journal *Environmental Health Perspectives*.

“Ragweed pollen allergy is likely to become a major health problem across much of Europe,” said lead author Iain Lake, a researcher at the University of East Anglia in England.

Not only will more people be laid low by allergic asthma, itching and swollen eyes, the severity of the symptoms is likely to increase, the study concluded.

This greater impact will stem from higher concentrations of ragweed, and a pollen season extending into September and October across most of the continent.

Countries less affected today — France, Germany and Poland, for example — will probably be hit hardest over the coming decades. The main culprit is climate change, but the continuing spread of the invasive species *Ambrosia artemisiifolia* — commonly known as ragweed — is also a key driver.

A single ragweed plant can produce about a billion grains of pollen per year, mostly in August. Ragweed accounts for more than half of pollen production in many European countries. Tree pollen in the spring, and grass pollen in early summer, account for the rest.

Hay fever is a common allergic condition that affects nearly 40 percent of Europeans at some point in their life. More broadly, allergic disease has increased rapidly in both rich and developing nations, and is now recognised as a global epidemic.

The World Health Organization estimates that 400 million people around the world suffer from allergic rhinitis, and 300 million from pollen-related asthma. The economic burden of these conditions is calculated in the tens of billions of euros or dollars in both Europe and the United States. Previous research has predicted global warming would hasten the spread of pollens, but this is the first study to quantify those consequences, Lake said.

His team combined maps of estimated ragweed pollen counts with population projections, data on where people live, and current allergy levels.

The researchers presumed a “moderate” climate change scenario that would see an increase in global average temperature — compared to an 1850 benchmark — of about 2.5 degrees Celsius (4.5 degrees Fahrenheit) by the end of this century. The world is currently on track for a surge of 2.7 C to 3.5 C (4.9 F to 6.3 F).—AFP

<http://epaper.brecorder.com/2016/08/29/11-page/789354-news.html>

GLOBAL WARMING MEANS SMOGGIER AUTUMNS IN US SOUTHEAST

Gainesville: The drier, warmer autumn weather that’s becoming more common due to climate change may extend summer smog well into the fall in the Southeastern US in the years ahead, according to a study published on Monday.

Research published in the *Proceedings of the National Academy of Sciences* also suggests a culprit for the smog that many people might not expect: It’s the lush woodlands that give much of the South a lovely green canopy. That’s because of a natural defense mechanism trees use to protect their leaves from drought conditions.

And since climate models predict more hot, dry Octobers in coming decades, we should expect these late-season smog, or ozone, events to happen more often, according to climatologists at the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology.

“It’s not going to happen every year, but when it happens it will be worse than in the summer time,” said Yuhang Wang, who co-authored the study with Yuzhong Zhang. “We are likely to have record ozone days in the fall, and we need to prepare for that.”

The research isn’t conclusive, but it presents enough evidence to raise concerns about the indirect consequences of global warming, said other scientists who weren’t involved in the study.

“Climate change is about more than sea ice and polar bears,” Ashley Lawson, a fellow at the Center for Climate and Energy Solutions, said in an email. “It is also about whether the air will be safe so your children can go play outside.”

The climatologists looked deeply into a rare October smog spike in the Southeast in 2010. That was a drought year, with unseasonably high fall temperatures, and smoggier in October than it had been in July, when smog usually peaks.

Discovering what caused that spike was important to public health: A longer season for smog raises health risks for millions of people, especially the elderly and children whose lungs are more vulnerable. Smog also can stunt crops.

It has been known for decades that trees and other plants send more smog-causing emissions into the atmosphere than the pollution humans send directly from tail and factory pipes. This study points to an indirect consequence of the global warming humans have caused.

During hot Southern summers, trees usually have humidity to help them cope. But after the humidity breaks in the fall, they’re more vulnerable to hot days, which used to be more rare, they found.

The October 2010 smog spike, seen in bright red and orange splotches on an air pollution map, confused Wang and Zhang at first.

“We used to do all this research focusing on the summer, and this October case was very intriguing because we didn’t expect to see the red and oranges in the Southeast, with not nearly as much in the Northeast and in California,” Wang said.

Moreover, smog-causing emissions from cars and industry have actually declined in recent decades in the Southeast and elsewhere because of tighter emissions requirements under the Clean Air Act. So why were the region’s ozone numbers that month higher than nearly everywhere else in the nation?

They looked at all the sources they could think of, and couldn’t find the culprit until they turned to the trees. Trees emit isoprene to protect their leaves during warm, dry weather. Isoprene combines with sunlight to produce smog. Only when they plugged this factor into their computer simulation did the results add up.

Chris Field, director of the Department of Global Ecology at the Carnegie Institution for Science at Stanford University, said the study doesn’t prove the cause of the October 2010 smog spike, but it does suggest that climate change threatens air quality in ways few people expected.

“The argument is that climate change affects the trees, the trees release a chemical that may help them cope with harsh conditions, and the chemical produced by the trees leads to an increase in ozone,” Field said in an email.—AP

<http://epaper.brecorder.com/2016/08/29/11-page/789349-news.html>

ISSI HOLDS TALK ON THREATS TO HUMANITY DUE TO CLIMATE CHANGE

Business Recorder, 31 August 2016

ISLAMABAD: “The international system or structure does not have adequate qualities or framework to cater to the existing threats to humanity due to climate change.”

Dr Richard Anderson Falk, Professor Emeritus of International Law, Princeton University and Former UNHCR Special Rapporteur on Palestine, said this on Tuesday while speaking at a public talk on “Climate Change, Nuclear Disarmament and Humane Global Governance.” The talk was organised by Institute of Strategic Studies, Islamabad (ISSI) as part of the institute’s distinguished lecture series 2016.

Dr Falk was accompanied by his wife Dr Hilal Elver, who is a research professor and global distinguished fellow at the University of California Santa Barbara LA Law School Resnick Food Law and Policy Center.

Dr Falk while explaining the topic said that this over-arching subject highlights the shortcomings of the international arrangement which cater to the existential threats to humanity.

“The problems among states are solved in a few basic ways; firstly, through multilateral consensus among states to serve the humanity. The international system or structure does not have adequate qualities or framework to uphold these global values,” he said.

He said the government should take the responsibility of either who generated these problems or who solves them. “One of the problematic area of climate change is the degree of the harms which are caused by it, and are concentrated and affecting those communities that are not responsible for generating the problem,” he said. He stressed the failure of United Nations system which emerged after the World War II to provide a plan of solving common challenges to humanity. Dr Hilal during her speech posed the question on about the difference between human and humane global governance. The fear factor is very important in mobilizing the societies to force their governments, and this fear with regards to nuclear weapons and climate change is one stark distinction.

She further explained that the global economy, corporate interest and private sector is less important in nuclear disarmament, but it is a more important factor in climate change scenario.

While the concept of security during the Cold War was based on territorial defense, but now it has changed to human security, which is the humane part of global governance and security, she said.

Earlier, in his welcome remarks, Chairman Board of Governors ISSI Ambassador Khalid Mahmood said that our climate and ecosystem is under severe stress which is evident from the frequency of natural disasters.

Climate change is intimately linked with the disastrous effects of nuclear weapons, and in the 1980s, many studies were made on the effect of climate change due to the use of nuclear weapons and the “nuclear clouds,” he said.

“These studies underestimated the devastation, as even slightest use of nuclear weapons will devastate our ecosystem,” he said, adding that in this context, “we need a global governance system in order to avert any such scenario where nuclear weapons are used.”

<http://epaper.brecorder.com/2016/08/31/15-page/790179-news.html>

OBAMA HEADS TO ASIA SEEKING BREAKTHROUGH ON TRADE AND CLIMATE CHANGE

Mark Landler

International New York Times, 2 September, 2016

HONOLULU — President Obama set off on a trans-Pacific voyage on Wednesday, his 10th trip to Asia as president and most likely his last chance to showcase two of his most cherished projects: the focus on Asia and the campaign to curb climate change.

For Mr. Obama, it is a mixed record. He hopes to announce further progress with China on climate change, which has become a rare bright spot in an otherwise fraught relationship. But his drive to reassert the United States' presence in Asia has been jeopardized by a political backlash against his ambitious trade pact, the Trans-Pacific Partnership.

On Wednesday, the president began his travels by focusing on climate change on the American side of the Pacific Rim. On his way to Asia, he stopped at Lake Tahoe, on the Nevada-California border, and in Hawaii to speak at two conferences dedicated to conservation and environmental preservation.

The challenges of conservation and combating climate change are connected. They are linked," Mr. Obama told a large crowd at a casino amphitheater under the dry, fire-prone peaks of the Heavenly ski resort at Lake Tahoe. Several hours later, Mr. Obama arrived in Hawaii, where he addressed leaders of Pacific Island nations, several of whom face the prospect of rising seas swallowing their homes and native lands.

"Few people understand the stakes better than our Pacific Island leaders, because they're already seeing the impact," Mr. Obama said at the East-West Center, an education and research organization in Honolulu. He noted that rising seas had driven villagers from their homes in Fiji and led Kiribati to buy property elsewhere for the day when that country vanishes beneath the waves.

Mr. Obama repeated his criticism of those who deny the science of climate change. But he has sought to reframe the debate over climate change around issues like conservation and environmental protection, officials said, because they are more accessible than scientific discussions of carbon emissions — and perhaps less polarizing, too.

Mr. Obama's Hawaii stop set the stage for a trip on Thursday to the remote Pacific atoll of Midway, which sits within a protected marine national monument that Mr. Obama announced last week he would quadruple in size to more than half a million square miles.

The president has long wanted to visit Midway, part of Papahānaumokuākea Marine National Monument, which was designated in 2006. He is trading his regular Air Force One for a smaller plane that can land at Midway's remote runway, not far from where one of the most fateful naval battles of World War II was fought in the Pacific.

From there, it is on to Hangzhou, China, for a Group of 20 summit meeting, where Mr. Obama hopes to announce that he and President Xi Jinping have both agreed to put the Paris climate accord into effect. That legal step could galvanize its worldwide enforcement since their two countries account for 40 percent of global emissions. Administration officials said the two sides were still working out the final details.

China has continued to find common ground with the United States on climate, even as the two sides fall out over computer hacking, trade, and China's aggressive claims in the South China Sea. Analysts said they expected sharp words between Mr. Obama and Mr. Xi over the South China Sea, particularly in the wake of China's repudiation of a tribunal ruling in The Hague that invalidated its broad maritime claims there.

Mr. Obama also plans to make an ardent case for the Trans-Pacific Partnership, a 12-nation trading pact that does not include China. Officials said he would emphasize the deal's benefits on his final stop in Laos, where he will attend a gathering of Southeast Asian countries, several of which have signed on to the agreement.

But he is holding a weak political hand at home. The two major party candidates, Hillary Clinton and Donald J. Trump, have both come out against the agreement, and support for free trade is fraying, even in the normally pro-trade Republican Party. Congressional leaders have made it clear the deal will not come up for a vote before the election.

Mr. Obama will most likely find himself educating Asian leaders in the fine points of the lame-duck session, which now looms as the last chance during his presidency for a Congressional vote. Josh Earnest, the White House press secretary, insisted there was a reservoir of popular support for the T.P.P. and that Asian leaders, as astute interpreters of American politics, would look past the hostile positions of Mrs. Clinton and Mr. Trump.

Still, administration officials are clear-eyed about what a defeat, or even long-term stalling of the agreement, would mean for Mr. Obama's effort to reinvigorate America's presence in Asia. With its vast scope — ending 18,000 tariffs and nontariff barriers imposed by Japan, Australia, and other countries against American produce — the agreement has become the centerpiece of the president's Asian focus.

“T.P.P. is, in many ways, seen as a litmus test for whether or not the U.S. has staying power in this region,” Benjamin J. Rhodes, the deputy national security adviser, said to reporters on Monday. “What the countries of the Asia-Pacific region want to know, particularly the Asian countries, is whether or not we can be counted on.”

Mrs. Clinton's unyielding opposition has been particularly troubling to Asian leaders, analysts said, given that she spoke out regularly in favor of the agreement when she was secretary of state. “I oppose it now, I'll oppose it after the election, and I'll oppose it as president,” she said last month at a campaign rally in Michigan.

Many Asian leaders believe that Mrs. Clinton would happily carry out the T.P.P. if it were approved before her inauguration, as do some members of the Obama administration. Others believe she will reverse her position if a few elements of the pact are tweaked. But as she has dug in her heels, such a reversal is harder to contemplate.

“They are starting to realize that if it doesn't get through in the lame duck, it will be very hard for her to pivot back to the position she had as secretary of state,” said Michael J. Green, an expert on Asia at the Center for Strategic and International Studies.

http://www.nytimes.com/2016/09/01/us/politics/obama-heads-to-asia-seeking-breakthrough-on-trade-and-climate-change.html?_r=0.

US, CHINA RATIFY PARIS CLIMATE DEAL IN 'TURNING POINT' FOR PLANET
Dawn September 4th, 2016

HANGZHOU: The United States and China on Saturday formally joined the Paris climate change agreement, with President Barack Obama hailing the accord as the “moment we finally decided to save our planet”.

The move by the world's two biggest polluters is a major step forward for the 180-nation deal, which sets ambitious goals for capping global warming and funneling trillions of dollars to poor countries facing climate catastrophe.

Obama and his Chinese counterpart Xi Jinping handed ratification documents to UN chief Ban Ki-moon, who said he was now optimistic the agreement will be in force by the end of this year.

At a ceremony in the Chinese city of Hangzhou, Obama said climate change would “define the contours of this century more dramatically than any other challenge”.

History would show that the Paris deal would “ultimately prove to be a turning point”, he said, “the moment we finally decided to save our planet”.

“There's an American saying, You need to put your money where your mouth is. That's what we're doing.” The Paris accord aims to limit global temperature increases to two degrees centigrade, and will be triggered after it is ratified by at least 55 countries, accounting for 55 per cent of global greenhouse gas emissions.

The US and China are together responsible for some 40pc of the world's emissions, so their participation is crucial.

China's Communist-controlled parliament ratified the agreement earlier on Saturday, and President Xi said the Asian giant was “solemnly” committed to the issue.

“Hopefully this will encourage other countries to take similar efforts,” he said in Hangzhou, where he is to host the G20 summit of the world's leading developed and emerging economies.

Until Saturday only 24 of the signatories had ratified the accord, including France and many island states threatened by rising sea levels but who only produce a tiny proportion of the world's emissions.

Ban said there would be high-level talks in New York later this month to push more countries to sign up, and told the two leaders they had "added powerful momentum" to efforts to bring the accord into force. "I am optimistic we can do it before the end of this year."

Climate is one of the few areas where the world's two most powerful countries — who are at loggerheads on issues ranging from trade disputes, cyberspying and the South China Sea — are able to find common cause.

Campaigners welcomed the move, with WWF saying they had sent "a very powerful signal that there will be real global action on climate change".

But some environmental groups say that the Paris pledges by China, the US and others fall far short of what is needed to meet the goal of less than two degrees of warming.

"This moment should be seen as a starting point, not the finale, of global action on climate," said Greenpeace policy adviser Li Shuo.

The Paris pact calls for capping global warming at well below two degrees Celsius, and 1.5 C if possible, compared with pre-industrial levels.

<http://www.dawn.com/news/1281893>

NEWS COVERAGE PERIOD FROM AUGUST 22ND TO AUGUST 28TH 2016

GOVERNMENT ASKED TO BRING PMD UNDER MINISTRY OF CLIMATE CHANGE

Business Recorder, August 24, 2016

A parliamentary committee has jointly recommended the government to bring Pakistan Metrological Department (PMD) under the Ministry of Climate Change for better co-ordination with other stakeholders. Senate Standing Committee on Climate Change was held on Tuesday under the chairmanship of Senator Mohammad Yousaf Badini where the Committee Members emphasised the need to develop an integrated, effective, efficient Early Warning System at national, provincial and local levels to meet emerging challenges of climate change.

Responding to a Calling Attention Notice, moved by Senators Sherry Rehman, Karim Ahmed Khawaja and Taj Haider, an official of the Petroleum Ministry said that three Liquefied Natural Gas (LNG) terminals are being constructed in Karachi, while one LNG terminal has already been completed which is away from the residential areas.

The officials said that there is no LNG terminal at Bundel Island which is not causing any threats to security and safety of the islands and also not endangering any defence infrastructure in the area.

Senator Sherry Rehman said that the minister was not present in Paris Climate Change conference. She said that Pakistan was among the worst-hit countries regarding climate change impacts but Pakistani delegation on the occasion presented just one paper document, which is very disappointing.

Senator Mushahid Hussain said the establishment of National Flood Protection Commission is being delayed by over past eight years and the committee must request the Prime Minister for early approval of the summary sent by PMD on the subject.

PMD Director General (DG) Ghulam Rasul, while briefing the committee about poor condition of the Early Warning System, said that the department needed capacity building. He informed the members that the PMD sent a summary to the Prime Minister for the purchase of latest Early Warning System equipments costing Rs 19 billions.

“This will not only ensure economy of effort but set a direction for development strategy for future plans and build resilience at all levels ensuring safety of lives and property”, said Chairman NDMA while chairing a meeting. The meeting was aimed at co-ordinating relevant stakeholders to achieve synergy and timely provision of Weather Early Warning for all users. He stressed the need to augment Pakistan Meteorological Department’s capability of weather forecasting SOPs, for data sharing and professional training.

The meeting discussed challenges being faced, areas of deficiency and limitations with respect to meteorological aspects, means to ensure a robust Early Warning System across the country, and to enhance co-ordination, said a press release.

PMD needs at least 10 weather stations in various areas of Pakistan for exact prediction of weather, and studying weather and climate while at present only one weather station was working in Karachi, which was constructed with the help of Japan International Cooperation Agency (JICA).

Rasul said that the Early Warning Radars at the PMD’s flood warning centres were almost 40 years old, while the life span of such radars was 10 years, and their obsolescence was a problem in gauging accurate readings.

He said that the PMD’s Radar in Sialkot was installed in 1978 which was still functioning; adding reading accurate results was a problem with these radars. “Against a requirement of 22 Radars, we only have seven, and the majority of them have completed their life spans,” he added.

<http://www.brecorder.com/general-news/172:pakistan/78717:government-asked-to-bring-pmd-under-ministry-of-climate-change/?date=2016-08-24>

RAINS LASH THAR, MIRPURKHAS, BADIN

Dawn, August 25th, 2016

MIRPURKHAS: Rain hit the city of Mirpurkhas, other towns of the district, Badin and Thar areas here on Tuesday night and Wednesday morning.

In Mirpurkhas, the rain continued for 30 minutes after a week long worst hot spell.

On one hand the rain brought relief while on the other it submerged roads, streets and low lying areas, exposing the inefficiency of the municipal committee of Mirpurkhas.

It rained also on Wednesday morning turning weather pleasant. Business activities were affected and power supply remained suspended as result citizens faced great difficulties. Filthy heaps of garbage, sewage and rainy water aggravated the unhygienic condition of the city.

Growers expressed happiness over rainfall, saying that it was beneficial for their crops of cotton, chili, sugar cane etc.

MITHI: Almost all areas of Thar desert continued to be lashed with moderate to heavy rains late on Tuesday and early on Wednesday.

Nagarparkar, Mithi, Islamkot , Chhachhro, Chelhar, Dahli, Diplo, Kaloi and their adjacent areas received moderate to heavy rains, bringing almost an end to long drought conditions. Villagers of Thar expressed joy and hoped to get good crops and fodder provided Thar gets another spell after 10 to 15 days.

BADIN: Moderate to heavy rains lashed most parts of Badin district on Wednesday, inundating low lying areas in Badin, Tando Bago, Talhar, Khoski, Nindo Shahar, Pangrio and other towns and villages.

The current spell of the rain caused damages to the crops of tomatoes, cotton and chillies.

<http://www.dawn.com/news/1279764/rains-lash-thar-mirpurkhas-badin>

NEWS COVERAGE PERIOD FROM AUGUST 15TH TO AUGUST 21ST 2016

GREEN PAKISTAN PROJECT LAUNCH: CLIMATE CHANGE MINISTRY FAILS TO MEET DEADLINE

The Express Tribune, August 16th, 2016.

Shahzad Anwar

ISLAMABAD: The Ministry of Climate Change (MoCC) has failed to launch the Green Pakistan Programme (GPP).

The deadline for formal launch of the project lapsed on August 11.

Under the project, envisioned by Prime Minister Nawaz Sharif, 100 million saplings will have to be planted across Pakistan from 2016 to 2021 to improve the forest cover and greenery to fight climate-induced devastation and catastrophes.

The government had also approved Rs2 billion for two financial years — 2016-2017 and 2017-2018 — of which Rs1 billion was to be released this year under the Public Sector Development Programme (PSDP) for the project.

A total of Rs10 billion will be spent on the project during the next five years with 50 matching grants by provinces.

Climate Change Ministry (MoCC) Secretary Abu Ahmed Akif told The Express Tribune that last month a summary had been forwarded to the Prime Minister's Office for inaugurating the project but the ministry was still waiting for a reply from the PM Office.

Another official at the ministry said that due to health issues and the ongoing assembly session, the prime minister could not spare time for launching the project.

Deputy Inspector-General (Forest) Abdul Munaf Qaimkhani said that August 11 had been fixed as a tentative date for inaugurating the project with the consultation of provinces and other stakeholders.

He said that due to the PM's busy schedule and personal health issues the programme could not be launched formally.

"Sindh, Punjab and Balochistan have submitted their project concepts, while the Khyber-Pakhtunkhwa chief minister has given the approval to provide a matching grant for the GPP," Qaimkhani said.

He said that the ministry had recently submitted a concept note of the GPP to the Planning Commission.

Usually, monsoon season in Pakistan starts from the first week of July and continues till the third week of September.

According to the Met Office, this year, monsoon rains started in the third week of June and the spell is expected to continue through the third week of September.

The Met Office's data shows that this year the country received rains six per cent below average during the initial weeks of monsoon.

"A deviation of plus-minus 10 of rains is considered as normal," Met Office Director-General Dr Ghulam Rasul told The Express Tribune.

He, however, said that extreme events could not be ruled out in the remaining monsoon season.

Rasul said that this year typhoon season in the Pacific Ocean started early, which suck the flow of Indian Ocean monsoon towards the south China Sea, which affected the dynamic of monsoon in south Asia including Pakistan, India and Bangladesh.

“In such a situation, the monsoon in south Asia is weaker than the normal,” he said.

Forest experts consider August as the best month for plantation because of low temperatures and repeated rains, which help saplings to expand their roots.

<http://tribune.com.pk/story/1163238/green-pakistan-project-launch-climate-change-ministry-fails-meet-deadline/>

JULY WAS EARTH’S HOTTEST MONTH IN MODERN TIMES

Business Recorder, August 18, 2016

Soaring temperatures world-wide made July the Earth’s hottest month in modern times, setting a new high mark for global heat in 137 years of record-keeping, US government scientists said Wednesday.

The report from the National Oceanic and Atmospheric Administration came just two days after the US space agency NASA released its climate data, which also found July was a record-breaking month. “July is typically the hottest month for the globe, and last month didn’t disappoint,” said a summary of the monthly report by NOAA.

“July 2016 was 1.57 degrees Fahrenheit above the 20th-century average, breaking last year’s record for the warmest July on record by 0.11 degrees.” Scientists say the heating trend is being driven by fossil-fuel burning, and is made worse by the ocean warming phenomenon known as El Nino, which came to an end last month.

July’s global average of temperatures taken over land and ocean surfaces were the “highest for any month in the NOAA global temperature dataset record, which dates back to 1880.”

July also marks the 15th consecutive month of breaking monthly temperature records, “the longest such streak in the 137-year record,” NOAA said. The report found above average warmth across most of the Earth, with new records observed in parts of Indonesia, southern Asia, and New Zealand. Places that saw near average or cooler than normal temperatures last month included the north-western United States, eastern Canada, southern South America, south-western Australia, north central Russia, Kazakhstan, and India.

<http://www.brecorder.com/general-news/172/76112/>

NEWS COVERAGE PERIOD FROM AUGUST 8TH TO AUGUST 14TH 2016

CLIMATE CHANGE: METALLIC POLLUTION IN SEA ON THE RISE

The Express Tribune, August 8th, 2016.

KARACHI: Metallic pollution seems to have risen over the years as the highest concentrations of heavy metals in green mussels were observed in 2012, according to a study.

The comparative study for 2012 and 1993 was conducted by the Institute of Marine Sciences (IMS), Karachi University. Green mussels were used in the study for identification of metal as they have the ability to accumulate pollutants in their tissues and are also easy to sample for identification.

Karachi’s coastal waters are known to be heavily polluted by metals, owing to the discharge of partial or untreated domestic and industrial waste directly into the sea. The main sources of metal pollutants include tanneries, shipping sources and other runoffs that are flushed directly into the waters.

To gauge the accumulation of metallic content in Karachi's coastal waters, two comparative studies in 1993 and 2012 were conducted by the IMS. For this, green mussels, having scientific name *P. Viridis*, were sampled from Manora in both the years for a good comparison in different periods.

“The data of 1993 was present at the institute and we wanted to update our findings with the water's condition in the current times,” explained Prof Rashida Qari of the IMS, who was part of this study.

During both the years, two different sizes of green mussels, 4 centimetre (cm) – 6cm and 6cm – 8cm, were collected. The samples were brought to the lab and carefully cleaned of mud debris, after which a chemical treatment was conducted to determine the properties of metal present.

As per the findings of the study, the highest concentrations of heavy metals were observed in 2012 as compared to 1993.

Green mussels were used as they have the ability to accumulate pollutants in their tissues and are also easy to sample for identification.

The results revealed the presence of heavy metals in the soft tissues of green mussels. Iron was found in the highest amounts, followed by lead, zinc and copper.

“The present probe of metal variation was recorded in two seasons, that is, summer (April – September) and winter (October – March),” says the study. “The highest value of iron was measured in the month of December, 2012, and the lowest in June, 1993. Moreover, maximum concentrations of lead were measured in March, 2012, while a minimum level was recorded in July, 1993.”

Generally, the metal concentrations increased in winter and decreased in summer. The study describes this phenomenon as related to the reproductive and weight fluctuations of these organisms in both the seasons.

The month of May brought along a little surprise for Karachiites as seashells, amounting to millions, were seen strewn across the seashore. It brought mixed responses from both experts and coast guards — some claimed it was a regular feature while others thought of it as an unusual occurrence.

While metallic pollution is a reason that is also backed by research, Prof Qari was of the view that high presence of mussels on the shore can also be attributed to a rise in the sea temperature. “A common cause of thermal pollution is the use of water as a coolant by power plants and industries,” she said. “When the water used as coolant is returned to the natural environment at a higher temperature, the supply of oxygen decreases. The change in temperature also affects the ecosystem composition.”

According to Prof Qari, fish and other organisms that adapt themselves to a specific temperature range can be killed by an abrupt change in water temperature, whether it is a rapid increase or decrease. This is known as thermal shock.

“Temperature changes of even one to two degree centigrade can cause significant changes in organism metabolism and other adverse cellular effects,” she explained. “These cellular level effects can adversely affect mortality and reproduction.” According to her, there is a high possibility that the Karachi coast is facing the same issue.

<http://tribune.com.pk/story/1157663/climate-change-metallic-pollution-sea-rise/>

GLOBAL HEAT, SEA LEVEL HIT RECORD HIGHS IN 2015

Dawn, August 10th, 2016

Business Recorder, August 08, 2016

Global heat, greenhouse gases and sea levels all climbed to record highs last year, making 2015 the worst in modern times across a range of key environmental indicators, international scientists said on Tuesday. A dire picture of the Earth's health is painted in the State of the Climate report, a peer-reviewed 300-page tome that comes out once a year and is compiled by 450 scientists from around the world.

The record heat that the planet experienced last year was driven partially by global warming, and was exacerbated by the ocean heating trend known as El Nino, it said.

El Nino, which just ended in July, was one of the strongest the Earth has seen "since at least 1950," said the report, led by the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information.

"This 'annual physical' of Earth's climate system showed us that 2015's climate was shaped both by long-term change and an El Nino event," said Thomas Karl, director of the NOAA division.

"Last year's El Nino was a clear reminder of how short-term events can amplify the relative influence and impacts stemming from longer-term global warming trends."

Major concentrations of greenhouse gases – including carbon dioxide (CO₂), methane and nitrous oxide – are the by-products of fossil fuel burning.

All three "rose to new record high values during 2015," said the findings, based on tens of thousands of measurements from multiple independent datasets.

The annual average atmospheric carbon dioxide (CO₂) concentration at Mauna Loa, Hawaii, reached 400.8 parts per million (ppm), surpassing 400 ppm for the first time, marking "the largest annual increase observed in the 58-year record."

On average globally, 2015's CO₂ level was 399.4 ppm, an increase of 2.2 ppm over 2014.

The report also confirmed NOAA and NASA's finding that Earth's average land and ocean surface temperatures warmed to record levels in 2015.

And global sea levels swelled to their highest point ever, about 70 millimeters (about 2.75 inches) higher than the 1993 average.

Sea level is creeping up gradually around the globe, averaging about 3.3 millimeters per year, said the report. Some places in the western Pacific and Indian Ocean are seeing waters rise faster. Even though the current pace may appear slow, experts warn that sea level rise will accelerate in the coming decades as glaciers and polar ice caps melt, putting millions of lives at risk in coastal communities around the world.

More extreme weather was seen in 2015, too, with an above-normal rainy season prompting major floods in some parts of the world.

Meanwhile, areas in severe drought nearly doubled, from eight percent of the planet in 2014 to 14 percent in 2015.

The Arctic, which is considered particularly sensitive to climate change, continued to warm, and increasing temperatures led to thinner and smaller sea ice cover.

"The Arctic land surface temperature tied with 2007 and 2011 as the highest since records began in the early 20th century, representing a 2.8 Celsius (5 Fahrenheit) increase since that time," said the report.

Meanwhile the Antarctic was colder than average, and the influence of El Nino on atmospheric circulation helped shift sea ice cover “from record high levels in May to record low levels in August,” it said. Across the globe, alpine glaciers continued to retreat for the 36th year in a row.

June’s late spring snow cover in the northern hemisphere marked the second lowest in the 49-year satellite record.

Warming waters are also blamed for the severity of a widespread algal bloom last summer that stretched from central California to British Columbia, Canada, resulting in “significant impacts to marine life, coastal resources and the human communities that depend on these resources.”

The Atlantic hurricane season was unusually mild for the second year in a row, largely due to El Nino, but tropical cyclones “were well above average overall,” said the report.

There were 101 tropical cyclones across all ocean basins in 2015, well above the 1981-2010 average of 82 storms. The eastern and central Pacific were roiled by 26 big storms, the most since 1992.

<http://www.brecorder.com/general-news/172/72960/>

CHECKING FOR CARBON EMISSIONS DISCONTINUED IN 2009, SAYS MINISTRY

Jamal Shahid

ISLAMABAD: In a written reply to the National Assembly, the Ministry of Climate Change has said it no longer monitors carbon emissions in Islamabad.

According to the reply submitted on Tuesday, the ministry used to check vehicular emissions every day in collaboration with the Islamabad Traffic Police. The practice was discontinued in 2009 due to the non-availability of field staff.

Earlier in May, the Pakistan Environmental Protection Agency (Pak-EPA), which works under the climate change ministry, that the air in Islamabad was polluted with colourless, odourless carbon dioxide, oxides of nitrogen, formaldehyde and other hazardous pollutants.

This observation was based on research conducted by Pak-EPA and Japan International Cooperation Agency five years ago.

An environment expert from the climate change ministry said the ministry does not have updated figures for after 2011 regarding the quality of air.

“The [ministry’s] state of the art environment monitoring system became non-functional five years ago. Pak-EPA has no mechanism for calculating the increase in suspended particulate matter and emissions from vehicles and factories in the air in Islamabad,” he said.

The environmental monitoring system he referred to was purchased for Rs1.2 billion with assistance from the Japanese government.

“It was one of Pak-EPA’s most ambitious projects. For five years, the machine has only gathered dust and some of its parts have been damaged from lack of use,” the senior official said, explaining that some of the parts needed to be replaced frequently.

According to the official, the increased number of vehicles in the city was leading to increased emissions and smoke.

“Just 60,000 vehicles were registered in Islamabad in 1998. According to Pakistan Bureau Statistics 2013-14, the number of registered vehicles in the city has increased to 15.2 million,” he said.

In May this year, the Secretary Ministry of Climate Change Syed Abu Ahmed Akif had said Rs1.8 million in funds were released to make the environment monitoring system functional again.

However, Pak-EPA officials have yet to revive the machine installed in their offices in H-8. The Rs1.8 fund for the machine has since lapsed.

A shortage of qualified staff was also one of the reasons the machine could not be made functional.

In its written reply to the National Assembly on Tuesday, Pak-EPA has said that due to the increased number of vehicles on the city's roads, the environment watchdog was finding it difficult to start with testing emissions every day and said this will require funds and human resources.

Pak-EPA has claimed that some of the steps taken for reducing smoke emissions from vehicles included phasing out lead from gasoline, the reduction of sulphur in diesel and conversion to compressed natural gas.

While most car engines are of Euro II standard, Pak-EPA said it has been unable to convince fuel manufacturers to improve the quality of fuel up to Euro standards.

<http://www.dawn.com/news/1276590>

URGENT ISSUE: 'POLITICAL PARTIES NEED TO PRIORITISE CLIMATE CHANGE'

The Express Tribune, August 10th, 2016.

KARACHI: The issue of climate change should be treated as a priority by political parties to improve the overall situation in the country, said Awami National Party's (ANP) Kamila Khan on Tuesday.

She said this during a session on climate change held at Centre for Excellence in Journalism, Institute of Business Administration, Karachi.

The roundtable discussion, organised by Individualland Pakistan, was attended by parliamentarians, field experts and journalists. The session was held with the aim to enable different political parties to recognise the problem of climate change and encourage them to work towards the issue.

"Climate change is occurring very rapidly and Pakistan remains one of the most vulnerable countries," said Muttahida Qaumi Movement's (MQM) Qamar Abbas Rizvi. However, he added, by taking timely action we can mitigate the effects of climate change.

Pakistan Muslim League-Functional's (PML-F) Nusrat Sehar claimed she will make sure that during the preparation of their party's manifesto for the next general elections, climate change is treated as a priority issue and steps to tackle climate change are listed in it.

<http://tribune.com.pk/story/1159029/urgent-issue-political-parties-need-prioritise-climate-change/>

CONFRONTING CLIMATE CHANGE

Business Recorder, August 11, 2016

In this monsoon season torrential rains have once again been playing havoc with public life. So far, flashfloods in the northern region have claimed at least 43 lives, and washed away homes in scores of villages. During the heavy downpours in Karachi-something unusual for that part of the country-13 people were killed in rain-related incidents.

Meanwhile, the Met Office has forecast more rains for the coming days and the Federal Flood Commission warned of high to very high flood levels in Rivers Jehlum and Chenab. According to a report in this paper, flood waters from

Chenab have already inundated vast areas in some 150 Punjab villages. District administrations in Sialkot and Gujranwala have declared an emergency, putting the rescue and relief personnel on alert.

Better preparedness to deal with an impending threat of course is vital. In Karachi, for instance, had the concerned authorities paid heed to the media reports – in the wake of warnings of heavy rains – about garbage heaps blocking the city's storm drains, incessant rain would not have caused as much harm as it did.

This year's torrential rains though are not a surprising occurrence but a manifestation of changing weather patterns. As predicted by environmental scientists, during the recent years Pakistan has been experiencing recurring devastating floods brought about by global warming.

In fact Pakistan is among the ten countries most vulnerable to extreme weather events. Which are only going to get worse with the passage of time, causing alternating cycles of floods and droughts ultimately leading to severe water shortages.

Pakistan is already one of the world's most water-stressed countries. The Indus River System Authority, acknowledging that the country is facing water scarcity, told the Senate last September that "Pakistan is becoming a water-stressed country as the per capita water availability has come down to below 1,000 cubic meters." It is not difficult to see what the consequences would be for the country's agrarian economy, food security, livelihoods, and social harmony.

Given the perils involved, the policymakers need to face up to the challenge of climate change in a resolute manner, shaking off their usual tendency to deal with all sorts of problems on an ad hoc basis. Climate change and water scarcity must become an integral part of both medium- and long-term planning. In a much belated move, the government recently announced its decision to establish a climate change authority which is to involve the chief ministers, and also launching of the Prime Minister's Green Pakistan Programme to promote forestry.

These are important steps, but not enough. Preservation of water resources must also get serious attention. Water reservoirs need to be constructed wherever possible to utilise excess water forming floods, and rainwater harvesting popularised. It is about time the government did some fresh thinking and got rid of old and impracticable plans and projects (such as the controversial Kalabagh dam) so as to ensure the nation's food and water security in the coming decades.

<http://www.brecorder.com/editorials/0:/73990:confronting-climate-change/?date=2016-08-11>

NEWS COVERAGE PERIOD FROM AUGUST 1ST TO AUGUST 7TH 2016

AFRICAN CHILDREN TO SUFFER AS EL NINO WINDS DOWN

Business Recorder, August 01, 2016

Millions of children will suffer disproportionately from the failed harvests and devastated livelihoods left behind by the El Nino weather phenomenon, Save the Children warned on Tuesday. El Nino affects rainfall patterns and causes both drought and flooding. As it recedes the Pacific cooling trend known as La Nina is set to begin.

"Children face protection risks as families and communities move in search of work, food, water and grazing land for animals," said David Wright, the charity's East and Southern Africa Regional Director. The charity estimated that 26.5 million children could face malnutrition, water shortages and disease in affected African regions. "Children are also finding it difficult to stay in school, due to hunger or lack of water," Wright added in a statement.

The 2015-2016 El Nino, one of the most powerful on record, has caused significant damage across several east and southern African countries, sending hunger levels spiralling and leading to greater spread of diseases. Ethiopia has

been experiencing its worst drought in 50 years, while Zimbabwe, Malawi and Mozambique all issued drought alerts earlier in 2016.

Despite African governments' best efforts the "sheer scale" of El Nino this time had outdone the states' capacity to deal with the crisis, according to Save the Children.

<http://www.brecorder.com/general-news/172/70711/>

EARTHLY MATTERS: WHO WILL SAVE THE KALASH?

Dawn, Sunday Magazine, August 7th, 2016

Rina Saeed Khan

Living in harmony with nature in three secluded valleys of the Hindu Kush mountains and celebrating the changing seasons according to their pre-Islamic religion for centuries, the ancient Kalash tribe of Chitral is under attack. This past week, armed militants from across the border in Afghanistan's remote Nuristan province attacked shepherds in the high altitude pastures of the Kalash valleys — Bumburet, Birir and Rumbur — in three separate incidents.

In the first attack, which took place last week on a pasture in the Bumburet Valley, they stole around 400 animals and killed two of the Kalash shepherds who resisted the attacks. The militants had come for their goats and sheep, essential for the Kalash who survive on their milk, goat's cheese and butter during the long winter months. Goats also play an important role in their festivals, which are a part of their unique culture and religion. It is estimated that the militants have stolen around 2,500 goats and sheep in such attacks.

In the second attack in Birir Valley's pastures, the shepherds ran away and hid in a nearby village fearing for their lives, while the militants herded their livestock over the high mountains, back into Nuristan. The third and most recent attack in Rumbur Valley's pastures was repulsed as around 260 Kalash men rushed up to the mountain to protect their livestock. Army action is expected to flush the militants out of the area, as they are said to be still hiding nearby.

"Our livestock can eventually be replaced but the two men who died have gone forever," says a Kalash community leader from Rumbur Valley. "We have had to defend ourselves during the three attacks which occurred just when the Shandur Polo Festival was taking place in north Chitral and all the army and government officers were busy with the festivities."

It is not the first time these attacks have occurred — three years ago, Taliban sneaked into the pasture-land of Bumburet valley, killed a shepherd from the Kalash community and took away a herd of 200 goats and sheep.

"This time we are terrified. The militants have told one of our Muslim neighbours, who was also in the pastures with his livestock, not to worry; 'We won't do anything to you, we are after the Kalash and we plan to kill them all in their villages.'" The most recent incident has created an unprecedented sense of insecurity amongst the local villagers.

The Kalash villagers, who now number around 4,000 people, live in the three narrow valleys of Bumburet, Rumbur and Birir in the towering mountains of south Chitral. Bumburet and Rumbur have been badly damaged by flash floods and glacial floods that poured down the steep mountainsides last summer when unprecedented rainfall hit Chitral.

The Kalash are animists in an Islamic state and have been threatened by the Taliban in the past. The people of this tribe are the last survivors of Kafiristan, who mostly converted to Islam in the 19th century. Their neighbours across the high mountain passes in the Afghan province of Nuristan are the Taliban who hold sway in many parts.

"If our livestock goes, our culture goes," explained Akram Hussain, who heads the Kalash Cultural Centre in Bumburet Valley. The Kalash believe in a creator, 'Dezau' but also believe in various deities, semi-gods and spirits. Prayers are usually offered during their festivities and their elaborate rites demand the sacrifice of dozens of goats.

The Kalash also confront other problems as migrants move into their valleys. “Some of these migrants are brainwashing the Kalash people. There have been several conversions to Islam,” explained Hussain. “They are slowly taking over our lands but they should not be allowed to frequent our lands.

The government really needs to help us.” He felt that the government and, in fact, the world was ignoring their plight. “Scientists all over the world spend so much money digging up old fossils and studying old cultures and here you have a living ancient culture that is struggling so hard to survive and the world is doing nothing about it.”

According to Unesco, Pakistan is a signatory to the Convention on Intangible Cultural Heritage and the Kalash tribe urgently need to be placed on its ‘Safeguard List’. However, this has to be done by the government of Pakistan itself.

“They have to send the nomination to Unesco, explaining why the culture is so unique and special that it needs to go on a global list — we can only help with capacity building,” points out Vibeke Jensen, the Unesco country director in Pakistan. “There are international instruments for safeguarding these tribes.”

For now, however, it seems that the Kalash are on their own. During the long winter months their valleys will be cut off from the outside world by snow. At least the deep snow will be a deterrent to militant attacks. In September 2009, the last Greek volunteer Athanassios Lerounis, who was helping the Kalash build their traditional structures, was kidnapped by the Taliban. He was released only after eight months in captivity. No other Greek volunteer has come here since then.

“That was a big blow to our community since he was doing good work for the Kalash,” says Shahida, a local Kalash woman from Bumburet. “The second blow was when one of our shepherds was brutally murdered on the border with Nuristan a few years ago.

” The Pakistan Army had moved into the valleys in recent years to provide them with better security but the recent attacks are the third big blow to the Kalash and they are reeling from it. “Maybe we should just move from here — if another country will have us and give us protection. We can’t live like this in constant fear for our lives,” says the community leader.

Soldiers patrol the Kalash valleys and have set up many checkpoints where ID cards are checked. Military camps have sprung up in Bumburet and Rumbur in the last couple of years but still the attacks continue.

According to Syed Harir Shah, a Chitrali disaster management expert who runs an NGO called JAD Foundation: “Serious efforts must be made to develop a comprehensive and integrated security plan to protect the Kalash people. Influential conversion of Kalasha should immediately be stopped through legal coverage. Local people (Kalasha) must be recruited into the Pakistan Army, Chitral Scouts and Chitral Police and they should be posted in security posts within jurisdiction of Kalasha.”

He is also clear about other resources needed to protect Kalash culture within Pakistan. “Preaching by Tablighi Jamaat and other individuals should immediately be stopped. Urgent legislation for the protection of Kalash community should be passed by the Khyber Pakhtunkhwa assembly, incorporating severe punishable criminal clauses for the forceful conversion of Kalash to another religion.

All official positions in the Kalash area should be reserved for the Kalash community and additional security posts should be established within the three Kalash valleys.” An army operation took place on Aug 2 and five militants were killed on the border with Nuristan.

<http://www.dawn.com/news/1275387>

September 2016

NEWS COVERAGE PERIOD FROM SEPTEMBER 26TH TO OCTOBER 2ND 2016

10 BIOGAS PLANTS INSTALLED NEAR KEENJHAR LAKE

Business Recorder, September 26, 2016

World Wildlife Fund Pakistan (WWF) in collaboration with Sui Southern Gas Company (SSGC) has set up 10 biogas plants at localities near Keenjhar Lake in District Thatta. The project is aimed at providing alternate energy to local communities who lacked basic facilities for cooking. The biogas supply will help reduce pressure on the forest.

WWF's Director for Sindh and Balochistan Ali Dehlvi said the project would help reduce human dependency and pressure on the nature.

Speaking at the inauguration ceremony of the project at Keenjhar Lake, he said, internationally, some 200 locations were identified for protection of environment on preferential bases, of them Keenjhar ranked 40. WWF has been playing its role to protect the Mother Nature. The 50 year project, he said, was initiated in 2006 and would continue till 2056.

Shehbaz Aslam, head of corporate communications, SSGC, said that initially some 10 small size biogas plants were installed in two villages on experimental basis with 7 plants in Yousuf Hilayo Goth while three at Ramazan Gopang village. The biogas plants cost some Rs2.8 million with around Rs 150,000 for each plant.

It took some six to eight months for completion, he added. "The project is successful, as the local people are quite happy; they are involved and taking ownership. The both organisations have intention to increase the number of plants in future," he said. Anees, a middle aged man, owner of one of the plants, praised the SSGC and WWF for ensuring cheaper fuel facility at his doorstep.

"Earlier, we had to go miles to bring woods to burn and use them as fuel. It was expensive and consuming more time and energy. Thanks to both organisations for wonderful plants. Gas pressure as fine as we can cook three times food easily," he said.

Every 2nd day, you have to put some 5kg animal dung and same quantity of water into the tank. It will produce gas automatically; he said adding that women were also happy and now free to make their handicrafts activities instead of wasting time in collecting woods from bushes. He said people were coming to them and desired to avail the facility.

Kamal Ahmad, Keenjhar Conservation Network president said the facility was environment-friendly. He said the best quality fertiliser was produced from these biogas plants that were being used in our fields.

Munawar Hilayo, a representative of the villagers, requested the WWF and SSGC to expand their projects to other localities as well. He assured his full cooperation in this regard. He said it was need of hours to switch to alternate energy because nearby forest was fast depleting due to massive cutting by residents for wooden fuel. He also complained of inferior material found in some of the plants. He urged the WWF and SSGC to award contracts to professionals. The officials assured him to address his grievance.

<http://www.brecorder.com/fuel-a-energy/193/88080/>

WHY OBAMA IS RIGHT ON CLEAN ENERGY

International New York Times, Sept. 25, 2016

William D. Ruckelshaus and William K. Reilly

Last year, President Obama took aim at the nation's largest source of carbon dioxide pollution, announcing a plan that would reduce these climate-changing emissions from the country's power plants by one-third by 2030, from 2005 levels.

It is an ambitious proposal to rein in a pollutant that has escaped regulation. But the president was absolutely right in taking this action. As he pointed out, these plants emit more carbon dioxide than our cars, planes and homes combined, and it is this greenhouse gas that is the principal culprit behind the alarming warming of our planet.

Predictably, the plan has run into a determined legal assault from businesses, industry groups and more than two dozen states, many with economies that rely on coal mining or coal-fired electricity generation, and its fate now lies with the judicial branch. On Tuesday, the United States Court of Appeals for the District of Columbia is set to hear a challenge brought by those litigants.

As former administrators of the Environmental Protection Agency who served three Republican presidents, we strongly support the president's Clean Power Plan. It is consistent with the fundamental, longstanding approach this country has applied in the face of environmental threats. We have filed a supporting brief with the court.

Over the last 45 years, the nation has built a successful, durable legal framework to protect public health and the environment. This is the result of two factors: first, a clear, essential delineation of responsibilities between the federal government and the states; and, second, laws written sufficiently broadly to anticipate new threats to public health. Those critical elements came together in 1970 with the passage of amendments to the landmark Clean Air Act and the creation of the Environmental Protection Agency by President Richard M. Nixon.

The Clean Air Act of 1970 gave the new E.P.A. the duty to set national ambient air-quality standards for six major air pollutants to protect public health. The law also deliberately and explicitly gave states the authority to devise and implement their own plans to meet the E.P.A. standards.

State responsibility was crucial to the legislative compromise that resulted in the amendments' passage by overwhelming majorities in both houses. Congress recognized that states were closer to the problems they faced, and often had a better understanding of how solutions could be tailored in more cost-effective ways. That consideration has defined virtually all subsequent public health legislation that the E.P.A. administers.

Although states were given the primary responsibility to meet the standards, Congress gave the E.P.A. the power to implement plans of its own if states failed to act. The clear and unmistakable message from Congress to the E.P.A. was to protect the health of Americans.

We have always viewed the E.P.A. first and foremost as a public health agency. In our time running it, both of us faced unanticipated threats to public health. The broad terms of the Clean Air Act gave us authority to act sooner rather than later.

That model — federally set national standards coupled with state planning and implementation — is the bedrock of the legal structure that is now in place to protect public health. The Clean Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act and Superfund all operate under that framework.

With the Clean Air Act, the success of this approach is clear. Levels of those six major air pollutants regulated by the law — ground-level ozone, particulates, carbon monoxide, nitrogen oxides, sulfur dioxide and lead — have declined substantially, with lead by more than 90 percent, even as the nation's gross domestic product grew by more than 230 percent.

The current challenge to the E.P.A.'s power-plant rule once again thrusts the role of the states front and center. Principles of states' rights and responsibilities are at the core of the agency's approach. The E.P.A. has granted maximum flexibility to states to make the emissions reductions in ways tailored to address their specific circumstances.

Given the explicit deference to state authority embedded in the Clean Air Act, the charge by opponents that this rule amounts to “one of the most aggressive executive branch power grabs,” as one state attorney general put it, simply ignores the law and its success over 45 years.

That law, passed long before climate change had emerged as a looming catastrophe, may not be the ideal tool to address this daunting challenge. But Congress’s failure to take any meaningful action requires the E.P.A. to act with the only tool it has — the Clean Air Act. Once the agency determined that carbon dioxide posed a risk to public health, as it did in 2009, the agency was required to act to reduce that risk, under a 2007 Supreme Court ruling.

The debate about whether the climate is changing is over. The consequences will be drastic if the United States and other countries do nothing. Climate change has no boundaries. It confronts all of us with the reality that what happens anywhere on the planet can affect all of us everywhere.

The actions this country is taking to reduce greenhouse gases exemplify American exceptionalism. Our leadership is indispensable to international progress. Failure to accept and assert that responsibility guarantees that future generations of Americans will face a world markedly different from today’s and bear a cost far in excess of addressing the challenge now.

<http://www.nytimes.com/2016/09/26/opinion/why-obama-is-right-on-clean-energy.html>

LNG TERMINAL: SUB-COMMITTEE ON CLIMATE CHANGE SEEKS REPORT

The Express Tribune, September 28th, 2016.

ISLAMABAD: The sub-committee of the Senate Standing Committee on climate change on Tuesday sought a report on construction of the liquefied natural gas (LNG) terminal in the Bundle Island Karachi, which could pollute the sea water and pose threat to defence installations.

The committee meeting, chaired by Samina Abid, directed the Ministry of Climate Change to hold inter-ministerial consultations with the ministries of Defence, Petroleum and Natural Resources, Ports and Shipping and the Sindh government on the construction of the terminal and submit a clear report within a week.

The committee was holding discussion on a ‘calling attention’ notice moved by Senators Taj Haider, Sherry Rehman and Karim Ahmed Khawaja about the construction of the LNG terminal resulting in obstruction of Bundle Island causing threat to security and safety of the Island as well as the defence infrastructure in the area.

The committee expressed concern over conflicting statements about the terminal, saying it required a clear reply.

It directed the ministry that the report should also contain all relevant details including the number of operational as well as proposed LNG terminals, applications for no-objection certificates, besides any negative effects of these terminals on the maritime life and threat to defence installations.

Representatives of the Ministries of Climate Change, Defence, Petroleum and Natural Resources informed the committee that as per their record no such LNG terminal existed and they were unaware of any NOC issued or under process for the project by the Port Qasim Authority.

They said till date no such application had been received, if any request comes, it would be evaluated keeping in view concerns of the committee and other stakeholders.

Among others, the meeting was attended by Saleem Zia, Sitara Ayaz Taj Haider and Sherry Rehman, besides senior officials of the Ministries of Climate Change, Defence, Petroleum and natural Resources.

<http://tribune.com.pk/story/1189641/lng-terminal-sub-committee-climate-change-seeks-report/>

HOW SMALL FORESTS CAN HELP SAVE THE PLANET

Erica Goode

International New York Times, Sept. 26, 2016

Birkenfeld, Ore. — Eve Lonquist's family has owned a forest in the mountains of northwest Oregon since her grandmother bought the land in 1919. Her 95-year-old father still lives on the 157-acre property. And she and her wife often drive up from their home just outside Portland.

But lately, Ms. Lonquist, 59 and recently retired, has been thinking about the future of her family's land. Like many small-forest owners, they draw some income from logging and would like to keep doing so. But they would also like to see the forest, with its stands of Douglas fir, alder and cherry, protected from clear-cutting or being sold off to developers.

"For us, the property is our family's history," she said.

More than half of the 751 million acres of forestland in the United States are privately owned, most by people like Ms. Lonquist, with holdings of 1,000 acres or less. These family forests, environmental groups argue, represent a large, untapped resource for combating the effects of climate change.

Conserving the trees and profiting from them might seem incompatible. But Ms. Lonquist is hoping to do both by capitalizing on the forest's ability to clean the air, turning the carbon stored in the forest into credits that can then be sold to polluters who want or need to offset their carbon footprints.

"Trees are the No. 1 way in which carbon can be removed from the atmosphere and stored in vegetation over the long term," said Brian Kittler, the western regional office director for the Pinchot Institute for Conservation, which has a program in Oregon to help the owners of family forests develop potentially profitable carbon projects.

Larger forests around the world have already been enlisted as carbon storehouses, through programs like the United Nations initiative for Reducing Emissions From Deforestation and Forest Degradation, or REDD, that encourage forest conservation worldwide in exchange for credits that can be sold on the global carbon markets.

Some large timber companies, including Potlatch, have also entered the markets, reducing their logging to levels below legal limits in order to receive millions of dollars in credits.

but so far, small-forest owners, even conservation-minded ones like Ms. Lonquist, have not rushed to embrace market-based carbon storage. Many do not even know it exists, and those who do often find the complexities bewildering.

Some owners believe, wrongly, that to enter the carbon markets they must forgo all income from logging. And some, reluctant to forfeit the ability to quickly turn their trees into cash, have balked at signing a contract to keep a forest standing for 15 to 125 years.

Even more daunting, the expense of bringing a forest to the carbon market — a process that involves taking an inventory of the trees, assessing the forest's carbon content, estimating future growth, and submitting to several levels of auditing — has been so high that it would eliminate any profit for most small landholders.

Environmental organizations like the Pinchot Institute and the Nature Conservancy have for years been searching for a way around these hurdles by educating landowners about the markets' potential for generating income and finding ways to decrease the costs.

“Traditionally, your only tool to generate revenues has been periodic timber harvest,” said Josh Parrish, director of the Nature Conservancy’s Working Woodlands program, which is working with the owners of private forests in Pennsylvania and Tennessee. “The nice thing about carbon is essentially people are being paid to improve forest management.”

In fact, if small-forest owners can get past the barriers, the carbon markets can be profitable, providing an initial flush of money and then regular yearly payments in much smaller amounts.

The carbon credits from Ms. Lonquist’s forest could bring an estimated \$235,000 over the first six years, and about \$6,000 a year after that, said Kyle Holland, the managing director of Ecological Carbon Offset Partners, a California firm that helps small-forest owners enter the carbon markets.

Ms. Lonquist and her family could still log on a limited basis, as long as they stuck to a plan for managing the forest and maintained a steady level of carbon storage through the forest’s continued growth.

The economic case for private owners entering the carbon markets is likely to get stronger. Forests, especially in areas like the Northwest, where trees grow tall and thick, tend to draw higher prices than many other conservation measures. And with last year’s Paris climate pact, some analysts expect carbon prices, now about \$3 to \$12 per ton in the United States, to rise.

Mr. Kittler said the conservation institute, which is subsidizing the preparation of Ms. Lonquist’s forest with the help of a grant from the Department of Agriculture and has partnered with Mr. Holland’s firm for the Oregon project, hoped it would encourage more private owners to enter the markets. Ms. Lonquist and other owners will be given a choice of selling credits on the global market or on California’s market, created under the state’s 2006 Global Warming Solutions Act.

Recent developments in forestry may help make the prospect more appealing by lowering the initial costs to landholders. Mr. Holland’s company, for example, has developed a digital tool — a smartphone equipped with a laser to measure distance and an inclinometer to measure height — that he believes will greatly reduce the expense of conducting a forest inventory, which typically costs \$40,000 to \$100,000 or more, depending about the amount of land.

With the specialized smartphone, landholders can take an inventory themselves, photographing and measuring the diameters and heights of their trees. The photos and data are sent to the company’s office in California, where an expert forester goes through the images, identifying the species and checking for damage to the branches or crowns, among other things. Probability models are used to calculate the amount of carbon stored in the forest.

The mathematical proofs developed by the company have been submitted to a scientific journal, Mr. Holland said. Using traditional methods, a forester conducting an inventory averages three or four forest plots per day and can spend months completing an assessment at a cost of \$350 a plot, he said. But Logan Sander, a forester who used the smartphone to inventory Ms. Lonquist’s forest and recently demonstrated it for two visitors, said he was averaging 30 to 35 plots a day, with the entire job taking only a week to complete.

Individual forest owners who sign up for Mr. Holland’s service pay a \$75 application fee and receive the smartphone. If, after conducting an inventory, they choose to move forward with the carbon project, they pay the company \$1,350 to complete the process.

Some small properties do not store enough carbon to make even that effort worthwhile. The price of carbon, Mr. Holland said, has to be \$10 or more per ton “to make it pencil out” for the owner. And novel methods like Mr. Holland’s still need approval from the companies that verify forest inventories or serve as official market registries.

But Jessica Orrego, the director of forestry for the American Carbon Registry, said such advances might be the key to bringing in small-forest owners.

“We’re fully supportive,” she said. “We’re advocates of innovation. We think it’s extremely important in the carbon market.”

Ms. Lonquist, who owns the forest here with two brothers and her wife, Lynn Baker, is still considering whether entering the carbon markets would make sense for her family.

The commitment — 125 years if the credits are sold in the California market — gives her some pause, she said.

“That’s well beyond our lifetime, and that’s a commitment that goes with the property,” she said.

She can imagine, though, what she might be doing 20 years from now.

“Maybe I’d just be at home growing carbon,” she said. “And maybe that’s the best thing.”

<http://www.nytimes.com/2016/09/27/science/private-forests-global-warming.html>

IAEA’S HELP SOUGHT TO DEAL WITH GLOBAL WARMING

Dawn September 29th, 2016

VIENNA: Pakistan urged the International Atomic Energy Agency (IAEA) on Wednesday to help it effectively deal with the challenges of global warming and climate change.

“The IAEA and Pakistan Atomic Energy Commission, growing together for the last 60 years, can effectively confront one of the greatest challenges faced by humanity today, that is global warming and the associated climate change,” PAEC Chairman Mohammad Naeem said.

Addressing the 60th session of the IAEA General Conference being held in Austria, he said Pakistan was one of the 10 countries most affected by this change.

“It is for this reason that nuclear power’s contribution in our energy mix is planned to be increased substantially in future.

“Nuclear technology also offers means of study and mitigation of climate change. The agency may aggressively promote the development of relevant nuclear techniques. Technical cooperation programmes in this area should be strengthened,” he said.

Guided by the past interactions, he added, Pakistan remained committed to collaborating even more with the agency for harnessing the vast potential of nuclear technology.

“The sustainable development goals will require even more input of nuclear technology. Nuclear power also has its role in the energy mix of the future; it has to make this contribution in a manner that is safe and beneficial.

“This is the reason that increasing number of countries are wishing to embark on nuclear power programmes. This expansion requires a greater contribution on the part of the agency as most of the countries wishing to start their nuclear power programmes look towards the IAEA for guidance and support,” Mr Naeem said.

Pakistan’s first Karachi Nuclear Power Plant (Kanupp), connected to the grid in 1972, continues to function without venter support and has recently set new record of continuous operation.

He said the safe and successful operation of the plant gave the country the confidence to further pursue and advance the nuclear power option to cope with its severe electricity shortage. Two 325MW Chashma nuclear power plants —

units C-1 and C-2 — continued to operate successfully and economically and two more units — C-3 and C-4 — in this series were expected to be connected to the grid in the coming months, he said.

<http://www.dawn.com/news/1286843>

CLIMATE CHANGE EFFECTS ON CROPS: EXPERTS TO WORK TOGETHER ON SOIL FERTILITY

Business Recorder, October 02, 2016

Agriculture and climate experts joined hands to work together on agro-ecological zones in line with climate change effects on crops, changing weather pattern, soil fertility and deteriorating underground water quality.

The meeting was chaired by University of Agriculture Faisalabad Vice Chancellor Professor Dr Iqrar Ahmad Khan while Muhammad Nawaz Shareef University of Agriculture Multan Vice Chancellor Professor Dr Asif Ali, Arid Agriculture University Rawalpindi Vice Chancellor Dr Rai Niaz, Chief Executive Punjab Agriculture Research Board Dr Noorul Islam, Director General Extension Anjum Ali Bhuttar, Director General Ayub Research Dr Abid Mehmood, DG On Farm Water Management Malik Muhammad Akram, Dr Azmat Hayat and Dr Dildar Kazmi from the Pakistan Meteorological Department, Director General Pest Warning Dr Khalid Mehmood, EDO Agriculture Abdul Hameed, and other notables also attended the meeting.

The meeting also decided to analyze the climate data of every ten kilometer for the last ten years. Chairing the meeting, UAF Vice Chancellor Professor Dr Iqrar Ahmad Khan said that the agriculture sector was facing the severe challenge owing to climate changes as the sector productivity is decreasing.

He was of the view that collaborative work will come up with viable solutions in the shape of recommendation on agro zone that will boost up the agriculture.

He showed his concern that rainfall volatility, increased drought and rising temperatures affect crop yields. He said that floriculture in the country was untapped area for which we have to take measures. He said that the government was setting up Horticulture Institute in Lahore that will bring hallmark results.

Dr Asif Ali said that tangible researches on factors disturbing the agricultural sector need to be carried out for ensuring the food in the country. He said that we have to develop the varieties keeping in view the changing climate as agro zones were changing. If we could not take the measures to fight the challenges, the issue of food insecurity would deepen.

<http://www.brecorder.com/business-and-economy/189:pakistan/89813:climate-change-effects-on-crops-experts-to-work-together-on-soil-fertility/?date=2016-10-02>

NEWS COVERAGE PERIOD FROM SEPTEMBER 19TH TO SEPTEMBER 25TH 2016

MATTER OF POLICY: CARBON FOOTPRINT TAKES CENTRE STAGE AT MEETING

The Express Tribune, September 20th, 2016.

ISLAMABAD: Pakistan's Intended Nationally Determined Contributions (INDCs) Committee has updated the National Carbon Emissions Inventory after a lapse of five years.

Ministry of Climate Change Deputy Secretary, Sajjad Haider Yaldram shared this during INDCs progress review committee meeting on Monday.

The meeting was chaired by Federal Minister for Law, Justice and Climate Change Zahid Hamid. The National Carbon Emissions Inventory was prepared in 2011. DS Yaldram discussed points of the report and said the key parameters were rooted in Vision 2025.

Official policy targets were set in the context of the Pakistan National Climate Change Policy and National Policy on Disaster Risk Reduction. Besides that, energy supply from diverse sources and optimising the mix were key considerations. A voluntary and ambitious commitment to reduce greenhouse gas (GHG) emissions is also required.

The participants of the meeting were told that analysed data was received from provincial governments and other stakeholders. The data calculates the abatement cost of these initiatives.

Greenhouse reductions, proposed on the basis of support from international climate financing, are the key consideration of the report.

Yaldrum added that the terms of reference, as provided by the Prime Minister in 2015, include the establishment of the Reference Case Scenario.

They further determine the emission level to undertake the projection for the future based on the government's growth programmes and measures.

They also review the current mitigation action and programmes. He also talked about the challenges faced during the study, including data gaps and inconsistencies, unaligned growth targets of different sectors, unclear road map with respect to China-Pakistan Economic Corridor (CPEC) and the time constraint to carry out the study.

The Minister for Climate Change was also told about the approach and methodology based on Intergovernmental Panel on Climate Change guidelines which were adopted in six economic sectors, including energy, transport, agriculture, industry, forestry and waste.

Adaptation and mitigation options, based on government interventions during the given period, were also discussed. He said this report would be sent to all stakeholders for authentication and verification by relevant ministries and departments.

Members of INDCs' committee were present on the occasion.

<http://tribune.com.pk/story/1184558/matter-policy-carbon-footprint-takes-centre-stage-meeting/>

PAKISTAN WARMING

Dawn, September 21st, 2016.

Fahad Malik

AMIDST all the turmoil, climate change is rapidly surfacing as an issue that eclipses all others in terms of its severity and sheer scale of impact. As part of the UN Framework Convention on Climate Change to reduce global warming, Pakistan was among 175 nations that resolved to mitigate the effects of climate change by becoming signatory to the historic Paris Agreement in April this year.

While the Earth Day signing represents a universal action plan to reduce global warming to below two degrees Celsius worldwide, countermeasures to achieve that goal need to be developed based on region-specific climatic challenges.

Pakistan's contribution to global greenhouse gas emissions is relatively minuscule as compared to India's and the manufacturing behemoth, China. As science would have it, unfortunately, toxicity expelled into the atmosphere by a single large-scale industrial nation disrupts conventional weather patterns of countries located in the vicinity that may not be directly responsible for those emissions — therefore worsening their own war with weather.

As a result of Chinese industries spilling their toxic guts into the atmosphere, a Nature study, conducted in 2010, analysed the constituents of the smog that engulfed major metropolises of China and identified it as the same hazardous smog that wafted over to Pakistan via springtime winds, spreading as far as western US.

This cross-border spillage, coupled with our own rapidly increasing dependency on fossil fuels, alarming rate of deforestation and unmonitored carbon emissions have impacted our regional climate to the point that an unprecedented ecological disaster is imminent if effective measures are not taken.

In spite of environmentalists' concerns since the early 1990s, it was only after the destruction of lives and infrastructure in the 2005 earthquake that the government began to recognise that climate change may not simply be a surface-level issue — experts say that shifting water levels may also lead to seismic shifts.

The 2010 super floods followed, ravaging lands, killing hundreds and displacing millions. At its height, the sheer scale of the floods could be observed from space, with the Indus stretching as far as 30 kilometres apart at certain points. These events combined claimed over 100,000 lives and caused billions of dollars' worth of infrastructure damage to a country already struggling to keep its economy afloat. In only five years, climate change anomalies shook a nation — that braves terrorism almost daily — to its core.

In the aftermath of the calamities' disastrous footprint, advocacy group Germanwatch ranked Pakistan eighth in 2015 in the Global Climate Risk Index of countries most susceptible to climate change. Our climate change problem is an intricate one; several anomalies tie into each other to create climate volatility in our region.

Pakistan's known glacial count, for instance, is 7,253 — the highest in the world — with 543 in the picturesque valley of Chitral alone. Central to our nation's otherworldly beauty, our glaciers are melting at an exponential rate due to yearly soaring temperatures — every summer since 2010 has been the hottest in the country's recorded history — thus disrupting volumetric flow in several important rivers.

As a result, the UN has predicted low-latitude glaciers in the Himalayan range to completely vanish by 2035, a small time frame in the global warming landscape. The colossal melting of ice will cause our rivers (primary source of 75pc of our water supply) to flood — at first causing an overabundance of water, and then receding at an even greater pace with no source left to replenish them, leaving famine in their wake.

Similarly, the illustrious real estate and timber industries have jointly claimed an astonishing 151,000 acres of forests in the country since its inception; making great progress, but reducing our forest cover to a paltry 1.9pc in the process — not to mention wiping away the essential first line of defence against floodwaters and carbon emissions.

The same paradox applies to the influx of foreign investments in the country that requires the development of new infrastructure. While vital for our country's economy to thrive, it is essential for the political machinery to take all necessary measures to contain the resulting air pollution that claims the lives of 30,000 children each year.

These causes and effects transform global warming from a simple case of malfunctioning weather to an all-encompassing problem that, if left unchecked, can inadvertently influence Pakistan's existing social framework. The chain reaction could aggravate social inequalities such as resource consumption and food security, possibly leading to deadly conflict and further instability in water-scarce provinces like Balochistan.

Unless the establishment makes exploration of renewable energy sources a part of its prime directive, weather-related catastrophes will continue to mount. Sporadic afforestation initiatives must evolve into a nation-wide movement that accounts for life, land and livelihood — else our country runs the risk of being at Mother Nature's mercy.

<http://www.dawn.com/news/1285037>

CLIMATE PACT GETS MUCH-NEEDED IMPETUS AT UN

Dawn, September 22nd, 2016.

UNITED NATIONS: Thirty-one more countries are expected to formally join the Paris Agreement on climate change this week, therefore greatly improving the pact's chances of coming into force just a year after it was negotiated, UN officials here observed.

More than 170 world leaders have signed the deal, but it won't take effect until 55 countries accounting for at least 55 per cent of global emissions have ratified or accepted it through their domestic procedures, the officials added.

That was initially expected to take several years, but 28 countries accounting for 39 per cent of emissions including the world's two biggest emitters, the United States and China, have already ratified the deal which has given the climate deal a much needed impetus.

The 31 ratifications expected to be handed to the UN Secretary General at a special event at UN headquarters in New York on Wednesday would bring the total to 58 countries — but many are small and their total emissions likely won't reach the required 55 per cent.

Brazil, Mexico and Argentina are the largest emitters on the list announced late on Tuesday by the United Nations. But the 30 countries will only bring the emissions total to 47 per cent.

At least half a dozen small island nations including Papua New Guinea, Tonga and Kiribati are expected to ratify along with several countries from Central America, Africa, Asia and one from the Middle East — the United Arab Emirates.

In the world of international diplomacy, this is considered a blistering pace, reflecting a sense of urgency in the fight against global warming and a desire to seal the deal before Ban and US President Barack Obama leave office.

AFP adds: The accord requires all countries to devise plans to achieve the goal of keeping the rise of temperatures within two degrees Celsius above pre-industrial levels.

But Edgar Gutierrez, the environment and energy minister of Costa Rica, said that the level was not ambitious enough in light of evidence of worse-than-feared climate change, with last month yet again setting a record for the hottest month ever.

Gutierrez called for countries to aim for 1.5 Celsius and warned that even a one-year delay in implementing the Paris accord could be too late for the planet. "Climate change is already dangerous, it has already exceeded the capacity of many countries to adapt to it, we have already lost lives, we are losing species and we have lost lands and buildings," said Gutierrez, speaking on behalf of a troika of climate-vulnerable nations including Ethiopia and the Philippines.

French Environment Minister Segolene Royal, who heads the body behind the Paris accord, told AFP earlier in the week that she hoped it would come into force before the next UN climate meeting on Nov 7 in Marrakesh, Morocco.

That conference opens one day before the presidential election in the United States, in which Republican candidate Donald Trump has dismissed mainstream science on climate change and vowed to tear up the Paris accord if elected.

<http://www.dawn.com/news/1285247/climate-pact-gets-much-needed-impetus-at-un>

GREENLAND ICE MELTING FASTER THAN THOUGHT

Dawn, September 23rd, 2016.

MIAMI: Greenland's highly unstable ice sheet is melting more than seven per cent faster than previously thought, scientists said this week after discovering a hotspot beneath the Earth's crust that was distorting their calculations.

The study in the journal Science Advances raises concern about the increasing impact of melting ice on sea level rise, since Greenland is the second largest ice sheet in the world after the one in Antarctica.

From 2003-2013 Greenland lost 2,700 gigatons (2,700 billion metric tons) of ice, not 2,500 gigatons as previously thought.

That means the ice sheet is losing about 20 gigatons more per year than the latest estimates.

The difference of 7.6pc was described as “a fairly modest correction” by lead author Michael Bevis, a professor of earth sciences at Ohio State University.

“It doesn’t change our estimates of the total mass loss all over Greenland by that much,” Bevis said. “But it brings a more significant change to our understanding of where within the ice sheet that loss has happened, and where it is happening now.”

<http://www.dawn.com/news/1285532/greenland-ice-melting-faster-than-thought>

CLIMATE CHANGE, WATER WOES: HIGH COURT RESENTS GOVT’S LACK

Dawn, September 23rd, 2016.

LAHORE: The Lahore High Court chief justice on Thursday expressed dismay over careless approach of the federal and provincial governments towards climate change and water security issues.

During hearing of a petition which questions apathy of the authorities concerned on the issue, Chief Justice Syed Mansoor Ali Shah said the next generations may face a dearth of water if government failed to device a concrete policy on it.

Representatives of different departments present in the court could not come up with any effective policy of the government to deal with the problems relating to climate change and shortage of water.

Justice Shah observed: “The government is not taking the matter seriously and the court is being compelled to see it.” The chief justice regretted that the federal and provincial governments were yet to finalise their water policies.

The chief justice directed the governments to submit details of the funds allocated for the projects to deal with the effects of climate change. The judge further directed both federal and provincial governments to finalise their water policies by the end of this year and adjourned hearing till Dec 14.

Agriculturist Asghar Leghari filed the petition and contended that the government had not been taking steps required under the Framework for Implementation of National Climate Change Policy 2013. He said most immediate and serious threat to Pakistan was water and food security. He said priority items under the framework had not been complied with and no action had been taken by the authorities to address the climate change issues.

A Lahore High Court full court meeting would be held on Saturday to review arrangements of its sesquicentennial celebrations.

Chief Justice Syed Mansoor Ali Shah will head the full court. All the judges of the high court will discuss policy and plan that how 150th-year of the LHC should be celebrated. The celebrations will be held in November and December.

<http://www.dawn.com/news/1285591>

FEW PATHS TO PLANET-SAVING CLIMATE GOAL

Dawn, September 23rd, 2016.

Marlowe Hood

OXFORD: The global target to prevent climate catastrophe, crafted at a landmark summit last year in Paris, will be very difficult if not impossible to hit, said some of the world's top scientists meeting this week in Oxford.

The first-ever climate pact to enjoin all nations vows to cap global warming at “well below” two degrees Celsius (3.6 degrees Fahrenheit) compared to pre-Industrial Revolution levels — and under 1.5 C (2.7 F) if possible.

“Currently we only have a few scenarios that get us there, and they are outliers,” said Valerie Masson-Delmotte, a climate scientist at Institut Pierre Simon Laplace in Paris, said of the more ambitious goal.

All but a few of the hundreds of complex computer models plotting the rapid reduction of greenhouse gases that drive climate change, in other words, zoom right past it.

“The 1.5 C target took the scientific community by surprise,” said Jim Hall, director of the Environmental Change Institute at Oxford, which is hosting the three-day conference ending on Thursday.

The question stretches back to the chaotic Copenhagen climate summit in 2009, which nearly derailed more than a decade of UN talks, set the threshold for dangerous global warming at 2 C.

A huge body of scientific literature has accumulated around that benchmark, feeding into periodic reports by the UN's Intergovernmental Panel on Climate Change (IPCC).

But a recent crescendo of devastating impacts — heat waves, deadly flooding, storm surges fuelled by rising seas — pushed world leaders to inscribe even more demanding temperature targets in the Paris pact, inked by 195 nations in December.

The effort was led by small island nations, some of which are likely to disappear under the waves within decades.

Major emerging economies, notably India, went along despite fears that the new threshold would be a brake on economic development.

On current trajectories, the world is set to warm at least 3 C (5.4 F) by century's end, a recipe for human misery and species extinction on a global scale, scientists say.

The inclusion of 1.5 C — even as an aspirational goal — was hailed as a political victory, especially by poor, climate-vulnerable nations.

But it caught the scientific community tasked with informing policy makers off-guard.

Top climate scientists gathered in Oxford to help fill this knowledge gap, and to funnel raw material for a major review — mandated by the Paris Agreement — to be delivered in mid-2018.

“The findings from our conference are going to lead directly into the evidence base for the IPCC special report on 1.5 C,” Hall said.

“The bad news is that we are already two-thirds of the way there,” he added, noting that average global temperatures in 2015 — the hottest year on record — were a full degree higher than 150 years ago.

Indeed, the 2018 report is likely to make for grim reading.

A 2 C cap on warming was already seen as hugely ambitious, both technically and politically.

For many scientists, 1.5 C seems virtually impossible — at least not without “over-shooting” the target.

“We may see the first year of 1.5 C above pre-industrial levels within a decade,” cautioned Richard Betts, head of climate impacts research at the Met Office Hadley Centre in England.

For some scientists, even setting the target is a bad idea.

“There is a risk that the 1.5 C temperature threshold is a distraction,” said Kevin Anderson, Deputy Director of the Tyndall Centre for Climate Research in England.

“The danger is that it will push us to look at geo-engineering solutions rather than how to achieve deep decarbonisation.” Slashing the output of greenhouse gases that heat the atmosphere and oceans — decarbonisation, in other words — has long been the preferred solution to global warming.

But despite a boom in renewables, emissions have continued to grow, putting even a 2 C target out of reach unless engineers find ways to suck CO₂ out of the air and store it underground — so-called “negative emissions.” The 1.5 C goal depends on these geo-engineering schemes even more, and could tempt policy makers to opt for “quick fix” solutions rather than a wholesale transformation of national economies, Anderson said.

The problem, scientists agree, is that few of these technologies have moved beyond the experimental stage, and those that have may pose new quandaries.

Schemes that depend on biofuels, for example, would — if scaled up sufficiently to make a real dent in CO₂ levels — compete with food crops that scientists say must double in the next 30 years to keep up with an expanding world population.

“Radical changes will be required,” said Nebojsa Nakicenovic, deputy director of the International Institute for Applied Systems Analysis, a major centre for climate modelling.

“And not just technically — to be successful, we need new values and norms,” he told the conference. —AFP

<http://www.dawn.com/news/1285544/few-paths-to-planet-saving-climate-goal>

PARIS CLIMATE DEAL PASSES MILESTONE AS 20 MORE NATIONS SIGN ON

The Express Tribune, September 23rd, 2016.

Coral Davenport

United Nations — More than 20 world leaders tendered legal documents on Wednesday, formally binding their governments to the Paris climate accord at a General Assembly ceremony here and all but ensuring that the agreement will go into force by the end of the year.

The specifics of each country’s plans, though, are voluntary. There are no sanctions for failing to control pollution or to put economic policies into practice, or for submitting unambitious pledges.

The legally binding portion of the Paris accord does little more than require governments to continue to convene at high-profile global climate summit meetings, make public pledges to tackle global warming at home and submit those plans to be published on a United Nations website.

The ultimate importance of the climate accord will be determined by its members.

“If enough countries start implementing the Paris agreement, historians will see this as a watershed moment,” said Erik Solheim, director of the United Nations environment program. “But if we don’t implement it, this will just be bringing a bunch of politicians together around a piece of paper.”

In total, 60 countries representing 48 percent of global planet-warming emissions have now legally bound themselves to the Paris accord. The deal goes into legal force when at least 55 countries representing 55 percent of global emissions sign on. At Wednesday's ceremony, leaders of countries representing at least an additional 12 percent of global emissions pledged to submit their legal documents by the end of this year. If they follow through, the pact will take effect.

“What once seemed impossible now appears inevitable,” said Ban Ki-moon, the United Nations secretary general, who will step down from his position at the end of the year.

Some of the plans that were already submitted, such as those of the United States, the world's second-largest greenhouse polluter, have hard targets backed up with detailed policy pledges. The Obama administration promised that by 2025, aggressive regulations designed to shut down coal-fired power plants will cut the nation's emissions by 26 percent to 28 percent from 2005 levels.

Even that plan stands in legal limbo. Twenty-seven states have sued the administration to stop it, and the Supreme Court has halted it until the suit is resolved.

Other plans are less aggressive and less detailed. India, the world's third-largest polluter, would essentially allow its emissions to triple by 2030 — an improvement, Indian officials say, from the sevenfold increase in emissions without any action. Exactly how India can carry out that plan, which includes a significant increase in solar power, is not clear. India's climate strategy does include references to Gandhi and yoga.

The more detailed plan put forth by China, the world's largest polluter, calls for Chinese emissions to drop — but only after 2030 — and for China to put a national cap-and-trade system in place starting in 2017. But China has also been plagued by questions about its own emissions data.

“Obviously, ratifying Paris quickly is better than doing it slowly,” said Christoffer Ringnes Klyve, director of climate and environment programs at Future in Our Hands, a Norwegian advocacy group. “But there are lots of problems with the Paris agreement, and lots of problems with the countries that are ratifying it not having the faintest idea how they're going to achieve the goals.”

Lacking emissions-reduction targets and sanctions, the Paris accord relies heavily on global peer pressure and public scrutiny — including many more events like Wednesday's. A regular series of global conclaves will spotlight countries that follow through on ambitious emissions cuts and publicly name those that don't.

Countries will be legally bound to attend summit meetings where they must give progress reports on their commitments. After 2025, countries must draw up more stringent emissions reduction plans, although the Paris pact does not say how much more stringent those plans should be.

“If I'm Singapore and I see China's doing it, that leads me to do it,” said Jonathan Pershing, the American climate envoy. “If I'm a Latin American country and I see Mexico's doing it, I'll do it too.”

But that strategy does not account for leaders who do not care about global opinion. Donald J. Trump, the Republican nominee for president, has called climate change a hoax and vowed to withdraw the United States from the Paris agreement if he is elected. Once the deal has entered into force, all countries will be legally bound to it for four years. But a Trump administration could refuse to attend summit meetings or submit plans or progress reports, with no consequences beyond lacerating speeches at United Nations podiums.

That attitude appears to be shared by President Vladimir V. Putin of Russia, the world's fourth-largest climate polluter. Russia put forth a plan that is essentially business as usual, requiring no new domestic policies.

At the next major United Nations climate change summit meeting in November in Marrakesh, Morocco, diplomats hope to create an independent body to monitor and verify countries' pollution levels — and to use public scrutiny to

push countries to reduce their emissions. If each nation's pollution levels are publicly reported on a website that showcases apples-to-apples comparisons of progress, governments will be more inclined to act, diplomats reason.

But several countries, including China and India, are expected to push for a more lenient system that is reliant on self-reporting.

"There is an expectation that people will report their emissions. But how does that happen?" said Jo Tyndall, the climate change envoy of New Zealand, who played a central role in brokering the Paris agreement. "What's the process for review? Who will review?"

In Marrakesh, countries will also take up the thorny question of money: Under the Paris deal, rich countries voluntarily pledged to spend \$100 billion annually by 2020 to help poor countries adapt to climate change and develop new clean energy technologies. There is already resistance in several countries, particularly the United States. Peer pressure may be enough to persuade countries to sign on to a global deal, but diplomats fear it may not be enough to open their wallets.

<http://www.nytimes.com/2016/09/22/world/americas/climate-change-paris-agreement-united-nations-ban-ki-moon.html?register=google>

50MW WIND POWER PLANT TO BE READY BY MONTH-END

Business Recorder, September 24th, 2016

KARACHI: The present government's tireless efforts to overcome electricity shortages are bearing fruit with gradual increase in power generation, and alternative sources of energy such as wind power that was also contributing to address power shortage.

The government is all geared up for meeting this challenge by the year 2018, as electricity shortages are a major impediment in economic development, besides negatively impacting people's standard of living.

It augurs well that on its part, the private sector has also come to the fore and contributing its bit in this very regard to help tackle the challenges in the energy sector, Inam Ur Rehman, Chief Executive Officer of Reon Energy and Tenaga Generasi remarked.

Tenaga Generasi's 50 MW Wind Energy Independent Power Plant (IPP) is one of the examples in this connection.

It is located in Bhambore – an ancient city on the northern bank of Gharo Creek, about 65 km east of Karachi in Thatta district.

The Tenaga project is currently undergoing its commissioning test and will be ready to supply power to the national grid within this month. The dedicated transmission line for this project is under construction. However, it has been assured that substitute power evacuation connection is being provided.

The project has been provided with General Electric's 1.6-82.5 wind turbines which has a very large installed base all over the world and have proven to work in all kinds of harsh conditions. These are especially suited for our wind speed and environmental conditions and give the best energy output.

Apprising of the background of this very initiative, Inam Ur Rahman, CEO Reon Energy & Tenaga Generasi Limited informed that Tenaga Generasi Limited (TGL), a Malaysian company, was incorporated in Pakistan for the setting up of a 50 MW Wind Power Plant.

It was allocated land for the plant at Khutik Kun area of Mirpur Sakto Taluka in district Thatta. The company was later acquired by the Dawood Lawrencepur Limited, which it is worth mentioning here, is among the recipients of

Pakistan Stock Exchange's Top Companies Award for the year 2015. Prime Minister Nawaz Sharif was the chief guest at the award ceremony held in Karachi recently. The project will have 25 percent equity and 75 percent debt.

In the second phase, the electricity generation capacity of the plant is planned to be enhanced to 100 MW.

It was further pointed out that the Jhimpir and Gharo areas have been identified for the development. The applicable tariff is determined by the NEPRA and currently the Feed-in Tariff is being applied.

Inam pointed out that Health Safety and Environment is the company's priority and the HSE objectives as per international requirements are being implemented.

www.brecorder.com/pakistan/industries-a-sectors/319433-50mw-wind-power-plant-to-be-ready-by-month-end.htm

NEWS COVERAGE PERIOD FROM SEPTEMBER 11TH TO SEPTEMBER 18TH 2016

CLIMATE CHANGE AND BANANA CROP

Dawn, Business & Finance weekly, September 12th, 2016

Mohammad Hussain Khan

THE quality and price of the current banana crop in Sindh have been affected by climatic conditions, mainly on account of abnormal temperatures and acute water shortages caused by damage to one of the main regulators of the Rohri canal. Most banana orchards in the province are fed by the Rohri canal.

Orchard owners say the abnormal rise in temperatures in June coupled with water shortages and storms affected the thickness and length of those banana fruit bunches that had grown in the May-June period. The size of the current crop was good.

Growers said they expected the banana crop to recover by October-November harvesting as the crop now looked healthy due to the positive effect of rains in July. More than 90pc of the country's banana is produced in Sindh.

The province produced 112,386 metric tonnes of banana in 2015 up 10.5pc from 101,725 metric tonnes of production in 2014, according to the provincial agriculture department's figures.

The damages to the Rohri canal regulator prompted irrigation authorities, amidst growers' protests, to close the canal for repairs in June.

Like mango orchards, banana orchard owners let out their orchards to contractors who are just interested in short-term gains.

Inferior quality fruit fetches a lower rate i.e. Rs600/40kg while somewhat better quality fruit Rs750/40kg.

"Closure of canals at a time when mercury shot upto 47C in Tando Jan Mohammad, in district Mirpurkhas, dealt a severe blow to the crop, triggering trans-evaporation in the plant's leaves", says Karamullah Saand, a banana orchard owner.

Currently, according to him, a vehicle is fully loaded with 600-800 banana bunches on a truck with 205 maunds against 400-500 bunches that weighed 250 maunds.

He, however, says recent rains during July-August had off-set the irrigation water shortage experienced earlier. This benefit to the crop would materialise during October-November — normally an ideal time for harvesting of the fruit.

Banana grower Imdad Nizamani says the fruit from his orchard during May-Aug 2016 was sold at Rs1,097/40kg against Rs1,243/40kg during the corresponding period of 2015. The current yield per acre was 192 maunds per acre

against 244 maunds in 2015. He hopes eight months of crop will provide him a chance to make a major gains later. But, he says, this will depend on exports to Afghanistan and an increased demand in local market.

During water shortage period, progressive growers, who had resources, saved their crop by providing water through tube-wells.

<http://www.dawn.com/news/1283481>

RISE IN AVERAGE TEMPERATURE: LONGER SUMMERS, WARMER NIGHTS AND EXTREME WEATHER EVENTS

The Express Tribune, September 16th, 2016.

Ferya Ilyas

Karachi: The Earth's average temperature today is around one degree hotter than pre-industrial levels and while the change appears marginal, the effect it has is catastrophic. Global efforts are focused on not letting the temperature breach the 2°C threshold – a relatively safe level beyond which climate change effects such as droughts, floods and heatwaves are likely to become more severe and irreversible.

Qamaruz Zaman Chaudhry, a meteorologist and research scientist, says the temperature has increased with unique variation in different parts of the world, including Karachi. “The first six months of 2016 have been the hottest; they have surpassed the record of 2015, which was the hottest year,” he shares, mentioning the recent temperature in Kuwait, which shot up to 54°C. “This is from our region; luckily we did not have such an extreme event but we cannot rule out the possibility,” he warns.

Bilal Khalid, an environmental expert associated with Leadership for Environment and Development (Lead), says earlier this year the global average temperature rise crossed the threshold of one degree Celsius, which underlines the scale of the challenge.

Quoting a research published by University of Sargodha, which analysed temperature records for Karachi over the period of 1947-2005, Khalid says the study establishes that the mean annual temperatures for Karachi have risen by 2.25°C during this period. “Although the exact figure might be contested, there is strong evidence and consensus that mean annual temperatures in Pakistan, including Karachi, are rising,” he stresses.

Urban planner Farhan Anwar says emissions from stationary and mobile sources like industries and transport, emissions from appliances used in homes and commercial buildings are some factors contributing to rising heat levels in Karachi. “Mass densification and vertical growth in the absence of proper environmental and planning safeguards could also be contributing to the possible urban heat island effect in the city,” he explains.

While the rise in mercury can be directly attributed to climate change, Lead's Khalid says there are numerous other anthropological factors that are increasing the intensity of high temperatures, especially in megacities such as Karachi. “These include lack of green spaces, exponential rise in concrete surfaces and poor ventilation in houses and buildings,” he lists.

Meteorologist Chaudhry says the rise in average temperature has extended the period of summers, made the nights warmer and resulted in extreme events like heatwaves. “In Karachi, the situation is exacerbated because of humidity and urban factors,” he explains. “The cooling that is supposed to take place at night doesn't happen as concrete buildings release heat they had absorbed during the day. The relief that used to come with the night is gone.”

Listing the impacts, Chaudhry says the increase in heat levels has severe implications on public health. “Heat puts stress on the human body and can cause dizziness, headache and fainting,” he says. “In extreme cases, it can be life threatening.” Rise in temperature, Chaudhry adds, increases energy consumption, putting pressure on the energy

infrastructure. “Power generation systems in Pakistan cannot sustain the increase in demand and often break down during events of extreme heat,” he points out.

Khalid says the rise in temperatures has also increased the vulnerability of urban centres such as Karachi. “The rise in summer temperature poses a severe risk to the wellbeing of urban dwellers and also to the economic activity of the city,” says the Lead member. “Rising instances of heatwaves in South Asia are becoming a common occurrence, which can paralyse cities for days in addition to large scale fatalities.

Unsustainable population levels, marginalised communities and ill-planned urban settlements are some of the key factors that exacerbate the impact of climate-induced calamities such as heatwaves. Moreover, in recent years, such calamities have led to widespread social unrest since they directly contribute to the rising inequality in developing countries.”

Chaudhry says because warming is a global phenomenon, efforts to curb it have to be global. What people of Karachi can do, he suggests, is to adapt to this change by adjusting their habits. “On the local level, we can make sure there’s a proper warning system, timely advice to modify or restrict activities and cooling centres to provide relief to those hit by heat,” he recommends.

The research scientist says people in rural areas adjust well to climate changes than those in the cities. “Labourers in our urban centres work the same number of hours even during heat events while farmers during hot days usually start work just around sun rise and return home before the sun reaches its peak,” he states.

As the nature of heatwave events makes them hard to detect, Khalid says this causes large-scale casualties before the state can react. “The traditional disaster response model based on reactive and knee-jerk responses is incompatible for managing heatwaves. There is a need to develop a proactive heatwave management plan that includes an early warning system and clear response protocols,” he suggests.

Such a plan, Khalid says, will also require close coordination between various institutions since no government department can singlehandedly tackle the challenge. “Lastly, there is need for capacity-building and awareness-raising of all stakeholders to sensitise them about the risks and mitigation strategies for responding to heatwaves,” he stresses.

To mitigate the effect in the long term, urban planner Anwar says there’s a need for greater vegetation cover, vertical growth to correspond to the required environmental and planning provisions, transition to renewable sources of energy and promotion of public transport.

<http://tribune.com.pk/story/1182179/rise-average-temperature-longer-summers-warmer-nights-extreme-weather-events/>

PAKISTAN PARTICIPATES IN CLIMATE CONFERENCE IN WASHINGTON

Business Recorder, 17 September 2016

WASHINGTON: Pakistan attended an international conference on climate held in Washington from September 15-16 to discuss problems and identify solutions to protect and conserve ocean and its resources.

Zahid Hamid, Federal Minister for Climate Change, led Pakistan’s delegation at the “Our Ocean” conference hosted by US State Department at Washington D.C. Pakistan’s participation in the conference signifies that protection of environment and combating climate change is one of the key priorities of the current government.

President Obama while addressing the plenary session of the conference designated the first marine national monument in the Atlantic Ocean, protecting fragile deep-sea ecosystems off the coast of New England as the Northeast Canyons and Seamounts Marine National Monument.

The Secretary of State John F. Kerry also delivered the keynote address at the inaugural session which was attended by high-level delegations of more than 70 countries including three Heads of States.

It was the third conference in a row with an overarching objective to inspire and empower a new generation of leaders, entrepreneurs, scientists and civil society to identify solutions and commit to actions to protect and conserve ocean and its resources.

The conference deliberated on issues related to marine protected areas, sustainable fisheries, marine pollution and climate-related impacts on the ocean.

Pakistan's participation in the event would contribute towards being part of the international discourse with a view to joining and complementing international efforts in the area of increasingly important climate change.

On Thursday, the Minister for Climate Change also met with senior officials of the State Department including with US Special Envoy for Climate Change Jonathan Pershing. Both sides discussed bilateral cooperation in the area of climate change.

<http://www.brecorder.com/world/north-america/318105-pakistan-participates-in-climate-conference-in-washington.html>

PARADISE LOST: STUDY DOCUMENTS BIG DECLINE IN EARTH'S WILDERNESS

Business Recorder, 17 September, 2016

Will Dunham

Unspoiled lands are disappearing from the face of the Earth at an alarming pace, with about 10 percent of wilderness regions – an area double the size of Alaska – lost in the past two decades amid unrelenting human development, researchers said on Thursday.

South America, which lost 30 percent of its wilderness during that period, and Africa, which lost 14 percent, were the continents hardest hit, they said. The main driver of the global losses was destruction of wilderness for agriculture, logging and mining.

The researchers' study, published in the journal *Current Biology*, was the latest to document the impact of human activities on a global scale, affecting Earth's climate, landscape, oceans, natural resources and wildlife.

The researchers mapped the world's wilderness areas, excluding Antarctica, and compared the results with a 1993 map that used the same methods.

They found that 11.6 million square miles (30.1 million square km) remain worldwide as wilderness, defined as biologically and ecologically intact regions without notable human disturbance. Since the 1993 estimation, 1.3 million square miles (3.3 million square km) of wilderness disappeared, they determined.

“This is incredibly sad because we can't offset or restore these places. Once they are gone, they are gone, and this has shocking implications for biodiversity, for climate change and for the most imperiled biodiversity on the planet,” said conservationist James Watson of the University of Queensland in Australia and the Wildlife Conservation Society in New York.

The wilderness losses in the past two decades comprised a combined area about half the size of South America's vast Amazon region.

Watson, who led the study, said about a quarter of the planet's land surface remains wilderness, particularly in central Africa, the Amazon region, northern Australia, the United States, Canada and Russia. The losses in the past two decades were most acute in the Amazon region and central Africa.

We need to focus on quality of habitat and keeping some places on Earth that are largely untouched by us,” Watson said. “We are running out of time and we are running out of space. If society asked the question – ‘What does Nature need?’ – these places would become a global priority for environmental action.”

<http://www.brecorder.com/weekend-magazine/0/85651/>

GLOBAL WARMING ALTERING SEA AS WE KNOW IT

The Express Tribune, September 17th, 2016.

Ferya Ilyas

KARACHI: The human-induced warming, that began two centuries ago, has not only made our atmosphere warmer but also triggered changes in the properties of the oceans. Since the Industrial Revolution, our seas have risen about eight inches, gotten warmer by around 0.1°C and become toxic.

The changes, seemingly minimal, have devastating effect on the coastal human population as well as marine ecosystems which are sensitive to even the most modest temperature adjustment.

The warming of the sea, a result of heat-trapping gases, leads to extreme weather events such as cyclones; the rising water level, a result of fast melting glaciers, inundates habitats; and acidification, result of atmospheric carbon dioxide mixing in the water, hurts many marine organisms.

Speaking about the rise in sea level, Ali Dehlavi – environmental and resource economist working with WWF-Pakistan – says it has happened partly because of monsoon, cloudburst and glacial melt.

Explaining the change further, Naseer Memon – development professional and chief executive at Strengthening Participatory Organization (SPO) – says warming of our environment is causing glaciers to melt faster which is increasing the flow of water in our rivers. “Parts of Himalayas are going through unusually fast melting of ice cover and causing more frequent floods in the region. It is expected the phenomenon will gain more momentum in the coming years. Karachi is among the vulnerable coasts due to this phenomenon,” he explains.

As the sea gets warmer, Dehlavi says marine species move to cooler location or at worse cease to exist. In Pakistan, he says the fishermen know their fishing ground and changes in water jeopardises their livelihood as fish move away to a different location. “A country which had been profiting from a certain species of fish will one day find that the animal has moved to the neighbour’s jurisdiction,” Dehlavi explains.

The WWF official warns a warmer sea will have negative effect on the coastal human population as well as the marine diversity.

With the rise in sea level, SPO’s Memon says the shoreline of Karachi will be exposed to sea incursion. “Sea incursion is taking place due to lack of fresh water flows to Indus Delta as well as reduction in the natural shield of mangroves forests. In case of any cyclone or tsunami, Karachi’s vulnerability will increase manifold,” he cautions.

According to estimates available to Memon, coastal areas of Thatta and Badin have lost approximately two million acres of land to sea during recent decades. Additionally, the SPO official says the marine ecosystem is also enduring various stresses due to rising sea level as coastal habitats for plants and animals are inundated.

The negative effects are not just limited to that as Umama Binte Azhar, an environment expert at NGO Leadership for Environment and Development (Lead), says changes in the sea also cause the spread of marine diseases and increase the intensity and frequency of extreme weather events such as cyclones and tsunamis.

With changes in climate a trans-boundary issue, WWF’s Dehlavi says countering it demands collective efforts. The point of origin, he says, is not important.

Through climate compatible adaptation measures and interventions, Azhar stresses the impacts of climate change in the coastal areas can be minimised.

In agreement, Memon from SPO says cropping pattern, human settlements, public infrastructure and lifestyle need to be aligned with emerging climatic realities with an adaptation approach. “The Sindh coast needs protection of mangroves cover to mitigate impacts of rising sea level. Regular monitoring of sea levels and intrusion are also essential,” he suggests.

<http://tribune.com.pk/story/1182897/negative-effects-global-warming-altering-sea-know/>

EARTHLY MATTERS: RIDING THE WAVES FOR CLIMATE CHANGE

Dawn, Sunday Magazine, September 18th, 2016

Rina Saeed Khan

People across Pakistan are now experiencing unpredictable rainfall, increased temperatures and changes in weather conditions. In 2012, the BBC’s Climate Asia Report on Pakistan found that “People need information about future impacts and on what they can do right now”. The media, they pointed out, could play a positive role by highlighting the serious impacts of climate change and focusing on solutions so that people know what to do to adapt their lifestyles to the changing climate. The survey found that communities who were informed about their environment were best able to cope with shortages and extreme weather.

Rafia Saleem, a young writer from Multan who has been focusing on raising awareness about environmental degradation and protection since 1999, has made it her mission to inform communities about the perils of climate change and how they can adapt and survive. Having received several awards for her environmental efforts, she recently began an environmental Urdu language radio show Sabz Khawab, initially funded by WWF-Pakistan’s small grants programme and now supported by the Pakistan-US Alumni Network.

Aired on FM 103 Multan on a weekly basis, the show reaches out to thousands of listeners in Southern Punjab and focuses on environmental protection and awareness. It promotes green heroes and addresses problems like changing climate, contaminated water, dwindling wildlife, noise pollution and fading forests in Pakistan. “As most of my writings were in English, I felt the need to do something through which a common man can better understand the phenomenon of climate change”, she says of her innovative radio show series which began earlier this year. That’s how the idea of Sabz Khawab was born,”

Around 15 minutes long, the radio show is entertaining and informative with catchy tunes. It also uses “eco dramas”, which are dialogues, for example, between a grandfather and his young grand-daughter who is horrified at animals being kept in zoos instead of roaming free in jungles and a father and his children who go for a picnic to a forested area and are aghast at seeing “useless” trees being cut down mercilessly for development.

This is infotainment at its best and the show is slickly produced — Rafia not only introduces the theme of each show herself in her melodious voice but also plays interviews recorded in the field. For the segment on Lal Sunahra National Park in Bahawalpur, for example, she interviews park and wildlife officials and their voices can be heard describing the various animals in the park and steps taken for their welfare.

This is all the more remarkable given that Rafia actually has another day job — she is not a professional radio or TV host but a Chartered Accountant who works in microfinance at the National Rural Support Programme office in Multan. She developed an interest in the environment while still a student, even receiving a “Young Eco Hero Award” in this connection from an American NGO called Action for Nature in 2003.

“I was always inspired by nature as a kid. As I grew up, I realised that my surroundings were not as clean and green as I imagined them to be in my childhood. From the day this realisation dawned upon me, I took up the pen and started

advocating on environmental issues through my writings and activism. I spoke to kids and adults on pollution, wrote an eco booklet for kids, fought a public interest court case on garbage disposal and authored research papers”, she explains of her interest in this field.

One of the more interesting aspects of her radio show is the listeners feedback segment at the end of each show where she reads out messages from her audience in Southern Punjab. It is evident that the listeners are not only being informed about environmental protection and what they can do as individuals to safeguard trees and wildlife in their areas, but that they are enjoying her show immensely.

“The programme has been received very well by the listeners. I now intend to take it to other provinces of Pakistan or on a national level depending upon funds” she says. The show goes on air Fridays/Tuesdays from 5.45 to 6pm and one can even listen to it online. As the show is in Urdu it reaches a much wider audience on radio which is heard in poorer rural households who can’t afford a TV or it is switched off due to constant load shedding.

Instead of innumerable mindless talk shows that focus on politics and governance in this country, we need more initiatives like Rafia’s that provide invaluable information to a wide audience on important topics like the environment and climate change. After all, Pakistan’s unique geography from glacier -covered mountains in the north to the Indus river delta of the coast, makes it stand out not only as an extremely diverse country but also one that is increasingly vulnerable to the impacts of climate change.

For several years now the country has been facing the consequences of a changing climate: erratic monsoon rains, rising temperatures leading to reduced agricultural output, glacial floods in high mountains, seawater intrusion into Indus Delta and extreme weather events like major floods and droughts.

Back in 2012 the BBC’s team found that people in Pakistan have much lower confidence in their government to act and people were taking action on their own to respond to climate change (67 per cent of those surveyed in Pakistan). Clearly those who are adapting need information that is reliable and practical and radio shows like Sabz Khawab can deliver this information to them.

<http://www.dawn.com/news/1284098>

BIODIVERSITY IN DANGER: RAPID GLOBAL WARMING THREATENS ECOSYSTEMS

The Express Tribune, September 18th, 2016.

Ferya Ilyas

KARACHI: Global warming is altering ecosystems everywhere, with species changing their habitats and behaviour in a life-and-death struggle to survive. Ecosystems in Karachi are also not immune to this change and many plant and animal species are believed to have moved or become extinct due to the changing environment. Given how intricately all living organisms are connected to each other to form the food web, impact on even one species has the potential to disturb life as we know it.

Tahir Rasheed, an environmental expert currently working with South Punjab Forest Company (SPFC), says dearth of scientific data makes it difficult to prove changes in local ecosystems but cautious observations over a long period confirm disturbance in the natural order.

“We are a research-deficit country and there’s no concrete work on this issue except for sporadic studies. Based on personal experience and what older people have observed, we can say changes have occurred in Karachi in terms of plants and animals found in the city,” Rasheed says, adding that extreme weather events such as heatwaves and cyclones have damaged habitats for not just the humans but the city’s flora and fauna as well.

Explaining how climate change affects ecosystems, an expert from the International Union for Conservation of Nature (IUCN), Danish Rashdi, says changes in the atmosphere have an adverse impact on rain pattern, soil conditions, rangeland productivity, species health and reproduction as well as competition for food among the species – the combine effect of which is disorder in our ecology.

“Rising temperatures and weather change result in species moving from lower altitudes to higher levels in search of optimal temperature for survival. Plants also adapt to weather patterns but erratic change may cause death and disappearance of certain species,” Rashdi shares.

This whole process, he says, affects the ecosystem of the region and hence human livelihoods. “In the case of Lyari in Lasbela district, the population of a very rich and well-settled village migrated due to the changes in environmental conditions which affected the socio-economic and ecological setting of the area,” Rashdi explains.

Sharing specific observations from Karachi, environmental expert Rasheed says there were certain areas in Karachi where one could easily witness parakeets and parrots flying around but not anymore.

“They have now been replaced with another species called kite. Karachi was also home for Egyptian and griffon vultures and they were found in abundance in areas around Lyari River and on small hills within the city but they are missing today,” he lists.

These animals are either extinct or have been replaced by a different species. “This is an indicator how climate change has affected our ecosystem,” he says.

With reference to changes in aquatic life, SPFC’s Rasheed mentions the increase of Indian mackerel species in the Arabian Sea in the last 15 to 20 years. “Iran, where the species was never found, is now catching and exporting it. Similarly, the population of Indian oil sardine has declined due to changes in sea currents and tides,” he states.

Apart from relocation, Rasheed says behaviour of certain species has also changed due to climate change. “Japanese threadfin breams always lived at the bottom of sea but now they are seen at the surface. Resultantly, their catch has also increased because of this change,” he says.

Rasheed says climate change is the likely reason behind these changes along with many other factors.

Though climate change is a global phenomenon, IUCN’s Rashdi says adaptation measures can be taken at local level to retard its impact. “Forestry projects on public and private land and in urban areas may improve local weather conditions and rain patterns. Carbon sequestration by these plants may also have positive impact on our agricultural and rangeland zones,” he says.

By supporting and improving the local weather, Rashdi explains, we will be able to support local species of fauna and flora that ensure balance in our socio-economic and ecological systems.

Additionally, SPFC’s Rasheed calls on the relevant authorities to make concentrated efforts particularly in the field of data collection to predict the future implication of changes in our habitats and be better equipped to deal with them.

<http://tribune.com.pk/story/1183461/biodiversity-danger-rapid-global-warming-threatens-ecosystems/>

NEWS COVERAGE PERIOD FROM SEPTEMBER 5TH TO SEPTEMBER 10TH 2016
FLOODING OF COAST, CAUSED BY GLOBAL WARMING, HAS ALREADY BEGUN
International New York Times, Sept. 5, 2016

Justin Gillis

NORFOLK, Va. — Huge vertical rulers are sprouting beside low spots in the streets here, so people can judge if the tidal floods that increasingly inundate their roads are too deep to drive through.

Five hundred miles down the Atlantic Coast, the only road to Tybee Island, Ga., is disappearing beneath the sea several times a year, cutting the town off from the mainland.

And another 500 miles on, in Fort Lauderdale, Fla., increased tidal flooding is forcing the city to spend millions fixing battered roads and drains — and, at times, to send out giant vacuum trucks to suck saltwater off the streets.

For decades, as the global warming created by human emissions caused land ice to melt and ocean water to expand, scientists warned that the accelerating rise of the sea would eventually imperil the United States' coastline.

Now, those warnings are no longer theoretical: The inundation of the coast has begun. The sea has crept up to the point that a high tide and a brisk wind are all it takes to send water pouring into streets and homes.

Federal scientists have documented a sharp jump in this nuisance flooding — often called “sunny-day flooding” — along both the East Coast and the Gulf Coast in recent years. The sea is now so near the brim in many places that they believe the problem is likely to worsen quickly. Shifts in the Pacific Ocean mean that the West Coast, partly spared over the past two decades, may be hit hard, too.

These tidal floods are often just a foot or two deep, but they can stop traffic, swamp basements, damage cars, kill lawns and forests, and poison wells with salt. Moreover, the high seas interfere with the drainage of storm water.

In coastal regions, that compounds the damage from the increasingly heavy rains plaguing the country, like those that recently caused extensive flooding in Louisiana. Scientists say these rains are also a consequence of human greenhouse emissions.

“Once impacts become noticeable, they’re going to be upon you quickly,” said William V. Sweet, a scientist with the National Oceanic and Atmospheric Administration in Silver Spring, Md., who is among the leaders in research on coastal inundation. “It’s not a hundred years off — it’s now.”

Local governments, under pressure from annoyed citizens, are beginning to act. Elections are being won on promises to invest money to protect against flooding. Miami Beach is leading the way, increasing local fees to finance a \$400 million plan that includes raising streets, installing pumps and elevating sea walls.

In many of the worst-hit cities, mayors of both parties are sounding an alarm.

“I’m a Republican, but I also realize, by any objective analysis, the sea level is rising,” said Jason Buelterman, the mayor of tiny Tybee Island, one of the first Georgia communities to adopt a detailed climate plan.

But the local leaders say they cannot tackle this problem alone. They are pleading with state and federal governments for guidance and help, including billions to pay for flood walls, pumps and road improvements that would buy them time.

Yet Congress has largely ignored these pleas, and has even tried to block plans by the military to head off future problems at the numerous bases imperiled by a rising sea. A Republican congressman from Colorado, Ken Buck, recently called one military proposal part of a “radical climate change agenda.”

The gridlock in Washington means the United States lacks not only a broad national policy on sea-level rise, it has something close to the opposite: The federal government spends billions of taxpayer dollars in ways that add to the risks, by subsidizing local governments and homeowners who build in imperiled locations along the coast.

As the problem worsens, experts are warning that national security is on the line. Naval bases, in particular, are threatened; they can hardly be moved away from the ocean, yet much of their land is at risk of disappearing within this century.

“It’s as if the country was being attacked along every border, simultaneously,” said Andrea Dutton, a climate scientist at the University of Florida and one of the world’s leading experts on rising seas. “It’s a slow, gradual attack, but it threatens the safety and security of the United States.”

One night eight years ago, Karen Speights, a Norfolk resident, was sitting at the dinner table with her mother, eating crab legs dipped in butter and a tangy sauce. She felt a tingle.

“Ma!” she cried. “My feet are wet!”

Her mother laughed, but then she felt it, too: a house that had not flooded since the family moved there in 1964 was soon awash in saltwater. Ms. Speights initially hoped that flood was a fluke. Instead, it turned out to be the first of three to hit their home in less than a decade.

Nowadays, Ms. Speights, an administrative worker at a utility company, is wondering how to get her and her mother out of the neighborhood before the water comes again, without taking too much of a financial hit. And she pays more attention to problems that once seemed remote, like warnings from scientists about the rising sea.

“I believe it because we’re living it,” Ms. Speights said as she sat on her sofa, nodding toward the nearby tidal marsh that sent water into her living room. “The water has to be rising if we never flooded, and all of a sudden we’ve flooded three times in eight years.”

Because the land is sinking as the ocean rises, Norfolk and the metropolitan region surrounding it, known as Hampton Roads, are among the worst-hit parts of the United States. That local factor means, in essence, that the region is a few decades ahead in feeling the effects of sea-level rise, and illustrates what people along the rest of the American coast can expect.

The biggest problems involve frequent flooding of homes and roads. As the sea rises, hundreds of tidal creeks and marshes that thread through the region are bringing saltwater to people’s doorsteps.

This summer, on a driving tour of Norfolk and nearby towns, William A. Stiles Jr. pointed to the telltale signs that the ocean is gradually invading the region.

He spotted crusts of dried salt in the streets, and salt-loving marsh grasses that are taking over suburban yards. He pointed out trees killed by seawater. He stood next to one of the road signs that Norfolk has been forced to install in recent years, essentially huge vertical rulers so people know the depth of floodwaters at low-lying intersections.

“There’s just more and more visible impacts: water on the street, water that won’t clear from the ditch, these intense rain events, higher tides,” Mr. Stiles said.

“It’s beginning to catch the attention of citizens, restaurant owners, business people, politicians. There’s just much more of a conversation, and it’s not just in the politically safe places. It’s everywhere.”

Mr. Stiles, known as Skip, heads a local environmental group, Wetlands Watch. At his suggestion, students at two local universities began looking at the neighborhood where Ms. Speights lives, Chesterfield Heights. It has had little history of flooding, but that is starting to change as the water rises.

The plan the students developed has morphed into an ambitious program to safeguard the neighborhood, and another nearby, for decades. The Obama administration recently gave Virginia more than \$100 million to carry the plan out.

The administration has also enlisted one of the universities, Old Dominion in Norfolk, to spearhead a broad effort at better planning.

But the size of that grant illustrates the scope of the problem confronting the region, and the country: protecting a single neighborhood from rising water can easily cost tens of millions of dollars. Sea walls and streets may have to be raised, or movable gates built along waterways so they can be closed at times of high water.

While the Obama administration is trying to create a few showcase neighborhoods, there is no sign Congress is prepared to spend the money that cities and states say they need: tens of billions of dollars just to catch up to the current flooding problems, much less get ahead of them. Norfolk alone, a town of 250,000 people, has a wish list of \$1.2 billion — or about \$5,000 for every man, woman and child in the city.

As the national response lags, experts warn that the flooding is putting the country's defense at risk.

Several studies have concluded that Naval Station Norfolk, the world's largest naval base, is profoundly threatened by rising seas, as are other coastal bases. The Pentagon has managed to build floodgates and other protective measures at some facilities. But attempts by the military to develop broader climate change plans have met fierce resistance in Congress.

That was the case this summer, when an effort by the Pentagon to appoint officers to take charge of climate resilience led to a House vote prohibiting taxpayer money from being spent on the plan.

“When we distract our military with a radical climate change agenda, we detract from their main purpose of defending America from enemies” like the Islamic State, said Mr. Buck of Colorado, the Republican congressman who sponsored the measure. His amendment passed the House 216 to 205, though the Senate has yet to agree to it.

Many people in Congress, almost all of them Republicans, express doubt about climate science, with some of them promulgating conspiracy theories claiming that researchers have invented the issue to justify greater governmental control over people's lives. So far, this ideological position has been immune to the rising evidence of harm from human-induced climate change.

The Obama administration has been pushing federal agencies, including the Pentagon, to take more aggressive steps. But without action in Congress, experts say these efforts fall far short of what is required.

“In the country, certainly in the Congress, it hasn't really resonated — the billions and perhaps trillions of dollars that we would need to spend if we want to live on the coast like we're living today,” said David W. Titley, a retired rear admiral who was the chief oceanographer of the Navy, and now heads a climate center at Pennsylvania State University.

“I haven't seen any evidence that there is serious thought about this: What does a world of three, four, five feet of sea-level rise look like?”

Deep in a thicket of trees on an out-of-the-way island in the Florida Keys, a diesel engine roared to life. Soon a drill bit was chewing through ancient limestone, pulling up evidence from the geological past that might shed light on the future of the planet.

On a sultry day in March, Dr. Dutton, the University of Florida scientist, stood watch over the drilling operation, inspecting her samples as they emerged from the ground. She spotted fossilized corals, proof that what is now the dry ground of Lignumvitae Key was once underwater.

With taxpayer funding from the National Science Foundation, Dr. Dutton is chasing what might be the most urgent question in climate science: How fast is the ocean going to rise?

“Is it going to happen in decades, or centuries, or a thousand years?” Dr. Dutton asked as she took a break to eat lunch on a tarpaulin spread under the trees. “This will give us an example to say, ‘Well, the last time this happened, here is how long it took.’”

The opponents of climate science in Congress, and the tiny group of climate researchers allied with them, have argued that the concerns of thousands of mainstream scientists about the future are based on unproven computer forecasts.

In reality, their concerns are based in large part on mounting evidence of what has happened in the past.

Through decades of research, it has become clear that human civilization, roughly 6,000 years old, developed during an unusually stable period for global sea levels. But over longer spans, coastlines have been much more dynamic.

During ice ages, caused by wobbles in the Earth’s orbit, sea levels dropped more than 400 feet as ice piled up on land. But during periods slightly warmer than today, the sea may have risen 70 or more feet above the current level.

Dr. Dutton and other leading scientists are focused on the last sea-level high point, which occurred between the last two ice ages, about 125,000 years ago.

After years of surveying ancient shorelines around the world, scientists determined that the sea level rose by something like 20 to 30 feet in that era, compared with today. But how long did it take to make that jump? That is the question Dr. Dutton, using improved research techniques, wants to answer.

Large parts of the Florida Keys are simply ancient coral reefs that grew during the period of high seas, and were exposed when the levels fell. Trees, roads and houses now sit atop the old reefs. By recovering samples, Dr. Dutton hopes to date a sequence of corals as they grew along with the rising sea, potentially revealing the rate at which the water rose.

The research, likely to take years, may supply a figure for how quickly the ocean was able to rise under past conditions, but not necessarily a maximum rate for the coming decades. The release of greenhouse gases from human activity is causing the planet to warm rapidly, perhaps faster than at any other time in the Earth’s history. The ice sheets in both Greenland and West Antarctica are beginning to melt into the sea at an accelerating pace.

Scientists had long hoped that any disintegration of the ice sheets would take thousands of years, but recent research suggests the breakup of West Antarctica could occur much faster. In the worst-case scenario, this research suggests, the rate of sea-level rise could reach a foot per decade by the 22nd century, about 10 times faster than today.

In 2013, scientists reached a consensus that three feet was the highest plausible rise by the year 2100. But now some of them are starting to say that six or seven feet may be possible. A rise that large over a span of decades would be an unparalleled national catastrophe, driving millions of people from their homes and most likely requiring the abandonment of entire cities.

In essence, by revealing how sensitive the ice sheets have been to past warming, Dr. Dutton’s research may answer the question of whether such a rapid jump is possible.

Along those parts of the United States coast that are sinking at a brisk clip, including southern Louisiana and the entire Chesapeake Bay region, including Norfolk, the situation will be worse than average. On the Pacific Coast, a climate pattern that had pushed billions of gallons of water toward Asia is now ending, so that in coming decades the sea is likely to rise quickly off states like Oregon and California.

Along the East Coast, scientists with the National Oceanic and Atmospheric Administration say that many communities have already, or will soon, pass a threshold where sunny-day flooding starts to happen much more often.

“When you look at the historical record, there’s no trend saying the flooding is going down,” said Dr. Sweet, the NOAA expert. “The trends are all very clear. They’re going up, and they’re going up in many of these areas in an accelerating fashion.”

Late last year, in Paris, nations reached a landmark global agreement to cut emissions. It is fragile, and might not survive if Donald J. Trump is elected president in November; he has pledged to scrap it.

But the air is already so full of greenhouse gases that most land ice on the planet has started to melt. So even if the deal survives, it will, at best, slow the rise of the sea and perhaps limit the ultimate increase. Many climate scientists, including Dr. Dutton, believe a rise of at least 15 or 20 feet has already become inevitable, over an unknown period.

As Brad Tuckman walked the piece of land in Fort Lauderdale where he is building a grand new house, he pointed toward the canal that wraps around three sides of the property.

It is scenic, with yachts plying the water, yet as the sea has risen, street flooding in the area has become a recurring nuisance. So before starting construction, Mr. Tuckman said he spent nearly a half-million dollars to raise the sea wall and truck in dirt to elevate the land.

“The predictions of what’s going to happen over the next 20, 30, 40 years — it’s real,” said Mr. Tuckman, the founder of a company offering creative services to the retail industry.

In South Florida, among the worst-hit parts of the country for sunny-day flooding, people are not waiting for state or federal help. Those who can afford it are starting to act on their own. A company, Coastal Risk Consulting, has cropped up to advise them, and is offering its services nationally.

Cities and counties in the region have formed an alliance and enlisted professors to help them figure out what to do. They are hiring “chief resilience officers,” an idea pioneered by the Rockefeller Foundation in New York, which is paying some of the salary cost.

In Miami Beach and Fort Lauderdale, as well as in older Northern cities like Boston and New York, tidal marshes and creeks were filled in a century or more ago to make new land, and it is in these areas — “back bays,” as some of these spots are called — where the flooding is happening first.

That is because they remain the lowest spots in the landscape, vulnerable to the rising water nearby. Old drain pipes empty into the tidal creeks, and at high tide the water can back up through these pipes, bubbling into the streets seemingly from nowhere.

In Miami Beach, the city engineer, Bruce A. Mowry, has come up with a plan for combating the flooding. He rips up problematic streets, raises them with extra dirt and repaves them, installing new drains and giant pumps that can push water back into the bay. The approach has already been shown to work in several neighborhoods.

A controversy has erupted about whether Miami Beach is polluting Biscayne Bay with the water, but the city is pushing ahead. Miami Beach plans to spend at least \$400 million on its plan by 2018, raising the money through fees imposed on homes and businesses.

The huge county government for the region, Miami-Dade County, is developing its own resilience strategy, one likely to cost billions. It has committed to rebuilding some of its decaying infrastructure, like a sewage plant, in a way that safeguards against sea-level rise and storm surges.

“I don’t see doom and gloom here; I see opportunity,” said Harvey Ruvlin, the clerk of courts for Miami-Dade County, who has been a leading voice on the environment in Florida for a half-century, and who recently led a county task force on sea-level rise. “We’re talking about the most robust possible jobs program you can think of, and one that can’t be outsourced.”

Many of the Republican mayors in the region are on the same page as Democrats in requesting national and state action on climate change, as well as pushing local steps. James C. Cason, the Republican mayor of Coral Gables, has convened informational sessions that draw hundreds of residents, and he has received no complaints for his stance.

“I hope in coming years when we have to spend a lot of money, the citizens will still support it,” Mr. Cason said in an interview.

Still, his city, and others in South Florida, have some hard decisions to make.

Some property owners cannot afford to raise their sea walls, putting their neighborhoods at increased risk of flooding. Will they be held legally responsible when floods do occur? A strict policy could force some people from their homes. Conversely, should public money be spent to do the work, even if it largely benefits private property?

Just for streets, storm drains and the like, South Florida governments will need to raise billions, and they have yet to figure out how. Moreover, if the rise of the sea accelerates as much as some scientists fear, it is doubtful the cities will be able to keep up.

The region has one mayor, Philip K. Stoddard of South Miami, who is a scientist himself — he studies animal communication at Florida International University — and has been a close reader of scientific papers about climate change since the 1990s.

“I remember lying in bed at night thinking, ‘I hope this isn’t real,’” Dr. Stoddard, a Democrat, recalled. “I hope other data comes in that contradicts it. It took me several years to get my head around it and say, ‘Oh, God, it is real.’”

Now he is focused on easing the pain for South Miami, with a \$50 million system of sewer pipes to replace septic tanks threatened by the rising water table.

“You can play it really badly and let unpleasant things happen earlier,” he said. “Or you can push them off by doing some infrastructure repairs and some thoughtful planning.”

He is, though, under no illusions about the long-term fate of the region he calls home.

“We’re putting enough heat in the ocean to send water over us, no question,” Dr. Stoddard said. “Ultimately, we give up and we leave. That’s how the story ends.”

<http://www.nytimes.com/2016/09/04/science/flooding-of-coast-caused-by-global-warming-has-already-begun.html?ref=collection%2Fbyline%2Fjustin-gillis>

A VITAL AGREEMENT

The Express Tribune, September 6th, 2016.

As one of the global frontline states affected by climate change, Pakistan has a strong vested interest in any developments that may serve to improve our prospects — and China and the US have now delivered just that.

The two countries have formally ratified the Paris Climate Change Agreement as an impressive overture to the ongoing G20 summit in Hangzhou, China. There was immediate and unusually widespread appreciation of what is seen as a significant advance in the struggle to hold back global warming.

Just occasionally, there are moments when history is seen to be made, and this is one of them. China and the US had been working for months behind the scenes to craft a document that they were both comfortable signing up to.

The agreement brings together both will and vision, and is committed to spanning successive governments for at least a generation hence, a recognition of the need to act extra-politically and transnationally for the good of all nations.

This opens the way for the Paris Agreement to be ratified this year, earlier than expected, and represents a move from making commitments — relatively easily done — to taking action which is relatively difficult to do. Richer countries are going to support poorer countries in limiting their carbon emissions beyond 2020.

Final ratification requires the agreement of 55 countries — which coincidentally form 55 per cent of global emissions. What looked like a very tall order today looks eminently possible.

The UN is holding a climate summit in November, and if other big emitters such as Brazil can be brought on board, then the global community will have finally found a banner under which all are prepared to march. Climate change presents an existential threat planet-wide, with countries such as ours extremely vulnerable. Pakistan has a tiny carbon footprint but lives with disproportionately high risk. That risk may just have been mitigated a little.

<http://tribune.com.pk/story/1176578/a-vital-agreement/>

October 2016

NEWS COVERAGE PERIOD FROM OCTOBER 24TH TO OCTOBER 30TH 2016

WHEN CLIMATE CHANGE HITS KP

Dawn, Business & Finance weekly, October 24th, 2016

Mubarak Zeb Khan

Khyber Pakhtunkhwa agriculture suffers from very low productivity, with risks of crop failures owing to persistent weather anomalies.

The Climate Change Centre at the University of Agriculture, Peshawar, has warned the provincial government that the surging temperature will make the land unsuitable for cultivating wheat, maize and sugarcane.

The most alarming side of the centre's study is that higher temperatures are expected to promote the growth of fungus and pests in the province. Currently, of the two crops, wheat occupies over 45pc and maize, the second important cereal crop grown, about 30pc of the cultivated area.

The total cultivable area of the province is 6.55m acres but irrigation facility is only available for 2.277m acres, hardly 32pc of the cultivable area. Thus 68pc, or 4.43m acres, are arid. A delay in timely rains exposes a large rural population to weather risks.

Given the agricultural landscape of the province farmers suffer from low productivity. Nearly 80pc of the KP population lives in rural and peri-urban areas, whereas about 85pc, directly or indirectly, earn their livelihood from farming. However, agriculture contributes a mere 14pc to the provincial income; far below its potential.

Deputy Director and Associate Professor at the Climate Change Centre, Dr Inamullah Khan says an increase of just one degree Celsius in temperature might cause a rapid increase in the population of insects which will have a devastating effect on crops. The study established a direct link of rising temperatures with falling crop areas.

In the past decade, the increase in temperature was between 0.46 and 0.69 degrees Celsius. In D.I Khan, where the water situation is already alarming, sugarcane will not be able to grow because of depletion in the water table.

Climate change and uncertain hydrological patterns are expected to affect access to water in this highly diverse and ecologically fragile province. Farmers need to be supported in finding and developing adequate responses to these challenges.

Samreen Babar, a member of the research team, also established that a degree increase in mean temperature reduces crop yield by approximately 2000 tonnes. She said climate change has a harsher impact in the southern part of KP, which is already short of water supply and gets low rainfall.

KP Spokesperson, Mushtaq Ghani says his government is aware of the situation and has come up with several steps to overcome the problem.

The KP government will plant a billion trees by the year 2018. Around 190m trees have already been planted over a period of two years.

The plantation in the water logged area was in order to cultivate the barren soil. Mr Ghani further says that the KP government is also working on the re-generation of the forest. "We have taken several steps in this direction".

Regarding the issue of low crop production, he said poor infrastructure is preventing a lower utilisation of water.

Water supply will improve after the construction of the Chasma Right Bank Canal (CRBC). The canal will provide water for wheat growing in the D I Khan area. As a result, Mr Ghani says, the province will become self sufficient in food, and end its dependence on Punjab.

In February 2016 the federal government agreed to provide help to KP for developing infrastructure so that it may utilise its full share of water. KP is seeking an amendment in the IRSA Act 1992, to get a payment of about Rs120bn, as a compensation for its under-utilised water.

KP has also been demanding the construction of the CRBC by the federal government, which could irrigate 300,000 acres of land in the province.

Besides, the KP government will have to develop new crops for a changing climate, better farming practices and modern methods to improve yield of various grain crops and fruits.

<http://www.dawn.com/news/1291790/when-climate-change-hits-kp>

CLIMATE CHANGE COULD PUSH 122M INTO EXTREME POVERTY: UN
Business Recorder, October 24, 2016

Climate change could sink up to 122 million more people into extreme poverty by 2030, mostly in South Asia and Africa, where small farmers will see their output plummet, the UN's Food and Agricultural Organisation (FAO) warned on Monday.

In an annual report, the FAO warned that a worst-case scenario of high-impact climate change would pound the communities that rely on agriculture for their livelihood, and food insecurity could spread to all regions.

It called for a "broad-based transformation of food and agricultural systems" to adapt to a warmer world, with an emphasis on supporting small shareholders.

"There is no doubt climate change affects food security," FAO chief Jose Graziano da Silva said.

"What climate change does is to bring back uncertainties from the time we were all hunter gatherers. We cannot assure any more that we will have the harvest we have planted."

Farming is both a driver of climate change, responsible for some 21 percent of global greenhouse gas production, and a victim, with crops adversely affected by drought and floods.

Adopting “climate-smart” practices, like planting nitrogen-efficient and heat-tolerant crops, or finding better ways to conserve water, would reduce undernourishment for many millions, the FAO said.

The report also called on signatories to the 2015 Paris climate deal to “put commitments into action”, underscoring the need to help developing countries with climate change mitigation

<http://www.brecorder.com/general-news/172/96247/>

GREENHOUSE GASES MILESTONE SHOWS NEED FOR ACTION: WMO

Dawn October 25th, 2016

OSLO: Greenhouse gases rose to a symbolic milestone in 2015, taking climate change into a new phase which could last generations even if governments act to curb man-made global warming, the UN World Meteorological Organisation (WMO) said on Monday.

Globally averaged concentrations of carbon dioxide, the main man-made greenhouse gas, reached 400.0 parts per million (ppm) in the atmosphere for the first time on record and were 44 per cent above levels before the Industrial Revolution, it said.

The relentless rise contrasts with accords by almost 200 governments to start reining in emissions, led by the Paris Agreement last year to phase out fossil fuels in favour of renewable energy in the second half of the century.

“The year 2015 ushered in a new era of optimism and climate action with the Paris climate change agreement. But it will also make history as marking a new era of climate change reality with record high greenhouse gas concentrations,” WMO Secretary General Petteri Taalas said in a statement.

“The key issue here is to go from this kind of political will to concrete action,” he told a news conference in Geneva. “So far we haven’t seen a major change in the behaviour.” An observatory at Mauna Loa in Hawaii, the main measuring station with records back to 1958, “predicts that carbon dioxide concentrations will stay above 400 ppm for the whole of 2016 and not dip below that level for many generations”, the WMO said.

Carbon dioxide levels will continue rising unless the world stops burning fossil fuels and starts planting trees, said WMO’s atmospheric environment research chief Oksana Tarasova.

“The technology is there. It’s just human will. If we want we can do it,” she said, recalling Europe’s successful efforts to combat acid rain by tackling sulphur and nitrogen emissions.

<http://www.dawn.com/news/1292096/greenhouse-gases-milestone-shows-need-for-action-wmo>

WITHOUT URGENT ACTION, CLIMATE CHANGE WILL PUSH MILLIONS INTO HUNGER: UN

Business Recorder, 29, October 2016

Farmers urgently need help to adapt their methods of growing food if the world is to curb greenhouse gas emissions and prevent climate change pushing millions into hunger and poverty, the UN Food and Agriculture Organization (FAO) said on Monday.

Small farmers who produce the bulk of food in developing countries are some of the most vulnerable to changes in climate and need help adapting to a warming planet, FAO said in a report.

Climate is expected to hit crop yields and livestock production and make the price of food more volatile, putting poor families at greater risk of hunger, the UN agency said. “Unless action is taken now to make agriculture more sustainable, productive and resilient, climate change impacts will seriously compromise food production in countries and regions that are already highly food-insecure,” FAO director-general Jose Graziano da Silva said in the report.

“Hunger, poverty and climate change need to be tackled together. This is, not least, a moral imperative as those who are now suffering most have contributed least to the changing climate,” Graziano da Silva said.

The UN agency estimates that, with climate change, an additional 42 million people will be vulnerable to hunger in 2050. This figure does not include the growing numbers affected by extreme weather events. The number of weather and climate-related disasters more than doubled in the last two decades compared with the preceding two, the UN Office for Disaster Risk Reduction said last week.

“Climate change is already happening, there is an increasing frequency and severity of extreme weather events,” said Kostas Stamoulis, head of FAO’s Social and Economic Development Department. These climate shifts are reinforced by the recurring El Nino weather pattern, which happens when water in the Pacific Ocean becomes abnormally warm, altering global weather patterns.

More than 60 million people – two thirds of them in east and southern Africa – faced food shortages this year because of droughts linked to El Nino. “We all know that El Nino will happen, but the intensity by which it happens is really scary,” Stamoulis told the Thomson Reuters Foundation.

Smallholder farmers in Africa and Asia are already affected by rising temperatures, changes in rain patterns, frequency of droughts, and rising sea levels. “Larger farmers have the means to cope with those temporary threats, whereas small farmers can be totally wiped out because they don’t have the savings ... or assets,” Stamoulis said.

Climate change is also expected to affect the nutrient content of food. The higher the concentration of CO₂ in the atmosphere, the lower the nutritional content of crops like wheat, Stamoulis said.

“So not only people’s ability to acquire food will be reduced, but also the nutrient contents of whatever people will buy will be lower,” he said. Agriculture, forestry and changes in land use together produce 21 percent of global greenhouse gas emissions, making them the second largest emitter after the energy sector. The raising of livestock alone produces nearly two thirds of agriculture emissions, FAO said on Monday.

The figures do not include emissions produced from farm machinery, or in the transport, processing and storage of food.

“Those emissions come from the way we plough our soil, fertilize our crops, the way we use chemicals and manure, the way we raise our livestock, and the way we ... deforest,” said Stamoulis. “If we don’t change the way we do business ... every target ... to stabilize the climate will be missed,” he added.

A global agreement to tackle climate change, reached in Paris last year, will take effect on November 4. Work is due to start at UN climate talks in Morocco next month to hammer out the rules for putting the accord into practice. The need for more sustainable agricultural practices will be an important part of that discussion, Stamoulis said.

These include growing crops which use less nitrogen and are more tolerant to drought, restoring forests, changing livestock feed, and ploughing the land less. Soil stores carbon, so the more it is ploughed, and the deeper, the more carbon is released into the atmosphere.

<http://www.brecorder.com/weekend-magazine/0/97828/>

NEWS COVERAGE PERIOD FROM OCTOBER 17TH TO OCTOBER 23RD 2016
EFFORTS ON TO SHIELD FARMERS FROM CLIMATE CHANGE IMPACT

The Express Tribune, October 18th, 2016.

Peer Muhammad

ISLAMABAD: Pakistan Telecommunication Authority (PTA) Chairman Ismail Shah has stressed that the government is making all necessary arrangements to cushion farmers against the challenges posed by climate change.

“The PTA will continue to encourage the development of local content-based applications and is willing to extend all sort of support to help farmers by providing reliable and timely information, automation of certain agricultural processes and connecting buyers and sellers in the marketplace,” he said.

Shah was speaking at the launch of ‘Ba Khabbar Kisan’ programme of Mobilink at Dera Sardar Sarfraz Khan, Attock. More than 1,000 local farmers and Mobilink and Warid CEO Aamir Ibrahim were present on the occasion.

“It gives me immense pleasure that Mobilink decided to launch an agri-service in line with international standards with the core objective of increasing farm productivity and income,” he said.

Mobilink has introduced the app-based service in an effort to raise awareness among farmers.

Utilising interactive voice response technology, the app will provide farmers different types of information and services such as optimised cultivation methods, modern farming techniques, health precautions for growers and plants, 24/7 helpline with training, weather information, crop insurance, market-related information and a platform for sales.

The free-of-charge service has been developed after understanding the needs of local farmers. It focuses on three main points of the agricultural sector – productivity loss, supply chain inefficiencies and financial exclusion – by offering relevant and timely information, supply chain-related services and mobile financial services.

“We believe this service will play an integral role in ensuring farmers get their due reward for playing an important role in the society,” Warid and Mobilink CEO Ibrahim said.

<http://tribune.com.pk/story/1201322/efforts-shield-farmers-climate-change-impact/>

HOW THE CHEMICAL INDUSTRY JOINED THE FIGHT AGAINST CLIMATE CHANGE

International New York Times, 18 October 2016

Hiroko Tabuchi And Danny Hakim.

It might seem surprising to find the world’s chemical companies on the front lines of preventing climate change, fighting to disrupt their own industries.

But in a sweeping accord reached on Saturday in Kigali, Rwanda, companies including Honeywell and Chemours, a DuPont spinoff, were among the most active backers of a move away from a profitable chemical that has long been the foundation for the fast-growing air-conditioning and refrigeration business.

The companies were driven less by idealism than by intense competition, and a bet that they could create more environmentally friendly alternatives.

Still, some environmentalists say the aggressive move away from hydrofluorocarbons, or HFCs, provides a template for other industries to follow.

They learned that without a rule change, their new products couldn’t compete,” said David Doniger, director of the Climate and Clean Air Program at the Natural Resources Defense Council, based in New York. “They woke up and said, ‘The science is real.’”

“We wanted them restricted for purely environmental reasons. The companies wanted them restricted for many other reasons,” including profit, Mr. Doniger said. “But the point is that they had a certain common interest with the international community.”

The chemical industry’s response stands in stark contrast to the foot-dragging, and in many cases the outright obstruction of climate regulations, by the big oil companies.

Exxon Mobil, Chevron and others have been criticized for lobbying against rules to curb greenhouse gases for decades, even though their own researchers have warned of the risks of climate change.

Some environmentalists contend that the chemical companies were allowed to have too much input into the Kigali deal. They also say the deal could have been more ambitious in timing and scope.

And there are concerns that many producers in countries will not profit as quickly, consolidating the power of the world’s biggest companies. Much of the resistance to the agreement came from China and India, which feared that some of their chemical manufacturers would be shut out, or that their consumers would face higher prices.

“Although we welcome the outcome and there is progress, it’s being dictated by the industry,” said Paula Tejón Carbajal, the global business strategist for Greenpeace in Amsterdam.

The Kigali deal is the latest chapter in what has been at times an environmentally disastrous role played by the air-conditioning and refrigeration industry.

For decades, a class of chemicals called chlorofluorocarbons, or CFCs, were used widely in air-conditioners and refrigerators, as well as in aerosol sprays and cleaning products. But scientists warned that CFCs deplete the ozone layer, which protects the earth from the sun’s ultraviolet rays. Chemical companies first resisted, saying that alternatives were not economically viable. “They were awful, just like the coal industry,” Mr. Doniger said.

But consumer concern about the chemicals led to slumping sales, and a handful of countries banned CFCs. In 1987, the Montreal Protocol agreement was created to completely phase out those chemicals.

The alternatives available at the time, HFCs, were greenhouse gases with 1,000 times the heat-trapping potency of carbon dioxide. Concerns over those chemicals spurred campaigns by environmentalists to phase out HFCs as well.

Photo This time, chemical producers raced to get ahead of any new round of regulations. Even as the switch to HFCs was taking hold in the early 2000s, Honeywell and several other companies began research and development programs to study alternatives with far lower warming potential.

Europe tightened its regulations in 2011, with stricter laws aimed at phasing out HFCs in car air-conditioners. Regulators in the United States gave credits to domestic automakers for switching to HFC alternatives.

In 2012, Honeywell set up a production base just north of Shanghai to make a more environmentally friendly HFC alternative known as HFO-1234yf. The company followed with a second plant north of Tokyo, and is set to open its largest production base in Geismar, La., early next year. It has spent \$900 million on its alternative coolant program.

Since then, Honeywell has publicly voiced its support for stricter regulations, and in 2014, was one of a group of companies to partner with the Obama administration in its bid to make amending the Montreal Protocol a priority.

With the world phasing out HFCs, the company is set to reap the benefits of its investment. Though Honeywell does not break out specific figures for its chemicals business, it has said that sales of its HFC alternatives are rising fast, helping the company grow its annual revenues from its wider fluorine business by double digits to over \$1 billion.

“This is an area where we are aligned with the environmental benefits,” Kenneth Gayer, vice president of fluorine products at Honeywell, said in an interview. “We anticipated the need for these regulations before people were even talking about global warming. Now, the world is going to use alternatives in a big way.”

Other options are now available, including systems that use propane or ammonia, and companies throughout the supply chain are racing to adopt them. Coca-Cola, for example, has put more than 1.8 million refrigerated vending machines and other HFC-free equipment into service.

Still, some environmentalists caution against what they see as excessive influence by the corporate sector in shaping the way forward for cooling technologies.

Daikin makes a low-cost HFC alternative called HFC32 that has a relatively small global warming impact, and is seen as useful for markets like India. Daikin, based in Osaka, Japan, makes both air-conditioning hardware and chemicals. It has been putting some of its patents in the public domain to encourage local manufacturers to use its chemicals.

Ms. Carbajal, of Greenpeace, saw the aggressive promotion of HFC32 as problematic. The industry, she said, decides “what is low and what is high, and that’s why we are very concerned.”

Ms. Carbajal said that while there was a range of better alternatives to HFCs, those were not the ones being adopted in some countries. “The problem is that the ambition has not been as high as we expected,” she said.

Damian Thong, who heads Asia technology research at Macquarie, said Daikin had backed HFC32 in an attempt to balance warming potential and higher energy efficiency.

Emissions from air-conditioners also come from generating the electricity they consume, Mr. Thong said. “The issue being glossed over is that focusing on global warming potential alone may be bad for the environment still,” he said.

Despite the remaining issues, the Kigali deal was an example of an emerging dynamic, where companies pre-empt environmental policy changes by developing more planet-friendly products, then push for regulation that grows that market, environmental experts say.

“More and more companies are looking further and further down the timeline to see what changes they can expect, and what they need to phase out of their products,” said Baskut Tuncak, a lawyer at the United Nations specializing in toxic chemicals.

“It shows regulations do drive innovation,” Mr. Tuncak said. “The more we have a global approach, the better it is, even for businesses.”

http://www.nytimes.com/2016/10/17/business/how-the-chemical-industry-joined-the-fight-against-climate-change.html?rref=collection%2Fbyline%2Fdanny-hakim&action=click&contentCollection=undefined®ion=stream&module=stream_unit&version=latest&contentPlacement=1&pgtype=collection

BUSY AT HOME, CLIMATE MINISTER MISSES UN HABITAT CONFERENCE IN ECUADOR
The Express Tribune, October 22nd, 2016.

Shahzad Anwar

ISLAMABAD: Climate Change Minister Zahid Hamid missed the opportunity to participate in the third UN Conference on Housing and Sustainable Urban Development (UN Habitat-III) in Ecuador despite getting permission from the prime minister. “Local engagements” were cited as the reason by a source at the PM’s office, who added that a representative from the foreign office did attend the moot.

Habitat-III was held in Quito, Ecuador, from October 17 to 20.

The moot is held once every 20 years. The first Habitat-I was held in Vancouver, Canada in 1976, with the Pakistani delegation led by Nusrat Bhutto, while Habitat-II was held in Istanbul, Turkey in 1996 and saw participation from a Pakistani delegation led by then-Prime Minister Benazir Bhutto.

The Ministry of Climate Change is the focal institution for UN Habitat activities in Pakistan.

The ministry, with UN Habitat's assistance, had conducted meetings with stakeholders to address sustainable urbanisation issues including climate change vulnerability assessment of Islamabad in order to help the country devise an urban development policy for Pakistan. Habitat-III set the agenda for housing and sustainable urbanisation for the coming decades.

It was the first global summit held following the adaptation of the post-2015 agenda of climate change agreement in which governments, local authorities, civil society organisations, the private sector, and academia gathered to review urban and housing policies and frameworks.

Pakistan is the one of the most urbanised nations in South Asia. The urban population has increased tremendously from 23.5 million in 1981 to 43 million in 1998, with the current estimate of urban population being 75 million. The country is expected to become predominantly urbanised by 2025.

Keeping in view the importance of the event, the ministry of foreign affairs had proposed that the Pakistani delegation should be led by Zahid Hamid along with planning secretary, as the country's Vision 2025 plan also has implications for managing urbanisation in line with new UN Habitat urban agenda. The other names approved by PM Office included the MOCC Environment DG and a representative from the ministry of foreign affairs. Around Rs1.26 million had been budgeted for participation costs.

<http://tribune.com.pk/story/1205982/cold-busy-home-climate-minister-misses-un-habitat-conference-ecuador/>

NEWS COVERAGE PERIOD FROM OCTOBER 10TH TO OCTOBER 16TH 2016

ADDRESSING CLIMATE CHANGE

The Express Tribune, October 10th, 2016

Shahid Javed Burki

There has been a consensus in the scientific community for several years that human activity was causing the globe to warm. Human activity had produced global warming; it will take human action to bring the situation under control. This required ambitious actions by governments around the globe. With this aim in view, 192 countries assembled in Paris last December and, after two weeks of intense deliberations, concluded an agreement – the Paris Climate Accord.

The Paris Agreement took a different approach from the one adopted by the Kyoto Protocol agreed to a couple of decades ago. It was based on mandatory and enforceable carbon reduction by member countries. Paris, on the other hand, called countries to develop their own programmes, submit them to the United Nation's body responsible for overseeing global warming, keep the programme under review and update it every five years after the Accord was ratified.

The agreement would enter into force when at least 55 nations representing 55 per cent of global emissions officially join the Accord. For each nation, that process includes signing and domestically ratifying the agreement and then depositing an "instrument of ratification" at the United Nations. Two major steps were taken in the first week of October to cross the threshold.

India completed the process on October 2, bringing to 63 the number of countries that together represent 51.89 percent of global carbon emissions. India's action mattered since it is now the fourth largest emitter of carbon dioxide accounting for 4.1 per cent of the global total. The United States and China the two largest emitters had led the effort at Paris and were among the first countries to join the Accord.

India, by joining the Paris club, won applause especially when it brought the total of committed countries to 51.89 per cent, close to the 55 per cent target. The EU action pushed the agreement over the threshold of 55 percent. "The entry into force of the Paris Agreement less than one year after its signature is a massive achievement, given that it took eight years for the Kyoto Protocol to become effective," said European Parliament President Martin Schulz.

Scientists broadly agree that the individual plans made by countries under the Paris Agreement will not stave off worst effects of global warming. Among those who worry is the highly respected NASA scientist James Hansen, whose recently published paper argues that a 1.3 degree increase above pre-industrial level is well past the climate safe zone.

He argues that to "stabilise the planet at 1.5 or two degrees Celsius now probably means developing expensive new technologies, which do not exist at a large enough scale, to remove carbon dioxide from the atmosphere. That means extracting of carbon dioxide from the air in order to achieve the agreed goals."

The South Asian region will be affected the most if the pace of global warming does not get slowed. There are signs all over the Subcontinent that weather changes have arrived. Most of the water that flows down the areas large rivers comes from the melting of glaciers. Pakistan has many of the world's glaciers and they are threatened by warming temperatures. South Asia has a long coastline, most of it in India, which makes it vulnerable to rising sea levels. Millions of Bangladeshis will be rendered homeless as sea levels rise. T

he Subcontinent has experienced devastating heat waves in recent years, which have led to deaths and seriously affected agriculture. Collective action is the only way to deal with the worsening situation. India is the only South Asian country that is giving some attention to climate change. It made news on October 2 when it completed the process that would contribute to the formal launch of the Paris Climate Agreement.

Prime Minister Narendra Modi is the main reason for India's impressive moves in the area. He is determined to move the country to a broader mix of electrical resources by significantly increasing wind, solar and hydropower. There are plans that will have the country produce more than 20 per cent of solar power in the world. If the goal is met, it will help to meet the growing demand for electricity as the country urbanises and improves the living standards of its people.

According to one account, the Indian "government has three initiatives to help achieve its climate goals – a market to balance supply and consumption of electricity which should be launched next year, a programme to enhance the efficiency of the agriculture sector, and a programme to spur more efficient technologies in air conditioning which is critical given that cooling accounts for half of the growth in new efficiency demand."

Pakistan's leaders have yet to turn their full attention to developing a credible climate change and environment protection policy. In fact, by choosing to solve its energy shortage by building large coal-using power stations, it is moving in a direction that goes against the spirit of the Paris Accord.

This is bound to be noticed by the outside world and will become another area for international condemnation. Pakistan, already high on the international disapproval list, can't afford to have another item added to that list. The leadership elite has to gather the courage to develop the needed consensus to invest in large hydroelectric projects. .

<http://tribune.com.pk/story/1196193/addressing-climate-change/>

US SEES PROGRESS IN TALKS ON GREENHOUSE GASES
Dawn, October 15th, 2016

KIGALI (Rwanda): Talks on a global pact to cut greenhouse gases used in refrigerators and air conditioners are making progress, said the United States Secretary of State John Kerry on Friday, raising hopes for a breakthrough against climate change.

Mr Kerry consulted officials from China, India and Pakistan on the sidelines of a meeting in Rwanda that aims to strike a deal among 150 nations on ways to phase down factory-made hydrofluorocarbon (HFC) gases.

“Everyone in this room is aware of how serious the stakes are,” Mr Kerry told delegates assembled for a plenary session. “The window of time that we have to prevent the worst impacts from happening is in fact narrowing and closing fast,” he said.

Earlier, Mr Kerry told reporters “we’re making progress” after talks with China’s Deputy Minister for Environmental Protection Zhai Qing and Indian Environment Minister Anil Madhav Dave.

“I am confident that at the end of the conference we are going to see an agreement,” said United Nations Environment Programme head Erik Solheim. Solheim called on all sides to show flexibility, adding that a quick reduction of HFCs could be a major contribution to slowing climate change, avoiding perhaps 0.5 degrees Celsius (0.9 Fahrenheit) of a projected rise in average temperatures by 2100.

India, the world’s third largest emitter of greenhouse gases, is under pressure to speed up its plans for cutting HFCs. New Delhi had previously been pushing for a 2031 deadline, but now claimed that the peak could be set for between 2024 and 2026. The United States, European Union and African states are among those seeking a peak sooner, around 2020 to 2022.

“If we’re going to give this amendment the teeth it needs to prevent as much as a half-degree of warming, then we need to make sure we’re pushing for the most far-reaching amendment we can adopt,” Mr Kerry said.

Environmental groups have called for an ambitious agreement on cutting HFCs to limit the damage from the roughly 1.6 billion new air conditioning units expected to come on stream by 2050, reflecting increased demand from a rapidly expanding middle class in Asia, Latin America and Africa.

Use of HFCs, which can be 10,000 times more powerful than carbon dioxide as greenhouse gases, is already declining in many rich nations.

An amendment to the Montreal Protocol covering HFCs is to be agreed by consensus. Any amendment to the protocol will be legally binding.

After a meeting with Mr Kerry, the head of the Pakistani delegation, Industries Minister Ghulam Murtaza Khan Jatoui, told reporters the teams still hoped to agree a deal on Friday, but they were still discussing a compromise target date for the phaseout to begin.

Clare Perry, of the Environmental Investigation Agency campaign group, said some “tricky issues” remained to be resolved, such as financing.

She said countries were under pressure because “no one wants to be the reason that the biggest climate win in 2016 didn’t happen”.

Developing countries like India, and other hot nations where HFC-using air conditioners are in high demand, are concerned about the high costs of the transition away from HFCs.

“There are issues of cost, there are issues of technology, and there are issues of finances. We would like to emphasise that any agreement will have to be flexible from all sides concerned. It can’t be flexible from one side and not from the other,” said Ajay Narayan of India’s environment and climate change ministry.

Last month, a group of developed countries and companies offered \$80 million to help developing countries make the switch away from HFCs.

<https://www.dawn.com/news/1290154/us-sees-progress-in-talks-on-greenhouse-gases>

DEAL REACHED TO CUT BACK ON GREENHOUSE GASES

Dawn, October 16th, 2016

KIGALI: About 200 nations have agreed to a legally binding deal to cut back on greenhouse gases used in refrigerators and air conditioners, a major move against climate change that prompted loud cheers when it was announced here on Saturday.

The deal, which includes the world's two biggest economies, the United States and China, divides countries into three groups with different deadlines to reduce the use of factory-made hydrofluorocarbon (HFC) gases, which can be 10,000 times more powerful than carbon dioxide as greenhouse gases.

“While diplomacy is never easy, we can work together to leave our children a planet that is safer, more prosperous, more secure, and more free than the one that was left for us,” the White House said in a statement on the deal.

US Secretary of State John Kerry said the deal was “a monumental step forward” as he left the talks in the Rwandan capital of Kigali late on Friday.

Under the pact, developed nations, including much of Europe and the United States, commit to reducing their use of the gases incrementally, starting with a 10 per cent cut by 2019 and reaching 85 per cent by 2036.

Many wealthier nations have already begun to reduce their use of HFCs.

Two groups of developing countries will freeze their use of the gases by either 2024 or 2028, and then gradually reduce their use. Pakistan, India, Iran, Iraq and the Gulf countries will meet the later deadline.

They refused the earlier date because they have fast-expanding middle classes who want air conditioning in their hot climates, and because India feared damaging its growing industries.

“Last year in Paris, we promised to keep the world safe from the worst effects of climate change. Today, we are following through on that promise,” said UN environment chief Erik Solheim in a statement, referring to the Paris climate talks of 2015.

The deal binding 197 nations crowns a wave of measures to help fight climate change this month. Last week, the 2015 Paris Agreement to curb climate-warming emissions passed its required threshold to enter into force after India, Canada and the European Parliament ratified it.

But unlike the Paris agreement, the Kigali deal is legally binding, has very specific timetables and has an agreement by rich countries to help poor countries adapt their technology.

A quick reduction of HFCs could be a major contribution to slowing climate change, avoiding perhaps 0.5 degrees Celsius of a projected rise in average temperatures by 2100, scientists say.

Environmental groups had called for an ambitious agreement on cutting HFCs to limit the damage from the roughly 1.6 billion new air conditioning units expected to come on stream by 2050, reflecting increased demand from an expanding middle class in Asia, Latin America and Africa.

Benson Ireri, a senior policy adviser at humanitarian group Christian Aid, said that all African countries had volunteered for the earlier deadline because they worried about global warming pushing more of their citizens into poverty.

“It was a shame that India and a handful of other countries chose a slower timeframe for phasing down HFCs but the bulk of nations, including China, have seen the benefits of going for a quicker reduction. It’s also been encouraging to see small island states and African countries a part of this higher ambition group,” he said in a statement.

A scientific panel advising the signatories to the deal said phasing out HFCs would cost between \$4 billion and \$6bn, said Manoj Kumar Singh, India’s joint secretary at the Ministry of Environment, Forest and Climate Change.

“The implementation starts from 2024 onwards so there is enough time to plan and mobilise finance,” he said.

<https://www.dawn.com/news/1290271/deal-reached-to-cut-back-on-greenhouse-gases>

NEWS COVERAGE PERIOD FROM OCTOBER 3RD TO OCTOBER 9TH 2016

COMBATING CLIMATE CHANGE: WHY IT MATTERS

Dawn, October 3rd, 2016

Pakistan’s ‘super floods’ in 2010 (that affected around 20 million people), prolonged drought in Tharparkar in Sindh, and the 2015 Karachi heat-wave constitute significant impacts of climate change, thereby, increasing public awareness about extreme weather events. Such changing weather patterns reinforce the need to integrate climate change measures into national policies, strategies and budgetary allocations.

Therefore, with UN Sustainable Development Goal (SDG) 13 specifically calling for ‘urgent actions to combat climate change and its impacts’, Pakistan has its work cut out. About 45 of the 169 targets related to this goal highlight the need to tackle climate change and avert impacts, particularly on food, water, energy and economic development.

Governed through the United Nations Framework Convention on Climate Change (UNFCCC) SGD 13 underscores the need to strengthen the link between development and climate to promote climate compatible development agendas. In other words, Goal 13 – including its 50 associated targets – is focused on the implementation of the Paris Agreement on Climate Action, signed by Pakistan alongside 200 other countries.

Pakistan may have submitted its climate action plan, or Intended Nationally Determined Contributions (INDC), to the UNFCCC Secretariat last November – missing the Oct. 1, 2015 deadline – but has yet to make firm commitments on climate mitigation action.

Furthermore, the challenges of climate change and its adverse impact undermine the ability to achieve Vision 2025 — Pakistan’s development blueprint. Adverse climate impacts are reflected through increased floods, prolonged droughts, changing temperatures and extreme weather events — heat-waves, glacial melting, changing monsoons and cropping cycles.

The climate threat is heightened because successive governments have consistently failed to make adequate investments in climate compatible development during the period of the Millennium Development Goals (MDGs) from 2000 to 2015. It may be difficult to combat the effects of climate change with Pakistan’s energy consumption and emissions, which is expected to rise with its growing economy in the future.

Loss and damage caused by climate change adds to the price tag of economic development.—White Star

Meanwhile, the loss and damage caused by climate change are constantly adding to the price tag of economic development. A 2015 World Bank study, Sustainability and Poverty Alleviation, estimates that environmental

degradation is costing Pakistan 9pc of its GDP — the cost in Sindh is believed to be as high as 19pc. More recently, a study by the Climate Development Knowledge Network (CDKN) has shown that Pakistan will risk not making progress on meeting the targets set by the SDG, if global temperatures increase by two degrees, and perhaps achieve a per-capita income of no more than \$6,526 compared to \$8,160 envisioned in Vision 2025. National and provincial policy planning departments need to understand that, unless climate change is treated as central to the development agenda, vulnerabilities will continue to rise and erode resilience levels.

Interestingly, Pakistan was the first South Asian country with a dedicated Ministry of Climate Change (MOCC) in 2012 that successfully developed the National Climate Change Policy (NCCP), followed by the Framework for Implementation of Climate Change Policy (2014-2030). The latter, complete with 735 suggested actions, including what are termed as 242 priority actions and 380 short-term actions, 108 medium-term and five long-term actions. Despite this elaborate plan, we learnt through our work at the Climate Change Commission – set up by the Lahore High Court to ensure implementation of the NCCP – that most federal ministries or departments in Punjab, as perhaps in other provinces, were barely aware of the existence of a climate change policy, let alone had the capacity or intent to implement such plans.

That most of the priority areas, to be addressed by December 2015 at the completion of the first three years of the policy were not implemented comes as no surprise. Even so, progress has been made in the last few months with the provincial governments in Khyber Pakhtunkhwa, Punjab and Sindh working on policies and action plans to demonstrate that they are seriously taking on climate change.

For implementing the above framework, Pakistan needs a three-pronged approach to meet its targets: Invest in resilience: Prioritise investments in local social and physical infrastructure to reduce climate vulnerabilities.

Invest in low carbon development: With projections showing that 70pc of the population will live in seven big cities in coming decades, investment in low carbon, (or carbon neutral) mass transit systems and energy-efficient building codes, including the housing sector, is imperative.

Invest in national and provincial capabilities: This will lead to accessing international climate finance to meet targets. Presently, the country is not able to attract international or private sector climate finance and is not accredited to the Adaptation Fund, nor has it secured accreditation to the much larger Green Climate Fund. It will need to draw and spend about \$1 billion annually until 2020 from these sources to mitigate climate risks.

Meeting targets will need action in the provinces. However, to do so their capacity to access international finance and technical support needs strengthening. This is possible only if Pakistan is able to submit its Second National Communication reports and the Intended Nationally Determined Contribution (INDC) to the UNFCCC Secretariat.

The first will give a baseline on Pakistan's emissions; while the second will present national plans to stabilise the country and reduce emissions from 2020 onwards. These key plans will set the foundation to meet targets and, demonstrate commitment and most importantly, deliver a sustainable future for our next generation.

<http://www.dawn.com/news/1287097>

EARTH'S CLIMATE PAST POINTS TO OVERHEATED FUTURE: STUDY
Business Recorder, 3 October 2016

PARIS: Our planet may grow intolerably hot even if greenhouse gases in the atmosphere remain at current levels, according to the first two-million-year reconstruction of surface temperatures, published on Monday.

“Stabilisation at today's greenhouse gas levels may already commit Earth to an eventual total warming of five degrees Celsius (nine degrees Fahrenheit) over the next few millennia,” said a study in the peer-reviewed science journal Nature.

This was the middle of a predicted warming range of 3 C (5.4 F) to 7 C (12.6). Even 3 C would, in the long-run, unleash a maelstrom of climate change impacts including storm surges engorged by rising seas, deadly heat waves, and severe flooding, said the study.

The UN's Intergovernmental Panel on Climate Change (IPCC) has said that current atmospheric concentrations of the main greenhouse gas CO₂ — just over 400 parts per million (ppm) — would, over the next century, push average global temperatures 2 to 2.4 C above the pre-industrial era benchmark.

The IPCC had concluded that global warming of 2 C was a relatively safe limit for humanity for most regions.

But a recent crescendo of climate-enhanced extreme weather pushed world leaders to inscribe an even more stringent temperature cap of “well under two degrees” in the Paris Agreement inked by 195 nations in December.

The planet has already heated up 1.0 C (1.8 F) above the pre-industrial benchmark, and could see its first year at 1.5 C within a decade, scientists reported at a conference in Oxford last week.

The new study, by palaeoclimatologist Carolyn Snyder of Stanford University's Interdisciplinary Program in Environment and Resources, is the first to piece together a continuous record of average surface temperatures stretching back two million years.

Some parts of Earth's climate history have been relatively easy to reconstruct: there is broad agreement, for example, on carbon dioxide levels, sea surface temperatures and sea level going back hundreds of thousands — sometimes millions — of years.

But evidence of the change in air temperatures has been harder to come by.

In what a climate expert not involved in the study called “an original approach”, Snyder extracted 20,000 bits of data from 59 ocean sediment cores, to build a temperature timeline at 1,000-year intervals.

She then used climate models to infer wider trends.

The result agreed with a well-established link between global temperature and atmospheric greenhouse gas concentrations, especially over the last 800,000 years of cyclical ice ages, occurring roughly every 100,000 years.

The new data suggests that a doubling of CO₂ levels in the atmosphere would drive global temperatures up by 9 C, an increase that would melt away ice sheets and raise sea levels by dozens of metres.

This is considerably higher than most estimates.

Researchers not involved in the study also cautioned that it relied on numerous assumptions that may turn out to be wrong. Extrapolating land temperatures based on what's going on in the oceans, for example, is rife with uncertainty, they said.—AFP

<http://epaper.brecorder.com/2016/10/03/12-page/799408-news.html>

A CURIOUS PLAN TO FIGHT CLIMATE CHANGE: BUY MINES, SELL COAL

Michael Corkery And Michael Wines

Business Recorder, OCT. 1, 2016

The coal was piled about as high as it could go, spilling down to the railroad tracks and towering over the elevator shaft. A yellow bulldozer pushed the mound to make room for more. From a distance on this rainy day, the black heap looked like a giant whale about to swallow the mine whole.

The word underground was that Federal mine No. 2 would soon have to close. It was early April, and the mine was running out of storage space. There were not enough buyers for all the coal.

A few months earlier, this problem would have belonged to Patriot Coal, one of the nation's largest coal companies, which used to operate the Federal mine, built near a meandering mountain stream called Miracle Run.

But this was not Patriot's problem anymore. Nor was it the problem of the hedge funds and other investors that had lent the company millions.

When Patriot filed for bankruptcy in 2015 — its second time in three years — environmentalists and regulators were prepared for the company to figure out ways to shunt liabilities and maximize returns. But no one could have envisioned what happened next.

Patriot handed over millions of dollars of environmental obligations to a nonprofit company run by a man named Tom Clarke, who owned a chain of nursing homes and a tourist attraction that had fallen behind on its bills. Until that day in April, Mr. Clarke, 61, had never been in a coal mine.

Patriot sold not only the troubled Federal mine to Mr. Clarke, but also several other mines that were no longer in operation, including a sprawling surface mine carved from the top of a mountain in southern West Virginia. Mr. Clarke's new company agreed to clean up the shuttered mines and reclaim the land that had been ravaged.

As part of the deal, the miners' union invested \$10 million in the Federal mine operation, which was supposed to keep producing coal for Mr. Clarke to sell. But the mine has struggled from low coal prices.

"It was a spectacular deal for Patriot," said Patrick McGinley, a law professor at West Virginia University who has been involved in cases against coal companies since 1970s. "This company has had complete success in divesting itself of all liabilities of every kind, including environmental liabilities, which are the hardest to shed."

Why then, would someone like Mr. Clarke want to take over a troubled mine and the environmental obligations that Patriot Coal was seeking to get rid of? As improbable as it may seem, Mr. Clarke said the Patriot deal had played to his advantage — helping start his grand plan to remake coal mining into a greener industry.

He is not only reclaiming Patriot's mines that are no longer in use. He has come up with a model, he said, for how the industry can keep producing coal, while reducing its impact on the climate.

The plan involves creating pollution credits by planting or preserving trees around the world to offset the carbon emitted from burning coal. For every ton of coal he sells, Mr. Clarke attaches some of the credits.

Mr. Clarke has had trouble, however, persuading buyers of his coal, like utilities and steel companies, to pay extra for the credits.

Mr. Clarke hoped electric utilities would be able to count his green-coal credits toward the carbon-emissions goals that the Obama administration has set for states in its Clean Power Plan, now before a federal court. But administration officials have effectively ruled that out.

That hasn't stopped Mr. Clarke's company from acquiring more mines. In addition to Patriot, Mr. Clarke has made deals over the last 11 months with several other struggling coal companies, gaining control of multiple underground mines, millions of tons of coal reserves and thousands of acres of surface mines.

He has even tried bidding on steel mills to create a captive buyer for his coal bundled with carbon credits. Now he is in the market for utilities, for the same reason.

While the Federal mine has cut back on production, some of his other mines are poised for a rebound. Demand for metallurgical coal — which is used for making steel — has roared back in recent months. One of the companies he founded with a longtime coal executive, ERP Compliant Fuels, is now one of the largest producers of metallurgical coal in North America.

“I am the guy that is trying to work from within,” Mr. Clarke said. “The goal is to have a big enough footprint to drive our environmental philosophy home.”

If this were a movie about the American coal industry, Mr. Clarke would be the character who goes completely off script.

For decades, the battle lines around coal have been clear. The companies are fighting to protect their diminishing business. Many environmentalists, meanwhile, are trying to limit coal production permanently and force the industry to clean up the damage it has inflicted on forests, rivers and lakes.

The debate over coal on the campaign trail is also predictable — Donald J. Trump has vowed to bring back lost mining jobs and roll back overzealous environmental regulations, and Hillary Clinton is promising to help mining communities transition out of coal and into new industries.

Environmental groups can almost smell victory. Many of the nation’s largest coal companies have filed for bankruptcy. Natural gas is pulling even and may surpass coal as the top power source in the United States.

The industry’s decline is forcing states to deal with how to clean up the mines and who should pay for it. In West Virginia alone, 300,000 acres of forest — an area half the size of Rhode Island — have been damaged by mountaintop mining, by one estimate.

After some challenges, Mr. Clarke’s reclamation work has been meeting regulatory standards and even exceeding expectations by some measures, one West Virginia official said.

In January, Gov. Earl Ray Tomblin of West Virginia lauded Mr. Clarke in his state-of-the-state address for helping develop “new and innovative ideas.” Mr. Clarke is donating a reclaimed former Patriot mountaintop mine to the state to build an industrial park.

“Tom is a real visionary,” said Robert McAtee, one of several coal industry veterans who have come to work with Mr. Clarke. “He stepped in when no one else would.”

Mr. Clarke says he relies on the expertise of several seasoned coal executives to run his mining operations.

But environmentalists worry that Mr. Clarke is breathing new life into a polluting industry and that he is incapable of handling the huge mess the coal companies have handed him. In August, several environmental groups granted Mr. Clarke an extension on a court order to treat polluted runoff from a former Patriot mine, saying his “start-up capital was less than expected.”

Should Mr. Clarke’s company run into financial trouble, environmentalists worry that the cost of reclaiming the mines could fall to West Virginia taxpayers. Unlike Patriot, Mr. Clarke has few deep-pocketed Wall Street investors that the state could pressure to cover the costs, they say.

“These are strange days,” said Peter Morgan, a lawyer for the Sierra Club, who has been challenging the coal industry over water pollution issues for years. “I don’t know what Tom Clarke’s intentions are. But I am skeptical he can pull it off.”

Bankruptcy is like a chess game in which companies seek to minimize liabilities and creditors look to maximize profits. Over the years, Patriot has played like a grandmaster.

The company was founded in October 2007 from a spinoff of the coal mining giant Peabody Energy. From the start, Patriot was loaded with liabilities.

Peabody gave Patriot 13 percent of its coal reserves but 40 percent of its obligations to pay for health care for thousands of retired miners. In short, Patriot took over many of the company's unionized mining operations in Appalachia, while Peabody kept its nonunion operations in the West.

"The legend in the coal fields is that Patriot was set up as a liability dump," said Kevin Barrett, a lawyer at Bailey & Glasser, who represents the West Virginia Department of Environmental Protection in the coal bankruptcy cases. "It was destined to fail."

In a statement, Peabody said: "Patriot Coal was highly successful when it became an independent, publicly traded company nearly a decade ago," adding that its market capitalization quadrupled in less than a year.

But in July 2012, Patriot failed as predicted.

A few weeks before it filed for bankruptcy, the company, which is based in St. Louis, took steps to improve its chances in court, according to the union. Patriot created two subsidiaries in New York City, allowing its case to be heard there. The United States Bankruptcy Court in Manhattan was viewed as favorable to corporations looking to cut their debts.

After the coal miners' union objected, the case was moved to St. Louis.

On that first trip through bankruptcy, Patriot was able to deal with its health care obligations after a separate fund was created to administer the benefits.

Health care was not Patriot's only issue, though. The company faced huge costs for cleaning up selenium — a harmful coal byproduct — that was seeping into water sources downstream from its mines.

While industries readily used bankruptcy to shed labor and pension obligations, it was unclear whether coal companies could do the same with reclamations and water remediation.

In 1986, the Supreme Court blocked a New Jersey company from abandoning its oil waste processing plants in bankruptcy, citing a threat to public health and safety. But it was unclear whether the judges in the coal bankruptcy cases would rule that defunct mines posed the same pressing health threat.

In the end, Patriot was able to emerge from its first bankruptcy without dealing with most of its environmental liabilities.

By 2015, the American coal market was in a deep slide, as utilities and manufacturers increasingly turned to natural gas and demand from China cooled. One after another, mining companies, including Patriot, declared bankruptcy.

Everybody knew what to expect in Round 2," Mr. Barrett said. "They would try to sell their best assets and leave their biggest environmental problems behind."

The Natural Bridge is a rocky arch towering 215 feet above a small creek in southwestern Virginia.

Thomas Jefferson bought the property from King George III of England for 20 shillings. Today, it is owned by a nonprofit company started by Mr. Clarke. He bought the bridge in 2014, using a \$9.1 million loan from the State of Virginia.

Mr. Clarke planned to revitalize flagging ticket sales to the bridge, then hand over the property as a state park. But his plans ran into trouble early on. Visitors dwindled, and he defaulted on his state loan. He had to use proceeds from selling coal and land to help get caught up on his bills.

In September, Mr. Clarke handed over management of Natural Bridge to the state. His nonprofit group, called the Virginia Conservation Legacy Fund, will still own the property until it pays back the loan. Some state officials praised Mr. Clarke's work preserving the property but also had to give him more time to pay back his debt.

Mr. Clarke compares his struggles to those of the former president, who also ran into financial trouble at one point. "I sort of felt like I am having my Jeffersonian moment," Mr. Clarke said.

Relentlessly upbeat, with a near permanent smile and the soothing voice of a public radio announcer, Mr. Clarke has spent a career trying to turn around an eclectic assortment of companies. He has bought troubled nursing homes, a forest preserve in Belize and a restaurant in Roanoke, Va. — a "philanthropub" that was supposed to dedicate its profit to Africa until it closed down in March 2015.

In the 1990s, he turned one of his companies, Lenox Healthcare, into a \$400-million-a-year business — one of the largest nursing home chains in the country. His former business partner at Lenox, Lawrence B. Cummings, called him a master at bolting together impossible business transactions. "He showed again and again an ability to put together deals that other people couldn't."

Lenox was a juggernaut, Mr. Clarke said, until it went bankrupt in 1999. Mr. Clarke said he began to rethink his life's goals. He went hiking in South America, where he met his wife, Ana, a native of Venezuela.

They moved to Virginia, converted his remaining nursing homes to nonprofits and placed them under a new company, Kissito (pronounced kiss-E-tow) Healthcare. He became interested in poverty issues in Africa and began raising money and building a maternity hospital in Ethiopia.

Mr. Clarke said he realized that many of the problems like drought and extreme floods in Africa were caused by climate change. Back in Virginia, Mr. Clarke said, he decided to take aim at the coal industry's contribution to carbon emissions.

Too often, Mr. Clarke said, the debate over the future of coal is infected with what he called tribalism — a conviction that you are either with the mining industry, or against it. He said he was trying to find some middle ground.

Mr. Clarke's first foray into the coal industry came when he took a job in late 2014 with Jim Justice, a wealthy West Virginia businessman who had built a fortune partly on coal. Mr. Clarke's job was to assist Mr. Justice and his Southern Coal Corporation in dealing with hundreds of environmental violations at mines across Appalachia.

While results are difficult to track, some environmental groups acknowledge that Mr. Clarke's work had an appreciable impact on the Justice properties. A Democrat, Mr. Justice is running to become West Virginia's next governor. Through a spokesman, he declined to comment.

One of Mr. Clarke's believers is Chandler Van Voorhis, a founder of C2I, a company outside Washington. C2I's business is planting trees. The trees soak up carbon dioxide, converting it to wood and leaves. An acre of trees can convert 156 tons of carbon over a 20-year period, Mr. Van Voorhis said.

Mark Bartkoski, a miner, underground at the Federal mine No. 2 near Fairview, W.Va. Credit Luke Sharrett for The New York Times

C2I plans to reforest a million acres in the southern Mississippi River Valley and sell the carbon offsets to companies to reach pollution-reduction goals. Together, Mr. Clarke and Mr. Van Voorhis sketched a plan to bundle C2I's carbon offsets with coal.

Their plan faced some steep challenges including this one: There was no natural market for coal bundled with pollution credits because of its higher cost.

Undaunted, Mr. Clarke hired an investment banker and lawyers to hatch his idea.

“Wall Street's a pretty cynical place,” said Tim Hess, a real estate developer in Virginia, who introduced Mr. Clarke to his banking contacts. “But when you see somebody with that kind of passion and integrity, if there's a way to make business sense out of it, I think people lean forward.”

Patriot Coal's executives and advisers first met Mr. Clarke around the start of the company's second bankruptcy case in May 2015.

For this second bankruptcy filing, Patriot chose to file in Richmond, Va., where restructuring experts say some judges are eager to move large bankruptcy cases through quickly. The choice turned out to be a fortunate one.

During the first day of bankruptcy hearings, Mr. Clarke said he happened to be in Richmond for a meeting with state officials when he wandered over to the federal courthouse. “It just amazed me how quickly they rushed through everything,” Mr. Clarke recalled of the proceedings.

The best mines would be sold to Blackhawk Mining, a coal company in Kentucky, which would run the properties with financing from some of Patriot's lenders. The less valuable mines would be placed in a separate “liquidating trust.” The sole purpose of that trust would be to clean up water pollution and reclaim the mines.

West Virginia officials felt comfortable with this arrangement because they could pressure Patriot's hedge fund lenders to contribute money to the trust for reclamation work, said Mr. Barrett, the lawyer for West Virginia's environmental protection agency. Equally important, regulators could hold Patriot's top executives liable for completing the mine cleanup. If they failed, the government could deny them mining permits until the work was completed.

“It was incredibly important to them personally, because these liabilities would follow them,” Mr. Barrett said.

But Mr. Clarke was proposing something else entirely. His nonprofit company would assume Patriot's environmental and reclamation obligations. And ultimately, the deal would release former executives from liability.

At first, regulators and advisers to Patriot didn't know what to make of Mr. Clarke. He had no experience. He had no traditional bank financing. When he came to meet Patriot's management for the first time, he brought his young daughter with him. A company secretary watched her while he met with the executives for hours at the Charleston airport.

Many people involved in the negotiations assumed that Mr. Clarke had the financial backing of Mr. Justice, but that wasn't the case.

Initially, state regulators did not consider Mr. Clarke a realistic option. So when Patriot signaled last summer that it was going to make a deal with Mr. Clarke, Mr. Barrett said, “we were floored.”

Shortly before a crucial court hearing, a major piece of Mr. Clarke's financing fell through. Patriot's lawyer and investment bankers scrambled to keep the deal from falling apart.

Supporters of Jim Justice, a wealthy West Virginia businessman who won the Democratic primary for governor this year. Tom Clarke got his start helping Mr. Justice and his company deal with hundreds of environmental violations. Credit Erica Yoon for The New York Times

In the end, Patriot agreed to effectively lend Mr. Clarke \$5 million, and the coal miners' union also stepped in with money. Surety companies that had insured Patriot's reclamation obligations agreed to release millions in cash so Mr. Clarke could start the work.

Regulators and environmental groups worried that if the state held up the deal, Patriot could threaten to liquidate its properties, leaving no money for reclamations.

"It was the least bad outcome," Mr. Morgan of the Sierra Club said.

Even if Mr. Clarke's venture proves short-lived, Mr. Morgan said, he has already completed a good deal of reclamation work. Mr. Clarke said his fund has spent about \$28 million on the work to date.

As insurance, Patriot's lenders contributed \$12.5 million to backstop the reclamation work in case Mr. Clarke failed. The state also has some control over the account that Mr. Clarke uses to pay for reclamation work.

For Mr. Clarke, the Patriot agreement opened the door to other deals. He took over reclamation obligations from Walter Energy, another mining company that had declared bankruptcy. He also picked up more viable mines and a coke processing plant from Walter. This spring, his company vied to take over an entire coal company, Alpha Natural Resources, but the bid was not accepted in the bankruptcy case.

"For someone with zero experience to come into this complex and troubled industry proposing the sort of things he is proposing is astonishing," said Mr. McGinley, the law professor. "I give him the benefit of the doubt. But I don't see where it is going."

It was raining when Mr. Clarke and a clutch of miners rode a cavernous elevator 734 feet down to the dank shafts of Federal mine No. 2 last spring. At the bottom, the men boarded trains that clanked and jerked along wooden tracks through a maze of silent tunnels, empty except for the occasional mouse scurrying. The trains passed emergency shelters and ventilation shafts pumping cool air from above.

This is the miners' 45-minute commute to the coal seam, where they shave off thousands of tons of black rock each week.

"I am proud of you," Mr. Clarke told some of the miners.

As part of the deal with Patriot, the coal miners' union invested \$10 million and took a 20 percent stake in the Federal mine, which Mr. Clarke says he is doing everything he can to keep open even though it doesn't break even.

When he bought the Federal mine from Patriot, Mr. Clarke said he expected to sell its coal for at least \$50 a ton. Recent shipments have sold for just above \$40 a ton, he said. On some weeks, the mine has had to operate on a three-day schedule because of the low demand for thermal coal, which is used to produce electric power.

Phil Smith, a spokesman for the United Mine Workers of America, said the union expected production to improve at the mine when the broader coal market recovered.

Still, Mr. Clarke's company has shifted away from thermal coal and is hunting for mines that produce the much more valuable metallurgical coal used in steel production. Last month, an ERP-affiliated company acquired a set of huge surface mines in British Columbia out of bankruptcy.

Unlike many of the Patriot mines that Mr. Clarke acquired to clean up, these new mines are capable of pumping millions of tons of new coal onto the market each year and he's projecting big profits next year.

Ultimately, Mr. Clarke hopes to offset all of the expected emissions from the coal he is producing with pollution credits. But right now, he is offsetting only 10 percent. That worries environmentalists. "It's all I can afford," he said.

Mr. Clarke says he has been absorbing the costs personally until he can persuade utilities and steel mills to agree to pay for credits. He is hoping that states, led by West Virginia, will allow utilities to pass through the costs of his credits to ratepayers. Those discussions are continuing, he said.

"Coal isn't the villain," he said. "The villain is excess carbon dioxide in the atmosphere, and we have to find ways to deal with it."

http://www.nytimes.com/2016/10/02/business/energy-environment/a-curious-plan-to-fight-climate-change-buy-mines-sell-coal.html?_r=0

NEXT 'RENEWABLE ENERGY': BURNING FORESTS, IF SENATORS GET THEIR WAY

Eduardo Porter

New York Times, Oct. 4, 2016

President Obama's Clean Power Plan — the central plank in his strategy to combat climate change — is in danger.

It's not just that it is under attack in court, where its legality was challenged last week by a coalition of 28 states and scores of companies and industry groups. Or that fossil fuel interests and Republicans in Congress will keep trying to block it, whatever the courts decide.

The president's plan to reduce emissions of heat-trapping carbon dioxide from the nation's power sector could be undone within a matter of weeks by an unlikely bipartisan collection of senators that includes staunch Republican climate change deniers as well as Democrats who support the administration's strategy.

What's the problem? They want to force the government to assume that burning forests to generate electricity does not add carbon dioxide to the air but is instead "carbon neutral." As long as forests that have been cleared are regrown rather than turned into, say, subdivisions, language proposed by the senators argues that the Environmental Protection Agency and the Agriculture Department should recognize the wood and other organic matter pulled from a forest "as a renewable energy source."

If they succeed, from next year to 2030 they will have added a cumulative total of at least 830 million metric tons of carbon dioxide into the air, according to calculations by the Partnership for Public Integrity, an energy policy analysis group, based on a model used by the government's Energy Information Administration to assess the impact of the Clean Power Plan.

That amounts to 64 million additional tons of carbon dioxide a year, on average, about the same amount that was produced by forest fires in the lower 48 states in 2013. It makes for a big hole in a plan that is supposed to cut annual emissions from the power sector by some 250 million tons between now and 2030.

The proposal not to count carbon from biomass is the work of Maine's two senators — Susan Collins, a Republican, and Angus King, an independent — who introduced it into the Senate version of the energy bill passed earlier this year. It has broad support, and passed by a unanimous voice vote, according to those speaking for the chairman and ranking member of the Senate's energy committee.

"The Senate has strongly supported the benefits that biomass utilization can have, including instances in which it is a carbon-neutral source of energy," they wrote in a statement. "Conversations about the amendment are expected to

continue among the bill conferees, the amendment sponsors and other congressional colleagues as the energy bill moves through the conference process.”

While it is hard to handicap its chances, the biomass proposal could become law within weeks. Members of Congress are now working to reconcile the Senate’s bill with the one that passed in the House, which does not include this provision. Even if it fails to make it through, similar language has been attached to appropriations bills for the Interior Department, passed by both chambers and now undergoing reconciliation.

Forest and climate scientists, environmental groups and even doctors are scared. “The cost of getting biomass policy wrong is high,” Sami Yassa of the Natural Resources Defense Council said in a statement. “Burning biomass as a ‘zero-carbon’ fuel to comply could seriously erode the climate gains projected under the Clean Power Plan.”

The strongest proponents of “biomass neutrality” are, unsurprisingly, in heavily forested states where biomass industry groups have substantial sway. But those lawmakers believe they have a legitimate environmental argument: It makes sense not to count carbon dioxide from burning trees when the trees will grow back and recapture all the carbon released when they were burned.

There are a few problems with this thinking. Wood is not very efficient. In fact, burning trees to generate electricity generates more carbon per unit of power than using coal. Power companies would produce fewer emissions if they burned coal and left the forest alone to keep sucking carbon out of the air.

And there is the problem of timing. Sure forests regrow. But it takes many decades for seedlings to grow into trees and recapture all the carbon emitted.

“It’s a double whammy, because you remove an active sink that was sucking carbon out of the air,” said Mary S. Booth, director of the Partnership for Policy Integrity, which opposes the assumption that biomass is carbon neutral. “Under the most conservative assumptions you are worse off for 40 to 50 years.”

The world simply does not have that kind of time.

It is not surprising that power companies would rush to build more biomass generators if they were allowed to consider biomass carbon neutral. Meeting the Energy Information Administration’s estimate of demand for biomass power under this scenario from now to 2030 would require clear-cutting six million to eight million acres of forest, according to the partnership’s analysis.

Biomass proponents say more forests would be planted if timber were considered carbon neutral. Still, that is perhaps too speculative a proposition on which to base such a critical decision.

Indeed, according to the Energy Information Administration’s modeling, one of the core claims of biomass’s champions — that wood would take out coal — is wrong. It would replace solar energy instead: By 2030, installed photovoltaic capacity would be some 20 percent higher in a scenario in which biomass carbon is counted than in one in which it is assumed to be carbon-free. Coal-fired generation, by contrast, does not change.

It is not crazy that members of Congress from states with big forestry industries would try in a big way to draw wood into the nation’s efforts to combat climate change. They must worry, too, about economic development and jobs. And yet creating the fiction that burning forests won’t contribute to climate change would defeat the purpose of climate policy.

The White House is worried about the prospect of turning forests into sources of electricity. Earlier this year it objected to legislation that would stop the Environmental Protection Agency from making its own call on biomass based on its understanding of the science. Still, it is mostly staying out of the fray.

If Mr. Obama thinks climate change is the most important challenge of our time, he might want to take a more muscular approach. According to scientists at the Energy Department's Lawrence Berkeley National Laboratory, the United States might end up 330 million tons short of the promise it made in Paris last year to cut greenhouse gas emissions in 2025 by 26 to 28 percent compared with 2005.

Burning forests won't help recover the lost ground.

<http://www.nytimes.com/2016/10/05/business/economy/next-renewable-energy-burning-forests-if-senators-get-their-way.html?ref=colle>

AWARENESS CAMPAIGN: CPNE URGES FUNDS FOR CLIMATE CHANGE

The Express Tribune, October 7th, 2016.

KARACHI: Council of Pakistan Newspaper Editors (CPNE) has called for allocation of funds for the prevention of climate change. CPNE Sindh's Vice President Aamer Mahmood said editors and journalists should exchange research content with CPNE so there could be awareness among the masses. Dr Jabbar Khattak – Chairman Projects and Programs Committee announced in the Focus Group Discussion organized at CPNE Secretariat in collaboration with UNDP that a CPNE Climate Change Desk would be established and CPNE would introduce best story award for reporters of this beat.

This was the third session of its kind and the previous sessions were held in Lahore and Islamabad. The discussion was attended by editors of various newspapers including Ghulam Nabi Chandio, Hamid Hussain Abidi, Tahir Najmi, Mubashir Mir, Abdul Khaliq Ali, Naseer Hashmi, Abdul Rehman Mangrio, Javed Mahar Shamsi, Minhaj Kazmi, and a large number of journalists and columnists.

<http://tribune.com.pk/story/1194868/awareness-campaign-cpne-urges-funds-climate-change/>

TAX FOSSIL FUELS OR RISK KIDS' FUTURE: US CLIMATE SCIENTIST

Business Recorder, October 08, 2016

Kerry Sheridan

The planet's three most dangerous greenhouse gases are rising, and fossil fuels must be taxed to protect children from the costly turmoil of rising seas and extreme storms, world-renowned climate scientist James Hansen warned Tuesday.

Otherwise, young people face the "dubious" proposition of somehow sucking carbon dioxide from the air at a price tag of hundreds of trillions of dollars in the next century, said Hansen, who leads the climate science programme at Columbia University's Earth Institute.

"The science has become crystal clear," Hansen told reporters on a conference call to discuss his latest research paper, titled "Young People's Burden: The Requirement of Negative CO2 Emissions."

"We have to phase out carbon emissions over the next few decades," said Hansen, describing the actions of the US government up until now as "grossly inadequate."

Hansen, formerly of NASA, is suing the US government along with 21 youths across the country, including his 18-year-old granddaughter. The suit alleges that US leaders are not doing enough to curb climate change and are failing to protect essential "public trust" resources such as clean air and water, thereby depriving future generations of their constitutional rights to life, liberty and property.

The paper, published Tuesday in Earth Systems Dynamics Discussion, has not yet been peer-reviewed, but Hansen said he wanted it released now because time is of the essence. "Some people might object to discussing such a paper

before it has gone through the peer-review process, but I am going to do that simply because we are running out of time on the climate issue,” Hansen said.

The paper, authored by Hansen and 11 prominent climate scientists, warns that the global average temperature is already 1.3 degrees Celsius (2.3 Fahrenheit) warmer than pre-industrial times, defined as 1880-1920. That is perilously close to the level agreed during last year’s Paris talks, when global leaders committed to “holding the increase of global average temperature to well below 2 degrees Celsius above pre-industrial levels.”

Meanwhile, the heat-trapping gases of carbon dioxide, methane and nitrous oxide are all rising, ensuring more global warming in years to come.

Already, fossil fuel burning has unnaturally propelled the Earth to a temperature range last seen 115,000-130,000 years ago, “when sea level was six to nine meters (20-30 feet) higher than today,” said the paper.

As a result, glaciers and ice sheets are melting, the oceans are acidifying and rising seas will engulf coastal cities worldwide in the coming centuries. “That’s not fair. Today’s adults benefit from fossil fuel burning and leave the waste for young people to clean up,” said Hansen’s granddaughter, Sophie Kivlehan, in a video message released along with Hansen’s paper.

“We should be moving on to clean energy, leaving dirty energy in the ground.”

‘Like a cancer’

“The assumption that young (people) will somehow figure out a way to undo the deeds of their forebears has crept into and spread like a cancer through United Nations climate scenarios,” said the paper.

In the absence of sharp cuts to emissions, future generations are saddled with figuring out some way to extract CO₂ from the atmosphere in order to limit climate change, Hansen argued.

That would require risky, unproven technologies such as bioenergy with carbon capture and storage (BECCS), at a price tag of between \$104-570 trillion this century.

“It is a very dubious idea and the cost of it is not negligible,” Hansen said.

Hansen said the way to reverse course is to place a gradually rising tax on carbon and end government subsidies for polluting fossil fuels like coal, oil and natural gas. “Make the price of fossil fuels honest. Stop subsidising them. And make them pay their cost to society,” Hansen said.

“If we put a gradually rising fee on carbon emissions, it will spur the business community and entrepreneurs and the public to develop carbon-free energies and energy efficiency, and it will spur the public to change their choices so that we move rapidly to reducing emissions and move to clean energy.”

Hansen said he was optimistic that the lawsuit, organized by Our Children’s Trust, will go forward. In April, the case survived an attempt by the fossil fuel industry and US government to get it tossed out of court, and is currently under review by US District Judge Ann Aiken.

She heard oral arguments on September 13 and is expected to announce her decision by mid-November. Then, the case will head either to trial or appeal.

<http://www.brecorder.com/weekend-magazine/0/92072/>

November 2016

NEWS COVERAGE PERIOD FROM NOVEMBER 28 TH TO DECEMBER 4TH 2016

CLIMATE HAZARDS: CHINA URGED TO DEVELOP EARLY WARNING SYSTEM

Sehrish Wasif

The Express Tribune, November 28th, 2016

Islamabad: While China is reviving the old Silk Route under its ‘One Belt, One Road’ initiative, it has asked Pakistan to suggest ways to reduce trade losses caused by possible extreme weather events, The Express Tribune has learnt. The multibillion-dollar China-Pakistan Economic Corridor (CPEC), dubbed a game-changer for the region, is a part of the ‘One Belt, One Road’ initiative.

Dr Ghulam Rasul, the chief of Pakistan Meteorological Department, said China had organised the International Science Forum of National Scientific Organisations in Beijing earlier this month, which saw participation of 36 heads of Asian and European scientific organisations.

During the conference, he said, Pakistan had urged China to develop a multi-hazard early warning system in areas vulnerable to climate hazards such as tsunamis, flashfloods, landslides, earthquakes, fog, tropical cyclones and dust storms.

He said Pakistan had also called for strengthening weather and climate data network, besides improving financial cooperation and sharing skill and technology-based knowledge among member states.

“These measures will help Beijing to reduce trade and human losses on the route,” he said.

India, he said, had also attended the conference and supported proposals suggested by Pakistan.

Dr Rasul pointed out that the Gwadar port was vulnerable to cyclones and tsunamis while other areas in Balochistan were at risk of strong sand and windstorms and areas in the north faced risks of flashfloods, landslides and snowstorms.

Citing various studies, he said Pakistan was among countries highly vulnerable to climate change. Over the past few years, various areas of the country had witnessed rapid weather shifts, he added.

Monsoon, he said, had become highly unpredictable, and the country witnessed floods in one province and drought in another simultaneously.

“The water flow in the Indus River is becoming highly erratic,” he said. “In Pakistan, more than 70 per cent of natural disasters [extreme weather events] are associated with the monsoon season,” he said.

‘One Belt, One Road’ is among China’s most important initiatives aimed at building the global infrastructure for boosting trade and relations with Asian, Central Asian and European countries.

After its completion, the initiative would directly benefit at least 4.4 billion people or 63 per cent of the global population with a combined GDP of \$21 trillion, accounting for 29 per cent of the world’s wealth.

<http://tribune.com.pk/story/1247524/climate-hazards-china-urged-develop-early-warning-system/>

‘DEVELOPING STATES BEARING BRUNT OF CLIMATE CHANGE’

Business Recorder, 2 December 2016

KARACHI: Climate change has become increasingly important in recent years and requires innovative solutions to reduce its adverse impacts. Industrialised countries are primary responsible for greenhouse gas emissions and developing countries are heavily bearing the brunt of climate change. This was stated by speakers during the annual Green Office Network Meeting 2016 organized by WWF-Pakistan.

The aim of the meeting was to share Eco Innovation in Products and Technologies with the corporate sector. The event aimed at making people aware about sustainable consumption of resources and options for reducing impact on the environment through reusing, recycling and renewable energy sources.

Speaking on the occasion, Hammad Naqi Khan, Director General WWF-Pakistan said that eco-innovation represents a chance for companies to save costs and expand to new markets, and that implementation of resource saving eco-innovations at the company level can contribute to greater structural shifts towards sustainability. ‘Through our actions, we should leave a living, healthy Pakistan for our future generations,’ he added.

Naeem Mughal, Director General, Sindh Environmental Protection Agency said that it is high time to promote green growth and sustainable development in Pakistan. He shared that there was no planning to take advantage of different types of waste which could be utilized as a good resource of energy, as examples in other countries show.

Imran Sabir, Deputy Director Technical, Sindh Environmental Protection Agency said that lightweight and durability, two most important properties of plastics, makes it a serious environmental hazard. He added that most commercial plastics have thermal stabilizers, unreacted monomers, ultra-violet stabilizers, plasticizers, flame retardants, reinforcing additives and colourants which leach out into the environmental.

These additives are known to have a negative effect on human and animal health. ‘Humans exposed to chemicals that release monomer upon burning from plastics may cause cancer, brain and liver diseases, birth defects, pregnancy complications, diabetes and metal poisoning’, he added.

Sessions were held by experts in which environmental friendly products and technologies were shared. Ali Habib, CEO Himaverte shed light on recycled paper, followed by Nazifa Butt, Manager Green Office WWF-Pakistan, who shared that now there are 59 Green Offices in Pakistan working with the organization to reduce their footprint and have reduced 1833 metric tons of carbon emissions in 2015-2016.

Hakoon Valstad, CEO from Brighterlight talked about the provision of green energy to off grid areas. Jawad Khan from Tetra Pak Pakistan, who talked about the current recycling of used tetra pak cartons in Pakistan and products made out of them.

Award for Eco-innovation was given to Archroma Pakistan Limited, Engro Fertilizers and Corporation Limited and Sapphire Finishing Mills Limited for taking outstanding steps towards environmental sustainability. —PR

<http://epaper.brecorder.com/2016/12/02/8-page/824574-news.html>

BIG CITIES SEEK \$375BN TO FIGHT CLIMATE CHANGE

Dawn, December 3rd, 2016

MEXICO CITY: The world’s big cities will need \$375 billion of investment to curb climate change, a large gathering of mayors heard in Mexico on Thursday.

“It is a lot, but there is no other option. Together we will seek that money,” said the new president of the C40 network of big cities, Paris Mayor Anne Hidalgo.

If that amount is made available “humanity will have a chance of surviving,” she told a gathering of C40 mayors in Mexico.

The mayors were meeting to plot strategy in the face of climate scepticism from US president-elect Donald Trump. They said they planned to make commitments to reduce harmful emissions by promoting cycling in cities and renewable energy, among other measures.

In one such initiative, the mayors of Paris, Mexico City and Madrid said in a statement on Thursday they had committed to ridding their cities of diesel engines by 2025 to improve air quality.

As leaders of busy, polluted cities that are home to millions of people, the mayors gathered in Mexico City want countries to push on with adopting the so-called Paris Agreement to limit harmful emissions.

Trump has cast doubt on the accord, which aims to limit global warming to two degrees Celsius above pre-industrial levels.

The Republican billionaire has in the past vowed to tear up international climate agreements, though he said in an interview last week that he has an “open mind” about supporting them.

He had previously said global warming was a “hoax” invented by the Chinese and not scientifically proven.

The C40 group’s 85 cities include London, New York, Vancouver, Hong Kong and Seoul.

Los Angeles Mayor Eric Garcetti told the gathering that 38 US cities had sent a letter to Trump to tell him they would push ahead with their efforts against climate change.

<http://www.dawn.com/news/1300141/big-cities-seek-375bn-to-fight-climate-change>

NEWS COVERAGE PERIOD FROM NOVEMBER 21ST TO NOVEMBER 27TH 2016
INTENSIFIED BY CLIMATE CHANGE, ‘KING TIDES’ CHANGE WAYS OF LIFE IN FLORIDA
International New York Times, 22, November, 2016

Lizette Alvarez and Frances Robles

FORT LAUDERDALE, Fla. — In an enclave of a city known as the Venice of America, where dream-big houses look out over a maze of picturesque canals, the comparison to the Venice of Italy no longer seems so appealing.

On Monday morning, shortly after November’s so-called supermoon dropped from view on Mola Avenue, it was easy to see why. The tide swelled on command. Seawater gurgled audibly up through manhole covers and seeped from the grass. Under a sunny sky, the water drowned docks and slid over low sea walls. By 8:15 a.m., peak tide, this street in the Las Olas Isles neighborhood was inundated, just like the Venice across the pond.

Sergio Lafratta, an independent business consultant who moved in just three months ago, stood shirtless in tall waders, watching the saltwater seep into his new lawn.

“There goes my grass again,” Mr. Lafratta said. His grass squares floated away down the street. His wife, Marilia, a psychologist, stood on the doorstep in her pajamas and chimed in. “We spend too much money to live here,” she said. “We knew about this” — the flooding — “but we didn’t think it would be this bad.”

In South Florida, which takes rising sea levels seriously enough to form a regional compact to deal with global warming, climate change is no abstract issue. By 2100, sea levels could swell high enough to submerge 12.5 percent of Florida’s homes. These so-called king tides, which happen frequently, are the most blatant example of the interplay between rising seas and the alignment of the moon, sun and Earth. Even without a drop of rain, some places flood routinely.

Monday's planetary dance was particularly notable: The moon was both full and at its closest distance to the Earth since 1948. The closer the moon, the stronger the gravitational tug on the oceans, the higher the tide. Rising sea levels exacerbate the flooding, scientists said.

In much of South Florida, including Broward County and Fort Lauderdale, finding short- and long-term fixes to the challenges of flooding caused by rising seas is a priority. A new position now exists to deal with it: resiliency chief or sustainability director.

Pumps and backflow valves have been put in place. Roads will be or have been elevated (most famously in Miami Beach, which invested \$400 million to deal with flooding). Sea walls are being raised. Counties are also beginning to rethink building codes. Taken together, the costs will be enormous.

In the next five decades, the seas could rise two to three feet, said Jennifer Jurado, Broward County's chief resiliency officer.

Already, life on Mola Avenue has changed considerably, depending on the moon cycle, the month, the wind and the rain. Residents are already gearing up for the next king tide. It arrives next month.

Adapting to the "new normal," as some call it, is a requirement now. Sherry Harris kicks off her heels and splashes to her car to go to work. The Lafrattas, both originally from Brazil, pore over tidal charts for the first time in their lives. "No wake" signs warn cars to slow to a crawl so the brackish water does not inundate lawns. Residents know to park on high ground. Garbage cans are kept safely away from the curb, or they wind up bobbing up and down the road like wayward buoys.

"I forgot them one time," Mr. Lafratta said, "and there was garbage everywhere."

People who live here have complained to city officials for years but said they might wind up having to pay for some of the fixes themselves (one proposal asks for \$20,000 from each resident). Already, many have to elevate their sea walls because they sit on private property. Raising the roads may also cost them. All of these options inevitably give rise to should-we-or-shouldn't-we squabbles. And even as new multimillion-dollar mansions rise from the saturated ground, those who live on Mola fret about property values.

"Flood?" said Michael Asser, poking fun at the situation after he opened his front door to a waterlogged reporter. "What flood? The city says there is no flood."

"It's been going on 25 years, but each year it's worse," he added. "When I first came here, during spring tides, you had a splash here, a splash there."

Does he ever think about selling? "I'll probably have to stay here forever," he said.

Standing in front of the whimsical garden outside his Coconut Grove house, Dr. Karl H. Muench, a physician and professor of medicine at the University of Miami, said he and his neighbors got lucky this week. The forecast called for widespread king tide flooding, but West Fairview Street dodged the worst of it on Tuesday.

"It can come up to here," he said, pointing to the edge of his property. "I've had to wade home knee-deep from a block away; I didn't want to bring my car into the saltwater."

A stone's throw away, a canal threatened to spill over a sea wall as a manatee frolicked by a small bridge. But the water held back, reaching the brim. Instead, it seeped up through the storm drains and pooled onto Fairview. Miami-Dade County was largely spared the tide cycle this week: Miami Beach's pumps and elevated roadways easily dealt with the incoming water (save for an inundated parking garage where an octopus swam). Other problem pockets near the Miami River and in Shorecrest got minimal flooding.

It was an example of the unpredictability of nature, which can make planning and preparing for floods tricky business. Last month, when the wind was churned up by a passing hurricane, the king tide was much worse. And last year, residents said, it was spectacularly bad.

Erratic as the weather can be at times, Dr. Muench, 82, who has lived in this graceful neighborhood of banyan trees and salt-sprinkled air for 40 years, said he was certain about one thing: Global warming is the culprit for the shin-high water that regularly covers the road in front of his house.

“There has been a definite, gradual increase since the onset of information about global warming,” he said. “In my mind, there is no question about the relationship. The canal is rising because the ocean is rising.”

Dr. Muench said he fretted about President-elect Donald J. Trump’s position on global warming. In a much-circulated 2012 post on Twitter, Mr. Trump said the concept was “created by and for the Chinese in order to make U.S. manufacturing noncompetitive.”

Now that Mr. Trump has chosen Myron Ebell to lead his Environmental Protection Agency transition team, Dr. Muench’s concerns have deepened. Mr. Ebell has helped lead the charge against the scientific consensus that global warming exists and is caused by people.

James Murley, Miami-Dade County’s chief resilience officer, said the rising sea level did not cause king tides, “but it amplifies these events.”

Claudia Falero was drying her French bulldog inside her gleaming house as it drizzled outside. When she and her husband bought the house seven years ago, the flooding took them by surprise. “It wasn’t something advertised,” she said, laughing.

The couple’s letters to city officials have gone unanswered, she said. Residents say they hear that the road may get elevated, the sea wall fixed. So far, though, it is just talk.

“It gets you mad,” Ms. Falero said, “because you pay taxes, and nothing is getting done.”

Shirley Borg gripped the steering wheel of her Honda Accord, traveling at a turtle’s pace through saltwater a few inches deep that was rising all over her street. The homeowners here on Adams Drive know the drill: Drive slowly to keep the splash down, or drive quickly and risk ruining your car.

“I just replaced the wheel bearings because the seals were broken from saltwater,” she said. “I asked, ‘How does that happen?’ And they said, ‘Do you go through a lot of brackish water?’ Oh, yeah.”

The Florida Keys have a unique problem: Unlike areas farther north, which have barrier islands and then the mainland, the Keys are made up solely of a chain of low-lying islands built on porous limestone. Stopping the water from rolling into neighborhoods here is not an easy task. Sea walls, for example, do not work.

Patience is a requirement nowadays on some Keys roads.

Ms. Borg has lived in Twin Lakes, a waterfront community, for 11 years, and floodwaters are now a regular feature of the neighborhood. They vary, like everywhere else in South Florida, depending on moon cycles, and they are compounded by poor infrastructure and rising sea levels.

“The first seven years, we only flooded twice,” Ms. Borg said on Tuesday.

Last year, 10 inches of water outside often trapped residents in their homes. Ms. Borg’s car sits five inches off the ground, so do the math. In 2015, she went carless for two weeks — not even flatbed truck drivers wanted to chance it.

Some people in her neighborhood left their cars somewhere else and commuted, Florida Keys style, by boat. Others lost their cars altogether; saltwater is particularly corrosive to engines and metal.

Climate change is on many of their minds. And, like Dr. Muench, they worry — not just about the incoming president, but also about Florida’s governor, Rick Scott. Some former state environmental employees accused Mr. Scott, a Republican, last year of banning the phrase “climate change” in conversation and on documents, a charge he has said is untrue.

“A climate change denier?” quipped Benjamin Klitzkie, standing in his driveway on Tuesday morning as the water encroached. “I got a house for you in Key Largo.”

Mr. Klitzkie bought his home on Shaw Drive in 2011, but worries about his investment. Houses on the street are still selling — one is listed for \$729,000 — but what if the water keeps coming? Recently, he said, it approached a neighbor’s front gate.

County officials are meeting regularly with homeowners to discuss raising the road and other improvements. They have stopped issuing building permits on the street, Mr. Klitzkie said.

“It’s sinking,” he said. “And the seas are rising.”

Rhonda Haag, Monroe County’s sustainability director, said officials had done an analysis of some county roads. The conclusion was that elevating them, including on Shaw Drive, would be the best option. But it is expensive — raising one road six inches costs \$1 million for a third of a mile — and complicated.

“And we do recognize the fact that we will lose certain places sooner rather than later — some of the natural areas first,” Ms. Haag said.

For Frank Garces, an insurance adjuster who moved here less than two years ago, it cannot happen fast enough. He said he never used to give global warming a second thought. “Now,” he said, “I’m researching moon phases and tides.”

<http://www.nytimes.com/2016/11/18/us/intensified-by-climate-change-king-tides-change-ways-of-life-in-florida.html>

CLIMATE CHANGE: A SAARCASTIC APPROACH

Business Recorder, November 23, 2016

Earlier this week, Islamabad-based think tank Sustainable Development Policy Institute (SDPI) held a seminar titled SAARC-Challenges and Opportunities in Changing Regional Dynamics.

The panellists spoke about regional issues that transcend borders and should become part of the SAARC agenda. Mainly, this included climate change, disaster management, and water security. Given the threat of climate change-induced disasters in South Asia, the panel deemed it imperative for the governments of all countries to enhance cooperation at the SAARC level to evolve mechanisms to protect the lives and agriculture across the region.

The panellists stressed the need for exchanging data and information, coordination between disaster management authorities, and the joint management of resources. As Sanjay Vashist, Director Climate Action Network (CAN) South Asia said, South Asian governments lack capacity to respond to such challenges while working in isolation and must join hands to find solutions. Dr. Imran Khalid of SDPI added that the nature of the disasters in South Asian countries such as floods and draughts prevailed across the region and thus could be responded to by collaborated mechanisms.

However, we might just be jumping the gun here. We know that trade among SAARC countries under SAFTA is around five percent of the total trade; we know there are non-tariff barriers and no free movement of people; and we

know all too well of the trust deficit and tense relations between certain member countries. If SAARC countries can't even trade, how can they come together on more complex issues like climate change?

BR Research spoke Dr. Viqar Ahmed, Deputy Executive Director of SDPI, who confirmed that people-to-people exchanges and trade are definitely the "low-hanging fruit" and are a prerequisite for the type of regional cooperation being debated. Without trust, these things will remain a fantasy.

Another industry source confirmed the same; greater economic interdependence leads to the waning of political boundaries and can enhance cooperation. Dr. Viqar added that a SAARC Disaster Management Framework was adopted, but negotiations went cold when it came down to data-sharing between countries.

This data includes water inflows, glacial melting, and other indicators. This clearly indicates the trust deficit between member states.

One thing is true, however: issues like climate change and water definitely transcend borders and call for a globally unified approach.

They pertain to the planet, and not countries. The smog seen earlier this year also reminded us that what happens in one country can indubitably affect the other. So, we are all for making climate change a part of the SAARC agenda, provided that the SAARC agenda actually means something!

<http://www.brecorder.com/br-research/999:all/7155:climate-change-a-saarcastic-approach/?date=2016-11-23>

‘CLIMATE CHANGE, DISPARITY MAJOR CHALLENGES TO FOOD SECURITY’

Dawn, November 24th, 2016

Aamir Yasin

RAWALPINDI: Food production has been hit badly by climate change, and unity is needed within the global community to alleviate poverty and protect water and energy sources, speakers at an international conference said on Wednesday.

The three day 'Asia-Pacific Policy Dialogue on Water, Energy and Food Security for Poverty Alleviation in Dry Land Regions' began at the Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) on Wednesday.

The conference was organised by PMAS-AAUR and Unesco, with support from the Japan Funds-in-Trust and Malaysia Funds-in-Trust. It aimed to give policymakers, scientists, academics and other stakeholders the opportunity to explore new dimensions to increase water and food security and alleviate poverty in resource deficient dry land regions in the Asia-Pacific region and particularly in Pakistan.

Federal Minister for Parliamentary Affairs Sheikh Aftab Ahmad was invited to the inaugural session as the chief guest. The session was attended by Japanese Ambassador Takashi Kurai, Malaysian High Commissioner Dr Hasrul Sani bin Mujtabar, Azad Kashmir Treasury, Planning, Development and Public Health Minister Dr Mohammad Najeeb Naqi, Unesco Jakarta Director Dr Shahbaz Khan, PMAS-AAUR Vice Chancellor Prof Dr Rai Niaz Ahmad, Unesco Pakistan Director Vibeke Jensen, Dr Shamul Mulk, Mumtaz Khan Manais, as well as 200 participants from Pakistan, Malaysia, Indonesia, Japan, China, Philippines, Nepal, Korea, Afghanistan and Australia.

Parliamentary Affairs Minister Sheikh Aftab Ahmad said the government has put water, energy and food security at the top of its development agenda in Vision 2025, because these sectors are the most vital instrument of socioeconomic development in a country.

"We are facing immense challenges in the energy sector, which is considered the lifeline of any economy, and the most vital instrument of a country's socioeconomic development," he said.

Mr Ahmad said special attention is being paid to incomplete hydroelectric projects, such as the Diamir Basha Dam, to make the country self sufficient in the energy sector. “The energy sector has also been the prime focus of the China-Pakistan Economic Corridor (CPEC) project. The government is also realising the importance of alternate energy sources so that resources can be used in an optimum way,” he said.

He told other participants of the conference that changing climatic conditions, particularly natural disasters, as well as resource base degradation, poverty, low levels of education and high disparities in access to food are major challenges to food security in Pakistan.

Mr Ahmad also commended PMAS-AAUR for cultivating resources with efforts such as its rainwater harvesting model, energy production from solid waste and initiatives to promote 21st century agriculture through hydroponics.

Mr Ahmad urged the dialogue’s participants to discuss thematic areas and propose policy guidelines and strategies for the effective use of resources to ensure water, energy and food security. He said he hoped this conference would help facilitate the integration of the Sustainable Development Goals into development plans for Pakistan and other countries in the Asia-Pacific region.

Dr Mujtabar, the Malaysian high commissioner, said: “We have to play our role to create awareness regarding food security and other challenges so that future of new generation can be secure.” He added that such conferences are essential because they provide the opportunity to gain in-depth knowledge of key issues and give knowledgeable individuals a platform to share information.

The Japanese ambassador said Japan has been assisting Pakistan in various fields, including support for clean drinking water projects.

<http://www.dawn.com/news/1298313/climate-change-disparity-major-challenges-to-food-security>

WILL THE PARIS AGREEMENT UNRAVEL?

The Express Tribune, November 25th, 2016.

Syed Mohammad Ali

While it is not too long ago that the Pentagon under Obama had described climate change a ‘threat multiplier’, with the potential to exacerbate existing sources of friction around the world. Conversely, Trump has been dismissive of the climate change threat. In an interview with the New York Times, while Trump refused to repeat his promise to abandon the international climate accord, he has not given any assurances to the contrary either. The impact of his impending presidency on the slowly building global resolve to tackling climate change thus remains a suspenseful topic.

While not a big fan of Hollywood activism, I could not help but appreciate the recently released documentary, Before the Floods, made with the collaboration of academy award-winning filmmakers, environmental activists and narrated by Leonardo DiCaprio, a UN appointed Messenger of Peace.

In the footsteps of An inconvenient truth, the 2006 documentary showcasing US Vice President Al Gore’s campaigns to spread awareness of the dangers of global warming, this movie shows how climate change is not a distant threat. DiCaprio travelled around the world to witness climate change firsthand and to highlight the fact that unless we do something, the situation will become untenable.

This new movie draws attention to the alarming impact of deforestation in countries like Indonesia for palm oil cultivation, and that of major emissions by not only China, but India as well.

The dilemma faced by poorer countries to address energy shortages which are hurting their economies, and depriving their populace of electricity supply for extended periods, and curb emissions is also acknowledged. In fact, it also points out how many developing countries need to not only contend with the problem of growing energy demand, but are yet to provide electrification to a significant proportion of their populations.

Currently, fossil fuels used to produce energy are cheaper than investing in alternative sources, but investing in alternative sources offers both the developed and the developing world the opportunity to contend with this above-mentioned dilemma. Last year, the Paris Agreement on Climate Change brought most countries together, including the US, to come up with voluntary aims to curb climate change.

The US finally pledging to an international agreement to curb climate change was considered a major step forward, even if the need for a carbon tax to raise revenues for investment in alternative energy, or an effective compliance mechanism to ensure implementation of pledges were not achieved.

However, there was growing concern in the lead up to the US elections where Trump kept pledging that we would not only disentangle the US from the Paris Agreement but also withdraw funding from the UN Framework Convention on Climate Change (UNFCCC) and redirect climate programming funds to infrastructure projects.

Trump's transition team and Republican lawmakers have argued that leaving the Paris agreement will be simple, because it hasn't been ratified by the Senate. However, since Obama helped usher the deal into force early this year, it means that any country that was a party to the agreement couldn't leave until it completed a four-year withdrawal process.

The US, under Trump, could take a shortcut and exit the UNFCCC, which can be done in a year rather than in four. Or Trump's administration could drag its feet in carrying through on Obama's pledges to cut emissions, as will probably happen in many other countries as well, due to lack of political will or institutional capacity.

It is encouraging to see other industrialised countries, as well as emerging ones, such as India and China, so far reiterating their resolve to stick to their pledges. Yet, states which have not yet ratified the Paris Agreement could try to slow down action on carbon emissions, following the US administration's shifting posture on this issue. Officials from Saudi Arabia, Qatar and other oil producing states already seem relieved by Trump's victory because of his support for fossil fuels.

The fate of the slowly emerging consensus to curb emissions thus seems to have taken an unexpected turn within this past month, even though climate change threats remain unabated.

<http://tribune.com.pk/story/1243421/will-paris-agreement-unravel/>

HOW CAN LATIN AMERICA MOVE TO LOW-CARBON ENERGY?

International New York Times, Nov. 24, 2016

Lisa Viscidi And Rebecca O'connor

Washington — Climate negotiators convened in Morocco, this month to discuss how to turn the Paris climate accord into action. The accord, signed by almost 200 countries last year, came into force on Nov. 4. Many questions persist about how each country can move toward the zero carbon-energy target that experts say is necessary to avoid destructive climate change. Some parts of the world are better positioned than others to take this test. Latin America is a good example.

The region faces some of the toughest obstacles to halting energy emissions, such as rapidly increasing car ownership. But many Latin American countries also have among the best opportunities to reach climate goals because of their extremely low-carbon electricity sectors.

There is growing evidence that the effects of climate change are already occurring. The last five years have been the hottest on record, according to the World Meteorological Organization. Ice melt and warming temperatures that expand seawater have accelerated the rate of sea-level rise around the world, putting hundreds of millions of people in low-lying areas at risk.

Warming temperatures also bring an increase in the frequency, intensity and duration of extreme weather events like storms, droughts and heat waves. Global warming can destroy agriculture, housing and roads across much of the planet, endangering everything from food security to energy supply.

Most Latin American countries, including the two biggest emitters, Brazil and Mexico, have ratified the Paris agreement. However, only one signatory in the region, Costa Rica, made a pledge that would help meet the accord's goal of keeping the rise in the planet's average temperature below two degrees Celsius, according to analysis by the Climate Action Tracker.

To reduce per capita emissions consistent with this goal, by 2050 Latin America would not only have to stop deforestation and reduce emissions from agriculture and other non-energy sources, it would also have to cut consumers' energy use by 40 percent through huge improvements in efficiency.

The region would also need to "decarbonize" 90 percent of its power sector and electrify its entire transportation sector, according to a study by the Inter-American Development Bank. Decarbonization would require replacing high-carbon energy sources like oil and gas with zero carbon sources, like solar or wind energy.

Latin America is in many respects ahead of other regions in sustainable transport and clean energy. Nearly 80 percent of its population lives in cities, and demand for public transportation is second only to China's. Latin America's 69 bus rapid transit systems move 20 million people per day. Governments are looking to reduce emissions by improving fuel efficiency and expanding cleaner vehicles. But this is not enough. Emissions from transportation are rapidly growing in the region, as car ownership rises and oil consumption increases.

As middle-income economies, the region's countries have among the highest growth rates of car ownership in the world. In lower-income countries, like many in Africa and South Asia, only a small portion of the population owns cars, while in high-income countries like the United States car ownership has already peaked.

In the power sector, Latin America's per capita emissions are among the world's lowest, as 48 percent of generation capacity comes from renewable energy sources, 96 percent of which is hydropower.

However, hydropower has become less reliable because of increasingly frequent droughts and social opposition to new projects. As a result, several countries are expanding natural-gas-fired power to provide a reliable source of baseload power. While this helps meet short-term emissions targets because natural gas is cleaner than coal or oil for power generation, these investments will encourage the use of fossil fuels for decades, making it more difficult to reach long-term goals.

Cutting energy emissions is increasingly important for reducing Latin America's total carbon footprint. Historically, two-thirds of the region's emissions have come from land-use changes and one-third have been energy-related — the reverse of the world average. But more recently, deforestation has fallen, especially in the Brazilian Amazon, and energy has emerged as one of the primary drivers of emissions growth in the region.

To meet the ambitious Paris agreement Latin American countries would have to build infrastructure that supports low-carbon energy systems. At the same time, they will need to increase hydropower generation to ensure more sources of baseload power and expand electrical grid integration, both domestically and regionally, to compensate for the intermittent nature of renewable energy.

Enormous investments must also be made in electric vehicles and public transportation. Consumers should be encouraged to adopt these cleaner options through incentives like tax breaks, congestion charges and preferential

parking and driving lanes. Capacity for electricity generation will also need to expand substantially to accommodate increased electricity demand for transportation. The low cost of renewables in Latin America could help accelerate its transition to sustainable energy.

Many of the commitments that Latin American countries made under the Paris agreement include conditional pledges dependent on international finance and technology transfer. This month's climate talks are expected to clarify access to such assistance.

The climate goals for the next decades will require major transformations in the way people consume energy as well as technological breakthroughs to find new energy uses and sources. In Latin America, countries will have to define their own paths, but they all need to start planning their long-term climate change strategies today.

http://www.nytimes.com/2016/11/24/opinion/how-can-latin-america-move-to-low-carbon-energy.html?_r=0

NEWS COVERAGE PERIOD FROM NOVEMBER 14TH TO NOVEMBER 20TH 2016

CLIMATE CHANGE AFFECTS NEARLY ALL LIFE ON EARTH

Business Recorder, November 14, 2016

Most life on Earth is already being changed by the warming climate, even though the rise in global temperature since pre-industrial times has been rather slight, researchers warned on Thursday. The study in the journal *Science* found that 82 percent of key ecological processes including genetic diversity and migration patterns are being altered by global warming.

These effects extend to land, oceans and freshwater environments, even though temperatures have risen just about 1.87 degrees Fahrenheit (1 degree Celsius) over pre-industrial times due to fossil fuel burning. "We now have evidence that, with only a about one degree C of warming globally, major impacts are already being felt," said lead study author Brett Scheffers, member of the International Union for Conservation of Nature Climate Change Specialist Group and assistant professor at the University of Florida. "These range from individual genes changing, significant shifts in species' physiology and physical features such as body size, and species moving to entirely new areas."

These changes will affect humans by causing disease outbreaks, inconsistent crop yields and cutting down on fishery productivity, threatening food security, experts said.

The study, which analysed 94 ecological processes as documented in peer-reviewed literature, also warned that the more ecosystems change, the less likely they may be to guard against the harshest effects of climate change. Unhealthy forests will no longer be able to sequester large amounts of carbon, for instance.

Increasingly warm oceans will no longer act as a an effective buffer against temperature rise, and climate-related floods, sea-level rise and cyclones will get worse.

Since people depend on healthy ecosystems for food and clean water, the more the natural environment changes, the more people's livelihoods will be at risk.

"We are simply astonished at the level of change we observed, which many of us in the scientific community were not expecting for decades," said senior author James Watson from the University of Queensland and Wildlife Conservation Society, member of the IUCN Climate Change Specialist Group.

<http://webcache.googleusercontent.com/search?q=cache:http://www.brecorder.com/general-news/172/102868/>

THORNY ISSUE OF WHO WILL PAY FOR CLIMATE DAMAGE SIMMERS AT UN TALKS

Business Recorder, 19, November 2016

Megan Rowling

“Loss and damage” from climate change has been a controversial topic at the UN talks over the past decade, mainly because it asks a tough question: Who should pay to repair the harm done by planet-warming emissions?

Aid agencies say “loss and damage” occurs when stresses made worse by climate change – such as creeping deserts or rising seas – are too severe for people to overcome.

That can mean losing your home as shores and river banks crumble, no longer being able to farm a degraded plot of land, or even the disappearance of culture after communities are scattered by repeated weather disasters.

Following push-back from industrialized countries worried about being forced to pay for the cost of climate damage, governments agreed in 2013 to create the “Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts” (WIM).

At the Paris climate summit last year, developing countries won a hard-fought battle to secure its existence as part of the new global climate change accord.

But for that happen, they had to accept a stipulation that the loss and damage provision in the agreement “does not involve or provide a basis for any liability or compensation” – a demand from the United States backed by other rich nations.

At the climate change talks in Marrakesh, negotiators are sparring over when and how to conduct a planned review of the WIM, which has had little more than a year to get going on its key tasks.

They include setting up a clearing house for information on climate risk insurance and a task force on climate-linked displacement.

But it is the financing of measures to address loss and damage that remains the key sticking point.

“Who should pay for it? The ‘hot potato of responsibility’ is being moved around,” said Olivia Serdeczny, a research analyst with Climate Analytics and an advisor to vulnerable countries on loss and damage. “The sources of finance is an issue that remains untouched.”

Most of the discussions around finance for loss and damage have focused on providing insurance against disasters – a popular measure with rich nations.

In June 2015, for example, G7 states announced an effort to increase by up to 400 million the number of people in low and middle-income countries with access to insurance coverage against climate-related hazards, by 2020.

But aid experts argue insurance cannot be the only financial tool to help people faced with loss and damage.

Harjeet Singh of the global charity ActionAid said insurance does not work well for longer-term shifts such as sea-level rise and melting glaciers.

But “there is a reluctance to move beyond insurance” on the part of developed states in the UN loss and damage discussions, he noted.

CARE International says the WIM should develop instruments that can generate \$50 billion in new cash annually by 2020.

Sven Harmeling, climate change advocacy coordinator for the development agency, said there was a growing awareness that other types of funding would be needed, beyond insurance.

“At this stage, no one denies there is a problem,” he said. “There is a bit of a progress in terms of willingness to discuss what process might work, but not in terms of ‘We will pay for the damage’.”

That is a key reason for this week’s hiccup in Marrakesh over the review of the WIM, which was due to be completed at these talks.

Developing countries want the review to happen over the next year and cover the future of the mechanism, while developed countries fear that could trigger new demands over finance.

Either way, it is clear the thorny problem won’t just disappear, and needs more work.

In a recent paper, Austrian researchers Reinhard Mechler and Thomas Schinko at the International Institute for Applied Systems Analysis said major scientific challenges remain, in particular to better understand the physical and social limits of adaptation – in other words, where loss and damage starts.

Making more accurate projections of rising climate risks and the associated costs of measures to prevent and respond to loss and damage could help move the discussion forward, they added.

In the meantime, Bangladesh is not waiting around. A 2010 World Bank study estimated the country would lose some \$121 billion, or 5 percent of national GDP, between 2005 and 2050 due to climatic variability, including impacts such as a fall in rice production.

Singh said the proposal to set up a national mechanism for loss and damage was a way of trying to speed solutions.

“It is saying we need to make progress faster at the international level, and we are ready to act at the national level,” he said. -Reuters

<http://epaper.brecorder.com/2016/11/19/21-page/818448-news.html>

CLIMATE AROUND CLIMATE CHANGE

The Express Tribune, November 20th, 2016.

Trust stakeholders — industrialists, civilians and government officials, to become alert when there is money at stake. Faisalabad Chamber of Commerce President M Saeed Shaikh has alerted the government that detrimental effects of climate change are affecting potential industry revenues via an eroding agriculture sector. He cited an example of lower cotton harvest this year compared with a few years ago.

Earlier this month, the Lahore smog made headlines with its hazardous atmospheric 2.5-micron particulate matter, the most deleterious of them all. This was all owed to the effects of climate change and increased carbon and other gases in the atmosphere.

It is most unfortunate, however, that many people did not draw the connection between the smoggy evenings in Lahore and the loose policies and control Pakistan has on its industrial emissions. The nexus must be recognised before we can move forward with implementing healthy policies that would restrict fossil emissions and restore Pakistan’s atmosphere.

Despite 50-plus years of science, especially noting the steep rise in global temperatures since the 1980s per NASA, it is embarrassing that politicians deny the events of climate change and call it a hoax. The situation is more daunting now with US President-elect Donald Trump soon to take office and his recently appointed climate change denier Myron Ebell for Trump’s Environmental Protection Agency team. The US is a major contributor to global emissions and recently instigated the Climate Action Plan.

If it backs out now, which is in the works, global climate change efforts will be pushed back. While it is a progressive sign that Pakistan's university agricultural departments are researching ways to scale back the effects of climate change, the US' new stance on climate change poses a significant threat to global efforts to cut down on fossil fuels. For the sake of our future generations, the Republicans need to think logically and long-term. Likewise, Pakistan must revise its policies to facilitate greener practices by industries and invest in green technology.

<http://tribune.com.pk/story/1236678/climate-around-climate-change/>

NEWS COVERAGE PERIOD FROM NOVEMBER 7TH TO NOVEMBER 13TH 2016

UNABATED TREE FELLING MAY UNLEASH DISASTER, WARN EXPERTS

Dawn, November 9th, 2016

Qurban Ali Khushik<http://tribune.com.pk/story/1236678/climate-around-climate-change/>

DADU: Unabated practice of chopping down trees to clear forest land for cultivation of crops by influential land-grabbers may bring about serious climatic changes and unleash natural disasters in Kachho arid zone in Dadu and Jamshoro districts, warn environmentalists.

They demanded the Sindh government should immediately take steps to protect forest cover by putting an end to tree felling to check further environmental degradation.

The influential land-grabbers who have encroached upon thousands of acres of land owned by the forest department chop down trees in forests in Kachho area that fall within the jurisdictions of Dadu and Jamshoro districts to clear land for cultivation and sell the logs as firewood to

brick kilns, hotels and homes in Dadu, Khairpur Nathan Shah, Mehar, Sehwan and Kotri towns.

Prominent environmentalist Naseer Ahmed Memon said the influential persons had been occupying forest land for the past 35 years and they had grown too powerful for the forest department to take action against them.

He urged the government to use modern satellite technology to probe causes behind fast vanishing of forest cover. It could unveil 150-year history of forests and the reasons behind their continuous shrinkage, he said.

Dr Sono Khangharani, renowned environmentalist and development expert, said that the trees locally called Kandi, Jaal, Khabbar, Pipur and Babbar were perfectly suitable for drought-hit areas as they could resist and withstand ill-effects of natural disasters because they had deep roots.

“When such trees are cut down, land becomes weaker and loses sustainability to retain and absorb rainwater for long periods. As a result, rainwater flows off to nearby low-lying areas, causing underground water brackish in these areas. It may also lead to cause other serious climate changes in Kachho and other arid areas of the province,” he said.

Zaffar Ahmed Junejo, an environmentalist, said the forest department was doing nothing to introduce plants which were favourable for arid land nor was it stopping the illegal practice of tree felling, which could unleash natural disasters.

Mashooq Birhamani, social worker, said that unabated practice of chopping down trees had seriously affected the area's ecology and caused visible changes in climate. One of the proofs being that despite onset of winter in other areas, it was still hot in Kachho, he said.

He said that comparative study of last five years of rain in the area showed that amount of rain had gradually shrunk over the years and it rained relatively little this year. People were cutting down trees of Jaal, Khabbar and Kandi and selling them with impunity as there was nobody to stop them, he said.

Ghulam Nabi Rustamani, a resident of Wahi Pandhi, said that about 150 tractor-trollies loaded with logs were leaving the area on a daily basis for adjoining towns and nearby brick kilns. Forest department officials and local police had turned a blind eye to the illegal practice because of involvement of influential persons in the trade, he said.

Roshan Ali Khushik, office-bearer of a civil society organisation, said that Dadu forest division had 115,000 acres land in two districts of Dadu and Jamshoro out of which 30,000 acres had been occupied by influential persons and local political leaders.

He said that 5,000 acres in Dadu and 2,000 acres in Jamshoro districts had been given to people who had cut down the trees to clear land for cultivation of crops. Forest land in Manjhand, Unnarapur, Budhapur, Khadar Ji, Amri, Rajri, Ketu Lalia, Ketu Jatui, Kandi, Bagban, Radhan, Kacho Mangsi, Kamal Deero and Nari had been encroached upon in connivance with forest department officials, he said.

<http://www.dawn.com/news/1295128>

US CLIMATE PLEDGES UNLIKELY TO BE MET: STUDY

Dawn, November 11th, 2016

MARRAKESH (Morocco): The United States will likely fail to meet its pledges under the landmark Paris climate pact to reduce greenhouse gas emissions, analysts said on Thursday on the margins of UN climate talks.

Even if president-elect Donald Trump does not reverse policies already put in place by Barack Obama — and that is a big ‘if’ — US emissions of heat-trapping gases would remain stable over the next 15 years, badly missing the target, the experts said in a report.

“With no additional policies, emissions in the US will be flat until 2030,” said Niklas Hohne, director of the NewClimate Institute in Cologne, Germany, and co-author of the analysis.

Under the Paris agreement, which went into force last week, the United States committed to slashing its carbon pollution by 26-28 per cent, as measured against a 2005 benchmark.

If Trump carries out threats to unwind the Obama administration’s Clean Power Plan, these emissions could be even higher, Hohne said.

Democratic candidate Hillary Clinton vowed to continue Obama’s policies, and would have had at least a chance of meeting the Paris goals through executive action, experts say.

It is highly uncertain whether Obama’s long-term objective of slashing economy-wide emission 80pc by mid-century will be maintained by the new administration. Trump has described global warming as a “hoax” perpetrated by the Chinese government, and has said at different times that he would “renegotiate” or “cancel” the 196-nation deal.

<http://www.dawn.com/news/1295588/us-climate-pledges-unlikely-to-be-met-study>

EARTHLY MATTERS: THE ROAD TO MARRAKECH

Dawn, Sunday Magazine, November 13th, 2016

Rina Saeed Khan

Climate change is not something that is going to happen in the future — it is happening right now. Every year the planet is getting hotter and we are witnessing bigger hurricanes, increased flooding and more intense air pollution to name just a few of the disastrous impacts.

Currently, the city of Lahore is covered in a thick blanket of smog — and it is not even December yet. The smog contains dangerous gases like sulphur dioxide which can cause damage to lungs, skin, eyes, etc. Experts say such extreme and strange events are examples of climatic changes.

According to Adil Najam, a Pakistani climate change expert based in the US, “Every month this year has been the hottest ever recorded for that month since measurement began. This was yet another year of alarming Arctic ice melt. And 2016 is poised to be the globally hottest year ever in historical record and the 40th consecutive year that the annual temperature would be above the 20th-century average”.

This November, world leaders will be meeting again in Marrakech, Morocco in regard to global warming at the annual UN Climate Change Conference. Last year a global agreement to curb climate change was reached in Paris at the 21st Conference of Parties (COP21) signatory to the United Nations Framework Convention on Climate Change (UNFCCC). The Paris COP was the largest gathering of heads of state that ever took place, signaling that the threat of climate change has now indeed become a top global priority.

A total of 196 countries approved the Paris Agreement which aims at limiting global average temperature increases to well below two degrees Celsius above preindustrial levels and to pursue efforts to limit it to 1.5°C. Each country submitted their individual Nationally Determined Contributions (NDCs) documents to the UNFCCC, which were basically voluntary plans to reduce their greenhouse gases.

The agreement was widely heralded as most of the world finally agreed to do something tangible about controlling emissions from factories, cars, power plants and deforestation which are causing climate change. However, experts say that if you add up all the NDCs, they are not enough to reach the goal of the Paris Agreement.

According to Adil Najam, “Even with full implementation, there will be an estimated global average temperature increase of between 2.6°C and 3.1°C by 2100.” This will prove to be catastrophic for low-lying small island states threatened by sea level rise and most of Africa and South Asia.

Under the Paris agreement, countries have agreed to meet every few years to approve plans and revise targets. A Green Climate Fund was also set up by rich countries, and developed countries have pledged to mobilise jointly at least 100 billion dollars a year by 2020 (to be scaled up later), to be given to adaptation and mitigation projects in developing countries. Developing countries are worried this amount might not materialise as rich countries are becoming increasingly reluctant to give generously to this fund.

However, the fund is now operational and just recently a project working on protecting mountain communities from Glacier Lake Outburst Floods (GLOFs) in the north of Pakistan was given funding of 37 million dollars by the Green Climate Fund — the project will be implemented by the United Nations Development Fund in collaboration with the Ministry of Climate Change.

On November 4 this year, the Paris Agreement became a legally binding agreement since over 55 per cent of the signatories to the agreement have ratified it. Today, 92 countries including big emitters like China and the US (the world’s largest economies) have ratified the agreement. This week the government of Pakistan also ratified the Paris Agreement.

Most people agree that we are seeing good progress on the climate front as the Paris Agreement has come into force with unprecedented speed. The earlier Kyoto Protocol took seven years to ratify — in fact the US pulled out and never actually ratified it. The other good news on the climate change front is that there has been an agreement to limit HFCs (Hydrofluorocarbons) used in air-conditioners and refrigerators, which also contribute to global warming.

Experts say this will shave off a further 0.5 degrees Celsius of global warming. Pakistan, along with the Gulf countries, has also agreed to phase out HFCs by 2028. Pakistan’s emissions are very low at the moment but we will be increasing our emissions with all the projects that are currently being implemented as part of the China-Pakistan Economic Corridor (CPEC). This is something Pakistan will need to keep an eye on.

<http://www.dawn.com/news/1295557>

NEWS COVERAGE PERIOD FROM OCTOBER 31ST TO NOVEMBER 6TH 2016
HOW A CHANGING CLIMATE IS SHAPING A LEAF PEEPER'S PARADISE
International New York Times, Nov. 2, 2016

Craig S. Smith

IONA, Nova Scotia — A century ago, the flaming fall foliage in Nova Scotia would have long faded by early November. But today, some of the hills are still as nubbly with color as an aunt's embroidered pillow.

Climate change is responsible, scientists say. As the seasonal change creeps later into the year, not only here but all across the northern United States and Canada, the glorious colors will last longer, they predict — a rare instance where global warming is giving us something to look forward to.

“If climate change makes eastern North America drier, then autumn colors will be spectacular, as they are on the Canadian Shield in dry summers, especially the red maples,” said Root Gorelick, a biology professor at Carleton University in Ottawa. The Canadian Shield is a broad ring of forests and ancient bedrock that extends hundreds of miles from the shores of Hudson Bay.

Over the very long term, the warming planet may have a negative effect on fall foliage, but even then any adverse impact is uncertain. It is not just an aesthetic question, but an economic one as well: The changing colors drive billions of

“From a peeper's point of view, it's good news,” said Marco Archetti, the lead author of a 2013 paper at Harvard on predicting climate change impacts on autumn colors in New England.

We only have to read Henry David Thoreau to know that climate change is pushing the changing colors later into the year. He spent a lot of time tramping around his native Concord, Mass., making notes on how plants changed with the seasons.

In his 1862 essay “Autumnal Tints,” the naturalist wrote: “By the twenty-fifth of September, the Red Maples generally are beginning to be ripe. Some large ones have been conspicuously changing for a week, and some single trees are now very brilliant.”

He goes on to say that sugar maples, whose change generally follows red maples in short order, “are most brilliant” about the second of October.

Anyone sensitive to the onset of autumn in New England these days knows that most trees, including the maples, are still bottle green on those dates.

“In general, peak leaf color in Concord and the surrounding Boston area for these maples is now more typically a week or two later” than what Thoreau observed, said Richard Primack, a biology professor at Boston University. He has been using Thoreau's records and satellite images to track the effect of climate change on local plant cycles.

The Harvard study, which looked at the percentage and duration of autumn color in Harvard Forest in central Massachusetts from 1993 to 2010, predicted that with current climate change forecasts, the duration of the fall display would increase about one day for every 10 years. Look at it this way: Children born this year could have an extra week to enjoy the colors by the time they are 70.

The study further analyzed data for trees that turn red: red maple, sugar maple, black gum, white oak, red oak, black oak, black cherry and white ash. Only in white ash trees did the duration and full display of color decrease. In the others, the amount and duration of red leaves increased over the course of 18 years.

The Harvard study used data collected by John O’Keefe, the museum coordinator, now emeritus, at Harvard Forest, who made his observations by eye — estimating the percentage of colored leaves for each species and the duration from when 10 percent of a tree’s leaves turned color to when 90 percent had turned.

Those observations have been validated by Andrew Richardson, a professor of evolutionary biology at Harvard, who has since set up a network of 350 “phenocams,” cameras that quantify the duration and intensity of autumn colors in locations from Alaska to Hawaii, Arizona to Maine and up into Canada.

“John’s direct observations on the ground line up pretty well with the camera data,” Professor Richardson said. “In the shorter term, autumn colors may get better before they get worse.”

Worse? Scientists say that in the longer term the warming temperatures could threaten cold-weather hardwoods like the blazing maples, pushing their southern border north and narrowing the band in which they can survive between the temperate and circumpolar boreal forests.

More southern — and less colorful — species like oaks and hickories may march north, eventually replacing the maples and other exhibitionists. Some scientists also say that the mechanism that makes leaves red may not work as efficiently in much warmer weather, eventually dulling those colors.

The scientific term for the color change is leaf senescence, when deciduous trees pack up their summer clothes and prepare to sleep naked through the long frigid winter. The green chlorophyll in the leaves breaks down, disappearing to reveal the yellow carotenoid pigments underneath. Those pigments break down more slowly, until the leaves eventually turn brown.

The real magic comes from the trees, maples among them, that produce a compound called anthocyanin as the chlorophyll disappears.

Anthocyanin is the pigment that makes cranberries red and blueberries blue, among other things. Its role in autumn leaves is not well understood, but current theories suggest that some trees have evolved to produce it to protect their leaves from the damaging effects of intense sunlight while the chlorophyll breaks down — the red pigment absorbs wavelengths in the green region of the spectrum that would otherwise be reflected by the disappearing chlorophyll.

http://www.nytimes.com/2016/11/03/science/climate-change-leaves.html?_r=0

CLIMATE PACT GOES INTO FORCE TODAY

Dawn, November 4th, 2016

PARIS: Just days after the landmark Paris climate pact comes into force on Friday, diplomats from 196 nations gathering in Marrakesh will face intense pressure to translate its planet-saving promise into action.

The agreement “will now be the instrument on which our future depends,” said World Bank Group President Jim Yong Kim.

That’s a daunting responsibility, even if the UN talks are still riding the political momentum that carried the deal — decades in the making — across the ratification finish line in record time.

Greenhouse gas emissions — which are pushing the planet into the red zone of dangerous warming — continue to climb, putting newly ambitious goals for capping rising temperatures potentially out of reach.

Even if all national carbon-cutting pledges joined to the Paris pact are kept, Earth will heat up some 3.0 degrees Celsius by century's end, a recipe for climate devastation, according to a UN Environment Programme report released on Thursday.

Discussions on how to disburse \$100 billion a year to poor, climate-vulnerable nations remain contentious, even as a major report estimates that the level of annual investment needed over the next 15 years in developing nations is 20 to 30 times that amount.

“The US presidential election will loom large over the COP,” said Liz Gallagher, senior advisor at climate thinktank E3G, using the acronym for the annual Conference of the Parties climate meet.

A Trump victory, most analysts agree, could cripple the Paris deal, which the Republican candidate has said he would “cancel”.

A victory by his opponent Hillary Clinton — a vocal proponent of action on climate change — would surely trigger a huge, collective sigh of relief on Day Two of the 12-day conference, allowing the 15,000 attendees to get on with business.

<http://www.dawn.com/news/1294114/climate-pact-goes-into-force-today>

December 2016

NEWS COVERAGE PERIOD FROM DECEMBER 26 TH TO JANUARY 1ST 2016

CLIMATE REPORT SAYS 2016 ON PACE TO BE HOTTEST YEAR YET

Business Recorder, December 26, 2016

A monthly global climate report by US government scientists on Monday offered more evidence that 2016 is likely to be the warmest year in modern times, as sea ice at both poles hit record lows. Climate scientists say the continued burning of fossil fuels is spewing greenhouse gasses that trap heat in the atmosphere, making the planet warm up.

In addition, a strong El Nino trend in the first half of the year warmed the equatorial Pacific Ocean and exacerbated the heating. Taken alone, last month marked the fifth warmest November since records began in 1880, said the report by National Oceanic and Atmospheric Administration. But the average of the first 11 months of the year remained unusually high. “The year-to-date temperature across global land and ocean surfaces was 1.69 Fahrenheit (0.94 Celsius) above the 20th century average of 57.2 F,” said the NOAA report. “This was the highest for January-November in the 1880-2016 record, surpassing the previous record set in 2015 by 0.13 F.”

Even without the final data from December, the report said 2016 is “on pace to be record warm.”

That heat has contributed to sea ice in the Arctic shrinking to its smallest extent for November since records began in 1979.

“The average Arctic sea ice extent for November 2016 was 750,000 square miles (1.9 million square kilometers) below the 1981-2010 average,” according to the report which cited the National Snow and Ice Data Center.

<http://www.brecorder.com/general-news/172/117297/>

FINANCING FRAMEWORK FOR CLIMATE CHANGE IN THE OFFING

Dawn December 28th, 2016

ISLAMABAD: The Ministry of Finance is in the process of developing a Climate Change Financing Framework (CCFF) with the assistance of the United Nations Development Programme (UNDP) to mainstream climate change into the planning and budgeting cycle, sources told Dawn on Tuesday.

Tracking Climate Change Expenditure (CCE) will start with coding and developing linkages with other ministries. The process will be complemented with capacity building of the concerned officials reporting on CCE and tracking.

Climate change is now a core part of the global development agenda and governments are recognising the need to adopt low carbon economies and build resilience of the poor and vulnerable to climate change. Pakistan faces particularly stiff challenges in adaptation and developing community resilience.

The CCFF will build upon the national climate change policy and the Medium Term Budgetary Framework (MTBF) and its links with sectoral policies. Within the policy parameters of the national climate change policy, the CCFF will begin by recommending a framework which will help to create an enabling environment for mainstreaming climate change, and identify the systems required to integrate climate change into public finance management.

It will also capture different sources of financing for climate change and any gaps between the financing required and that which is available.

Once an integrated CCFF is created integrating climate change into the MTBF, the finance ministry will approach all federal ministries and divisions through a Budget Call Circular to help identify allocations related to climate change.

By March 2017, the ministry of planning will incorporate climate change into government planning formats including the PC-1.

UNDP says the need to embed climate change into budgeting and planning is accentuated by the increased international funding available for climate change related activities.

At the Climate Change Conference held in Copenhagen in 2009, developed countries – party to the UN Framework Convention on Climate Change – committed to mobilising \$100 billion per year by 2020.

To access this international finance, countries like Pakistan should be able to demonstrate a transparent public financial management system which ensures that resources are utilised efficiently and transparently; and their own financial contribution to addressing climate change.

<http://www.dawn.com/news/1304822>

CALIFORNIA DIGS IN TO FIGHT TRUMP ON CLIMATE

The New York Times International 28 Dec 2016

Adam Nagourney And Henry Fountain

Foreign governments concerned about climate change may soon be spending more time dealing with Sacramento than Washington.

President-elect Donald J. Trump has packed his cabinet with nominees who dispute the science of global warming. He has signaled he will withdraw the United States from the Paris climate agreement. He has belittled the notion of global warming and attacked policies intended to combat it.

But California — a state that has for 50 years been a leader in environmental advocacy — is about to step unto the breach. In a show of defiance, Gov. Jerry Brown, a Democrat, and legislative leaders said they would work directly with other nations and states to defend and strengthen what were already far and away the most aggressive policies to

fight climate change in the nation. That includes a legislatively mandated target of reducing carbon emissions in California to 40 percent below 1990 levels by 2030.

“California can make a significant contribution to advancing the cause of dealing with climate change, irrespective of what goes on in Washington,” Mr. Brown said in an interview. “I wouldn’t underestimate California’s resolve if everything moves in this extreme climate denial direction. Yes, we will take action.”

The prospect of California’s elevated role on climate change is the latest sign of how this state, where Hillary Clinton defeated Mr. Trump by more than four million votes, is preparing to resist the policies of the incoming White House. State and city officials have already vowed to fight any attempt by Washington to crack down on undocumented immigrants; Los Angeles officials last week set aside \$10 million to help fund the legal costs of residents facing deportation.

The environmental effort poses decided risks for this state. For one thing, Mr. Trump and Republicans have the power to undercut California’s climate policies. The Trump administration could reduce funds for the state’s vast research community — including two national laboratories — which has contributed a great deal to climate science and energy innovation, or effectively nullify state regulations on clean air emissions and automobile fuel standards.

“They could basically stop enforcement of the Clean Air Act and CO2 emissions,” said Hal Harvey, president of Energy Innovation, a policy research group in San Francisco. “That would affect California because it would constrain markets. It would make them fight political and legal battles rather than scientific and technological ones.”

And some business leaders warned that California’s embrace of environmental regulations — from emission reductions to new regulations imposing mandatory energy efficiency standards on computers and monitors — could put it at a disadvantage, all the more so as conservatives elsewhere move to roll back environmental regulations.

“If the other states pursue no-climate

change policies, and we continue to go it on our own with our climate change policies, then we would be at a competitive disadvantage for either relocating companies or growing companies here, particularly manufacturing factories,” said Rob Lapsley, the president of the California Business Roundtable.

Still, Democrats relish the prospect of challenging Mr. Trump on climate change, noting that other states have followed California in trying to curb emissions. And California has the weight to get into the ring: It is one of the 10 largest economies in the world, with a gross domestic product of approximately \$2.5 trillion.

“California more than ever is strongly committed to moving forward on our climate leadership,” said Kevin de León, the leader of the State Senate. “We will not deviate from our leadership because of one election.”

The state has been at the forefront of climate and energy policy for more than half a century, beginning with setting appliance and vehicle emissions standards in the 1960s. Those policies will continue, analysts said, in no small part because they are overwhelmingly popular here: 69 percent of Californians said they supported the law requiring the state to roll back emissions in a July survey conducted by the Public Policy Institute of California.

“This is not something that’s going to be fueled by dislike of Donald Trump,” said Adrienne Alvord, the western states director for the Union of Concerned Scientists. “This will be fueled by people liking these policies and wanting to see them continue. Our leadership and the people of California support the science.”

Ms. Alvord said that in the new political climate, the fossil-fuel industry may feel emboldened to take on some of the state’s energy and climate initiatives. “But they would be fighting a very uphill battle,” she said. “Politically, it’s going to be very difficult to really slow this train down.”

California's economy is powered by a high-tech industry and prominent research institutions that make it well placed to continue to lead on energy and climate. The state has already taken on an international role. Mr. Brown has spearheaded the Under 2 MOU initiative, backed by a coalition of state, local and regional governments in 33 countries — more than 160 jurisdictions with a total population of more than 1 billion — that have agreed to deep emissions cuts to try to keep global warming to less than 2 degrees Celsius, or 3.6 degrees Fahrenheit.

California's cap-and-trade program, which imposes a limit on greenhouse gas emissions and allows companies to buy and sell emissions credits, is linked with one in Quebec. The program has suffered recently from weak sales, and it is facing a legal challenge from the state Chamber of Commerce. Its future is likely to be the subject of debate by the Legislature. State officials have also had discussions with other countries, including Mexico and China, about joining forces on cap-and-trade policies.

Domestically, California has long been a leader on vehicle emissions. The federal Environmental Protection Agency allowed it to have tougher standards under the 1970 Clean Air Act, and more than a dozen states have adopted its standards. The Trump administration could deny the state a new waiver, as the George W. Bush administration did, which would lead to a court fight.

The clean-air initiatives here have become an intricate part of the economy and a source of growth and jobs. Federal cutbacks would no doubt hurt the state to some extent, but analysts say the very energy-efficiency policies that may soon come under attack by the new administration have been a significant factor in California's economic reversal.

"If the president-elect and his administration work to undermine our climate leadership, they will hurt our economy," Mr. de León said. "They will kill jobs. And ultimately, they will hurt the economy of the United States. We are 13 percent of the overall G.D.P."

Still, California officials and environmentalists said climate measures in place here will undoubtedly be undercut if the Trump administration rolls back environmental policies put in place by President Obama.

"Our system works better — our cap-and-trade system and other ways of addressing climate change — if we have more company," said Anthony Rendon, the speaker of the Assembly. "The more company we have, the better."

Dan Jacobson, the legislative director of Environment California, said the state can "keep doing what we are doing, leading the way."

"But will that be enough, soon enough? Not without the partnership of other cities, states, and nations. So that's why it's so dangerous for Trump to pull out of the accord," he wrote in an email, referring to the Paris climate agreement.

Mr. Brown will be a critical player in this fight. He has presented himself as an environmental advocate since he first served as governor in the 1970s. As he enters what will probably be his last two years in public life, he has seized on the prospect of leading an anti-Trump environmental movement.

"We've got the lawyers and we've got the scientists and are ready to fight," Mr. Brown declared in a speech in San Francisco this month to the American Geophysical Union. "We're ready to win."

Mr. Brown, in the interview, called Mr. Trump's election a setback for the climate movement, but predicted that it would be fleeting.

"In a paradoxical way, it could speed up the efforts of leaders in the world to take climate change seriously," he said. "The shock of official congressional and presidential denial will reverberate through the world."

<http://iht.newspaperdirect.com/epaper/viewer.aspx>

TOWARDS A REALISTIC CLIMATE ACTION POLICY

Syed Akhtar Ali

Climate Change is a catastrophe that can be avoided by a combined human action and co-operation, as human civilization has been able to tackle many issues that threatened its well-being and survival in the past. What level of effort and sacrifice has to be made by individual countries and the relative proportion that is to be there has remained a matter of contention.

Climate Change is caused mainly by the accumulation of Green House Gases (GHG) such as CO₂, SO_x, NO_x, Methane, etc predominantly, it is CO₂ which is a product of combustion of fuels and biodegradation of organic materials. These emissions lead to rise in temperature of earth and atmosphere giving affecting meteorological balance and melting of Glaciers, etc, causing droughts, floods, hot summers, and rise in the ocean level threatening inundation of many coastal cities such as Karachi.

Pakistan's contribution to the problem (emission levels) is miniscule indicated by its rank of 135 commensurate with its ranking in many other development indicators. Energy consumption and thus emissions have long been considered as indicator of development and thus any thought of any limitations on it appears to be a limitation on development itself. For developing countries including Pakistan who are at best at an early stage of development, the demand of limiting emissions is akin to resisting and opposing their development.

For developed countries, perhaps development peak has already occurred and thus action and sacrifice can be made on their part. Being technologically developed, it is easy for them to rearrange their resource inputs and reduce emissions which activity can infact boost their economies. Developing countries are not able to do this by themselves without technical and financial assistance from the developed world. Even if such assistance comes through, most of it may be loans and very little grants leading to indebtedness.

International discussions and even polemics have occurred on whether the load has to be borne by developed countries alone or some effort may also come from the developing countries. The conundrum is that although individual countries emissions are miniscule in per capita terms, combined and in absolute terms the developing countries contribution as a whole to the problem aggregates to a significant number.

It has therefore been agreed that they will estimate their own share and level of effort and declare the ensuing targeted emissions as their plan of action and submit such affirmations in the form of Intended Nationally Determined Contributions (INDCs).

Developing countries including Pakistan have been in confusion as to what should be their target and what kind of commitments can be made. And even estimating the emission levels and possible reduction without damaging their economies has been beyond most developing countries. India submitted its INDC last year and Pakistan could do it only last month.

The issue still remains as to whether any reduction in emissions can be targeted, as our current emissions or even projected ones say of 2035 are going to be too low. Reduction in emissions say from 2035 level may tantamount to limiting our development.

Pakistan's Climate Change policy makers, perhaps under pressure of announcing some commitment and to be the part of international process and to be able to benefit from Mitigation assistance packages that are to ensue, have submitted INDCs, committing to a reduction of 20% emissions from 2035 level.

In my view more creativity and effort should have gone into estimating and decision on INDC commitments. We could have reviewed other countries, especially, of the region, particularly India. India has not agreed to any absolute limitation on its emissions at all. India has said it will ensure that its greenhouse gas emissions from one unit of GDP in 2030 is at least one third lesser than what it used to be in 2005.

This is reasonable as this amounts to improving energy and emission efficiency by implementing conservation policies. Pakistan should also make its INDC submissions on these lines. Things are not at a level of finality at this stage. There is still time to come up with emission reduction targets and approach that are consistent with our unrestricted rights to growth.

We can show our sincere commitment to the international community by agreeing to promoting conservation, renewable energy induction and development of emission sinks like forestation. This would be taken more seriously than a kind of commitment that eventually may not be implementable.

Unfortunately, Ministry of Climate Change (MCC) is in its infancy, although it is trying to do a lot. A Climate Change Law is in the offing, and a Climate Change Authority is being made. However, it need not reinvent the wheel. Climate Change is a multi-sectoral issue. In this context Planning Commission can come to the rescue of MCC.

Planning Commission has multi sectoral resources which can be marshaled to support MCC. For example, they have a full-fledged Energy Wing which is building an integrated Energy Model. Energy contributes to 50% of GHG emissions in Pakistan. Emission module could be added to the Energy model without much difficulty.

There are many other ways and means through which PC can be of help. For Planning Commission, yet it is another opportunity to meaningfully contribute and improve its image in a target area that is rapidly evolving. Infact it is though such opportunities like Climate Action and Inter-provincial integration that Planning Commission can renew itself, legitimising its very existence which has emerged from many quarters even from within government departments.

Concluding, although our contribution to the causes of Climate Change is insignificant, the consequence and catastrophe that is threatening us is very dreadful. We have been declared third most endangered country in terms of Climate Risk, the impact of which has already beginning to tell on us in the form of floods and hot summers.

There is threat of droughts and floods alternating. And our largest city Karachi is on the coast facing risks from inundation from ocean and many others. We have to plan and prepare for mitigation steps and infrastructure in order to be able to deal with the challenge adequately. Crisis is an eventually not planned for.

<http://www.brecorder.com/weekend-magazine/0/118731/>

NEWS COVERAGE PERIOD FROM DECEMBER 19 TH TO DECEMBER 25TH 2016

CHANGING MINDS FOR CLIMATE CHANGE

The Express Tribune, December 20th, 2016.

Changing minds for climate change was the title of four day international conference organised by the Pakistan-US Alumni Network (PUAN) in Islamabad recently. PUAN is the alumni network of the students and professionals, who have participated in US government sponsored exchange programmes.

With more than 19,000 alumni across Pakistan, PUAN is one of the largest alumni networks in the world. PUAN regularly organises events across Pakistan, including service projects, leadership training, roundtable discussions, and community engagement activities.

The conference brought together climate change professionals, activists, students, teachers, and policymakers, to share knowledge and experiences. More than 250 alumni of US government-sponsored exchange programs from across Pakistan and South, Central and East Asia gathered in Islamabad for the event, which was jointly sponsored by the US Embassy in Islamabad, US Educational Foundation in Pakistan and PUAN.

Senator Mushahid Hussain Sayed, Secretary Senate Standing Committee on Climate Change, Samina Baig, Pakistan's first female to summit Mount Everest and the Seven Summits attended the conference's opening ceremony to kick off a program of interactive workshops, panel sessions, keynote speeches, and community outreach events.

Senator Mushahid Hussain Sayed in his remarks said that, he is the voice of climate change in parliament. He suggested that "siachen should be converted into Peace Park, as both neighbouring countries are heavily spending their resources over there."

American ambassador to Pakistan David Hale addressing the conference participants said, that "No country can tackle climate change alone, we must all work together. Governments and scientists, businesspeople and civil society must harness every aspect of a nation's resources to address this global crisis." The US, along with partner nations around the world including Pakistan, is working to reach common ground on the climate agenda.

Notably, Pakistan has recently made great progress on the path to adopting the Paris Agreement, he said. Pakistan has also agreed to an amendment to curb greenhouse gases (hydro fluorocarbons/HFCs). Moreover, the US and Pakistan are working together to encourage private sector investment in new clean energy generation (such as wind, solar, and hydro) through technical assistance, grants for transmission infrastructure, and financing.

Pakistan's vulnerability to adverse impacts of climate change is well established and widely recognized. Despite Pakistan's diminutive contribution to global GHG emissions, it is among the top ten most climate affected countries of the world, as indicated by the Global Climate Risk Index developed by Germanwatch.

Moreover, these adverse impacts of climate change are not in the distant future but are imminent. Indeed, these are already occurring as Pakistan has started suffering with ever-increasing frequency and ferocity of climate-induced catastrophes.

Studies and assessments undertaken by the National Disaster Management Authority show that extreme climate events between 1994 and 2013 have resulted in an average annual economic loss of almost US dollars 4 billion.

The last five floods (2010-2014) have resulted in monetary losses of over US\$ 18 billion with 38.12 million people affected, 3.45 million houses damaged and 10.63 million acres of crops destroyed. Likewise, over 1200 people lost their lives due to the unprecedented heat wave in Karachi in 2015.

The conference coincided with ratification of the Paris Agreement by Pakistan. Adoption of the Paris Agreement has further reinforced the ultimate objective of the United Nations Framework on Climate Change and has provided a framework for its realisation in a more intense manner with a long term perspective.

The global consensus on limiting temperature increase to below 2 degrees Centigrade is an endorsement of the scientific conclusions reached by the Intergovernmental Panel on Climate Change and provides safeguards for vulnerable regions and countries of the world from irreversible adverse consequences.

In doing so, the urgent need for undertaking adaptation measures by all groups of countries has also been underscored. Moreover, it needs to be recognised that without provision of adequate finance, technology development and transfer and capacity building, the consequences for developing countries are likely to remain catastrophic.

According to the World Wildlife Fund, by 2040 up to ten per cent of Pakistan's agricultural output would be affected by climate change. Global warming could not only make it more difficult to produce crops, the reduction in crop yields could also push food prices up, adding to the miseries of the bottom 40 per cent of the population.

Besides disasters, unprecedented floods could play havoc with agriculture. Being one of the most climate change vulnerable countries in the world, Pakistan's economy is already under severe strain from prevailing and likely future threats of climate change. Adverse climate related impacts are draining public funds from essential social requirements towards disaster management.

Climate change knows no boundaries. Changing minds of policy makers from Islamabad to Washington is imperative and no one can afford further delay to address imminent threat from climate change. Hence, the response has to be transnational. Learning from global and regional experience is crucial in this regard. For instance, Bangladesh is considered as adaptation capital of the world, which offers huge opportunities to region for climate change adaptation.

<http://tribune.com.pk/story/1268172/changing-minds-climate-change/>

JOINT EFFORTS URGED TO CURB CLIMATE CHANGE EFFECTS

Business Recorder, 23 December, 2016

FAISALABAD: Agri experts have called for joint efforts to curb climate change effects on agricultural productivity with the help of adaptation and mitigating strategies and development of climate resilient varieties.

They stated this while addressing a workshop on “Agricultural Model Inter comparison and Improvement Project (AgMIP)” hand-on trainings phase second arranged at University of Agriculture.

UAF Vice Chancellor Prof Dr Iqrar Ahmad Khan said that ecological cropping zones were being redefined keeping changing climate in view. He said that with increasing temperature, unusual weather behaviour was being witnessed. He said that the agriculture sector was facing the severe challenge owing to climate changes. He was of the view that collaborative work will come up with viable solutions to boost up the agriculture.

He showed his concern that rainfall volatility, increased drought and rising temperatures affect crop yields.

He said that during last year the cotton production had faced the 40 percent decline. He said that the government was redesigning the agriculture policy to fight the challenge.

DG Pakistan Met Department Ghulam Rasool stressed upon the need to make the joint efforts to fight the challenges. He said that joint efforts are needed to ensure the food and nutrition security in the country.

He said water scarcity is going from bad to worse. He said that the per person water availability is less than 1000 cubic metre that puts Pakistan into water scarce country.

Dean Faculty of Agriculture Dr Muhammad Amjad said that new climate tolerant varieties will help address the problem of climate changes.

He said that due to climate changes, even crop areas are changing. He said that we have to work together to address the issue at massive level. He said that if we could not take the measures to fight the challenges, the issue of food and nutrition insecurity would deepen.

AgMip Lead Principal Investigator Dr Ashafaq Ahmad Chatha stressed upon the need to develop trained manpower on the issue of climate effects on the agriculture sector.

<http://epaper.brecorder.com/2016/12/23/13-page/831274-news.html>

NEWS COVERAGE PERIOD FROM DECEMBER 12 TH TO DECEMBER 18TH 2016

EXPERTS FOR FINANCING TO ADDRESS CLIMATE CHANGE CHALLENGES

Business Recorder, 18 December 2016

KARACHI: A training workshop on Climate Financing Opportunities was organized by IUCN, the International Union for Conservation of Nature, in Islamabad on Saturday. The training was organized under the UNDP-GEF funded Pakistan Sustainable Transport (PAKSTRAN) Project being implemented by the Ministry of Water and Power, Government of Pakistan.

Representatives from the government, media, academia and national and international NGOs participated in the event. The training aimed at underscoring the need for accessing climate financing through special funds especially global funds such as the Green Climate Fund (GCF).

The chief guest on the occasion was Hassan Nasir Jamy, Additional Secretary, Ministry of Water and Power, Government of Pakistan who highlighted the need for building capacity of partners in accessing climate financing for securing funding for key environmental initiatives that were essential in addressing the numerous environmental challenges in the country.

He said that while the government was willing to support, its budgets were limited and external funding was needed to tackle the massive challenges Pakistan faced. He added that given the urgency and seriousness of the challenge, the Fund is mandated to make an ambitious contribution to the united global response to climate change. In Pakistan the relevant institutions are not well aware of the GCF opportunity to combat the challenges of the climate change.

Dr. Muhammad Saleem Janjua, National Project Manager of the PAKSTRAN Project explained that the PAKSTRAN Project was providing technical support to Government of Pakistan by focusing the critical challenges being encountered by the transport sector. The overall objective of the workshop is to build the capacity of PAKSTRAN partners and key stakeholders to get oriented to the climate financing concepts to develop relevant concepts for their respective departments.

He elaborated that through its 4 outputs and specialized expertise the PAKSTRAN team was assisting the Punjab and Sindh governments to create an enabling environment to promote sustainable transport initiatives.—PR

<http://epaper.brecorder.com/2016/12/18/2-page/829514-news.html>

NEWS COVERAGE PERIOD FROM DECEMBER 5 TH TO DECEMBER 11TH 2016

CASHING IN ON CLIMATE CHANGE

Moises Velasquez-Manoff

International New York Times, December 3, 2016

You've saved your money and amassed a surplus. You've read a few books on investing and gleaned the basics — the importance of diversification, of investing for the long term, and of buying and holding rather than trying to beat the market.

But you also know that human-caused climate change will (if it hasn't already) start eroding economic output. Extreme weather, droughts and crop failures could mean mass migration and political instability.

As Henry Paulson, the former Treasury secretary, recently put it, the "greenhouse-gas crisis" won't burst like the housing bubble of 2008 because "climate change is more subtle and cruel."

What's a climate-aware investor to do?

Individuals aren't the only ones contemplating this question. Sixty-nine percent of Fortune 500 companies reported more demand for "low carbon" products this year, according to the nonprofit Carbon Disclosure Project. And some of the country's largest pension funds, including the California State Teachers' Retirement System and New York State's retirement fund, have begun tilting away from fossil fuels.

This approach has been called "socially responsible investing." But these days, money managers aren't doing it only because they think it's morally correct; they also worry that, over the long term, fossil fuels are a losing bet.

Some experts told me that the historic accord on limiting greenhouse-gas emissions reached in Paris last year was a turning point in how investors think about climate change. The United States and China, the world's two largest emitters, ratified it in September. It's now unclear what will happen to the agreement; President-elect Donald J. Trump has said he wants to pull the United States out of it.

But it's worth noting that business interests — and Mr. Trump sells himself as a consummate businessman — were integral to making the Paris deal happen in the first place. They realize that “environmental stability is absolutely at the base of financial stability,” Christiana Figueres, the diplomat who organized the conference, told me. Extreme weather, like the 2011 monsoon floods that ravaged parts of South Asia where electronic components that go into hard disks and cars are built, have driven that lesson home.

Something more hopeful is happening as well. Renewable energy prices have dropped, and are nearly competitive with fossil fuels. China aims to build enough charging stations to power five million electric cars by 2020. What will happen, Ms. Figueres asked, if China phases out the combustion engine altogether? “You can begin to see the signals,” she said. “The tide is beginning to change.”

Advances in battery technology are part of this change. The wind doesn't blow all the time, nor does the sun shine all day. Energy produced intermittently needs to be stored. A lack of easy storage options has been an obstacle to renewables. But battery costs have declined by more than 70 percent since 2008. Mark Fulton, a founding partner of Energy Transition Advisors, says that what's about to happen with the battery and renewables is an old-fashioned technological disruption story, akin to the advent of the internet. From an investor's standpoint, this kind of disruption could mean losing your shirt or, if you plan properly, handsome returns.

One of the myths around socially responsible investing is that aligning investments with ethics means lower returns. But that's not the case. George Serafeim, an associate professor at Harvard Business School, and his colleagues analyzed data going back over 20 years. Companies that were committed to sustainability outperformed companies that weren't, they found. A dollar invested in sustainability-minded companies in 1993 would have grown to \$22.58 by 2014, but just \$15.35 if invested in companies with no such commitments. Why might this emphasis increase profits? These firms may also be more likely to invest in human capital and be better run overall.

So what can an individual investor do? You might follow the Rockefeller Family Fund and divest from the fossil fuel companies entirely. The research firm MSCI offers fossil-free stock indexes — like the S.&P. 500 but without fossil fuel companies — as does a newer organization called Fossil Free Indexes. Various climate-aware mutual funds exist.

But even if you divest, says Jean Rogers, chief executive of the nonprofit Sustainability Accounting Standards Board, there's no escaping the ripple effects of climate change. “Because it's so ubiquitous, it's very hard to diversify away from climate risk,” she told me.

Another approach is a kind of divestment lite. Asha Mehta, director of responsible investing at Acadian Asset Management, told me that her clients increasingly request a “decarbonization” of their portfolios. Worried that complete divestment might hobble a portfolio's performance, however, Ms. Mehta might reduce a portfolio's carbon footprint to, say, 80 percent of a benchmark like the S.&P. 500 by removing the biggest emitters.

A firm called Osmosis Investment Management takes a different tack. It researches the overall efficiency of companies — how many resources a firm uses to create how much product. And instead of excluding certain industries entirely, Osmosis chooses only the most efficient within a given sector. It caters to institutional investors, but plans to release a fund for individuals soon.

You can, of course, try to do what Osmosis does on your own; the Carbon Disclosure Project has a trove of information on how companies fare on the sustainability front. But here's the problem. More than 5,600 corporations disclose sustainability information, but no standards govern these disclosures. The Sustainability Accounting Standards Board and others are working to devise such standards.

Pressure is also mounting on the Securities and Exchange Commission to enforce the disclosure of sustainability information. The commission recently asked for feedback on reforming the disclosure process, and a good chunk of letters mentioned sustainability and climate change.

Under a Trump administration, it seems less likely that the S.E.C. will respond to these concerns. But that may have a paradoxical effect: If investors can't count on regulators to enforce transparency on sustainability, says Sonia Kowal, the president of Zevin Asset Management, they may take matters into their own hands.

So if you're concerned about how climate issues might damage your nest egg, you might begin by raising your voice. Ask your fund managers about their plans. And look at how the funds you own vote on sustainability-related issues, such as whether to calculate and disclose a company's greenhouse gas emissions, or whether to develop a risk-assessment plan for climate change.

Some of the largest asset managers consistently vote against such resolutions. In so doing, critics argue that they work against their customers' interests. An organization called Fund Votes tracks how mutual funds vote, and the nonprofit Ceres keeps a list of what happens with climate-related resolutions. The broader point is that climate-proofing your portfolio may require homework and some rabble-raising.

Does that make you an activist? "The word I prefer is 'investor advocate,'" Jackie Cook, who operates Fund Votes, told me. "You're advocating for your own investments."

For many, the perceived gap between socially responsible investing and good business has narrowed almost to the point of convergence. And maybe that shouldn't be a surprise. A Citi report from last year put the costs of climate change, without mitigation, at \$44 trillion by 2060. Many analysts have pointed out that a yearslong drought preceded the conflict in Syria — an example of how shifting climate can encourage political instability that ripples around the world. And this year, a report from the World Economic Forum said that the No. 1 global risk in the next 10 years was water crises. Nos. 2 and 3 were climate adaptation failure and extreme weather.

The economy can be only as healthy as the planet that houses it. Pushing for transparency on sustainability issues, and asking money managers to consider climate change, is really the purest form of self-interest.

http://www.nytimes.com/2016/12/03/opinion/sunday/cashing-in-on-climate-change.html?_r=0

JAPAN IS OBSESSED WITH CLIMATE CHANGE. YOUNG PEOPLE DON'T GET IT.

Tatiana Schlossberg

International New York Times, December. 5, 2016

TOKYO — At 12:30 p.m. on a recent Wednesday, the Ministry of the Environment offices here were almost completely in darkness, lit only by the silver-blue glow of computer screens.

All of the government ministry offices are supposed to go dark for an hour in the middle of each day to save energy and reduce greenhouse gas emissions. Satoru Morishita, deputy director general of global environment affairs at the ministry, said the policy is a daily reminder of the stakes of climate change.

"We're trying to change behaviors in addition to changing attitudes on climate change, and from that, to change the whole society," Mr. Morishita said in an interview.

But the Japanese people, particularly young people, do not seem to be heeding Mr. Morishita's wishes. A recent government survey showed that nearly 75 percent of Japanese people ages 18 to 29 expressed interest in climate change, an impressive figure by international standards. But it is a noticeable drop from the close to 90 percent interest stated by the same age group just a few years ago.

A recent survey by the Pew Research Center showed similar results: 75 percent of Japanese citizens over the age of 50 said global warming was a major threat to the country, compared with 59 percent of those ages 18 to 34.

Because Japan has to import most of its energy, and because of the 2011 Fukushima nuclear plant disaster, the country has an almost obsessive interest in tackling energy issues. The apparent drop in concern by Japanese young people alarms many in government, including Mr. Morishita.

“I want young people to understand that climate change is their problem, too, and to act on it,” he said.

This nation’s approach to fighting climate change provides an illuminating contrast both to other countries straining to engage the public on the issue and to those that deny it altogether. While the United States took a global leadership role on climate change under President Obama, President-elect Donald J. Trump appears uncertain whether climate change is real, or if it is, how to deal with it.

The Japanese people, though largely united in recognizing the threat of global warming and rising sea levels, are likely to face hurdles in reforming their energy policy, including some resistance from young people who say the nation faces more pressing problems, like the economy.

To spur interest among the young and old, the government last summer began a campaign called “Cool Choice,” which encourages consumers to buy energy-efficient appliances.

The country has several other energy-saving and environmental initiatives, including a complicated (to foreigners) trash-separation plan. Nevertheless the municipal recycling rate hovers around 20 percent, according to environment ministry data from 2012, the most recent year data was available, which is relatively low among developed countries. However, the amount of waste per capita is very low — in 2011, it was 902 pounds a year, compared with 1,628 in the United States.

In 2005, the government unveiled “Cool Biz,” a campaign to reduce energy consumption in the summer by discouraging the use of air-conditioners and encouraging workers to dress more casually — wearing short-sleeve shirts, for instance.

The program has a winter counterpart, called “Warm Biz,” which began at the same time but gained more steam after the Fukushima disaster. It encourages people to use less heat in the winter, suggesting things like holding nabe (a Japanese hot-pot dish) parties with family and friends to stay warm. This campaign also has a mascot named Attamaru, a “warm ninja” who gives tips on staying warm.

In a new effort to capture young people’s attention, the government has begun studying the possible environmental benefits of the sharing economy, since this generation seems less interested in owning cars, homes or bikes, environment ministry officials said. And since many campaigns here have mascots, those officials are soliciting designs for a three-dimensional character, hopefully inspired by Hatsune Miku, a digitized pop star.

So far, some young people seem unmoved by the government’s efforts.

Sui William McCauley, 24, a graduate student in journalism at Waseda University here, shrugged at the public education campaigns. “That just feels like, whatever,” said Mr. McCauley, who grew up in Sendai, north of Tokyo on Japan’s main island.

“Maybe if they say you should drink whiskey when it’s cold, I’ll do that,” he said.

His view might reflect a much deeper generational divide in Japan, according to Midori Aoyagi, principal researcher in the Integrated Environment and Economy Section of the National Institute for Environmental Studies, who studies public opinion on climate change in Japan.

She said that in her focus groups with Japanese millennials, she “always felt a kind of hopelessness” toward their everyday lives, their careers and social issues, possibly a result of having grown up during a prolonged period of economic stagnation known as the lost decades.

Interviews with several Japanese students and office workers ages 22 to 26 elicited similar responses to arguments for the need for urgency on fighting climate change. The young cited the huge scale and timeline of the problem, a feeling of powerlessness, silence from the media, and preoccupation with more important issues.

Several said other issues seemed more pressing for Japan than climate change: a stagnating economy, a declining population and tensions in East Asia, to name a few. Many worried about energy security — only three of the country’s 45 nuclear reactors are now operational, a result of safety concerns after Fukushima — and expressed hope that Japan would invest more in renewable energy.

Most of them said they didn’t really believe that almost 75 percent of their contemporaries were actually interested in climate change. It might be considered rude in Japan to say you are not interested in something, and most Japanese people know they are supposed to care, even if that rarely translates to action.

Maki Nakamatsu, 24, a graduate student at Waseda University, said the government should spend less effort on a public awareness campaign — “That’s not the point,” she said — and more on encouraging or requiring environmentally conscious behavior.

In a 2007-8 Gallup World Poll, Japan had some of the world’s highest levels of awareness and understanding of climate change — at 99 and 91 percent, respectively — and the fifth-highest level when it came to thinking climate change was a serious problem (around 80 percent), possibly because climate change is taught in most schools.

Japanese energy consumption has fallen every year for the past five years, but the government wants to cut energy use more deeply and faster to meet pledges made under the 2015 Paris climate accord.

An inherent tension between the seeming ineffectiveness of immediate and individual action and the long view the government is trying to take here may be common to every society trying to reduce emissions and to encourage participation.

Campaigns and voluntary programs like the ones Japan has started are “relatively small bore,” said Anthony Leiserowitz, a research scientist at the Yale School of Forestry and Environmental Studies and the director of its climate change communication program. “It’s very difficult for individual people to see how those behaviors relate to climate change.”

That seems to be part of the problem for many young Japanese like Shota Kanai, 23, an analyst at an e-commerce company in Tokyo.

“This issue is too big,” he wrote in an email, “and I feel my actions cannot make any difference.”

http://www.nytimes.com/2016/12/05/science/japan-global-warming.html?_r=0

JOINT REPORT: ‘CLIMATE REFUGEES IN SOUTH ASIA NEED PROTECTION’

The Express Tribune, December 10th, 2016.

New York: People forced to leave their homes because of climate change in South Asia should get the same protections given to political refugees, advocates said on Thursday.

Governments in South Asia have failed to address the climate migration of millions of people, uprooted by cyclones, flash floods and other disasters, said a report by the non-profit groups Climate Action Network – South Asia, Bread for the World and ActionAid.

The region's eight nations – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka – should adopt a treaty and policies to help protect climate refugees, said Harjeet Singh, a spokesman in India for the South African-based ActionAid. The eight nations also comprise the South Asian Association for Regional Cooperation (Saarc).

“We share a common ecosystem, and we share common mountains, rivers, history and culture,” Singh said. “When these solutions need to be devised, we have to have common solutions.”

Saarc should have policies under which people crossing borders due to environmental crises are recognized as refugees, he told Reuters.

South Asia, the world's most disaster-prone region according to the United Nations, has suffered widespread droughts, heat waves and cyclones leading to crop failures in recent years, the report said.

More than 46 million people in South Asia fled their homes due to natural disasters between 2008 and 2013, the Geneva-based Internal Displacement Monitoring Centre has estimated.

<http://tribune.com.pk/story/1259056/joint-report-climate-refugees-south-asia-need-protection/>