

# NEWSCLIPPINGS

***JANUARY TO JUNE 2020***

## ENVIRONMENT



## Urban Resource Centre

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## Protecting the ecosystem

On learning that India has started construction of the Ratle dam, Pakistan's hurriedly dispatched delegation to the World Bank has returned empty-handed. Pakistan's water diplomacy has come to a dead-end. The Pakistan Commission for Indus Waters has no regular communication with its Indian counterpart. Their meetings have become increasingly infrequent, and they are used to talking at rather than to each other. More importantly, instead of having a piecemeal approach of dealing with one dam at a time, India and Pakistan need to develop an integrated ecosystem-based approach.



Instead of looking at the entire spectrum of the Indian ambition to construct a cascade of dams aimed at a web of link canals for out-of-basin water diversions, the vision of Islamabad's negotiators is confined to engineering matters focusing on questions about the permissibility of the design or capacity of the proposed infrastructure. This time it is Ratle on the Chenab. Before this, it was Kishanganga on the Jhelum. And earlier, Baglihar on the Chenab. For Pakistan, it is one failure after the other, for want of a clear water vision and negotiating strategy.

The Indian government's ambitions are imperial and built upon the British colonial tradition of disregarding the integrity of ecosystems. In fact, they are reminiscent of the Soviet Union's diversion of Amu Darya and Syr Darya in the 1960s so that they could irrigate the desert region in order to favour cotton rather than protect the Aral Sea. Today, the Indus ecosystem is fast becoming a global environmental disaster, only much bigger than that of the Aral Sea. The region's water policymakers, however, continue to be tragically uneducated and utterly unblemished by contemporary knowledge on ecosystem-based approaches to transboundary water management.

The story of the Sutlej, Beas and Ravi rivers given to India under the treaty with full rights to utilise their waters is very instructive. Still, Pakistan used to get excess water that helped recharge groundwater, annually flush pollutants and keep the ecosystem alive at nominal levels. Rapid depletion of groundwater in Lahore is partially attributable to the fact that Ravi has become a dead river with zero flows into Pakistan. Ravi's water is diverted at Madhupur headworks to Beas and Sutlej, rather than being allowed to come to Ferozepur to feed the canals constructed in pre-Partition India for eastern and western Punjab. The upstream construction of a cascade of dams for out-of-basin transfers has begun to strangle the Indus ecosystem.

*Pakistan must abandon its piecemeal approach for a clear water vision and negotiating strategy.*

Let us briefly examine what is happening in Indian Punjab. Soon after Partition, the Indian government took charge of Punjab's waters. A master plan to link Punjab's rivers started in 1950 with two major projects, Harike headworks and Bhakra-Nangal, shifting waters from the Beas to the Sutlej, through the Beas-Sutlej link canal. The headworks were developed in Himachal Pradesh, denying Punjab control over its water. To date, this has continued to cloud Punjab's water relations with the central government.

The Beas-Sutlej link canal takes water to Bhakra dam on to Nangal dam from where two concrete canals transfer 7.5 million acre feet (MAF) water of Beas and Sutlej to Delhi, Rajasthan and Haryana, leaving less than one-third of the total available water for Punjab. This scheme has rendered the Sutlej into a seasonal nullah that gets water only when excess water cannot be absorbed at Bakhra dam. Result: there are now hardly any environmental flows to Pakistan from the Sutlej.

Likewise, a Ravi-Beas link canal was constructed in 1955 to take the waters of both rivers through Bikaner feeder and the controversial Indira Gandhi canal deep into Rajasthan, up to Jaisalmer, some 750 kilometres away. This has foreclosed any water for all canals in eastern and western Punjab from Ferozepur headworks, thus denying any seasonal flows for the Ravi river or local groundwater recharging on both sides of the border.

Further, another out-of-basin water transfer was envisioned in the early 1980s through the Sutlej-Jumna link canal for transferring 3.5MAF water. Despite the Indian supreme court decisions and central government interventions, Punjab continues to resist. Yet, it has been made operational by the central government through an interim arrangement from Bhakra to take 2.1MAF water away from Punjab, and thus further reducing the water availability in the state.

Tinkering further with the ecosystem, Hindutva has commenced the Vedic Saraswati, a mythical canal mentioned in the Rig Veda, to take Sutlej water up to the Rann of Kutch in Gujarat. Some plans suggest that, given opposition in Punjab, Sutlej waters will be diverted upstream from Himachal Pradesh with the help of three dams at Haripur, Adi Badri and Lohgah.

In the last 70 years, Indus water flows have changed dramatically. More than 75 per cent water of the Beas, Ravi and Sutlej now flow to other states instead of Indian Punjab, resulting in accelerated groundwater depletion and ecosystem degradation.

The diversions to non-basin riparians have resulted in self-inflicting reliance on groundwater. Heavy subsidies by the central government (by providing free electricity to almost two million tube wells and submersive pumps) have played havoc with the ecosystem. Of 142 blocks (subdivisions), 110 are overexploiting water, particularly in central Punjab which is India's food basket. According to NASA's Gravity Recovery and Climate Experiment project, this level of abstraction is not sustainable, attributing it to the collapse of agriculture output and severe shortages in potable water. The time given is barely a few decades.

While Punjab is threatened by desertification, a water-intensive cropping pattern (which includes paddy, sugarcane and other water-intensive crops, particularly fruit and vegetables, for the growing middle classes of distant consumers) continues. It adds to the stress on the water balance in the Indus ecosystem. Instead of identifying the sources of scarcity and curbing wasteful usage, demonising the Indus Waters Treaty has become fashionable.

Out-of-basin transfers and consumption practices in Indian Punjab are — or need to be — of strategic interest to Pakistan and its water negotiators. For an ordinary farmer, growing early-season and exotic fruit and vegetables is understandably more profitable than worrying about the death of the Indus ecosystem.

(By Ali Tauqeer Sheikh Dawn, 08, 03/01/2020)

### **Green areas in Karachi decreased by 4pc from 2005 to 2017**

Karachi's urban environment and infrastructure provision have not kept pace with its growth, and green areas have decreased by four per cent, whereas the urban extent in the core city has expanded by 8pc between 2005 and 2017, says a new World Bank report.

The WB [report](#) titled 'The hidden wealth of cities: creating, financing and managing public places', launched at the World Urban Forum in Abu Dhabi on Tuesday, stated that the average number of street intersections per square kilometre is 71.7 — which is lower than the United Nations Human Settlements Programme benchmark of 100 intersections per square kilometre, and the average road length per square kilometre is 13.21. Informal settlements are also pervasive in the central part of Karachi, the report says.

The city's population grew from 10 million in 1998 to 16m in 2017, primarily through immigration. The urban extent also grew by 8pc from 2005 to 2017, consisting of 13.4 square kilometres in the core city and 211.8 square kilometres in the larger urban zone.

Karachi appears to have an equally accessible and connected public-space network. The share of public spaces out of total built-up areas is 14pc; the share of street areas is 8.7pc. Even though the share is relatively lower than in Dhaka and Lima, almost 95pc of people live within 400 metres of open green areas.

Public spaces in Karachi appear to be highly connected to one another, and a closer examination of public-space typology shows a considerable number of unclassifiable public spaces and a relative lack of neighbourhood parks in the city. Moreover, despite being a highly residential city, many residential neighbourhoods in Karachi have almost no green areas that can provide environmental and social benefits for people.

*'Many residential neighbourhoods in Karachi have almost no green areas'*

The World Bank picked for the report two cities — Dhaka and Karachi — as case studies because they represent two large, densely populated megacities in South Asia that are ranked low on liveability measure and are accompanied by weak planning and enforcement capacity.

Despite being some of the densest urban areas in the world, cities such as Dhaka and Karachi have large areas of vacant and open land — around 15 to 21pc of the total built-up areas. These areas could be transformed as new public spaces, either on government-owned land or incorporated as part of private urban developments.

Karachi's non-street public spaces reach an estimated 95pc of the population, meaning that almost all residents had at least one public space, such as a neighbourhood park or a public facility, in close proximity within their neighbourhood.

This underscores the need for planners and local governments to monitor that public spaces are equitably provided in underprivileged neighbourhoods that might need them — whether they are parks, markets or community centres.

The report says that many cities around the world are missing out on significant development opportunities by ignoring, under-leveraging, or mismanaging public spaces. There is an enormous opportunity for a smarter use of public spaces, to unlock the "hidden" value they create for communities, neighbourhoods, and entire cities.

It says that well-conceived, people-centred urban public spaces have vast potential to become assets that cities can leverage to transform the quality of urban life and improve city functioning.

The report says city governments often do not invest in the creation and management of good-quality public spaces due to poor and ad hoc urban planning, budgetary constraints, and other pressing priorities arising from rapid urbanisation. As a result, public spaces often become liabilities, creating a downward spiral that drains public resources and exacerbates various city problems.

(By Amin Ahmed Dawn, 15, 14/02/2020)

### **Minister asks officials to speed up urban forestation in city**

Minister for Forests and Wildlife Nasir Shah asked the officials concerned on Monday to expedite their efforts to ensure that the provincial government's Green Pakistan Programme was implemented in a way that served to make the country an environment-friendly place.

The minister presided over a meeting in his office to review progress vis-à-vis implementation of the Green Pakistan Programme.

"Every obstacle that comes in the way of this programme should be removed in soonest possible time," said the minister when he was informed about various factors that hindered the programme's smooth sailing.

The meeting reviewed the pace and progress of the urban forestation along the Lyari riverbank.

The minister said the scheme reflected the ruling Pakistan Peoples Party's policy to support and encourage the efforts that were taken to improve environment in the province.

*Progress on implementation of the Green Pakistan Programme reviewed*

He said initiatives such as Green Pakistan Programme and urban forestation were the brainchildren of PPP chairman Bilawal Bhutto-Zardari, whose vision was to improve the environment as a tool to improve the living standard of the people of Sindh.

He was informed about various issues that impeded the pace of the effort.

Mr Shah, however, warned the officials that no laxity would be tolerated that could delay the project.

He said the PPP leader had inaugurated the urban forestation project as a priority showing his immense interest in it because of its importance for the urban way of life.

"This programme should be completed in the soonest possible time in accordance with the vision of chairman Bilawal Bhutto," said the minister.

He added that special measures be taken for nurturing saplings planted in the urban forests. Besides, the authorities should make available spaces dedicated for sporting activities.

"Providing places for sports should be an integral part of this project since the Lyari River represents Lyari, which is a place chiefly identified for its love of sports and sportspersons," said the minister.

He said a playground for children also be provided on a location of urban forestation sites. Besides, jogging tracks and recreation facilities should be there to attract visitors and foreign tourists.

"These sites should attract tourists from elsewhere from the country and abroad. The authorities should call it People's Urban Forests and that should be advertised with boards in the city."

The minister said the urban forests should be visible to everyone for which the forest department should support every municipality.

"Tree plantation should be done along every thoroughfare, street and storm-water drain. Besides, saplings and plants be taken care of wherever they are planted."

He said Chief Minister Murad Ali Shah would be requested to inaugurate a spring tree plantation campaign.

Minister Shah also directed the authorities to plant trees along the tracks of railway as well.

### **On journalist's murder**

Meanwhile, Nasir Shah visited the Karachi Press Club and attended the journalists' protest outside the KPC where he assured the protesting journalists that killers of Aziz Memon, a reporter of the KTN news channel in Mehrabpur, who was murdered recently, would soon be arrested and punished.

He said the murder of a senior journalist had saddened everyone and everyone should condemn it. He said the late Mr Memon's family would not be left alone and the government would accord all possible help to them.

(By Newspaper's Staff Reporter Dawn, 16, 18/02/2020)

## **Mysterious gas leak**

Even after the passage of many hours, the cause of the gas leak in Keamari, a neighbourhood near the Karachi Port, remains a mystery. The yet-unexplained incident started to show its deadly effects from Sunday night. So far eight persons have died after inhaling the toxic gas. Besides, a total of 132 persons have been affected, according to the police. The government has ruled out sabotage. Authorities were alerted when people in Keamari area started rushing to nearby hospitals with severe breathing trouble on Sunday night.

The exact causes of the deaths had not been ascertained because the bodies were not brought to any government hospital, according to the police surgeon. Authorities say they are unsure of the source of the leak or the type of gas. A high-ranking police official told the media that the police were investigating the incident and a team — comprising officials of the Karachi Port Trust, the Pakistan Navy, the West Deputy Commissioner's office and the health department — was being sent to the area to help ascertain the cause of the mysterious gas leak. A spokesman for the KPT said the Navy's Biological and Chemical Damage Control Team would also investigate the incident.

Mercifully, the gas leak — which had begun to remind the horrors of the Bhopal gas tragedy of December 1984 — has not spread beyond the Keamari neighbourhood. Unconfirmed reports are circulating as to the source of the leak and the type of gas.

One such report says the gas emitted from a container carrying chemicals used to preserve peas. Such reports have been dismissed as mere rumour. Thankfully, the victims have only experienced problems in breathing and irritation in the throat.

Since the mysterious gas leak has affected so many people, it needs to be investigated thoroughly to prevent such tragedies in future. Considering the laid-back attitude of the authorities with regard to the enforcement of the rule of law, the tragedy ought to awaken those at the helm from their comfortable slumber. Celebratory firing has become a normal thing and no one seems to be aware of this. What you allow is what will continue.  
(By Editorial The Express Tribune, 16, 18/02/2020)

### **Sepa suspects toxic gas may have leaked from oil storage unit**

An initial investigation into the Keamari gas leak incident by Sindh Environmental Protection Agency (Seпа) on Monday showed that a toxic gas had leaked from the terminal/s storing crude oil and petroleum products located within the residential areas.

The incident reported late on Sunday evening in the Keamari area has so far claimed lives of five people and sickened over 100.

"Today, our team has carried out a detailed inspection of the affected residential areas in Keamari and found that they all are surrounded by several storage units meant to keep imported crude oil and petroleum products," said Seпа director general Naeem Mughal.

He added that companies periodically carried out repair and maintenance of their units and it was likely that a toxic gas leaked during such a process.

The team, he said, also interviewed the families whose loved ones either died in the incident or received medical treatment.

*Seпа chief says conclusive findings will be shared in a day or two after examining samples and meeting relevant people*

"The families which suffered immediate casualties had their houses located just adjacent to a storage unit in Railway Colony. The department, however, would be able to share conclusive findings in a day or two after examining the samples it has collected from various affected places and hearing out representatives of the Karachi Port Trust (KPT) and companies maintaining their units in residential areas," Mr Mughal said, adding that these samples included air quality samples.

Other areas which the team visited were Jackson and Shireen Jinnah Colony.

Asked about any departmental action, he explained the investigation was continuing and that these storage units probably built three to four decades ago were once located away from residential areas but came within these localities as the population grew.



"We will ask all oil and gas companies to review location of their units as they pose danger to public health and environmental safety," he said.

The department team also inspected the KPT and terminals including the China Port Deep Water Terminal.

"At the KPT, we saw poor handling of the environmentally hazardous pet coke on which the department will send a notice to the organisation," he said.

Meanwhile, a spokesperson for the Dr Ziauddin Hospital, which received a majority of toxic gas leak patients, said more than 125 people had reported at the hospital since Sunday night with complaints of inhaling a poisonous gas.

"Today, we have treated 11 patients including three children aged between three and 10. Five patients are under observation in the intensive care unit while the remaining have been shifted to the ward," spokesperson Amir Shehzad said, adding that four patients including two women had died on Sunday night.

All patients, he said, were provided free-of-cost treatment.

A large number of sufferers were also treated at the Kutiyana Memon Hospital in Keamari.

"We have received four cases so far. Three of the patients have been discharged while the fourth one, a resident of Massan area in Keamari, has just arrived," said executive director of the Jinnah Postgraduate Medical Centre (JPMC) Dr Seemin Jamali.

Meanwhile, Sindh Chief Minister Murad Ali Shah has asked the commissioner to submit a detailed report into the gas leak incident.

Mr Shah also directed the authorities concerned to provide required treatment to the affected people. He added proper arrangements should be made at the Ruth Pfau Civil Hospital Karachi, JPMC and Abbasi Shaheed Hospital to provide better treatment to the affected residents of Keamari.

(By Faiza Ilyas Dawn, 15, 18/02/2020)



## Hydrogen sulphide, nitric oxide found in Keamari during monitoring of air quality

The air quality monitoring conducted over the past two days by a private laboratory in two affected areas of Keamari has found the air extremely polluted but the levels of pollutants — particularly two harmful gases which should not be present in the air at all — did not cross the limit where it could endanger life, it emerged on Tuesday.



Sources also underlined the need for having a multi-disciplinary team and close coordination among the various investigating agencies to find the source of the toxic gas leak that was initially reported on Sunday night in the residential areas surrounding the port in Keamari and so far claimed 14 lives and sickened over 300. These areas included Bhutta village, Railway Colony, Jackson bazaar and Massan Road.

“The levels of all pollutants particularly the hazardous hydrogen sulphide and nitric oxide gases were found very high late Monday night near the Ziauddin Hospital when reports of more people being affected by the toxic gas leak emerged,” said an official of the Global Environmental Laboratory (GEL) on the condition of anonymity.

“Harmful gases such as hydrogen sulphide and nitric oxide shouldn’t be present in healthy air at all,” he said.

*A private lab assesses the levels of the two gases didn’t reach the limit where they could endanger life*

“But, levels of these gases didn’t reach the limit where they could endanger a life, though they would have long-term impact on health depending upon the extent and duration of exposure. The level of these gases was also high on Monday afternoon when we started monitoring air quality,” the official added.

The private laboratory certified by the Sindh Environmental Protection Agency is carrying out air monitoring on Sepa’s request as the environmental watchdog is ill-equipped to do the task.

Over the past two days, it monitored air quality at the railway gate and near Ziauddin Hospital in Keamari and in the area of Seaview, Clifton.

According to the GEL official, higher levels of pollutants were also noted during monitoring in the Seaview area.

“It’s important to know that air quality monitoring was done several hours after the gas leak incident so we can’t say with 100 per cent surety what caused casualties unless these results match with some other evidence.

“For instance, the autopsy reports of the gas leak victims could provide a crucial link between fatalities and the gas causing death as different gases affect the body in different ways.

“The evidence would then help identify the source of gas leakage for which a team of experts should carry out a thorough survey of all terminals, operating near/within the residential areas, which are being used to store oil and petroleum products,” he explained. The fact that casualties occurred in the residential areas gave credence to the assumption that the toxic gas/es leaked at any of these terminals, he reasoned.

The GEL report, a copy of which is available with [Dawn](#), said: “The levels of all pollutants were found to be higher than the allowable limits (Sindh Environmental Quality Standards) when monitored around midnight near Ziauddin Hospital in Keamari.

“However, the main source of gas leakage and reason for fatalities is yet to be confirmed. The higher levels of pollutants at Seaview need to be assessed further as they may be due to local factors.”

The laboratory results clearly show that levels of all major air pollutants including particulate matter were very high; the levels of hydrogen sulphide (SEQ none) ranged between 145ppb (parts per billion) and 661ppb whereas levels of nitric oxide (SEQ 40ppb) ranged between 191ppb and 784ppb.

The levels of sulphur dioxide (SEQ 120ppb) ranged between 123ppb and 1420ppb.

The levels of volatile compounds (SEQ none) was 73ppb and 886ppb.

### Murad hopes ‘mystery’ to be solved soon

Sindh Chief Minister Syed Murad Ali Shah on Tuesday said the whole matter of toxic gas in Keamari had turned into a “mystery” and all forces and agencies were involved to unearth the real cause behind the incident.

“I am thankful to Pak Army, Sindh police, district administration and health department who all have worked together to unearth the causes of the gas leakage,” said Mr Shah, adding, “Pakistan Navy and Suparco are conducting lab tests of the wind and samples of various oils and goods cargos ... at KPT.”

“The lab results would definitely resolve the issue,” he hoped.

CM Shah said he had visited Keamari on Tuesday night and went to a private hospital before a visit to the Jinnah Postgraduate Medical Centre and met with the patients and their attendants.

Later, Sindh Information Minister Nasir Shah along with Karachi Commissioner Iftikhar Shallwani briefed the media at the latter's office.

He said investigations into the incident were going on and media would be informed about the real causes behind the leakage once the findings were furnished before the authorities.

He said samples of the gas had been sent to a Karachi University laboratory and PCSIR.

"Appropriate action would be taken against those who are found responsible for the incident," said the minister.

He said all the relevant agencies came into action soon after the incident was reported.

"Most of those affected people have been given treatment and discharged from hospitals. Those people have returned to their homes."

He added the provincial health department had declared a state of emergency in all its hospitals after the incident and still the provincial government's agencies and Pakistan Navy were there to guide the people in need.

He said the Karachi Port was a busy gateway of Pakistan that was why slain former prime minister Benazir Bhutto had planned for the Ketu Bundar project to keep the port away from human settlements.

He said chemical factories should also be located away from the city. He expressed his regret over certain statements by the opposition parties regarding the issue, adding that such human miseries should not be used for politics.

Minister Shah said so far Keamari was the only area where the lethal gas had affected its residents while reports about its spread to other areas were not correct.

He said the chief minister had earlier suggested for evacuation of the area because of the situation at that time, but now the situation had improved.

Commissioner Shallwani said the incident had affected only a single area. He asked the media not to lend an ear to the rumours regarding spread of gas in other parts of the teeming metropolis.  
(By Faiza Ilyas & Hasan Mansoor Dawn, 15, 19/02/2020)

### Time to develop resilience plan for Karachi against rising sea level

Pakistan has a 1,046-km-long coastline that stretches along the border of the Arabian Sea. The Sindh coastline is about 320km long, and runs along Sir Creek on the east to Hub River on the west. The coastline of Karachi is about 70km long, and is located between Cape Monze and Korangi Creek.



Sea levels are rising at a significant rate because of global warming caused by carbon dioxide and other gases being released into the atmosphere in large quantities. Melting of glaciers, the heating and expansion of oceans and the melting of the Antarctic ice caps are contributing to sea level rise (SLR).

Some studies project sea levels to rise by 60 centimetres, or two feet, by 2050 and 110cm (3.6 feet) by 2100. SLR projection is influenced by subsidence, oceanographic effects and mass balance changes with the ice sheets.

According to Nasa's climate change website, the global rate of change of sea level is 3.3 millimetres (mm) per year and the sea level increased by 240mm (nearly 10 inches) from about 1870 to 2019.

According to the US National Oceanic and Atmospheric Administration, the global sea level has been rising over the past century, and the rate has increased in recent decades. In 2014, global sea level was 2.6 inches above the 1993 average. Sea level continues to rise at a rate of about one-eighth of an inch per year.

*Measures can include building of seawalls, dykes, restoration of mangroves, reefs and wetlands*

There are large uncertainties in sea level projections. According to some researchers, the SLR projection for Karachi for 95 percentile, is 2.6 metres (8.5 feet), relatively to the level in 2000, by 2100.

A 2019 report of the Intergovernmental Panel on Climate Change on the Ocean and Cryosphere in a Changing Climate indicates global SLR of 1.1m (3.6ft) by 2100, after including Greenland and Antarctica ice sheets' mass loss.

Global sea differs from local sea level. Global sea level trends and relative sea level trends are different measurements. Just as the surface of the Earth is not flat, the surface of the ocean is also not flat — in other words, the sea surface is not changing at the same rate globally. Sea level rise at specific locations may be more or less than the global average due to many local factors: subsidence, upstream flood control, erosion, regional ocean currents, variations in land height, and whether the land is still rebounding from the compressive weight of Ice Age glaciers.

Eight of the 10 big cities of world near a coast

Globally, eight of the world's 10 largest cities are near a coast. The Global Risk Report 2019 says: "Around 90 per cent of all coastal areas will be affected to varying degrees. Some cities will experience sea-level rises as high as 30 per cent above the global mean. Making matters worse, sprawling cities are sinking at the same time as sea waters seep in. This is due to the sheer weight of growing cities, combined with the groundwater extracted by their residents."

In Karachi, the average mean sea level rose to 1.1mm per year. The land subsidence rates in the Indus delta is around 4mm per year.

According to a report, the Arabian Sea has intruded up to 67 km, destroying large swathes of agricultural land in Thatta and Badin districts by turning it saline. More than 3.1 million acres of agricultural land has been submerged in Badin, Thatta and Sujawal districts.

Major factors that contribute to SLR are thermal expansion of seawater, caused due to greenhouse gas (GHG) emissions — in case of Karachi, coal-fired power plants are main culprits in releasing GHGs — and melting of the ice sheets. Melting of Greenland and Antarctica glaciers will increase the sea level by a whopping seven metres (23ft). This will inundate about 50pc area of Karachi.

#### **Resilience strategy for Karachi needed**

In Karachi, the Sindh planning and development (P&D) department is responsible for preparing strategies and development plans. Alongside mitigating the carbon footprints through reducing emissions, it should develop a resilience strategy for Karachi. Many cities like Bangkok, Los Angeles, New York, Amman, Melbourne, etc, have prepared resilience strategies.

The resilience strategy represents preparedness, addressing emerging resilience challenges and embedding resilience into a city's operations and systems. Many cities have already started building on the strategies, and translating the plans into actions.

Karachi can take a number of actions to deal with SLR. These include (a) hard engineering projects like seawalls, surge barriers, dykes, breakwaters, barriers and barrages to protect against water intrusion; (b) adopting environmental approaches, like restoration of mangroves, reefs and wetlands; (c) employing soft structures, like beach and shore strengthening; and (d) people-oriented measures including urban design, building resilience and retreating (migration, displacement and relocation).

One can also learn from what other cities are doing. For example, London has the Thames Barrier, designed in the 1970s for future repeats of the 1953 meteorological storm surge in the North Sea. The Thames Barrier has been closed 184 times since it became operational in 1982. Of these closures, 97 were to protect against tidal flooding and 87 were to protect against combined tidal/fluvial flooding.

Dutch coastal cities have bolstered by hard defences including a 3,700km network of dykes, dams and seawalls, including the famous Maeslant Barrier. Rotterdam offers a model for how to manage sea-level rise. The city is 90pc below sea level. Cities like Rotterdam are converting ponds, garages, parks and plazas into part-time reservoirs. They are also revitalising neighbourhoods and improving equity to build social resilience to future water threats.

#### **Cities bolstering resistance to rising sea levels**

China and Vietnam have launched 'sponge city' initiative. The sponge city is more like a sponge; it actually absorbs rainwater, which is then naturally filtered by the soil and allowed to reach into the urban aquifers. This allows for the extraction of water from the ground through urban or peri-urban wells. This water can be easily treated and used for the city water supply.

Shanghai has constructed 520km of protective seawalls that stretch across the Hangzhou Bay and encircle the islands of Chongming, Hengsha and Changxing. As in the case of Rotterdam, Shanghai has also installed massive mechanical gates to regulate overflowing rivers.

Bangkok has also laid out a 2,600km canal network and central park with a capacity to drain 4m litres into underground containers. Jakarta is building a massive sea wall with Dutch support, and is planning to relocate 400,000 people from threatened riverbanks and reservoirs.

American cities are investing billions of dollars to bolster their resistance to rising sea levels. New Orleans established the Hurricane and Storm Damage Risk Reduction System shortly after Hurricane Katrina killed more than 1,600 people in 2005, leaving 80pc of the city underwater. The system includes a series of massive dam barriers, reinforced levees and flood walls stretching some 560km around the city. The city also built a living water system of parks, wetlands and other existing features to reduce reliance on pumping and canals. It is one of the largest public works projects in US history and the most expensive flood-control system in the world. Boston, Houston, Miami, and New York City also have similar plans.

(By F.H Mughal Dawn, 13, 30/04/2020)



### Mayor imposes emergency in KMC-run hospitals to cope with heatwave

Mayor Wasim Akhtar on Saturday imposed a state of emergency in hospitals under the administrative control of the Karachi Metropolitan Corporation (KMC) keeping in view a heatwave alert issued by the Pakistan Meteorological Department.

He directed the senior director-medical services to ensure presence of doctors and paramedics and provision of all necessary equipment at each hospital.

"The Met department said a heatwave will hit Karachi from May 5 to 8 with the mercury expected to remain between 40 and 42 degree Celsius," he said, asking the people, particularly children and senior citizens, to avoid going out unnecessarily especially during these days.

Akhtar directed hospitals' managements to take special measures to combat the expected heatwave, adding that the lethargy would not be tolerated in this regard.

"Doctors and other paramedics should be called in three different shifts," he said.

*Met Office forecasts heatwave in the metropolis from May 5 to May 8*

The mayor said that hospitals were already running out of space as the number of coronavirus patients were increasing day by day.

"Most of the business places are closed in the city due to lockdown and the people stay at their homes and during the heatwave the best way to save ourselves is to avoid [unnecessarily going] out and travel especially during daytime," he added.

He directed managements of all hospitals under the administrative control of the KMC to ensure foolproof measures.

The mayor hoped that doctors and paramedical staff would also serve heatwave patients with courage just as they had been serving Covid-19 patients.

#### **Sportsmen also hit hard by lockdown**

Meanwhile, the mayor said that just like people of other sectors, sportsmen and artists were also hit hard by the coronavirus.

He said this while speaking at an event for ration distribution amongst sportsmen hosted by the Sindh Olympic Association.

Former MPA belonging to the Muttahida Qaumi Movement-Pakistan Mehfooz Yar Khan, Sindh Olympic Association secretary Ahmed Ali Rajput and other officials were also present.

The mayor said that all sports activities came to a halt across the world due to which people affiliated with different sports were also facing hardships.

He said that except cricket, no other sport was given priority in Pakistan as players of different sports often participate in the games through help of different NGOs.

The mayor said: "Instead of providing ration directly to sportsmen, we have decided to give tokens to their associations for the sake of their self-respect."

He added that the associations of gymnastics, table tennis, baseball, volleyball, weightlifting and others were provided tokens to distribute ration amongst their members.

Akhtar said the KMC was ready to promote sports, suggesting that a committee of former players could be formed which should be tasked to promote sports as well as helping the needy players.

He also said that the cyclers of the Sindh Cycling Association could have practice at the newly-established 62-acre Kidney Hill Park. (By Tahir Siddiqui Dawn, 13, 03/05/2020)

### **'70% infrastructure must be environment friendly by 2050'**

At least 70 per cent of the infrastructure around the world should be environmentally sustainable by 2050, insisted speakers during a workshop organised by the World Wildlife Fund for Nature-Pakistan (WWF-P).

The three-day virtual workshop, titled 'Sustainable Infrastructure and Greening the Belt and Road Initiative,' is aimed at reviewing and establishing WWF's global sustainable infrastructure framework, with particular focus on energy and maritime and industrial infrastructure.

"As we move through these extraordinary times of multiple global shocks hitting at once, we know the future will not look the same as it did a few months ago," observed WWF-United States sustainable infrastructure vice-president Kate Newman, explaining the need to develop sustainable infrastructure. "It is hard to predict what would be altered forever [or whether] people would fall back on old practices," she said, "but future infrastructure demand will certainly change."

According to Newman, "It will be crucial to meet these demands with a focus on sustainability rather than following the habits of the past."

In line with this argument, Special Adviser to the Prime Minister on climate change Malik Amin Aslam stated that infrastructure was the backbone of sustainable development in Pakistan.

For this reason, Pakistan is working towards making energy, water, transport and even building systems sustainable, he elaborated, adding that the government was making all possible efforts to increase the country's forest cover and promote alternative energy solutions to meet energy requirements.

Aslam further stated that the government was also committed to optimising the use of nature-based infrastructure, as a means to conserve biodiversity and critical ecosystems in the country.

Speaking with particular reference to the Belt and Road Initiative (BRI), WWF- China chief executive officer Sze Ping Lo shed light on the opportunities and challenges of making infrastructure sustainable post-Covid-19.

"Due to a recession in the global economy and restrictions on the flow of supplies and workers, we have seen industrial production slowing down and related pollution dropping," he said, adding that while some infrastructure projects were delayed or suspended as a result, more opportunities for working on sustainable development would present themselves in the future.

WWF-P director-general Hammad Naqi Khan, who also spoke on the occasion, explained that the objective of the workshop was to ensure that infrastructure services fell in line with sustainable development goals and, in effect, able to halt and reverse the unprecedented loss of biodiversity, putting nature on a path to recovery for the benefit of people and the planet.

He stressed that under the looming threat of climate change, a shift towards sustainable infrastructure was the need of the hour. (By Newspaper's Staff Reporter The Express Tribune, 05, 08/05/2020)

### Heatwave

While there is nothing surprising about the weather being hot in May and June, it is the phenomenon of global warming that sets alarm bells ringing when a heatwave is forecast. So far this year, Karachi has already witnessed one short spell of heatwave from May 5 to 9, and now the Met Office has forecast another spell between yesterday and May 22, with mercury shooting as high as 40 to 42 degrees Celsius. The weather will be hot and dry with hot winds blowing during the day, but sea breeze would resume in the evening making the weather pleasantly tolerable.

The Met Office has advised people to take precautions in order to protect from heatstroke: avoid coming out in the sun from 11pm to 4pm; wear lightweight and lightshade clothes; increase the intake of fluids and fruits; and above all drink plenty of water. Heavy and difficult-to-digest food should be avoided. Efforts should be made to prevent the stomach from getting uncomfortably overloaded. Some people tend to stuff their bellies with food uncomfortably full especially during the fasting month of Ramazan, in the hope of their will power aiding in digestion. Gluttony is a sin, a secret one though. Eating light and easily digestible food is also necessary because of the coronavirus pandemic. These are bad times for big eaters.

The present prediction revives the sad memories of the Karachi heatwave of 2015. In that year in June, a severe heatwave had struck Karachi and other places of Sindh. Temperature had soared to 49 degrees Celsius in Karachi and even higher. Then too it was Ramazan. More than 2,000 people had died from heatstroke and exhaustion, and most of the deaths had occurred in Karachi. The majority of the dead were construction workers and those who work in the sun under the open sky. Many workers died because water was not available at hand. This unpleasant experience should not be forgotten. (By Editorial The Express Tribune, 14, 17/05/2020)

### Study raises questions about environment impact of Thar coal

"Coal energy is dirty energy. It is dirty as well as harmful energy that leads to health hazards, loss of livelihoods, further poverty, loss of lives, destruction of natural resources, loss of biodiversity and the massive displacement of indigenous people due to all these things," said Mohammad Ali Shah, chairman, Pakistan Fisherfolk Forum (PFF).

He was speaking during the launch of Air Pollution, Health and Toxic Impacts of the Proposed Coal Mining and Power Cluster in Thar, Pakistan, a study conducted by the Centre for Research on Energy and Clean Air (CREA), and conducted online via Zoom Meetings by the Alliance for Climate Justice and Clean Energy (ACJCE) on Friday.

"It is not that different from forced displacement. After all, how will the people carry on living at a place where their water sources have been compromised along with the polluting of the air they breathe, where the common grazing lands of their animals too have been encroached upon? But this is what is going on thanks to the coal power project in Tharparkar," he said, adding that in order to end the sufferings of the Thari people, the government should look towards adopting renewable energy projects while stopping the mining and import of coal for power generation.

The study looks at the consequences of mining and power production in Thar over an operating period of 30 years by examining coal blocks one, two and six, using the data provided by companies responsible for mining and power production.

Its findings show that Thar will be a major air pollutant and mercury and CO2 emission hotspot in South Asia, which is expected to be the cause of 29,000 air pollution-related deaths, 40,000 asthma emergency room visits, 19,906 new cases of asthma in children, 32,000 premature births etc.

Some 1,400kg of mercury per year is expected to be deposited from the nine coal plants that have been studied. And 320kg of this will be deposited in the immediate vicinity, a massive public health risk to the 100,000 indigenous people living in the project areas. The report also indicates a range of failures by the environmental impact assessment (EIA) agencies.

There are errors and omissions in the data used in EIA reports of two coal power projects in block-II and one in block-VI as well as violations of the Sindh Ambient Air Quality Standards and guidelines of the World Health Organisation and the International Finance Corporation as they failed to take into account the mercury pollution, which is perhaps the most dangerous pollutant in coal power production.

"Since Pakistan is already suffering from air pollution levels that are among the highest in the world, the emissions induced by the coal mines and power plants of Thar will further reduce life expectancy in the country and increase the vulnerability of its citizens to the Covid-19 pandemic," said Lauri Myllyvirta, the lead analyst of CREA.

"One-fifth of the levels of mercury that will be emitted by the coal power plants would be deposited into land ecosystems in the region. Most of the deposition would take place onto cropland and increase the mercury concentrations in crops," he added.

"Given the actual incidences of legal non-compliance and misreporting involved in social and environmental impact assessments, land surveys, land acquisition and compensation and the monitoring processes adopted for development of Thar coal mines and power plants, what the study reveals is just a proverbial iceberg of misleading the public through data manoeuvring," said advocate Zubair Ahmad Abro of Alternative Law Collective, who has been fighting a legal battle for the communities adversely impacted by coal power projects in Thar.

(By Shazia Hasan Dawn, 14, 30/05/2020)

### **Threat of urban flooding**

In a recent statement, the Karachi mayor has said the Karachi Metropolitan Corporation does not have the required funds to clean storm-water drains before the start of the rainy season. He has also pointed out that most drains in the city are choked and if they are not cleaned before the rainy season begins, the city will witness urban flooding. Last year, Karachi had had several spells of heavy rains, resulting in scenes of urban flooding. The recent statement of the KMC mayor and the nightmarish experience of last year should be sending shivers down the spines of Karachi residents. According to the mayor, the Sindh government paid the KMC Rs437 million in 2016, when an administrator was at the KMC helm, and later Rs1.272 billion were to be paid to the KMC in 2017-18 on the directives of the Supreme Court, but Rs722 million has not been paid. The World Bank is to give the KMC Rs8 million for cleanliness. The disbursement of this amount is, however, getting delayed, Mayor Waseem Akhtar has urged the provincial government to help expedite the matter.

The present mayor has continuously been complaining of lack of funds with the KMC. A tug of war has long been going on particularly between the local governments of Karachi and Hyderabad, and as a result the common people are suffering. Karachi, though, contributes the largest chunk to the federal and provincial revenues. The mayor claims Karachi and other urban areas of Sindh are being subjected to official neglect. There are many who subscribe to this view. Civic infrastructure in Karachi has crumbled. It suffers from water and power shortages, roads and gutters are in a state of neglect, and this sprawling city of over 20 million has no public transport worth the name. So in view of the fast approaching rainy season, all tiers of government need to join hands to protect Karachi residents from a repetition of last year's bitter experience.

(By Editorial 14, 23/06/2020)

### **Murad reviews rain emergency measures across Sindh**

Chief Minister Syed Murad Ali Shah on Wednesday directed the local government department to work out a detailed plan for desilting, cleaning and repair of natural storm-water drains so that funds could be released in time.

"I want all deputy commissioners, local bodies and water boards to be taken on board while envisaging a rain emergency plan so that full and final action could be taken," he added.

This he said while presiding over a rain emergency meeting here at the CM House. The meeting was attended by Local Government Minister Nasir Shah, Chief Secretary Mumtaz Shah, Karachi Commissioner Iftikhar Shallwani and other officials. The divisional commissioners and LG representatives, mayors/chairmen across the province joined the meeting through video link.

#### **Promises funds for KMC**

Karachi Mayor Wasim Akhtar told the chief minister that he was facing a financial shortfall to carry out desilting of drains.

At this, the chief minister advised the mayor to enhance KMC financial resources, but said that the Sindh government would cover the shortfall and finance the desilting work.

*Asks KMC to enhance financial resources; says over 1,400 test positive for coronavirus in province*

The chief minister directed the LG secretary to send him financial requirements through the finance secretary.

Mr Shah said that an \$11 million World Bank project was in the pipeline and most probably it would start within the next four months under which almost all the major drains of Karachi would be lined.

"We would construct fencing around the nullahs so that no encroachment could take place," he said and added almost all the newly constructed major roads of the city had storm-water drains along them, therefore he was sure that rainwater would be cleared out. The meeting was told that some civil works of different drains in Karachi, Hyderabad and Sukkur were required.

The LG secretary told the CM that taking all the deputy commissioners on board he had sent a summary of Rs229m to the chief minister.

The CM directed the mayor and commissioner of Karachi to work out a plan to avoid last year's Saadi Town-like situation. He directed the mayor to expedite ongoing work on Mehran Nullah so that it may not overflow again and wreak havoc in Saadi Town.

Mr Shah also directed the Karachi commissioner to coordinate with K-Electric authorities for proper and uninterrupted power supply to the pumping stations of the KWSB.

The meeting decided that all the deputy commissioners would generate their requirement of suction machines, generators, pipes, etc, and send the same to Provincial Disaster Management Authority (PDMA) so that it could arrange the same.

It was also decided that hoardings, unnecessary cables and such other display boards would be removed before commencement of the monsoon.

#### **Rs70m needed for desilting in Hyderabad**

The Hyderabad commissioner told the chief minister that Rs70m was required for rain emergency of the city. Under the planned works, seven drains would be desilted, cleaned and repaired.

The CM said that although he would release the funds in the first week of July, the commissioner should start the work.

He said that work on all the seven drains must be started at once. He said that the Hyderabad Electric Supply Company (Hesco) had to be prepared to ensure uninterrupted power supply to the pumping machines of Wasa so that rainwater could be disposed of.

#### **Situations of other divisions reviewed**

The chief minister directed the commissioners of Shaheed Benazirabad, Mirpurkhas, Sukkur and Larkana to focus on cleaning of municipal and town committees' nullahs and sewerage system.

The chief minister was told that low-lying areas had been identified where rainwater mostly accumulated. Desilting of natural drains had been started.

The CM directed the administration to speed up the work as the monsoon was approaching fast.

When the Sukkur commissioner pointed out the issue of cattle colonies being set up for sacrificial animals, the CM said that there would be no cattle colony anywhere in Sindh.

He directed the chief secretary to issue necessary instructions and direct the district administration to devise an alternative plan for the sacrificial animals' market.

#### **1,414 new Covid-19 cases in Sindh**

In a separate development, the CM said on Wednesday that another 1,414 Covid-19 cases were detected by testing 7,400 samples, while 37 more patients died overnight lifting the death toll to 1,161, or 1.5pc.

According to a statement issued here from the CM House, the detection rate was 19.2pc. "So far 402,687 samples have been tested which diagnosed 74,070 cases all over Sindh," he added.

He said that overnight 1,028 more patients recovered and the number of patients recovered so far has reached 39,429, which constituted 53.5pc recovery rate.

At present, he said, 33,480 patients are under treatment, of them 31,974 in home isolation, 49 at isolation centres and 1,457 at different hospitals.

He said that out of 1,414 new cases, Karachi had 644 new cases —185 in East, 184 in South, 97 in Korangi, 70 in Malir, 68 in Central and 40 cases in West.

The CM said that Hyderabad had 74 new cases, Mirpurkhas 33, Sukkur 30, Ghotki 27, Shaheed Benazirabad 25, Larkana 18, Thatta and Shikarpur nine each, Badin and Sanghar eight each, Khairpur seven, Naushahro Feroze, Dadu and Jamshoro six each, Umerkot four, Sujawal and Jacobabad three each, Tando Allahyar and Tando Mohammad Khan have one case each.

(By Newspaper's Staff Reporter Dawn, 13, 25/06/2020)