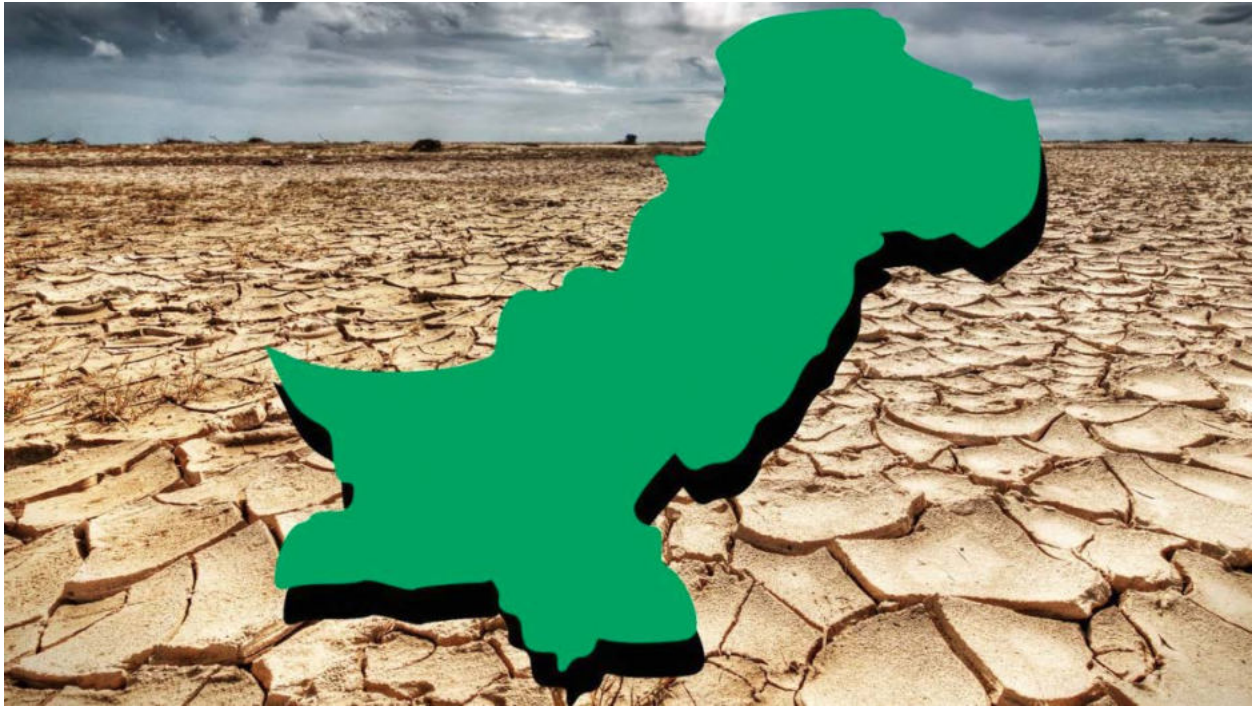


# NEWSCLIPPINGS

**JULY TO DECEMBER 2024**

## CLIMATE CHANGE AND ENVIRONMENT



### Urban Resource Centre

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### Midwife on the frontline of climate change on Karachi's islands

On a densely populated island off Karachi, a group of pregnant women wait in a punishing heatwave for the only midwife to arrive from the mainland.

Each week Neha Mankani comes by boat ambulance to Baba, an old fishing settlement and reportedly one of the world's most crowded islands with around 6,500 people crammed into 0.15 square kilometres (0.06 miles).

Climate change is swelling the surrounding seas and baking the land with rising temperatures. Until Mankani's ambulance launched last year, expectant mothers were marooned at the mercy of the elements.



At the gate of her island clinic waits 26-year-old Zainab Bibi, pregnant again after a second-trimester miscarriage last summer.

"It was a very hot day, I was not feeling well," she recalled. It took her husband hours of haggling with boat owners before one agreed to ferry them to the mainland — but it was too late.

"By the time I delivered my baby in the hospital, she was already dead," she said.

#### Summer heat hits pregnancies

Heatwaves are becoming hotter, longer and more frequent in Pakistan, one of the countries most vulnerable to extreme weather conditions resulting from climate change.

In May and June, a string of heatwaves have seen temperatures top 52 degrees Celsius for days.

"Climate change doesn't affect everyone equally," 38-year-old Mankani told [AFP](#) during the 20-minute boat journey.

"Pregnant women and newborns, postpartum women are definitely more affected," she said.



"In the summer months, we see a real increase in low-birth weights, preterm births, and in pregnancy losses." Women are at higher risk of stillbirth when exposed to temperatures above 90 per cent of the normal range for their location, according to experts [published](#) in the British Journal of Obstetrics and Gynaecology last year.

"Before we didn't have the evidence, a lot of it was anecdotal," said Mankani.

"But we've been seeing the impact of climate change for a while." In Pakistan, 154 women die for every 100,000 live births — a high maternal mortality rate shaped by socioeconomic status, barriers to healthcare access and limited decision-making powers, especially among young women, according to the United Nations.

Mankani began her 16-year career as a midwife in a Karachi hospital, where she worked at a high-risk ward, often treating women from the five islands dotted off the coast.

She founded the Mama Baby Fund in 2015 and set up the first clinics on the islands for expectant and new mothers. "Everyone opened their homes to us," she said.

The free 24/7 boat ambulance followed last year, crucially equipped to navigate rough seas in a region increasingly prone to flooding.

Sabira Rashid, 26, gave birth to a girl she named Eesha two months ago, following one stillbirth and a miscarriage at seven months — painful losses she blames on not reaching the hospital in time.

"At the dock, they make us wait because they don't want to ferry only two or three people. They told us to wait for more passengers, no matter what the emergency," she said.

#### Rising, dirty waters

Girls on the impoverished islands are often wed as young as 16, with marriage considered the source of security for women in an area where polluted water is killing off the fishing trade.

"Most of these girls don't know how to take care of themselves, they get severe infections from the dirty water they are constantly exposed to," said Shahida Sumaar, an assistant at the clinic, wiping the sweat from her face.

The 45-year-old said basic advice is offered to young mothers during heatwaves, such as using dry, clean towels to wrap their newborns in, washing their breasts before feeding and staying hydrated.

But with no access to running water and little electricity, warding off heat stress is a challenge for all the islanders.

Women are at particular risk, typically responsible for cooking over open flames in small rooms with no fans or proper ventilation. Ayesha Mansoor, 30, has four children and lives on the fringes of Baba, with just four to five hours of electricity a day.

The path to her home is covered by a carpet of discarded plastic bags which disappear underwater when the tide is high.

“Only those who have solar can deal better with the heat. We can’t afford it,” she said, swatting away flies that settled on her baby.

Mariam Abubakr, an 18-year-old assistant at the clinic who has grown up on the island, hopes to become its first full-time midwife. “I used to wonder why we women didn’t have any facilities here, a clinic that could just cater to us,” she said.

“When Neha opened her clinic, I saw a way that I could help the women of my community. “  
(By AFP Dawn, 03/07/2024)

### **Murad for coordinated steps to deal with emergencies during rains**

Chief Minister Syed Murad Ali Shah on Monday directed the Provincial Disaster Management Authority, local government, irrigation and related departments to establish close coordination and take the navy in the loop to manage anticipated urban and riverine flooding in view of the upcoming wet spell.

“I want proper coordination between all the concerned departments and agencies, including law enforcement and the Pak Navy so that timely action can be taken in case of any emergency,” he told participants in a meeting held here to review the preparedness for the monsoon season.

The chief minister instructed the departments concerned to develop a contingency plan to manage anticipated riverine floods. Provincial ministers Syed Sardar Shah, Saeed Ghani, Mohammad Bux Khan Mahar, Jam Khan Shoro and Makhdoom Mahboob, Chief Secretary Asif Hyder Shah, Chief Meteorologist Dr S Sarfaraz, a Pakistan Navy representative and commissioners of different divisions attended the meeting via video link.

Dr Sarfraz briefed the CM that the monsoon typically begins in Pakistan on July 1 and continues until mid-September. He outlined various factors influencing monsoon rains in the country and mentioned that the Copernicus Climate Change Service’s multi-model ensemble forecast for July to September indicated “wetter-than-average precipitation with a 60-70 per cent probability”.

The chief minister asked the departments concerned to take precautionary measure against the expected urban flooding in the city, saying that the provincial government had built eight small dams in the basin of Lat Nai, a natural drain on the upper side of the Northern Bypass, to address the issue of urban flooding.

He said that most of the rainwater in Thado Nai was stored in Thado Dam. “The excess water from the dam and Konakar Nai flows into the Malir River near Shafi village after crossing the M9 motorway near Dumba Goth,” he said.

Mr. Shah also noted that the rainwater from Lat Nai, after overflowing from Lat Dam, affected Sadi Garden, Gulshan Usman, Sadi town, and other areas when it spilled over the M-9 motorway near the Northern Bypass during heavy downpours in Karachi. “To address urban flooding, the irrigation department has built eight small dams in the basin of Lat Nai, in addition to the existing dams,” he added.

The irrigation minister informed the meeting that the flood mechanism in the province was derived from three sources - the Indus River, hill torrents and the monsoon rainfall-induced floods.

He said that the Indus as known through the records, documented by Greek Army from 300-B.C to 1932, swung across the entire province and had built its’ surface. “The Indus today is in a comparatively tame state, and its bed is continuously rising with the sediment deposition due to low and short-duration floods increasing the vulnerability of flood-protection dykes.

### **Vulnerable points**

The irrigation minister told the meeting that at Guddu Barrage there were 10 vulnerable points, Sukkur Barrage Right Bank 22 points, Sukkur Barrage Left Bank 36 points and Kotri Barrage 28 points, adding that the emergency works were under execution along the river bunds.

The CM directed the irrigation department to inspect all its loop bunds, hill torrent bund and reservoir bunds such as Manchhar Containing Bund, Keejhar Lake Bund and Chotiari Bunds.

He directed the irrigation department to speed up its ongoing works along the bunds inspect all the vulnerable points and start strengthening them.

Rehabilitation Minister Makhdoom Mahboob told the CM and said that the riverine flood had been ascertained through Seasonal Hydrological Forecast, adding that there was a 95 per cent chance of high flows in the Indus River.

“Rains in July may be violent accompanied by thunderstorms, and heavy showers of short duration. However, spells in August are likely to be calm, connected, consecutive and long duration therefore, more dangerous because natural depressions, drainage systems and soil permeability are likely to be saturated with earlier spells held during July,” he said and added that the PDMA had made necessary preparations in advance.

(By Newspaper’s Staff Reporter, Dawn, 13, 09/07/2024)

### **32 found dead in Karachi over two swelteringly hot days**

More than 30 bodies were found from different parts of Karachi over the past two days, when the mercury crossed 40.5 degrees Celsius, with extremely high levels of humidity, taking the “feels-like temperature” beyond 50 degrees in the metropolis.

The sweltering weather has raised fears that the majority of the deaths might have been caused by extreme heat, charity bodies and health experts said.



Interestingly, the health department didn't sound too worried about the situation and said that only "two people" died due to heatstroke on Wednesday, while reporting no deaths related to heat, on Thursday.

However, the department said that over two days, a total of 118 people were brought to different hospitals of the city who had suffered heatstroke and all of them were discharged after proper medical treatment.

The two major charities — Edhi Foundation and Chhipa Welfare Association — said on Thursday that during the past two days, at least "32 bodies presumably died of persisting extreme weather conditions" in the metropolis were found.

They added that most of the deceased appeared to be drug addicts whose bodies were recovered from roadside/footpaths, playgrounds and garbage dumps.

An Edhi Foundation spokesperson said that they received four bodies on Wednesday and six on Thursday from various localities.

Chhipa spokesperson Shahid Husain said their ambulances received 13 bodies on Wednesday and nine more on Thursday. He said all of them seemed to be drug addicts whose cause of death was "not known".

Although the health department data didn't corroborate with the numbers shared by the charities, the medical experts have little doubt on the claims of Edhi and Chhipa.

They also questioned the mechanism of healthcare operation in the city where the government, despite repeated demands, had failed to put a system in place to determine the cause of death of any person when such a huge number of bodies were found in just two days.

"It's so unfortunate that there's no system in place at the government to determine the cause of death when you are seeing that something unusual is happening," said Dr Qaiser Sajjad, former secretary general of the Pakistan Medical Association (PMA).

"As a common practice, you will only find written 'cardio respiratory failure' only to meet the formality of cause of death. You would never find the exact and precise information which is very crucial as to whether a person died of diabetes, hypertension, cardiac arrest, dehydration or heath stroke. We have demanded so many times but the government has not created any system which gives that particular and crucial info which leads to key policy decision."

He said with such "harsh weather", it was predominantly believed that such a huge number of bodies found in the city was due to extreme hot and humid conditions.

Secondly, he added, those who died mostly were homeless people who're more vulnerable to heatstroke and dehydration under such temperature due to little access to shades, better atmosphere and clean drinking water.

"In situation like this when natural calamity hits or any other health challenge arises, the significance of data determining the cause of death increases manifold," said Dr Sajjad, who's also a renowned E&T surgeon.

"If you don't establish such a system then obviously speculations and confusions will fill in the space. So the data plays crucial role in building an effective healthcare system and meet such challenges which we are facing today. We have seen in during Covid-19 days that how the data helped devising policies which helped us saving lives."

The Ashura procession on M. A. Jinnah Road on Wednesday was another indicator of the extreme heat conditions.

The spokesman for Majlis Wahdat e Muslimeen (MWM) confirmed that dozens of people, including men and women, suffered heatstroke and dehydration, who were timely taken care of.

"Like every year all possible medical care arrangements were made for the Ashura procession," he said.

"However, extra care and arrangements were put in place this year due to extreme weather conditions. Our medical teams and volunteers handled dozens of people who suffered heatstroke and dehydration. All of them were given timely care so Alhamdolillah situation remained under control. But yes, it was a challenge this year due to extreme hot and humid weather."

### **Weather**

The extreme hot and humid weather, in fact, tested patience of Karachiites across the city.

Though the city remained overcast during most of the hours on Wednesday and Thursday, the humid conditions with no breeze made the weather conditions unbearable for many in several city areas. The data shared by the Met office testifies the Karachiites' misery.

"On Wednesday, the maximum temperature was recorded 40.5 degrees Celsius with 66 per cent humidity [count of moisture in the air]," said Dr Sardar Sarfaraz, the Chief Meteorologist of Pakistan Meteorological Department (PMD). "With such high temperature and humid conditions when the sea breezes are blocked due to low pressure area at times the feels-like temperature touched nearly 53 or 54 degrees Celsius. Almost the same conditions prevailed on Thursday when temperature dropped to 38.2 degrees Celsius with 68 percent humidity. The feels-like at the peak time touched 50 degrees Celsius."

Another significant number was recorded night between Wednesday and Thursday when the minimum temperature was recorded at 32 degrees Celsius with 80 per cent humidity. The Met office says that 32 degrees Celsius has been recorded thrice this month and is a new highest night minimum temperature for July. The situation, however, started turning after second half of Thursday.

"The city witnessed little relief when the sea breeze started setting in with speed of 12 nautical miles per hour," said Mr Sarfaraz of the Met office.

"The situation would improve gradually. The current weather condition with little relief would stay for a day or two. After July 22 we see that the impact of low pressure area which has blocked the sea breezes would fizzle out. We can also witness some rains amid this new emerging weather conditions."

(By Imran Ayub Dawn, 13, 19/07/2024)

### Urban flooding

THE provincial authorities have been taking precautionary measures, or so we have been told, to cope with emergency situations that could result from the extreme monsoon rains expected this year. Yet, millions of city dwellers, especially across Punjab and KP, must brace themselves for urban flooding and flash floods over the next several days, as warned by the NDMA. Over the last few decades, Pakistan's cities — big and small — have experienced extreme episodes of rain-inflicted flooding that has claimed lives and destroyed property. This is because our cities are not prepared to deal with the unpredictable rains that are becoming a routine feature of the monsoons due to climate change. And temporary measures can only partially mitigate the damage from flooding.

Urban flooding is not a phenomenon specific to Pakistan. Cities even in the developed world are confronting the issue, as global warming is inducing climatic changes and causing more and more extreme weather events. Urbanisation itself, particularly unplanned urbanisation in developing countries such as ours, has created the perfect conditions for pluvial flooding. This is necessitating solutions to control and mitigate the effects of urban flooding, with governments building and rebuilding climate-resilient urban infrastructure to protect their people and the economy from damage. This is the area on which Pakistani authorities must concentrate. Unfortunately, we are still focusing on firefighting rather than diverting our resources to better urban planning. Pakistan is among the top countries most impacted by climate change, which is another reason why we should be instituting 'preventive measures', such as investing in urban governance, storm-water drainage, storage and management systems, as well as solid waste disposal management. However, climate-resilient urban development is not possible under the existing political and administrative system. Building a climate-resilient urban future requires a strong and efficient, as well as financially empowered local government system. Without that, we will only be putting out fires and not preventing them.

(By Editorial, Dawn, 06, 19/07/2024)

### What lessons can Karachi learn from big cities to tackle heat?

SCORES of people died in Karachi due to the recent heatwave, and there seems no end to it. Heatwave in Karachi can be compared to the 1,300 deaths during recent Haj due to the excessive heat. The Saudi health minister said that the deaths occurred among pilgrims who walked long distance under scorching sun, without water and shade facilities.

In Karachi, the victims were not able to access the heat shelters, as probable none exist, and this caused their deaths.

According to Ollie Jay, a professor of heat and health at the University of Sydney in Australia, heat kills in three ways. First is the heatstroke. When inner body temperature gets too hot, the body redirects blood flow toward the skin to cool down. But that diverts blood and oxygen away from the stomach and intestines, and can allow toxins normally confined to the gut area to leak into circulation.

That sets off a cascade of effects, like blotting around the body and multiple organ failure and, ultimately, death. The bigger killer in heat is the strain on the heart, especially for people who have cardiovascular disease. It again starts with blood rushing to the skin to help shed core heat. That causes blood pressure to drop. The heart responds by trying to pump more blood to keep a person from passing out. Heart is forced to do a lot more work than it usually does. For someone with a heart condition, the heart function can cave in and the person will die.

*'Cooling centres', tree plantation along streets and painting concrete surfaces white are steps taken world over to fight heatwaves*

Another way is dehydration. As people sweat, they lose liquids to a point that can severely stress kidneys. Many people may not realise the danger. Dehydration can progress into shock, causing organs to shut down from lack of blood, oxygen and nutrients, leading to seizures and death. Dehydration can be very dangerous and even deadly for everyone if it gets bad enough. It is especially dangerous for those with medical conditions and on certain medications. Dehydration also reduces blood flow and magnifies cardiac problems.

Heat also affects the brain. It can cause a person to have confusion, and the person suffering from the heat is unlikely to recognise it. And it becomes a bigger problem as people age.

Certain medications may increase the severity of heat. Medications can affect a person's perception of heat and interfere with internal thermostat. They can alter the body's ability to redirect blood flow to the skin, a key way that it cools itself.

Antidepressants may increase sweating, increasing the risk of dehydration. Tricyclic antidepressants, may decrease sweating, making it harder to cool off. Antipsychotics may impair sweating and alter the body's internal thermostat.

Anticholinergic drugs, a large category of medications commonly used to treat an array of conditions such as urinary incontinence, overactive bladder, allergies, and Parkinson's disease, may interfere with sweating and the body's internal thermostat. They may also reduce blood flow to the skin. Patients with heart disease may be prescribed multiple medicines, including diuretics and ACE inhibitors. Such drugs can cause dehydration, affect kidney function, and limit the body's ability to redirect blood flow.

Dehydration can increase the blood levels of some medications. Some diabetes medications, including insulin, can lose their effectiveness in hot weather.

A major life-threatening consequence of some medications is that, they cause weakness, agitation, confusion, and impaired perception of heat. And all these symptoms will lead to the death.

#### **Heat management for Karachi**

Karachi can learn from what other cities have done to tackle heat. Many major cities, like New York, Los Angeles, Boston, Chicago, Portland, Seattle and Toronto have cooling centres, an air-conditioned public or private place where people can cool off.

In Bangkok, there are informal cooling centres, meaning that the large air-conditioned shopping malls which double as cooling centres. In Bangkok, there are many such malls.

Phoenix has mobile medical teams, which provide cooling facilities and deliver lifesaving IV hydration in extreme heat. In Miami, the Miami-Dade County staff goes out and distribute cold water bottles and other supplies to people in distress, and help them to manage high temperatures. When the heat become excessive, the county staff provides cooling towels, helps coordinate water donations, hands out maps of where cooling sites are located, and even offers transportation.

Many cities have prepared heat maps, indicating locations that are very hot, and very vulnerable from a human perspective. Once identified, the municipal staff goes out and paints the hottest streets with a special cool pavement coating. The paint reflects the sun heat, rather than absorbing it.

Karachi has almost zero coverage of green space. A person standing at the Empress Market, Saddar, and a victim of heatstroke, is exposed to excessive heat from the engines of cars and buses, and will have nowhere to go to access green shades.

Installing significant green spaces, planting more trees along streets, and painting concrete surfaces white are just a few of the simple adjustments Karachi can take.

New York has a major programme of painting the roof white with white silicone reflective paint. New York's Coolroofs programme has painted over 10 million square feet of roof over the last 10 years. Painting parking lots white also makes a huge difference to heat reduction.

A 2022 study from China exploring the cooling effects of urban parks concluded that parks heat up more slowly than urban regions during the day, and that green public spaces containing water had a better cooling effect both inside the park and in the surrounding area.

The city of Medellín in Colombia has demonstrated the cooling power of trees. Unplanned development had eliminated green spaces and caused temperatures to rise 6°C above average. To combat this, between 2016 and 2019, 36 corridors of trees and other vegetation were planted along major roads and waterways, with vulnerable neighbourhoods prioritised. Covering more than 36 hectares, these areas have already seen temperature reductions of up to 4°C.

Paris has an excellent interlinked network of cool islands where people can seek relief. These islands are linked by naturally cool tree-covered walkways.

When fossil fuel is burnt in power plants or in vehicles, carbon dioxide is produced. This invisible gas builds up in the atmosphere and traps the Sun's warmth near the Earth's surface. As the people keep on burning fossil fuel, the carbon dioxide adds a little bit more to the temperature. As temperatures rise, the planet becomes hot, leading to extreme heat.

Heat is dangerous. When extreme heat is combined with high humidity, the human health risks multiply. Warming makes ocean water expand, and this leads to sea level rise. Rising sea levels threaten to displace as many as two billion people by 2100.

Since vehicles have increased multi-fold in cities, the transportation has become a major source of extreme heat.

Many studies have shown that it is nearly impossible to reduce heatwaves, if the transportation sector is not decarbonised, meaning reducing vehicles, switching to electric vehicles, and having efficient transit transportation. Can Karachi achieve that target?

To the good luck of Sindh, incumbent Chief Secretary Asif Hyder Shah was formerly the federal secretary of the ministry of climate change and environmental coordination. With that experience he can lead the programme of providing facilities to manage the heatwaves in Karachi.

(By F.H Mughal Dawn, 13, 22/07/2024)

#### **Drive to plant 140,000 trees in a fortnight**

The city administration has decided to launch a plantation campaign as a solution to mitigate the effect of heatwaves in the metropolis.

A meeting, chaired by Commissioner Syed Hassan Naqvi at his office on Monday, decided that the campaign would be launched within a fortnight.

"The drive aims at planting 140,000 trees with the cooperation of the forest department, municipal corporations and private organisations. The deputy commissioners of the city's seven districts will make arrangements to plant 10,000 trees each," said a press release.

The commissioner urged institutions to cooperate and make the campaign a success, which will help improve the city's environment and support the government's efforts to fight climate change.

The commissioner's office has started identifying locations and spaces for tree plantation. It has been decided to plant only environmentally friendly trees.

The meeting was attended by representatives of various organisations, including the forest department, Karachi Metropolitan Corporation, cantonment boards, DHA, different development authorities, Port Qasim Authority, town administrations, etc (By Dawn Reporter, 14, 23/07/2024)

### **Zardari asks Sindh to devise plan to stop urban flooding in Karachi**

President Asif Ali Zardari on Monday directed the Sindh government to devise a comprehensive plan to prevent urban flooding in Karachi by adopting a sustainable and long-term strategy based on the best international practices for sewage and storm water management.



He expressed these views while chairing a high-level meeting at Aiwan-i-Sadr in the capital on saving Karachi from urban flooding and environmental degradation, and for promoting sustainable water resource development.

Sindh Chief Minister Syed Murad Ali Shah, Local Government Minister Saeed Ghani, Karachi Mayor Barrister Murtaza Wahab, Sindh Chief Secretary Syed Asif Hyder Shah, Karachi Water and Sewerage Corporation Chief Executive Officer Syed Salahuddin had specially flown to Islamabad to attend the meeting.

Other participants include Adjutant General Lieutenant General Muhammad Asim Malik, senior government officials, local and international water management experts.

The president was given a comprehensive presentation by the experts who proposed various solutions to address the challenges of urban flooding and sewage in Karachi on the pattern of the tunnel sewer systems of Washington, super sewer project of London and deep tunnel sewerage system of Singapore.

During the briefing, it was proposed that a network of small and large sewer tunnels under existing roads in high-flood zones of Karachi might be developed.

It was highlighted that underground tunnelling using modern techniques would not disturb the public, city traffic and land ownership.

The experts informed that Karachi generated almost 450 million gallons per day (MGD) of sewage. They said that sewage and storm water were collected in small and large open drains which fell into the Lyari and Malir rivers and were released untreated into the sea, polluting the marine ecosystem.

The meeting was apprised of the limitation of the existing network of drains which absorbed around 50 per cent of the rainwater under normal circumstances. However, the excess water that was not absorbed by the system caused urban flooding, the experts said.

Speaking on the occasion, President Zardari underlined the need for completing a feasibility study to control flooding in Karachi through tunnelling options within three months.

He said Karachi and its coastal areas needed to be made clean and brought on a par with other metropolitan cities of the world.

The president said that keeping in view of significant environmental impacts, the government of Sindh should approach international donors to seek environmental financing for the project.

He said the construction of the wastewater treatment system would also help supply treated water to Balochistan for agriculture, besides promoting the fisheries sector.

The president remarked that the city of Hyderabad was also facing urban flooding and sewage issues that also needed to be addressed on a priority basis.

(By Syed Irfan Raza Dawn, 13, 23/07/2024)

### **Climate change education initiative launched**

From devastating floods to intensifying cyclones and soaring temperatures, the Sindh province in recent years has faced severe climate-related challenges.

The events like the 2010 and 2022 floods have affected millions of people and highlight the urgent need for proactive climate resilience measures in the province.

Recognising this critical need, Sindh Community Foundation (SCF), dedicated to environmental causes, has partnered with the Education and Literacy Department of Sindh. They are launching a pioneering initiative to combat the adverse impacts of climate change through education. The targeted districts include Thatta, Badin, Sujawal, Jacobabad, Matiari, Dadu, Hyderabad, Tharparkar, Sanghar, and Khairpur.

The signing ceremony marking the official commencement of this initiative was attended by notable figures including Sindh Education and Literacy Department Secretary Zahid Ali Abbasi, Curriculum Wing Chief Advisor Dr Fouzia Khan, representative from Sindh Teacher Education Development Authority (STEDA) Rasool Bux Shah, and SCF Executive Director Javed Hussain. Speaking on the occasion, Zahid Ali Abbasi emphasised the government's proactive stance in integrating climate and

environmental concepts into the educational landscape. He stressed the transformative impact of instilling climate resilience and environmental stewardship in children from a young age, noting initiatives like tree plantation drives as pivotal for future environmental sustainability.

Curriculum Wing Advisor Dr Fouzia Khan mentioned the critical link between climate change and educational equity, particularly for vulnerable communities. She underscored the imperative to build a resilient educational system capable of withstanding the disruptive impacts of climate change.

An acclaimed climate change activist, Javed Hussain, placed the initiative within the broader context of global sustainability goals, emphasising its alignment with the 2030 Sustainable Development Agenda.  
(By Newspaper's Staff Reporter, The Express Tribune, 05, 23/07/2024)

### **Four picnickers drown, as many rescued at Karachi beaches**

Four people, including two women, drowned in separate incidents while swimming in the sea at Turtle Beach and Seaview respectively on Tuesday, police and rescue services officials said.

In the first incident, a man and two women drowned while two other women were rescued at the Turtle Beach.

Keamari SSP Faizan Ali told *Dawn* that a family from the Liaquatabad area went for picnic at the Turtle Beach. They were swimming in the sea when strong waves took them further into the sea. As a result, a Naureen Shera, 30, and a man, Arshad, 40, drowned while three women were rescued who had become unconscious.

They were taken to the Dr Ruth Pfau Civil Hospital Karachi where one of them, Asma Karim Bux, 40, also died during treatment. Remaining two women, Sobia Bashir, 30, and Zaiban Rais, 45, were admitted for treatment, added the SSP.

He said that all the deceased persons were relatives.

In the second incident, a teenager drowned while two others were rescued at Seaview.

SSP-South Sajid Amir Sadozai said three friends were swimming in the sea near a restaurant at Seaview but were swept away by strong waves. Divers managed to rescue two of them but the third one drowned, the SSP added.

He was identified as 18-year-old Danish. The body was shifted to the Jinnah Postgraduate Medical Centre for medico-legal formalities.

#### **'Extremely difficult to stop people from going into sea'**

The officials said there was a ban on swimming and the police took strict action against its violation, particularly on holidays. However, it was 'extremely difficult' for the police to stop people from going into the sea.

Besides, Keamari SSP Ali said police lodged FIR against the picnickers for violation of the ban but sometimes it triggered hue and cry by certain sections of society that 'injustice' was being done to people for enjoying a picnic at the beach.

He said there were policemen and lifeguards deployed at the beaches but somehow the picnickers managed to go inside the sea despite rough season and high tides.

Meanwhile, the Mauripur police arrested nine persons for swimming in French Beach and Turtle Beach and registered cases against them under relevant laws, said SSP Ali.

Karachi police chief Javed Odho while taking notice of the drowning of three persons at Turtle Beach ordered a departmental action against the Mauripur SHO over charges of negligence, a police spokesperson said.

Mr Odho also issued directions for strict action against the people for violating the ban on swimming at the beaches.

He also warned that strict legal action would be taken against concerned SHO/DSP if any person drowned in sea at Seaview, Manora and Hawkesbay beaches.  
(By Imtiaz Ali Dawn, 13, 24/07/2024)

### **Karachi vulnerable to urban flooding, heatwave disasters, moot told**

The city administration does not seem prepared to tackle issues like flooding during monsoon, heatwaves, tree felling and influx of population and, therefore, there is a need to rethink the entire master plan for Karachi to make it a liveable city.

These were the views of speakers at a programme — Safe Karachi Conference: Strengthening Urban Resilience —organised at the Institute of Business Administration's City Campus on Thursday.

The conference brought together speakers from various fields and government departments to discuss their vision for a safer and sustainable Karachi and its preparedness for disasters.

In one of the panel discussions, speakers focused on urban flooding and heatwave related risk preparedness and the shared responsibility of the government and citizens.

Journalist and environment activist Afia Salam while speaking of the unusually harsh weather the city has been experiencing for the past many weeks said there was a difference between a hot day and a heatwave. A heatwave, she said, was that in which the temperature remained higher than the normal for around a week.



And when a heatwave was going on, she said, people in Karachi often used wrong methods to tackle it. Using chilled water and sprays, which people used in heatwaves, were never advised by experts, she said and added that the right thing was to cover one's head, preferably with a wet piece of cloth.

Speaking of the 'mater plans' made to solve various issues of the city, she said seven such plans were made but none was implemented. Similarly, a heatwave management plan was also made in 2015 but it was not implemented.

She also spoke of other issues related to urban planning and flooding, saying that urban forest policy should be implemented and public parks should be developed to mitigate the effects of heatwave.

Besides all those, a "total rethinking" was needed on part of the city administration to resolve all such problems, she added.

Soha Macktoom, associate director at the Karachi Urban Lab, said the city was vulnerable to two main disasters: urban flooding and heatwave. She said that at present the city was not resilient to the disasters it was facing.

Katchi abadis, she said, were often blamed for encroachments but many commercial properties and government institutions were also doing the same, even affecting storm water drains.

She also stressed on identifying and studying particular needs for Karachi and its different areas instead of just copying solutions from other cities and introduce all those in the city's master plan.

Zubair Ahmed Channa, the director of the Solid Waste Emergency & Efficiency Project (SWEEP), spoke about efforts to improve the drainage system in the city.

Imdad Hussain, manager operations of the Provincial Disaster Management Authority, said a survey had been conducted for disaster response in all district of the province. He said efforts were being made to strengthen the collaboration with district disaster management authority.

The speakers also said that not planting trees in the city and cutting down those already existed was also contributing greatly to hot weather and the government did not seem to be much concerned about that.

Similarly, they were of the view that other cities and towns should be developed to decrease influx of people in Karachi and unless that was done, no plan would be affective to resolve the city's problems.

During the conference, the Alertli app was also launched. It aims to report safety hazards, including encroachments.  
(By Waqas Ali Dawn, 14, 26/07/2024)

### Extreme heat's toll

CLIMATE change is an urgent global crisis that has led to an increase in extreme weather events. In many regions, temperatures have risen, the water cycle has been disrupted, heavy rainfall, flooding, and sea levels have gone up. The 2021 assessment report of the UN Intergovernmental Panel on Climate Change issued a dire warning, stating that global surface temperatures had already risen by 1.1 degrees Celsius compared to the pre-industrial period. It also cautioned that the world may experience 1.5°C to 2°C of warming earlier than previously projected. With ongoing heatwaves in several countries, including Pakistan, that prediction seems to have already been achieved. Unprecedented temperatures are becoming more frequent, intense, and prolonged, with significant implications for public health and healthcare systems.

Climate change is not globally uniform and affects some regions more than others. It has already affected Sindh during the past 40 years. Upper Sindh's districts, where I was born, have warmed by up to 1°C across my lifetime. The hottest day of the year is, on average, 1.5°C hotter than before; the summers are sweltering and humid. Similarly, the impacts of climate change are not equal, affecting some groups more than others. Women and girls are affected by climate-induced disasters more than others, as the impact of extreme events is exacerbated by sociocultural and gender norms and traditions that are mainly biased against them.

"In summer, if they [men] want to kill us, they do not need to use a weapon and can get away with a murder easily by demanding women to cook on a fire in this scorching heat," said a woman participant of a study on the impact of climate change on Sindh.

The most vulnerable populations are pre-gnant and breastfeeding women in Sindh, particularly in the upper districts like Jacobabad, Shikarpur, Sukkur, Larkana, and Khairpur, where temperatures reach 45°C to 49°C. There are concerns emanating from natural disasters like extreme heat, flooding, and heavy rain, as well as cultural factors and gender-discriminatory practices. Emerging evidence shows that extreme heat is linked to complications for both mothers and babies, including gestational diabetes, hypertensive disorders, preterm birth, low birth weight, and stillbirth. Exposure to climate hazards during and after pregnancy can affect mental health and lead to

*Women bear the brunt of the impact of climate change.*

increased stress, anxiety, and depression, which are risk factors for adverse perinatal outcomes. Women and girls are disproportionately affected by the impact of climate change due to the interplay of gender and social norms. Women often engage in outdoor and household work, putting them at greater risk of exposure to temperature extremes and infectious diseases. This includes pregnant and post-delivery women. Emergencies caused by climate change, as well as mental and economic stress, also increase the risk of violence against women and children.

An international non-profit organisation, White Ribbon Alliance, conducted a study in Sindh in 2022 and released a report called Birth in a Burning World. The report was based on interviews of women in Shikarpur district. The interviewed women shared their

lived experiences of bearing the burns of heatwaves, which were intertwined with sociocultural norms and gender inequalities that exacerbate the impact of heatwaves on their health and well-being. Several women described fainting in the heat, hospitalised because of dehydration, lethargy, loss of appetite, and struggling to manage a pregnancy or a newborn and their work, which included farming, caring for livestock, carrying water, and cooking over a fire. The interviewed women also reported that there is a rise in domestic violence during heatwaves.

“Extreme heat is becoming a major issue these days as women’s outdoor workload has increased. We are responsible for collecting more water because water consumption has increased due to hot summers. This makes us weak and dehydrated. I do all household chores, such as cooking, taking care of the children and livestock, and collecting water. Still, I feel the heat the most during cooking as we use firewood, which also increases the temperature,” said a pregnant woman who participated in the study.

Climate change poses immediate and long-term health risks, particularly for women, newborns, and children. To address this, the government should raise awareness of the impact of heat on vulnerable populations through public service messages, provide targeted relief such as cash transfers, subsidise the purchase of solar panels and batteries for power storage and ensure access to drinkable water for staying hydrated and cooling.

(By Sadiq Bhanghro Dawn, 07, 03/08/2024)

### Planting of trees urged to counter climate change

A day-long conference on climate change and Urdu literature was organised by the Federal Urdu University in collaboration with Malir University at the Arts Council of Pakistan on Wednesday.

In her introductory speech, Dr Yasmin Sultana said the theme of the moot is the most important issue of contemporary times. Scientists, thinkers and men of letters are trying to find a solution to the problem. Climate change is endangering the lives of all creatures on planet earth — humans, animals, plants etc. The melting of glaciers, the depletion of ozone layer and deforestation are affecting us all. This is the reason that the average age of humans is lessening.

She also informed the audience on the various sessions (involving panel discussions and reading of poetry) lined up for the day.

In his address, Malir University Chancellor Prof Dr Tipu Sultan said the theme of the conference is not just important for Pakistan but has become the most sensitive issue all around the globe. Due to climate change, all parts of the world are faced with calamities such as flooding, storms and rapidly rising temperatures. Pakistan is one of those few countries which are faced with all such natural calamities.

He said what’s happening is largely due to our own faults. “Scientists everywhere have been highlighting the climate crisis for decades but international policymakers weren’t willing to pay heed to it, as a result of which the crisis has enveloped those countries [of policymakers] as well. They’re largely responsible for greenhouse gases emissions (GHG). Things have reached a point that the present era is called the age of global boiling.

“It is for the first time that in many countries temperatures rose to unimaginable limits and 60 per cent of the global population this year bore the brunt of the hottest month of June. According to an American research organisation, if greenhouse gases keep emitting in the coming few decades then South Asia will face unbearable hot weather. It is a fact that Pakistan’s contribution to greenhouse gas emissions is less than one per cent and yet it is counted as one of the worst climate change affected countries,” he said.

Dr Sultan said the problem is also causing the spread of a number of diseases.

Shifting his attention to Karachi he pointed out, “The change in temperatures, flooding, air pollution and the removal of greenery from the city turning it into a concrete jungle are factors because of which international institutions have called Karachi unliveable. We are all living in this unliveable city. It is an alarming situation. Predictions being made about Karachi are horrific. In order to improve the situation all of us, especially the young ones, should come forward. If each one of us plants two trees and look after them for a couple of years, then improvement could be witnessed in the years to come.”

Vice Consul General of Iran in Karachi Ghulam Abbas Zaboli spoke in Urdu in a nice accent and agreed with the speakers on the gravity of the issue. He also recited verses in Persian and the following two lines in Urdu on the subject:

*Jangalon ko kaat ker kaisa ghazab hum ne kiya*

*Shehr jaisa aik aadam khor paida ker diya*  
[What have we done by cutting trees!]

We have created a cannibal monster called city]

Faisal Edhi and Naveed Lakhani also addressed the opening session of the event.  
(By Peerzada Salman Dawn, 14, 08/08/2024)

### Climate without borders

CLIMATE change does not need passports as it does not respect borders. Pakistan’s climate risks are rooted in shared ecosystems with its neighbours.

Major regional climatic developments and trends often cast a shadow on our national economic progress and well-being. Our climate threats originate in regional climate systems, often located in neighbouring countries. In fact, as climatic changes unfold, new ‘climate borders’ may emerge, requiring a distinct form of regional climate diplomacy.



From the Bay of Bengal to the Arabian Sea, and from the Tibetan Plateau to the Pamirs that link the Karakorams and Hindu Kush ranges, they are all part of the Himalayan mountain system defining Pakistan's water resources, ecology, economy, and cultural heritage. As the entire region is recording profound changes in monsoon patterns, all our climate neighbours have begun to experience compound extreme weather events (CEWEs), whereby each climate disaster triggers another one.

Like Pakistan, our climate neighbours have also been witnessing CEWEs. In the South Asian landmass, dry areas have become drier with less than normal precipitation coupled with less cooling off at night. The frequency of hot summer days and hot summer nights has increased in the region. Record-setting daily temperatures have become more common. We have seen that heatwaves have often triggered torrential rains as experienced recently in several parts of India and Pakistan.

Record-high temperatures in Delhi and Lahore, for example, have resulted in record-breaking rains in both cities. It should be recognised that flooding is often attributed to weak governance rather than climate change. We have seen severe heatwaves in the upper Indus Basin result in downstream flooding. Record-high temperatures in Balochistan, Sindh, and KP have invited heavier monsoon rains in several parts of the country.

Emerging trends in slow-onset climate events have also become perceptible in recent years. Monsoon currents, for example, have begun to visit the upper mountain reaches in Chitral and Swat. Likewise, tropical storms in the coastal belts of Balochistan and Sindh are now influenced by disturbances in weather patterns in the Arabian Peninsula, affecting the frequency and intensity of rains in the Gulf region. Easterly winds from the Arabian Sea are resulting in increased torrential rains in Balochistan.

*The challenge is to rethink the way in which we manage climate risks and plan adaptation.*

Many urban centres in South Asia, from Karachi to Kolkata, have seen that droughts, heatwaves, and floods in their hinterland have spurred outward migration. Seasonal and permanent displacement and migration have become major sources of rapid urban growth. It is perhaps felt nowhere more strongly than in Karachi that has provided refuge to a steady stream of migrants from Dadu and Jacobabad propelled by high temperatures, from Tharparkar accelerated by prolonged droughts, and from Sajawal, Badin and Thatta because of seawater intrusion and salinisation.

Karachi has attracted communities from Balochistan and KP's newly merged districts, plagued by land degradation and deforestation. Southern Punjab has also been contributing migrants in response to increasing hill torrents from Koh-i-Suleiman, a mountain range that separates the arid regions of Balochistan from the more fertile areas of Punjab, KP, and parts of Sindh.

A fundamental difference between traditional and non-traditional security challenges is the emergence of new climate borders. While traditional security is fundamentally concerned about geopolitical borders, the new climate frontiers are defined by transboundary impacts and the implications of change in climate systems and their cross-border impacts and implications.

The just-released Global Transboundary Climate Risk Report, 2023, by the Stockholm Environment Institute and others partnering in the initiative on 'Adaptation Without Borders', has drawn attention to some critical blind spots in national climate policies as well as the solutions offered by international climate diplomacy. It is an important report as it has pointed out — based on nine case studies — that transboundary climate risks also include those transmitted by national adaptation responses. The report has observed that national adaptation measures can have both positive and negative results across borders. In some instances, these can be negotiated to deliver shared benefits.

Climate risks impact local livelihoods, and critical sectors, such as finance, health and global supply chains, including agricultural commodities and manufacturing components. In the South Asian context, transboundary climate risks include shared rivers, mountain ranges, melting glaciers, flood disasters, and cross-border risks to infrastructure, and livelihoods.

The transboundary risk report has presented case studies, many of them of interest to Pakistan: agricultural commodities and food security, industrial supply chains, energy and sustainable energy transformation, finance, human health, mobility, livelihoods, well-being and equity issues. Amnesty International and other activist groups have long argued that climate justice must transcend national borders as climate hazards in one country have an impact across borders and affect its neighbours.

Each case study carries a message for Pakistan; perhaps the most central one is that policymakers and opinion leaders need to address their blind spots in climate policy. These risks are triggered by a climate hazard in one country affecting communities across the border. Likewise, adaptation actions in one country can be detrimental for neighbouring states. The risk report has called for more global cooperation on adaptation, with international policy fora as key drivers. National efforts to respond to climate change cannot succeed without understanding transboundary climate risks.

In a nutshell, the challenge is to rethink the way in which we manage climate risks and plan adaptation. The report sets out four potential areas to build resilience: i) create opportunities for innovative research on transboundary climate risks, ii) develop national/ regional indicators to track transboundary climate risks, iii) strengthen research based on climate scenarios, modelling and projections, and iv) negotiate preferred options to mitigate transboundary climate risks.

In order to manage regional climate risks and climate threats to security, non-traditional responses will be needed. Since most climate disasters are transboundary by nature, they require regional management approaches. Managing regional climate threats that do not respect national borders, will need process-oriented approaches that are not zero-sum but, instead, aspire to win-win scenarios.

(By Ali Tauqeer Sheikh Dawn, 06, 15/08/2024)

### **Gale-force winds batter Karachi, leave one dead in tree fall**

A woman died after being hit by a falling tree as strong winds blowing at the speed of up to 85 kilometres per hour on Friday uprooted over a dozen trees, knocked down some five electricity and telecommunication poles and damaged around six vehicles in what was described as a "rare" weather phenomenon of a deep depression in the Arabian Sea turning into a cyclone during the monsoon season.

"It would be a rare event as cyclones are uncommon in the monsoon season," Chief Meteorologist Dr Sardar Sarfaraz had said.

Rescue-1122 official Hassaan Khan told *Dawn* that strong gusts brought down round 15 trees in different parts of the city.

A 50-year-old woman died and three private vehicles were damaged as a tree in Gulshan-i-Iqbal fell on the main road.

*Gusts bring down around 15 trees, blow away poles*

The official said the incident occurred in the area off Stadium Road. The woman died on the spot. Her body was recovered and sent to a hospital. Later on, she was identified as Shamim Bibi, 55. She was stated to be a beggar.

Apart from falling trees, the officer added, by Friday evening some five electricity and telecom service poles were also hit by strong winds.

"As the trees and poles fell over the ground, it damaged some six vehicles in different parts of the city," he said and added that rescue teams were still active in different neighbourhoods in multiple operations of which data wasn't yet available.

"So the number could rise by the time we call it a day," added the official.

In another incident, two siblings suffered injuries in a roof collapse in New Karachi.

The official said a portion of the roof collapsed on a family near Do Mint Chowrangi.

As a result, Ghufuran Umer, 23, and his sister Beenish Umer, 21, came under its debris and suffered injuries. They were taken to hospital.

A tree in Gulshan-i-Iqbal Block-17 fell near the office of City Warden. The tree fell on electric wires, which disrupted the traffic. Meanwhile another tree fell owing to heavy winds in Block-10 of Gulistan-i-Jauhar. No one was hurt in the incident.

The Met office said that heavy winds started blowing in the midnight and further intensified as dawn broke.

The maximum 85.19 kilometres per hour wind speed was recorded at the Met office Masroor. The situation pushed the relevant authorities to issue alerts and warning mainly for travellers, roads users and those out under the open, to take precautionary measures and stay safe.

DIG traffic Ahmed Ahmed Nawaz Cheema through traffic helpline and its FM Radio 88.6 service warned motorists to be cautious while driving on any road as strong winds could cause collapse of billboards or any concrete structure.

The rare weather conditions also impacted utilities services. The K-Electric while announcing outages in different parts of the city due to damage to its power supply infrastructure asked Karachiites to stay away from electric poles.

"There are reports of trees falling in different areas which also have affected the power supply infrastructure," it said in a brief statement.

"The power supply to some areas are also affected and our teams on the ground to restore the services. The people are requested to stay from vulnerable infrastructure and using illegal connections for the power supply. This could cause irreparable loss."

(By Imran Ayub & Imtiaz Ali Dawn, 13, 21/08/2024)

### **Sindh govt told to raise special force for forest protection**

The Sindh High Court has directed the provincial government to set up a special force for protection of forest land in the province after it was informed that thousands of acres had been occupied by powerful persons.

A two-judge bench comprising Justice Salahuddin Panhwar and Justice Omar Sial ordered the Sindh forest secretary to ensure removal of encroachments from forests with the help of Rangers and police.

It directed the law secretary to ensure that requisite amendments were made in the law for the establishment of the forest force.

The bench noted that there was a forest force in Khyber Pakhtunkhwa and Punjab that worked like law enforcement agencies, but such a force did not exist in Sindh and even divisional forest officers did not have vehicles for patrolling.

*SHC asks mayor to come up with plan to turn Karachi green*

The bench also directed the Karachi mayor to submit details of any project with regard to plantation and turning the provincial metropolis into green city on the models as adopted in metropolitan cities of other countries.

The court was hearing two petitions filed against inaction of authorities about acute deforestation and seeking enforcing of the national forest policy.

The petitioners' submitted that the respondents had failed to perform their statutory duties and public was suffering on account of their inaction of the acute deforestation of urban areas.

At the outset of the hearing, the forest and wildlife secretary Dr Badar Jameel Mendhro appeared in court in the light of the last order and apprised the bench of the funds received by the department during the past five years, particularly on carbon credit rewards/amounts provided by foreign companies.

The SHC directed the secretary to file copies of the agreement executed between the forest department the companies.

It further asked the secretary to submit a policy about changing the status of forest land in range (barani) land, the record as well as correspondences with a private body on environment about plantation and details of amount received through different companies for such purposes.

The bench asked the chief executive officer of the Delta Company to be in attendance on the next hearing along with complete details of the pacts signed with the forest department and details about board members.

During the proceedings, one of the applicants/interveners filed an application and pointed out that that in Gambat and Sobodero, around 24,000 acres of forest land had been occupied by influential persons and they were irrigating the same as their own property and earning from it.

The bench issued notices on the application to all parties concerned and directed the forest secretary to ensure removal of encroachments with the help of law enforcement agencies.

The bench said it had been reported that in KP and Punjab, there were forest forces like law enforcement agencies. However, in Sindh, no such force existed and even senior forest officers did not have transportation means for patrolling.

At this, the forest secretary informed the bench that they were going to amend the law by introducing the same concept already existing in two other provinces.

"Accordingly, secretary forest & wildlife department and secretary law government of Sindh shall ensure that such amendment(s) shall be at par with other provinces, in case of failure, this court will examine this issue on the judicial side, to pass further direction(s)," the bench in its order ruled.

It adjourned the hearing till Sept 4 and directed the secretary and other senior officials of the department to be in attendance on the next date.

The bench also asked the finance secretary to file the concept of an endowment account fund and whether it was permissible in the law to invest it in Sindh Bank.

The forest secretary in his report stated that an amount of Rs926 million had been incurred on mangrove rehabilitation and conservation activities during the last five years and 80,000 acres of mangroves had been rehabilitated and conserved during this period.

An amount of Rs911m had been allocated during 2023-24 on afforestation of Indus Delta mangroves under the delta blue carbon-I project from the amount received under the sale of carbon credits, it added.  
(By Ishaq Tanoli Dawn, 13, 23/08/2024)

### **Malir villagers demand action against 'polluting' mills in Karachi**

Residents of Saleh Muhammad Goth in Malir demanded immediate action against three textile mills allegedly polluting air, water and soil in their area by emitting hazardous gases and discharging chemical waste.

They organised a rally, which was also joined by women and children in large numbers who raised slogans against the "illegal factories" and official indifference towards their plight.

"For the past three years, we have been raising our voice on this serious violation of provincial environmental laws and human rights that today threatens our lives," said Mehrunisa Baloch, one of the rally participants, adding that the industrial units emitted hazardous gases almost the whole day.

Highlighting villagers' suffering, Baloch said the air had become increasingly suffocating especially for the ailing, children and the elderly. "Children often complain of burning sensation in throat while many of us have developed skin infections. These health challenges are a huge burden on poor families, barely surviving on two meals."

*Sepa official says gaseous emissions of the industrial units in question were within permissible limits*

According to villagers, all top officials, departments and offices concerned have been contacted in this regard multiple times, but to no avail.

They shared with the media the documentary evidence of their complaints that they have so far submitted to officials and departments in three years.

They included the deputy commissioner Malir, the area member of provincial assembly, the Chief Minister Secretariat, provincial minister of environment and climate change, federal environment ministry and the Sindh Environmental Protection Agency (Sepa).

“We don’t know where to go and report this complaint. Everyone seems indifferent and the system lacks accountability,” shared Arshad Soleh, alleging that the mills were illegally operating on agricultural land.

He claimed that the mills operating in the village for several years now turned into a health hazard for the people three years back when they switched their boilers from costly electricity to cheap coal.

The industrial units, he alleged, were also releasing hazardous chemical waste that also threatened public health as villagers used underground water for drinking purposes.

**‘Mills operations are not against environmental regulations’**

Speaking to Dawn, Munir Ahmed Abbasi, Sepa’s deputy director-technical, explained that the environmental watchdog had inspected the three mills but didn’t “find their operation against environmental regulations”.

“We have been pursuing the matter for quite some time. We haven’t found them engaged in any practice that violates provincial environmental laws,” he said, adding that their gaseous emissions were within the permissible limits.

“The mills export their products and periodically submit their compliance reports to the department,” he said, adding that two units were being run on gas while the third one used wood.

About the land, he said issues pertaining to land didn’t come under Sepa’s jurisdiction. “But, we know that the status of the land on which this village exists and its adjoining areas was changed from agricultural to industrial in 1999.”

(By Faiza Ilyas Dawn, 13, 26/08/2024)

**Rains, strong winds hit Karachi infrastructure as thunderstorm looms**

A powerful weather system that was gradually moving closer to the Sindh’s coast made its presence felt early on Tuesday morning



with a windstorm and heavy showers lashing the city, disrupting life and damaging civic infrastructure.

The episode followed a rain spell in parts of the city late Monday night.

According to the meteorological department, the maximum wind speed was recorded in Masroor Base 67km/hour and Faisal Base 52km/hour.

On Tuesday, the maximum rainfall of 58mm was recorded in Gulshan-i-Hadeed followed by

Quaidabad with 52mm, Surjani Town 43.6mm, North Karachi 30mm, Nazimabad 26mm, Gulshan-i-Maymar 17mm, Kemari and Faisal Base 16mm (each) and University Road 15.6mm.

The data of other areas: Korangi 14.6mm, Saddar 13mm, old airport area 12.6mm, Jinnah Terminal 11.2mm, DHA and Bin Qasim 11mm (each), Gadap 10mm, Orangi Town 7mm and Masroor Base 5mm.

The data of rest of Sindh: Chachro 42mm, Mirpurkhas 41mm, Mithi and Diplo 40mm (each), Nagarparkar 38mm, Klorhi 33mm, Thatta 26mm, Dahli 21mm, PAF Bholari 19mm, Islamkot 16mm, Chhor 15.3mm, Sakrand and Sanghar 15mm each, Hyderabad 13mm, Tando Jam 7.5mm and Shaheed Benazirabad 4mm.

“There is no change in the intensity of the weather system that is likely to reach eastern Sindh from Indian Gujarat late night or on Wednesday morning,” shared a Met department official.

The department’s advisory has forecast widespread rain/wind-thunderstorms with scattered heavy-very heavy to isolated extremely heavy falls in Tharparkar, Badin, Thatta, Sujawal, Hyderabad, Tando Muhammad Khan, Tando Allah Yar, Matiari, Umartkot, Mirpurkhas, Sanghar, Jamshoro, Dadu and Shaheed Banazirabad districts and Karachi division with occasional gaps till Aug 31.

“Rain/wind-thunderstorms with few heavy to isolated very heavy falls are likely in Ghotki, Sukkur, Khairpur, Kashmore, Qambar Shahdadkot, Larkana, Naushahro Feroze, Jacobabad and Shikarpur districts with occasional gaps,” it says.

**Man dies from electrocution**

A young man died from electrocution in Nazimabad on Tuesday, police and doctors said.

Police Surgeon Summaiya Syed said that 20-year-old Abdul Wahab was brought dead to the Abbasi Shaheed Hospital from Nazimabad. He got an electric shock due to which he died.

Nazimabad SHO Amjad Husain said that the youth suffered an electric shock when he was doing some electrical work at a shop during rains.

**Schools open today**

Meanwhile, the weather situation forced several schools to close down on Tuesday, while attendance remained thin in colleges and universities.

The government, however, didn't announce closure of schools on Wednesday over the looming threat of heavy downpour and urban flooding in Karachi.

"The government has yet not decided to close schools and other educational institutions on Wednesday in the wake of heavy rain forecast in the province," Information Minister Sharjeel Memon said, adding that a cell had been set up at Chief Minister House to tackle any emergency.

Meanwhile, the Sindh education department also denied reports about closure of schools on Wednesday over social media.

In a statement it said all government and private schools would remain open on Wednesday.

Mayor Barrister Murtaza Wahab on Tuesday said that all administrative and municipal staff, along with pumps and other machinery, would continue to serve people on roads during the rainfall in the metropolis.

(By Faiza Ilyas Dawn, 13, 28/08/2024)

**Two die from electrocution as intermittent rains continue in Karachi**

Two persons died from electrocution as intermittent rains continued throughout the day on Wednesday, affecting life in the metropolis.



The civic situation is feared to get worse in the city facing a growing threat of urban flooding as the ongoing weather system is expected to gather more steam from Thursday (today).

According to the Met department officials, the 'deep depression' over south of Tharparkar and adjoining Runn of Kutch continues to move west-southwestward and is likely to reach northeast Arabian Sea and adjoining Sindh coast by Wednesday night or Thursday morning.

"All models are indicating a strong monsoon system reaching close to the coast. As of now, there is no possibility that it will lose its intensity. In fact, it would likely intensify,"

shared Chief Meteorologist Dr Sardar Sarfaraz.

According to him, experience shows that a monsoon system brings about maximum rain in Karachi when it reaches south, south-west of the city. "The city might see heavy downpour on Thursday morning or in the afternoon. We are expecting 150mm to 200mm rain in the city within two to three days."

According to Dr Sarfaraz, storm surge is also expected during the same period when the system would be over the sea, gathering more intensity.

According to officials, sea conditions are likely to remain rough to very rough with squally winds of 30-40 Kts during the forecast period. Fishermen are advised not to venture in open sea till 30 August.

**Two electrocuted**

Two persons died from electrocution in different parts of the city on Wednesday, rescuers said.

They said that 40-year-old Haroon suffered electric shock at a residential building in Jamshed Quarters during rain. He died on the spot. The victim was the watchman of the building. The body was taken to the Dr Ruth Pfau Civil Hospital Karachi.

In Metroville, a young man, identified as Zaman Zulfiqar, 25, was electrocuted, said police surgeon Summaiya Syed.

**Worsening civic situation**

Two days' of moderate to heavy showers have left the citizens grappling with host of issues, ranging from broken and flooded roads and lanes to frequent power outages and overflowing gutters.

According to the Met department's total rainfall data Aug 27-Aug 28 till 5pm, the maximum rainfall was recorded in Gulshan-i-Hadeed 121mm followed by Quaidabad 92.5mm. Nazimabad, 54mm, Kaemari 47mm, Bin Qasim town 55.2mm, Surjani Town 44mm and Met Complex (University Road) 40.8mm.

Data of other areas: old airport area 33mm, Jinnah Terminal 30mm, PAF Faisal Base 35mm, Masroor Base 21mm, North Karachi 38.2mm, Orangi town 22mm, DHA Phase II 28.2mm, Gulshan-i-Maymar 35.4mm, Korangi 38mm, Gadap (near Baqai Hospital) 14mm and Saddar 10mm.

Karach Mayor Barrister Murtaza Wahab, however, said that teams of the Karachi Metropolitan Corporation (KMC) were working round the clock on water drainage at locations where water had accumulated due to continuous rain.

He said all relevant staff was present on the roads and despite continuous rains main roads and underpasses were clear and attention was also being given to low-lying areas.

Meanwhile, the Met department's advisory forecasts widespread rain/wind-thunderstorms with scattered heavy-very heavy to isolated extremely heavy falls likely in Tharparkar, Badin, Thatta, Sujawal, Hyderabad, Tando Muhammad Khan, Tando Allah Yar, Matiari, Umerkot, Mirpurkhas, Sanghar, Jamshoro, Dadu and Shaheed Benazirabad districts and Karachi division till August 31 with occasional gaps.

(By Shazia Hasan Dawn, 13, 29/08/2024)

### Cyclone threat makes hearts throb

People in the city were on edge on Thursday as the Met office warned of a potential cyclonic storm forming in the Arabian Sea when the metropolis was already bracing for heavy rains under the ongoing monsoon system.

The situation also put the city administration on toes to keep things under control after it faced strong criticism from the opposition parties which claimed that current downpour had "exposed" Mayor Murtaza Wahab and his performance.

The Met office said that a cyclonic storm was expected to form over northeast Arabian Sea along Sindh coast on early Friday morning, causing widespread torrential rains across the province till Aug 31. The Met officials have described the formation of the cyclone in the monsoon season as a 'rare phenomenon'.

#### Rainfall data

According to the Met department's total rainfall data for Aug 29 from 11 am till 8pm, the maximum rainfall was recorded in Gulshan-i-Hadeed 35mm followed by Surjani Town 30mm, Quaidabad 25mm, Korangi 15.7mm and Met Complex (University Road) 15mm.

Data of other areas: Nazimabad 7.2mm, Keamari 10mm, old airport area 15mm, Jinnah Terminal 16mm, PAF Faisal Base 13mm, Masroor Base 5.5mm, North Karachi 7.5mm, Orangi town 5.7mm, DHA Phase 7.5mm and Gulshan-i-Maymar 9.3mm.

Sindh chief minister Syed Murad Ali Shah was the first to react and issue directives to all civic departments and institutions, especially administration and local bodies, to be more vigilant and active in view of cyclone alert.

In a statement, he said that all necessary preparations should be completed to deal with emergency situations and all relevant departments and hospital should ensure the attendance of their respective staff. The chief minister instructed all the hospitals of the province to improve their arrangements to meet any emergency.

He also directed the fisheries department to issue instruction to the fishermen in view of the unusual situation in the sea. The chief minister also ordered the irrigation department to keep monitoring the dams of rivers, canals and other water passages.

Meanwhile, Karachi Commissioner directed all deputy commissioners, town administrations and other civic agencies to remain alert and monitor the situation to take necessary actions to deal with the monsoon rains.

He directed the officials concerned to stay in the field and keep their live locations on. He also directed all the DCs, assistant commissioners, town administrations' municipal commissioners, and other relevant agencies to implement their contingency plans to combat the rain emergencies and ensure that measures for drainage of rain water and arrangements for relief work were completed.

Meanwhile, Mayor Wahab in a message asked people to "avoid unnecessary movement", amid warning of heavy rains. "It's been raining for last three days and in the next few hours, it's expected that there will be heavier rainfall with strong winds. I would urge the residents of Karachi, especially bike riders, to avoid unnecessary movement. Stay safe everyone, and in case of any emergency call 1339," he posted on X [formerly Twitter] in the evening.

Although the mayor kept updating about his performance and the job being done by the Karachi Metropolitan Corporation (KMC) during the rain, he failed to convince the rival parties who questioned the utility of the civic bodies which couldn't cope up with the challenge despite early warning by the Met office.

Saifuddin Advocate, the leader of the Opposition in the City council, said the rain and the situation that unfolded after that have badly exposed the "corruption and mismanagement" on part of the Pakistan People Party government in Sindh as well as the KMC.

Reacting to the current situation in the city, the JI leader said that the adamant city mayor needs to realise that Karachi is a mega city and not limited to the road between his office and his residence in a posh locality.

In a statement, he added that it seems that the mayor considers a portion of the city as whole Karachi as he always claims that "all is okay" in the megalopolis. During recent rains, large swaths of roads have vanished and the roads look like ruins, he said, adding that even a small amount of rain caused havoc in the city.

Muttahida Qaumi Movement-Pakistan (MQM-P) also criticised the city administration and PPP government, saying that the performance of the provincial ministers and Karachi mayor was limited to photo sessions and social media updates.

"It would be much better for the Sindh ministers and Karachi to stop portraying Karachi as clean and modern like London and Paris while making videos from their air-conditioned vehicles worth millions of rupees," the party said in a statement.

"The rain was consistent but it wasn't heavy like past. Still, it exposed the performance of mayor who has illegally occupied the office. The pleasant weather of monsoon and rains have become a nightmare for Karachiites."

Similar reaction came from the Pakistan Tehreek-i-Insaf (PTI) Karachi president Raja Azhar who said that the recent rains in Karachi came as "another stamp over PPP's incompetence and corruption.

"From a street to major thoroughfare, no road is safe. The infrastructure was already in shambles and the fresh rains have further ruined it," he said.

(By Imran Ayub Dawn, 13, 30/08/2024)



### Stormy winds bring down trees, signboards

High-speed winds of up to 82 kilometres per hour have swept across Karachi, causing widespread damage, including the toppling of trees and signboards.

A 50-year-old woman was passing by Bait-ul-Mukarram Mosque on Gulshan-e-Iqbal University Road when a tree fell on her due to strong winds, resulting in her death on the spot.

The body of the deceased, identified as Shamim Bibi, was shifted to Abbasi Shaheed Hospital in a private car, and after legal proceedings, it was handed over to the heirs.

Meanwhile, a man was killed when a tree fell on him due to strong winds near People's Chowrangi on New MA Jinnah Road in the limits of Jamshed Quarters police station. According to Chhipa officials, the deceased was riding a motorcycle when he was crushed under a falling tree. The identity of the deceased has not yet been determined, but his age is estimated to be around 25 years.

In various areas, several trees fell due to strong winds and rain. In Korangi Sector 51-C area, 25-year-old Muhammad Samir died due to electrocution while working at home.

The strong winds were a result of a storm churning in the Arabian Sea, which has started to impact the city. Up to 82.8km per hour wind velocity was recorded at PAF Base Faisal, 81km per hour at PAF Base Masroor, 57km per hour at Old Airport, and 36 to 45 km per hour in various areas of the city on Friday

The Pakistan Meteorological Department (PMD) earlier reported that wind speeds had reached dangerous levels, with gusts peaking at 60 kilometres per hour.

According to data released by the Meteorological Department, Surjani Town received highest rainfall of 129.6 mm during the last 24 hours, followed by Nazimabad 45.2 mm and 42 mm in Keamari. DHA got the lowest precipitation of 10.7 mm during the last 24 hours.

Chief Minister Murad Ali Shah has assured that the government will not abandon those affected by the recent rains and will provide full support to them.

Shah met with Faryal Talpur, the central president of the Pakistan People's Party's (PPP) women's wing and a member of the Sindh Assembly, at Zardari House in Karachi on Friday.

The discussion focused on the current monsoon rain situation across Karachi and the rest of Sindh.

Karachi Mayor Murtaza Wahab has urged residents to avoid "unnecessary movement." He took to X, saying, "I would urge the residents of Karachi especially bike riders to avoid unnecessary movement.

Stay safe everyone & in case of any emergency call 1339." The Karachi commissioner's office has also announced a holiday for schools on August 30 (Friday) due to the anticipated severe weather.

(By Newspaper's Staff Reporter, The Express Tribune, 04, 31/09/2024)

### Churna Island gets status of marine protected area

The Balochistan government finally paid heed to environmentalists' concerns over Churna Island and declared the biodiversity hotspot a 'Marine Protected Area' on Wednesday.



Officials said that the decision was taken at a meeting of the provincial cabinet, presided over by Balochistan Chief Minister Mir Sarfraz Bugti in Quetta.

It's the second island in Balochistan to get the protected status. Earlier in June 2017, the provincial government had declared Astola Island as the marine protected area.

Both islands are among the few marine areas in the country with coral habitats and considered biodiversity hotspots.

*The island is known for over 50 species of corals, 250 species of fish and many invertebrates and vertebrates, says WWF official*

Located near Karachi, Churna Island is being extensively used for scuba diving, snorkelling, cliff jumping, and jet skiing and other recreational activities. It's also considered an important fishing ground where a large number of fishermen from Sindh and Balochistan operate.

Experts believe that the marine ecosystem and diverse wildlife inhabiting Churna Island are under serious threat due to many anthropogenic activities, including the development of power plants, single-point mooring, an oil refinery in the immediate vicinity, as well as recreational activities that are conducted at the area.

In a statement, the World Wide Fund for Nature-Pakistan (WWF-P) appreciated the Balochistan government's decision, describing it as an important step towards protecting the fragile ecosystem of the island.

"The organisation appeals to both the federal and Sindh governments to take decisive actions to achieve the target of 30 x 30 by following the footsteps of the government of Balochistan and declaring additional marine protected areas in Pakistan," Senior Director Biodiversity Programmes at WWF-P Rab Nawaz said.

30 x 30 is a worldwide initiative for governments to designate 30 per cent of Earth's land and ocean area as protected areas by 2030.

Mr Nawaz regretted that the country was losing marine resources due to poorly planned development activities and climate change. "This initiative will help reverse the damage caused to marine ecosystems and would protect marine life for future generations."

Highlighting biodiversity of Churna Island, Technical Adviser at WWF-P Muhammad Moazzam Khan said, "It's known for more than 50 species of corals and 250 species of fish as well as many invertebrates and vertebrates. Its protected status will help address the challenges of biodiversity loss and protect the threatened species."

It may be noted that Pakistan is a signatory of the Convention on Biological Diversity. According to its Kunming-Montreal Global Biodiversity Framework, states are required to declare 30pc of the ocean area as a protected area by 2030.

(By Newspaper's Staff Reporter, Dawn, 13, 05/09/2024)

### **SHC seeks past five years details of tree plantation from mayor**

The Sindh High Court has directed the Karachi mayor to file a report about plantation carried out over the past five years in the provincial metropolis.

The SHC also directed the secretary forest department to assist it regarding who is responsible for protection of trees in Karachi as well as file report in respect of applicability of existing forest law in the cities.

The two-judge bench comprising Justice Salahuddin Panhwar and Justice Amjad Ali Sahito further asked the mayor to submit specific policy about tree-cutting for Red Line Bus Rapid Transit (BRT) project and warned to summon him in case of non-compliance.

It was hearing a petition filed in 2022 by two lawyers and they had submitted that around 26km long Red Line BRT project from Model Colony to Merewether Tower would be completed in two years and the track would be laid down at the cost of cutting down 50 thousand trees.

*Directs forest dept secretary to inform court who is responsible for protection of trees in Karachi*

At the outset of hearing, the bench said that it was a matter of record that hundreds of trees including old ones have been removed from the track of Red Line BRT project.

A provincial law officer submitted that the forest department has no concern within the territorial jurisdiction of the cities.

"Since cities are being expanded and limits are being increased on yearly basis, hence forest department shall submit a report with regard to applicability of existing law", the bench in its order said.

It also stated that the secretary forest must also assist the court about the ownership of trees within the city.

"Besides, Mayor Karachi shall submit policy of plantation; particularly carried out in last five years and specific policy with regard to the subject matter and in case of failure, he shall be in attended on the next date", it added.

The bench also asked the petitioners to implead the contractor of Red Line BRT project as respondent in the petition after they argued that the contractor was bound to relocate or re-plant the trees in terms of contract.

While adjourning the hearing till Sept 30, the court asked it office to issue notice to the contractor after petitioners cited the same as respondent.

Earlier, impleading chief secretary Sindh, secretary forest & wildlife department and others as respondents, the petitioners had contended that climate change was affecting the whole world and Pakistan was also among one of the major affectees, but the respondents have failed to implement the national environmental policy 2005, national forest policy 2015, national climate change policy 2012 and other laws about environment and forest.

#### **Directive issued to education authorities**

The same bench has directed the provincial education authorities to inspect various private schools to ensure that at least 10 per cent disadvantaged children/students get free education as required under the law. It noted that a provision in the Sindh Right of Children to Free and Compulsory Education Act, 2013, was crucial in establishing a framework that promoted the rights of disadvantaged/underprivileged children and ensured their access to quality education.

The bench was hearing some petitions filed by the TYMS Education Private Limited and various private schools in 2020 and challenged the amendments made to the Sindh Private Educational Institutions (Regulations and Control) Rules 2005 during the Covid-19 pandemic about closure of schools, enhancement or reduction in fees and other concessions.

It said that in order to examine the functions of the petitioners' schools and determine their compliance with relevant law, it was essential to evaluate whether they were adhering to a provision to provide free education to at least 10 per cent underprivileged children from their total admissions across all current batches.

A comprehensive breakdown and detailed account, duly signed by the respective principals of the schools, must be submitted including name, parentage and criterion of selection, it concluded.

**Interim report filed in plea against land allotment**

A court official in its interim report said that around 40 to 45 villages were located within the site comprising hundreds of acres which was said to be allotted to the Defence Housing Authority in Hawkesbay.

The bench took the interim report on record and directed the nazir to file complete breakup of the villages and houses in final report after getting help of Google Maps and other apps as well as with the assistance of revenue authorities and the petitioners.

A provincial law officer sought more time to file report on the behalf of chief secretary Sindh about any proposal of land to be allocated to the DHA.

A petition was filed in June and the petitioners had submitted that the Sindh government was planning to allot 5,000 and 6,000 acres of land for the extension of DHA which will result in ejection and demolition of the villages in three Dehs, including Chitara, Allah Bakhsh and Mundhyari.

(By Ishaq Tanoli Dawn, 13, 13/09/2024)

**Climate under siege**

FOLLOWING extreme heatwaves in almost every corner of the world, heavy rains and floods shocked the global community. This is becoming a pattern.



The recent past witnessed an unprecedented series of extreme weather events across South Asia and neighbouring regions, with devastating impacts on lives, infrastructure, and economies. A powerful monsoon system wreaked havoc, triggering catastrophic floods, landslides, and storms across India, Bangladesh, China, and Pakistan.

Not too long ago, a thunderstorm-laden monsoon swept into southern Sindh after causing significant damage in India's Gujarat and Rajasthan regions. The monsoon, which has been unusually intense this season, brought with it torrential rains, strong winds, and widespread flooding. Major cities were inundated, with low-lying areas submerged and infrastructure damaged.

We saw people being displaced due to rising water levels, with power outages and road blockages hampering rescue and relief efforts. An emergency was declared in parts of the country, as the authorities urged residents to stay indoors. The disaster follows a broader pattern of extreme weather that has gripped the region. Lately too, heavy rainfall has been predicted in certain areas in the week ahead.

*A broader pattern of extreme weather has gripped the region.*

In India, the monsoon's fury and torrential rains, especially in Gujarat and Rajasthan, also led to flash floods that engulfed villages and towns, resulting in significant loss of life and property, with thousands rendered homeless. Emergency services were stretched to their limit, and conducting rescue operations in flooded areas and providing relief to affected populations was difficult.

Himachal Pradesh and Uttarakhand, too, felt the impact, with landslides triggered by the relentless rains. Entire villages were buried under mud and debris, with rescue efforts hampered by treacherous conditions. Further rains were also forecast for the current month, raising fears of additional inundation.

Meanwhile, Bangladesh is already prone to flooding due to its low-lying geography, and it was no surprise that it was severely affected by this year's monsoons. Incessant rains caused the major rivers — the Brahmaputra, Ganges, and Meghna — to overflow, leading to widespread flooding across large parts of the country.

Millions were reported to have been affected, with many residents forced to flee their homes and seek refuge in temporary shelters. The floods also destroyed vast swathes of agricultural land, threatening the livelihoods of thousands and raising concerns about food security in the months ahead. The Bangladeshi government, along with international aid organisations, has worked around the clock to provide relief, but the scale of the disaster was overwhelming.

China was not spared the effects of extreme weather either, with the months of July and August bringing with them historic flooding and the onslaught of Typhoon Doksuri. The flooding, particularly in the northern and central regions, has been the worst in decades, with major rivers like the Yangtze and Yellow River swelling to dangerous levels. In some areas, entire cities were submerged, leading to massive evacuations.

The extreme weather events in South Asia and China are stark reminders of the growing impact of climate change. Scientists have long warned that global warming is leading to more intense and unpredictable weather patterns, with monsoons becoming more erratic and storms more powerful. The consequences are devastating for countries in the region, many of which are densely populated and heavily reliant on agriculture.

As the region grapples with the recent disasters, the urgency for robust climate adaptation strategies is clear. Governments must prioritise investing in resilient infrastructure, strengthening early warning systems, and enhancing community-level disaster preparedness to better withstand extreme weather events.

If mitigation efforts are not significantly scaled up, these extreme weather events could become even more frequent and severe, making large parts of the world increasingly uninhabitable. Rising sea levels could inundate coastal cities, displacing millions and leading to unprecedented migration crises. Agricultural systems, already under stress, could collapse, leading to widespread food shortages and economic instability. Without concerted global action to reduce greenhouse gas emissions and adapt to the changes already underway, the future could see a cascade of environmental, social, and economic disasters. The time to act is now, as the cost of inaction is far too great.

(By Masood Lohar Dawn, 07, 23/09/2023)

## Climate finance ecosystem

PAKISTAN'S climate finance ecosystem is informal and unfolding. It has not been fully operationalised or coordinated, let alone synchronised with climate action. In fact, policymakers are still grappling to define it fully for policy coherence and to systematically catalogue vulnerabilities, priorities, and financial needs for specific climate actions across sectors, provinces, and human settlements.



In a frantic reaction to Pakistan's desperate fiscal situation, the entire attention of key ministries and departments has moved to access international climate finance. The hope is that, if successful, this can ease the financial squeeze. This newfound priority has debased the national debate that ensued after the 2022 floods, from prioritising community resilience and low carbon development to accessing finances from some

under-accessed sources.

The shaking of the apple tree has not stemmed from specific provincial or sectoral estimates of financial needs. Instead, it has sprung from the urgency to plug the financial gaps that are forcing Pakistan to annually restructure its debt. It is clear that the urgency to access climate finance is driven by the present narrow fiscal space, and not the importance to invest in resilient, bottom-up demand. The sincerity of motivation has emerged as a barrier, adding to the long list of chronic obstacles.

This is in spite of the fact that during the last 50 years, Pakistan has developed an elaborate institutional and policy architecture dealing with environment and climate change. The process started with the Pakistan Environment Protection Ordinance in 1983, followed by the approval of the National Conservation Strategy (1992), Environmental Protection Act (1997), National Environment Policy (2005), and a wave of climate policy documents since the 18th Constitutional Amendment of 2010.

*The inability to stock-take has impeded the development of the climate finance ecosystem.*

None of these policies defined the decision-making tree for policy coordination, resource allocations, or timelines needed for implementation of specific policy initiatives, let alone identifying the structural barriers to their implementation.

While presenting impressive plans, they fell short of identifying key constitutional, legal, or institutional constraints to their environment and climate actions. None of the websites of national and provincial climate-related outfits carry any study on why our policies have failed the implementation test. This inability to stock-take has impeded the development of the climate finance ecosystem.

Specific questions begging clarity on mandates, respective roles and responsibilities between the provinces and the federal government, and between the climate and other sectoral ministries, particularly the planning ministry, remain unaddressed. The planning ministry holds the key to engaging with provincial planning boards in order to embed climate considerations in the public sector development portfolio and provincial annual development plans. Lopsided development has not allowed the climate finance ecosystem to take root.

The ecosystem in our context is a web of intricate interactions reflected by hard and dotted lines, indicating the complexity and richness of the functioning of its parts. The dynamic nature and interdependence of their interactions, as in natural systems, reflects both its fragility and resilience. The backward and forward loops, as in systems theory, will be indicative of its health and ability to protect itself from predators. In the climate change realm, the predators include domestic and international interest groups, and undue outside influences and interferences retarding its functioning.

Therefore, the ecosystem in our context does not only refer to cataloguing the existence of institutions, their mandates, rules, regulations and procedures, or the existence of their policy or strategy documents. Instead, it also encompasses their formal and informal relationships and linkages with each other and their respective constituencies and stakeholders, to protect the interests and well-being of everyone affected by climatic changes as users, consumers, or taxpayers.

How well has this ecosystem evolved in the last 50 years and how well is it working? The response to the following five factors shapes the size and influences the scale of the flow of international finance for climate action:

**Institutional and policy landscape:** Has the climate ecosystem resolved the key governance and regulatory issues? Or does the tendency persist to evade questions that deal with clearly defining the roles and responsibilities of all national and provincial actors? Introducing a legislative package that mandates climate action across the sectors and tiers of governance can clear the obstructed path to action, instead of adding yet another tier of institutions.

**Sectoral integration and action plans:** Does the ecosystem include sector-specific action plans for concrete climate measures? The absence of sectoral action plans that do not include adaptation strategies to build resilience, mitigation measures to curtail greenhouse gas emissions, or protect communities from loss and damage from rapid-onset and slow-onset will impede alignment with the country's national targets and international obligations. Such plans can help identify opportunities for green growth and low-carbon development within each sector.

**Subnational implementation:** Does the ecosystem commit to deliver resources at local levels by recognising that climate impacts are always localised?

This would entail setting up local governments and allowing them to function. They can develop and implement their own, locally led action plans to create resilience, build local capacities, and diversify livelihood opportunities. Nothing is more important for climate justice than inclusion and equity for a well-functioning ecosystem.

**Stakeholder engagement and partnerships:** Has the ecosystem engaged dynamic organisations, academia, small and medium enterprises, women and youth? Has the partnership with the private sector been designed to strengthen local markets and nationally generate revenues and finances? It is imperative to leverage private sector investment in low-carbon or disruptive technologies for climate-resilient infrastructure.

**Climate finance mechanisms:** Does the ecosystem include instruments for channelling domestic and international climate finance?

Blending private sector contributions, international climate finance, and domestic budgetary allocations have catalytic importance in the present economic situation for derisking climate investments. These can be enablers for enhancing direct access to international climate funds such as the Green Climate Fund.

The climate finance ecosystem will be incomplete unless it covers mitigation actions, adaptation efforts, and loss and damage planning. The national discourse will have greater credibility if it is based on the firm foundation of reprioritising community resilience and low carbon development, rather than seeking climate finances without a well-functioning climate finance ecosystem.

(By Ali Tauqeer Sheikh Dawn, 06, 26/09/2024)

### **SHC restricts authorities from cutting down trees across Sindh**

Restraining the provincial authorities from felling any tree across the province, the Sindh High Court has observed that cutting down trees, especially in urban centres like Karachi, will have disastrous environmental consequences.

In its written order released on Wednesday, a two-judge bench comprising Justice Salahuddin Panhwar and Justice Amjad Ali Sahito also ordered that in case of any necessity, the tree concerned must be relocated to an appropriate location and permission for removal of any tree must be obtained from the sessions judge of the relevant district.

The bench also specifically directed Karachi Mayor Murtaza Wahab to ensure that no tree was felled within the metropolis unless absolutely necessary.

It also issued a show-cause notice to Mayor Wahab as he did not appear in court in compliance with the court order to file a report regarding plantation policy.

The bench was hearing a petition filed in 2022 by two lawyers who had submitted that the track of around 26-km-long Bus Rapid Transit (BRT) Red Line project was being laid down at the cost of cutting down "50,000 trees".

At the outset of hearing, the secretary of the forest department appeared in court and filed some documents while one of the petitioners also filed a statement, which were taken on record.

The bench in its order observed that the Sindh Environmental Protection Agency (Sepa) had granted approval to the subject contract on the condition that the contractor would plant five trees for every single tree felled.

The details submitted by Sepa indicated that 3,802 trees were cut down in the course of the project and as per the stipulated policy, the contractor was obligated to plant five trees for each removed tree, but it came to the court's attention that this obligation was not fulfilled by the contractor, it added.

#### **Global warming**

The bench observed that the impact of global warming was concerning for countries like Pakistan, which were highly vulnerable to the effects of climate change despite contributing relatively little to global emissions.

Pakistan is already witnessing severe consequences, including unpredictable weather patterns, rising temperatures and frequent heatwaves particularly in urban areas like Karachi and across the Sindh province while deforestation of surrounding areas and urbanisation have significantly contributed to increase in temperatures and air pollution levels, it noted.

The court also observed that the cities like Karachi, where dense urbanisation had resulted in limited green cover, were particularly at risk and the provincial metropolis had suffered from extreme heatwaves in recent years resulting in loss of life and severe impacts on public health.

It said trees played a crucial role in regulating the earth's temperature by absorbing carbon dioxide from the atmosphere.

"The province's forests, including the mangrove ecosystems along its coastlines, are being depleted due to human activities, further worsening environmental conditions. Cutting down trees, especially in urban centres like Karachi and rural parts of Sindh, leads to disastrous environmental consequences," it added.

The bench further noted that on the previous hearing, directives were issued to the mayor to submit the policy regarding tree plantation particularly in relation to activities conducted over the last five years in the city, but he had failed to appear without a prior notice and also neglected to submit the required report.

Consequently, a show-cause notice was issued to the mayor of Karachi for non-compliance with the court's directions.

The court noted that the need for tree plantation in Karachi and Sindh was undeniable due to severe impacts of global warming and climate change on the region and in the light of the current environmental challenges, immediate action was required to ensure a sustainable and resilient future.

"In light of the aforementioned facts, it is hereby ordered that no trees shall be cut down in the future within the province of Sindh. The Mayor of Karachi is specifically directed to ensure that no trees are felled within the city of Karachi unless absolutely necessary. In cases of such necessity, the concerned tree must be relocated to an appropriate location", it added.

The bench in its order also said that the secretary of forest department must ensure that no trees are cut down without prior approval and conduct a region-wise survey of the trees within the city.

"It is further emphasised that this responsibility lies solely with the Forest Department and shall not be assumed by the Local Government. Should the removal of any tree be deemed necessary, permission must be obtained from the Sessions Judge of the relevant District, who is serving as the head of the Committee in compliance with the orders of the Honourable Supreme Court," the order concluded.

(By Ishaq Tanoli Dawn, 13, 03/10/2024)

### Karachi's green gap

The Sindh High Court has ordered provincial authorities to refrain from cutting down any trees throughout the province, emphasising that the removal of trees, particularly in urban areas like Karachi, could lead to severe environmental repercussions. The bustling metropolis faces an escalating climate crisis exacerbated by its glaring lack of trees. With a population exceeding 20 million, the city is a concrete jungle where green spaces are dwindling. The absence of trees contributes significantly to rising temperatures, air pollution and a decline in overall quality of life. Green spaces play a vital role in urban ecosystems. They absorb carbon dioxide, release oxygen and provide shade, which is particularly crucial in a city where summer temperatures often soar above 40 degrees Celsius. Without sufficient tree cover, Karachi experiences the urban heat island effect, where built-up areas become significantly hotter than their rural surroundings. This not only increases energy consumption as residents rely more on air conditioning but also poses health risks, particularly for vulnerable populations.

The environmental degradation caused by deforestation and urban sprawl has also led to poor air quality. Dust and pollutants thrive in treeless areas, contributing to respiratory illnesses and other health problems. The lack of greenery also diminishes biodiversity, threatening the local flora and fauna that are vital for a balanced ecosystem. Addressing this issue requires a concerted effort from government officials, environmental organisations and citizens alike. Urban planning must prioritise green spaces, integrating parks and tree-lined streets into the city's infrastructure. In a city facing mounting climate challenges, investing in trees is not merely an aesthetic choice; it is a necessity. By reintroducing greenery into Karachi, we can combat rising temperatures, improve air quality, and foster a healthier, more livable city for generations to come. The authorities must act before the green gap widens beyond repair.

(By Editorial, The Express Tribune, 14, 04/10/2024)

### Madhubala to reunite with sisters after 15 years in Karachi

Dr Amir Khalil and his team, representing Four Paws — an international organisation working for animal welfare — are back in the city, rekindling hopes for zoo elephant Madhubala's reunion with her sisters at Safari Park after 15 years.



The team held meetings with Karachi Metropolitan Corporation (KMC) officials on Thursday and visited Safari Park, where construction of the elephant sanctuary has entered its final stages.

"90 per cent of the sanctuary's construction is complete, and we expect that Madhubala will be reunited with her sisters Malika and Sonia in the last week of November," said Dr. Khalil, who leads the team. He also appreciated the support extended by the KMC and the mayor in reaching this critical stage.

The remaining work, he pointed out, includes landscaping the elephant enclosure, building a feed storage area and rooms for staff, finalising enrichment features, and resuming the necessary training for the three elephants.

"It's a huge task shifting a four-tonne elephant in a five-tonne crate, not just for the staff engaged in the relocation but also for the giant animal. Hence, Madhubala's crate training will resume next week with the arrival of elephant trainer Mathias Otto," explained the Egyptian veterinarian.

According to officials, Madhubala — who was left alone at the Karachi Zoo after her partner and sister Noor Jehan met a tragic death over a year ago — will be the last zoo elephant in Pakistan.

Under the KMC-Four Paws agreement signed in February this year, the area of the elephant sanctuary at Safari Park has been expanded from over 2 acres to 5.5 acres and divided into three sections. The staff is also being trained for the relocation process.

Experts say that while the three elephants are physically fit for reunion, they will undergo medical tests before the move to ensure they are free of infections.

Initially, Madhubala will be kept in one section, and Malika and Sonia in another, so staff can observe how the animals react upon seeing each other.

"We are excited and curious about how the elephants will react when they see each other after 15 years. It will be a unique moment indeed. Few animals across the world get the opportunity to reunite with their families," shared Dr Marina Ivanova, another Four Paws team member.

Elephants, Dr. Khalil pointed out, have very strong memories and don't forget easily. "Hence, their reunion will be a great and memorable moment."

Over three years ago, Dr Khalil and his team saved elephant Kaavan from years of loneliness at Islamabad Zoo and relocated him to a sanctuary in Cambodia.

"After Kaavan, Pakistan has another opportunity to set an example for developed countries like the US and Canada, where elephants are still being kept in zoos," Dr Khalil said.

He also recalled the recent successful relocation of zoo elephant Charley in South Africa. The ageing elephant had shown signs of deep unhappiness after the death of his partner in 2020. Dr. Khalil and his team relocated him from the Pretoria Zoo to a game reserve in the same country.

It should be noted that the four elephants — later named Noor Jehan, Madhubala, Sonia, and Malika, and now aged between 16 and 18 years — were brought to Karachi in 2009. Noor Jehan and Madhubala were kept at the zoo, while the other two were housed at Safari Park.

Their well-being has long been a subject of serious concern, and activists have been calling on the government to take measures for their welfare.

(By Faiza Ilyas Dawn, 13, 11/10/2024)

### Clearing the air

INDIAN External Affairs Minister S. Jaishankar's historic visit — historic because the last official visit to Pakistan by an Indian foreign minister was undertaken by his predecessor, Sushma Swaraj, in 2015 to attend a conference — comes at a time when the air in the federal capital is at its crispest. There is just the right amount of nipiness in the evening air for a hot cup of the popular pink Kashmiri chai to produce the perfect warmth — and thus thwart the toxic air between India and Pakistan.



The high-level, 11-country SCO summit, which Mr Jaishankar and his delegation are attending, also comes at the start of the smog season. That is why climate experts in both India and Pakistan agree that, given the stalled formal bilateral talks between the two nuclear neighbours, the two can at least take baby steps and discuss shared issues which are likely to generate less mistrust, scepticism and suspicion because of

scientific evidence.

The conversation can begin with air pollution, since we share and breathe the same air. According to the World Bank, an estimated total of 1.5 billion people in the two countries are exposed to this form of pollution. Yesterday's air quality data by IQAir showed Delhi and Lahore ranking as the second and fourth cities with the worst air quality.

Environment lawyer Ahmad Rafay Alam believes clean air should be an obvious agenda item for discussion at the summit. In fact, it would have made sense, he says, to hold the meeting in Lahore so that the attendees could view acclaimed British artist Dryden Goodwin's artwork titled Breathe, which highlights air pollution in Lahore through posters, digital billboards and projections on multiple sites across the city. This piece of art is part of the ongoing Lahore Biennale 03. According to Alam, Goodwin's work takes the discussion on air pollution out of the dryness of policy language and speaks directly to the heart. Abid Omar, a clean air campaigner, also the artist's model, said there was time still and the digital artwork can be projected on the façade of important buildings in Islamabad, as well as Karachi, even after the summit is over, as it will inform and educate the masses.

*The SCO provides an opportunity for cross-border discussions on pollution.*

To understand how deadly air pollution can be, one must understand the real culprit: inhalable particulate matter, which has a diameter of 2.5 micrometres and is finer than the finest human hair (which has a diameter of about 70µm) and is visible only under an electron microscope. When inhaled, it affects your heart and lungs. Research has found a connection between air pollution and the health of newborn babies — low birthweight, miscarriages and stillbirths. And, among young children, these particles can cause asthma, a reduction in brain volume, behavioral dysfunction, and impaired lung growth. It's a scary thought, but imagine South Asia burdened by a generation of unhealthy children, many of whom may not live to become adults.

But this particulate matter does not stay put or respect borders. It travels long distances. It chokes the air above us and across the region. Therefore, cleaning up the air in your own city or country is an exercise in futility, since there are six air sheds over the South Asian region in which the polluted air remains trapped and that can lead to an estimated two million premature deaths in the region.

Thus, a shared problem requires a shared strategy to eliminate it. It is time to move from bickering over which country spews the most poison and work together to overcome the challenge.

At a meeting organised last week in Nairobi by the UK-based Conciliation Resources between Indian and Pakistani experts, ambassadors, journalists and parliamentarians, air pollution experts, dismissing the silo-ed approach, and recommended greater cross-border engagement between the two countries in the form of knowledge-sharing and by treating the issue as a year-round problem rather than a seasonal event that gets underway with the onset of winter and as smog engulfs the two Punjab.

There were discussions on developing a long-term strategy for diversification of cropping patterns, capacity building of judges, lawyers, members of parliament and doctors, and sharing best practices so as not to reinvent the wheel. For example, India's 2017 Odisha Millet Mission — a transition to a more equitable food system that has brought millet back on the farmer's radar and

people's menu — can be tweaked and replicated in Pakistan. Millet is a hardy, climate-smart grain and an ideal choice for areas prone to drought and heat stresses.

Similarly, tested practices that failed or were not the best ones for the region, can also be shared so as not to repeat mistakes and erroneous technologies.

(By Zofeen T. Ebrahim Dawn, 07, 16/10/2024)

### **Decaying aquatic plants blamed for foul smell in city**

Past week, amid a dust storm, the city was hit by an unpleasant stench, which worsened over the weekend, especially in areas close to the sea.

The odour was particularly strong in Clifton, DHA, SMCHS, PECHS, Korangi, Orangi, North Nazimabad, Federal B Area (blocks 9 and 10), and also noticeable in Saddar.

"The smell was unbearable and aggravated my sinusitis. I've had breathing issues for years, but this October, my symptoms have worsened, and I believe it's due to the city's changing climate," shared Haris, a 26-year-old corporate employee who lives in SMCHS.

"I've been commuting through Clifton Block 3 for at least five years, and around this time of year, there is usually a foul odour, but it typically lasts no more than 48 hours. However, this time, I had difficulty breathing, even though I have no history of respiratory issues," said Faizan, who commutes daily from F.B Area Block 9 to Clifton.

When contacted by Dawn, Muhammad Moazzam Khan, technical adviser at the World Wide Fund for Nature (WWF-Pakistan), explained that the odour was caused by decomposing phytoplankton, sea plants that grow underwater, and was linked to changes in air direction.

"Karachi is situated near the Northern Arabian Sea, where monsoon reversal and circulation occur," he explained.

"The monsoon season lasts from mid-May to mid-September, and once it ends, turbidity in the water increases.

"Phytoplankton thrive in specific temperature conditions," he added.

"During the monsoon season, limited light prevents their growth, causing them to form a balloon-like mass that's then carried by the wind."

Rafiullah, an ecologist, explained the situation in terms of photosynthesis and rising temperatures in Karachi.

"Phytoplankton perform photosynthesis and release oxygen into the atmosphere, while zooplankton, from the animal kingdom, float alongside them. Both groups have cycles of growth and decline," he said.

He added, "A significant number of plankton end up in elevated areas due to tidal action. When the water recedes, they dry up, releasing a foul odour. The situation worsens when low-pressure systems occur, reducing air circulation and intensifying the smell."

When asked if the foul odour, combined with the dry weather and dusty winds in mid-October, could pose health risks, he stated that while there's no "concrete" evidence yet, the rapid temperature changes could potentially lead to issues. "Prolonged exposure might affect sinusitis," he noted.

Yasir Darya, CEO of Climate Action Centre (CAC), echoed a similar view but highlighted the impact of air quality and rising temperatures on health.

"The city's air quality has deteriorated significantly in recent years, and exposure to any foul odour could lead to various health issues," he explained. He added, "Besides phytoplankton, rotting fish in the sea is also a major health hazard, as it harbours bacteria, microbes, and viruses that carry infectious diseases."

Currently, the temperature in the city ranges from 28°C to 34°C on an average, accompanied by extreme dryness, while night-time temperatures drop to 21°C. The probability of a muggy day in Karachi decreases significantly throughout October, falling from 84 per cent at the beginning of the month to 37pc by its end.

In October 2023, Karachi recorded 10 sunny days, eight cloudy days, and no rainy days. The average maximum temperature was 33°C, with a high of 37°C and a low of 30°C. The average humidity was 78pc, reaching a maximum of 100% and a minimum of 36pc.

The slight fluctuations in temperatures over the years are not only impacting the Air Quality Index (AQI), but the decrease in humidity may intensify the odour, potentially leading to health hazards.

(By Aleezeh Fatimah Dawn, 13, 18/10/2024)

### **CS orders city-wide fumigation**

The Sindh government has decided to launch a comprehensive fumigation campaign in Karachi to combat spread of dengue and other diseases.

A decision to this effect was taken in a meeting chaired by Chief Secretary Syed Asif Haider Shah on Monday.



The meeting was attended by the Karachi commissioner, local government secretary, all deputy commissioners of Karachi division, municipal commissioner and other senior officials.

During the meeting, the chief secretary directed that the fumigation campaign be conducted across 25 town municipal corporations (TMCs).

The chief secretary emphasised the significance of this campaign, stating that this initiative was essential for protecting public health and would contribute to curbing the spread of dengue and other diseases in the city.  
(By Newspaper's Staff Reporter, Dawn, 13, 22/10/2024)

### **Study raises alarm over harmful particles in Karachi's air**

Expressing serious concern over the growing levels of air pollution affecting all major cities of Pakistan, a senior expert at a press conference held on Friday at the Aga Khan University (AKU) shared findings of a recent study conducted in Karachi, demonstrating a substantial increase in hospital admissions and ER (emergency room) visits for respiratory issues due to short-term exposure to ambient fine particulate matter (PM2.5) and its components (which are air pollutants).

The study titled 'Impact of fine particulate pollution exposures on respiratory health in a mega city of Pakistan' has recently been published in the journal Atmospheric Pollution Research.

The study — the first evidence of PM2.5 association with pulmonary diseases in a mega city of Pakistan— reveals alarmingly high levels of harmful particles in Karachi's air.

High levels of sulfate, ammonium, nitrate, and black carbon have also been found widespread across the city that contributed to poor air quality.

*Expert says its high time air pollution was treated as a crisis; calls for taking steps to curb rising levels of particulate matter in the air*

"We have seen a 25 to 30 percent increase in hospital admissions and ER visits on a daily basis and found children under one year, adults above 65 years and people with compromised immunity levels very vulnerable," said Prof Zafar Fatimi, Section Head, Environmental, Occupational Health and Climate Change, Community Health Sciences at AKU, adding that many patients admitted in critical condition couldn't survive.

It's a huge loss and economic burden not just for the families but also for the society as a whole. "Here, we are talking about hospital admissions. But, poor air quality affects everyone, including those with strong immunity levels. The harmful particles, we are inhaling all the time, are slowly affecting our bodily functions," he said, adding that particulate matter pollution also impacted cognitive ability.

#### **'Highest risk' to respiratory system**

According to him, PM2.5, known to pose the highest risk to human respiratory system, is emitted in large quantities from anthropogenic activities, and has been proven to contribute to cases of chronic bronchitis, lung infections, and the worsening of pre-existing respiratory diseases.

Prof Fatimi cited the World Health Organisation (WHO) 2021 report according to which high levels of particulate pollution in Lahore would reduce life expectancy of children being born in the city by five to seven years.

#### **Local problem**

The AKU study measured levels of PM2.5 constituents at Karachi's two busy sites; Korangi and Tibet Centre on M.A. Jinnah Road. During the same time period, data was obtained from the city's three leading hospitals: the National Institute of Cardiovascular Diseases (NICVD), the Jinnah Postgraduate Medical Centre (JPMC), and the Aga Khan University Hospital (AKUH) for hospital visits for respiratory health issues.

Researchers have found out that the average PM2.5 levels in Karachi are among the highest compared to other cities in both developed and developing countries and its concentration exceeded guideline values set by the WHO.

"It is high time we treat air pollution as a crisis and adopt measures to curb the increasing levels of PM2.5 in our environment. Also, we must understand that air pollution, unlike climate change, is a local issue created by our mismanagement and can be effectively addressed within a year in the city."

Road traffic and industrial emissions, he pointed, constituted major sources of pollution, while calling for creating public awareness, making policies backed by evidence and setting up a mechanism for their implementation.  
(By Faiza Ilyas Dawn, 13, 26/10/2024)

### **Climate investment**

THE increasing frequency and intensity of extreme weather events such as heavy rainfall, droughts, and heatwaves, result in loss of livelihood, human lives, and economic output. Furthermore, extreme weather events seriously undermine efforts to eliminate poverty and improve living standards, offsetting gains from economic development and resulting in the wastage of scarce resources. Thus, enabling adaptation to climate change and developing the resilience of key social and economic systems has become a top priority of governments worldwide.

Resource-scarce countries like Pakistan have no option, but to invest in climate change adaptation, developing climate resilience of vulnerable communities, and cushioning social and economic systems from climate-related stresses. Investment in climate resilience in the Pakistani context can protect the lives and livelihoods of vulnerable communities and shield social and economic



systems, safeguarding the country’s economic progress. For example, saving jobs and household incomes and avoiding and mitigating displacements can help maintain economic activity, facilitating local economies to rebound faster. Furthermore, investments in climate adaptation and resilience can increase the resource base, improve health and well-being, and reduce pollution, enabling a transition to a low-carbon economy.

There is much evidence of gains in investment in climate adaptation and resilience. A World Resources Institute study claims that for every dollar invested in climate adaptation and resilience, the returns range from \$2 to \$10, demonstrating a clear business case for investment in climate adaptation. The

study revealed that investment in early warning systems alone can help avoid losses and damages amounting to at least 10 times the value of the investment. The returns, however, depend on several social, economic, political, and institutional factors, which create conducive conditions for climate interventions and returns on such investments.

However, the latest estimates of the 2024 Climate Resiliency Report show that for every \$1 invested in climate resilience, \$6 is saved in terms of avoided losses and damages and \$7 is saved in terms of averted loss to the local economy, making the return on investments in climate change adaptation and resilience \$13. This means that billions of dollars could be saved by investing in climate change adaptation and resilience.

*We have no option, but to invest in climate change adaptation.*

While the Climate Resiliency Report estimates are from the US, there are successful examples of investing in climate resilience from low-income countries as well. For example, investment in water availability and increased water food security in Kenya, typhoon-resilient housing in Vietnam, urban flood risk management and averted losses in Mozambique, and urban heat management and reduced heat-related mortality and morbidity in India are some of the pieces of evidence of gainful investment in climate adaptation and resilience in Global South.

This evidence also offers key insights into successful climate interventions. Examples of such interventions include the use of data and climate information, participatory approaches, involvement of the private sector, strong coordination, decision-centred planning, political support, and long-term preparation. Notably, these strategies are included in key policy documents in the Pakistani context; however, their successful implementation, scaling up, and dissemination remained hurdles.

Developing climate resilience of key economic and social systems also involves climate-informed investment decisions to develop critical infrastructure, and prevent it from extreme weather events, mitigating the losses and damages and thus wastage of limited resources. However, among other things, limited climate change knowledge and institutional capacity and the absence of appropriate data and information impede climate-informed decisions to support adaptation and resilience building.

Importantly, investment in climate resilience is profitable even if there are no extreme weather events. For example, investment in agriculture resilience can improve crops and thus the food security and performance of the agriculture sector. Similarly, better infrastructure can improve population access to basic services such as clean drinkable water, transport, and health, resulting in improving human capital, employment and economic opportunities, social equity, and economic uplift of marginalised segments. Pakistan is not only in desperate need of developing climate resilience, but it also urgently needs to improve its human capital. Both aims can be achieved by aligning climate and development policies and interventions and integrating climate action in development programmes and projects.

(By Ajaz Ahmed Dawn, 07, 27/10/2024)

### Climate march in Karachi calls for urgent action against worsening environment

‘Save the Earth, save the generations’ echoed as the loudest chant in Frere Hall, where people from across the city gathered under the scorching sun to advocate for the planet and especially for their country.



The Climate March was organised on Sunday by the Pakistan Maholiati Tahaffuz Movement in collaboration with the Climate Action Centre, run by Yasir Darya, who was present at the march, and other organisations. He appeared very hopeful about the future of climate activism.

“I am happy with the turnout and glad that people are now taking climate change seriously,” he said.

The march began with a drum dance that the audience thoroughly enjoyed, with everyone joining in on the beats and having a great time.

*Victims of anti-encroachment drive, corporate*

*farming, fishermen affected by marine pollution also raise their voices*

It served as an ice-breaker, with dancers dressed in yellow and wearing green headbands stealing the spotlight and spreading vibrant colours all around. Then, a drum circle was conducted to warm up the audience.

On the left side of the hall sat the victims of demolition drive along Orangi Nullah, carrying the burden of homelessness for years.

The pain was evident on their faces as they voiced their concerns once again — a struggle that has become all too repetitive for them.

"My daughter is all grown up now, and I have no idea how she will ever get married, as we've been displaced for four years. We were never compensated for our losses, and no government official ever came to our door to explain why this is happening to us. So, we've shown up here in hopes that our voices will be heard — though, honestly, I feel very hopeless," Naveed, a resident who was displaced during the anti-encroachment drive by the provincial government, said.

The march also saw the presence of the fishing community from Ibrahim Hyderi, with ample representation of both men and women, who were demanding a cleaner sea for the fish to live in, as well as equal rights for themselves.

"We spend seven days a week at sea, and you tell me — if there's no marine life left to catch, how will we feed ourselves? The contamination is killing marine life, and, as a result, our livelihood is disappearing. We need to save the planet so that we don't end up starving," said 65-year-old Kulsoom Bibi in Sindhi.

Her words were translated by Karim, the man who accompanied her.

In front, Nooruddin, a man from Jacobabad, held a banner against corporate farming, advocating for farmers whose lands have been occupied, leaving them penniless and without hope of a better future for their children.

"The water from the Sindh River is being stolen, which prevents local farmers from getting their fair share for their land. These mafias have taken over our rightful resources. As an educated man, I am here to be the voice of my people — because if not me, then who?" he asked pointedly at the end.

An electrifying yet moving performance was delivered by teenage students dressed in various costumes, each representing a different element of the planet.

There were multiple musical performances, each leaving a unique impact on the audience.

Some of the notable posters at the march read, 'Stop the climate emergency with renewable energy!', 'System change, not climate change', 'Climate justice now!', 'End imperialist plunder and destruction', 'We pledge to take care of the Earth', 'Stop global warming', and more.

Additionally, a pledge wall was set up in one area of the hall, where participants were encouraged to write a one-sentence pledge contributing to environmental sustainability, which was widely appreciated by the audience.

There were major speeches by Ahmad Shabbar, Pastor Ghazala and Yasir Hussain, each amplifying the call for urgent climate action and connecting it to pressing issues like hunger, poverty, and land mafias.  
(By Aleezah Fatimah Dawn, 13, 28/10/2024)

### **Hawke's Bay welcomes 'ancient mariners' for nesting**

More than 80 green turtles have crawled up the Turtle Beach - also known as Hawke's Bay beach - after swimming hundreds of kilometres to nest and lay their eggs as their annual breeding season has already begun. In Pakistan, the breeding season starts around mid-August and continues until mid-February. Pakistan is one of 11 countries - including Canada, Germany, Italy, Australia, the UK, Sri Lanka, India, and Bangladesh - where turtles migrate to coastal areas for breeding.

A female green sea turtle, also known as the green turtle, black turtle or Pacific green turtle, normally lays between 80 to 110 eggs, while larger females (four feet and above) can lay up to 140 eggs. The eggs hatch into hatchlings within about 45 days. Interestingly, these green turtles are unique in that they do not see their babies after laying eggs.

The Sindh Wildlife Department (SWD) recently invited 150 schoolchildren to witness these ancient mariners. The children will help release one- to two-day-old hatchlings into the sea, hoping that they will survive to breed several times throughout their lives. However, pollution and uncontrolled development pose serious threats to these breeding efforts. The Olive Ridley turtle is on the brink of extinction on Karachi's beaches, while the endangered green turtle species also faces risks.

Hawke's Bay, a key nesting place for green turtles, has seen a surge in female turtles this month, with over 80 females laying around 8,000 eggs. Ashfaq Memon, In-charge of SWD's Marine Turtle Conservation, said that the breeding season lasts from September to February, with this year's target set at 30,000 hatchlings. Since 1975, around 900,000 turtle hatchlings have been released into the Arabian Sea.

SWD volunteers patrol the beach at night during the breeding season. According to Memon, after a female turtle lays eggs and returns to the sea, the volunteers collect the eggs and shift them to the SWD hatchery where the eggs are re-buried, and the hatchlings are kept under watch. After hatching, the baby turtles are released into the sea, leaving their survival to the Mother Nature.

"Female turtles select a nesting spot on the beach, often at night, and dig holes up to 3.5 feet deep," Memon said, adding that rain during the incubation period can damage the eggs due to waterlogging." Wildlife experts say that litter, particularly plastic bags, can obstruct turtles as they lay eggs and threaten their hatchlings.

While talking about other risks, the wildlife experts say that recent constructions along the beaches have further imperilled the turtle habitats, leading to the destruction of crucial breeding grounds. Fishing nets and boat propellers also endanger these turtles.

The experts further say that the nature has bestowed upon female turtles a magnetic sense that helps them swim back to the same beaches where they were born. Green turtles are named for the green fat found in their bodies rather than their exterior colouration. The Sindh Wildlife Foundation has tagged some turtles, which have been found as far away as the coasts of Iran, India, and Muscat.

The hatchlings do not return to shore after venturing into the sea for the first time, except for female turtles, which will return to their birthplace 10 to 15 times over their average lifespan of 70 years. Temperatures can influence the sex of the hatchlings: warmer sands produce females, while cooler sands yield males.

There are three main types of turtles in the world: sea turtles, freshwater turtles, and land turtles. Pakistan is home to seven species of sea turtles - eight species of freshwater turtles, and two species of land turtles. Turtles lay large clutches of eggs and play a crucial role in maintaining ocean health by feeding on seaweed.

According to a research from the International Union for Conservation of Nature (IUCN), only one in a thousand turtle hatchlings survives to adulthood - the fact that necessitates better conservation efforts by both international organisations and the SWD to ensure the survival of these wonderful creatures which have lived on Earth since the time of dinosaurs.

(By Aftab Khan The Express Tribune, 04, 28/10/2024)

### **ADB okays \$500m loan to fight climate change**

The Asian Development Bank (ADB) announced on Tuesday that it had approved a \$500 million policy-based loan to support climate change and disaster risk reduction and resilience in Pakistan.

The Climate and Disaster Resilience Enhancement Programme (CDREP) will strengthen Pakistan's institutional capacity for planning, preparedness and response; increase inclusive investment in disaster risk reduction and climate resilience; and support the scale up of disaster risk financing using a risk-layered approach, the Manila-based lending agency said in a statement.

Pakistan is one of the most vulnerable countries to climate change and disasters triggered by natural hazards in Asia and the Pacific.

Average losses from disaster events exceed \$2 billion per year. Women and other vulnerable groups are disproportionately affected by climate change and disaster events.

"This programme builds on ADB's longstanding work in Pakistan to understand and reduce climate and disaster risks and support effective disaster response," said ADB Director General for Central and West Asia Yevgeniy Zhukov. "We are proud to support an integrated and comprehensive approach to climate and disaster risk management, including a portfolio of disaster risk financing instruments for timely and adequate funding for disaster response."

The programme supports enhanced capacity for disaster risk mapping and modeling for investment and development decisions. It enhances coordination for disaster monitoring and response. It supports enhanced planning and prioritisation of gender-sensitive and resilient public investments, including integrated flood risk management and nature-based solutions.

The programme supports mobilisation of climate finance from public and private sources. This includes issuance of a domestic green Sukuk (Islamic bond). A key innovation of the programme is the use of ADB's Contingent Disaster Financing option for the first time in the Central and West Asia region. This will provide quick disbursing budget support in the event of a disaster.

The programme will support the establishment of a solidarity fund to facilitate the uptake of risk transfer solutions such as agriculture insurance. The programme also supports shock-responsive social protection to deliver cash assistance in the event of a disaster.

The ADB has also approved a technical assistance grant of \$1m to support implementation of the programme.

(By Khaleeq Kiani Dawn, 03, 30/10/2024)

### **Justice Shah regrets lack of focus on climate change**

Senior puisne judge Justice Syed Mansoor Ali Shah has observed that the government has yet to establish a Climate Change Authority or Climate Change Fund under Climate Change Act, 2017.

The 'overexcited' legislators dealt with matters overnight, but they did not set up a climate change fund or authority despite the fact that climate financing has become a lifeline for vulnerable countries like Pakistan, Justice Shah observed while speaking at a high-level Climate Finance Forum and COP-29 Preparatory Workshop, on Saturday.

The two-day event — co-hosted by Sohail and Partners and Resources Future, in collaboration with Institute of Business Administration (IBA), Karachi, and the National Institute of Banking and Finance (NIBAF), Islamabad — was designed to engage in strategic discussions for robust solutions to mobilise climate finance for Pakistan's mitigation and adaptation efforts.

"The government needs to wake up and think more seriously on such issues rather than other issues," Justice Shah emphasised.

He recalled how the Climate Act was essential for suitable adaptation of projects and submissions to international and local institutions for global funding related to climate change susceptibility. "Sadly, when the law was passed in 2017, and we are now in 2024, there is no such authority in the country," he reiterated while recalling how a public interest petition came to the Supreme Court with a prayer to direct the government to set up the climate change authority.

But the government had no answer when the SC asked about earmarking funds in budget for climate change, he said. "I failed to understand, as a judge, what would be more important for allocation in the budget if you do not allocate anything for climate

change in a country severely hit by climate change,” he regretted. This was shocking, though the government assured the court that there would be allocations in future budgets, he said.

“What I want to tell you is the reality check that the 2017 Act asks for the climate authority, but in reality, no such authority exists till date, besides not a single penny coming to climate change funds,” he bemoaned.

There must be a proper regulatory framework and ‘overexcited’ legislators need to come up with a robust and targeted regulatory framework. He emphasised that lack of such framework posed a risk to timely project implementation and limits investors’ confidence in the security of climate-related projects.

“The climate change should be the topmost human right issue since climate change is the greatest existential threat that Pakistan is passing through,” he cautioned. He said judges looked at climate change as a human right issue, as extreme weather events create basic rights issues of access to food, water and health. Therefore, any climate financing has become essential to preserving human dignity and human survival, he said.

“For Pakistan, climate finance is not a choice but a survival strategy,” Justice Shah observed. “When our house is on fire, I think climate finance is the water through which we need to put that fire out.”

Justice Shah said international finance of \$30 billion was outstanding in the wake of the 2022 floods. “Therefore, we need to agitate this matter as a human right obligation; otherwise, there will be no way to get such funds internationally,” he said.

Justice Shah said the courts, as protectors of rights, could hold the state to these commitments for ensuring that financial support flows to those who need it most by translating international agreements into forcing rights to the communities facing the gravest threats.

He noted that climate finance was not merely an economic policy but a matter of survival and justice.

The judiciary, both nationally and internationally, had an unprecedented role in ensuring these funds were managed, protected, and implemented to meet the urgent needs of vulnerable nations and communities.  
(By Nasir Iqbal Dawn, 03, 03/11/2024)

### 300 baby turtles released into sea after successful hatching

The Sindh Wildlife Department (SWD) has released 300 baby turtles into the Arabian Sea, marking the beginning of their life journey after hatching from eggs laid by green turtles on the Hawke’s Bay beach this breeding season, according to Ashfaq Memon, the in-charge of marine turtle conservation at SWD.

This year, as many as 8,000 female turtles have been preserved in nests for breeding, with a target of 30,000 eggs set for the season. The hatching period for these eggs ranges between 45 and 60 days.

The hatchlings released into the sea as part of the SWD’s conservation efforts were only one to two days old. Memon said that about 90 female turtles have returned to the sea after laying their eggs at Hawke’s Bay beach.

Each female lays between 80 and 110 eggs, mostly during the night. SWD staff places the eggs in sand nests covered with iron grills in an attempt to protect them from predators.

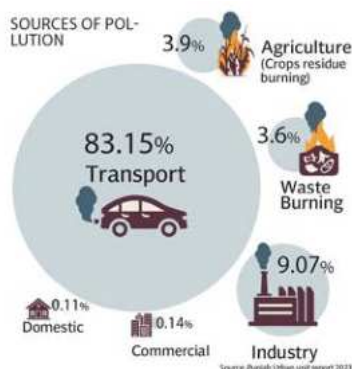
Female turtles are tagged to monitor their movements, Memon said, adding that they have set a goal of tagging 30,000 turtles this year. Many other turtle species in Pakistan have become extinct due to several factors.

The breeding season for green turtles runs from mid-August to mid-February. Since 1975, the department has released around 900,000 hatchlings into the sea.

These conservation efforts show the SWD’s commitment to protecting marine life and ensuring the survival of green turtles in the region.  
(By Newspaper’s Staff Reporter, The Express Tribune, 05, 04/11/2024)

### A fortress of smog

While school children across the globe are usually off from school during the holiday season only, those studying in Pakistan’s most populous province are set free during the smog season too. However, unlike festive occasions, this season brings nothing to celebrate.



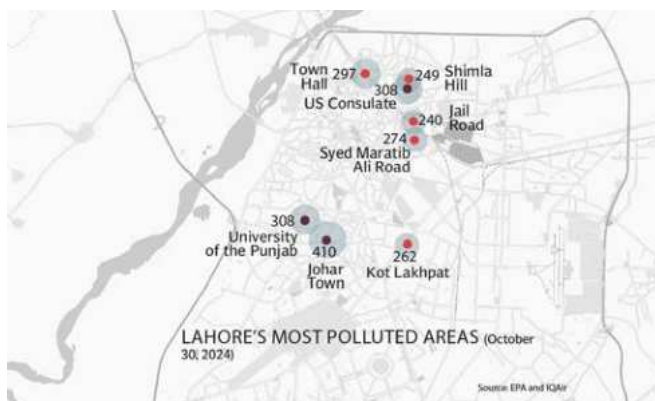
As the choking air settles into the atmosphere, the wheezing of an asthmatic loved one aggravates, the buzz of outdoor activities is killed while life seems to revolve around a big box of surgical masks, or an air purifier tucked in a corner of the home.

With eyes stinging, voices cracked by dry air, smell dulled by congestion, and hearing strained by infections, the citizens of Punjab are imprisoned in a concentration camp of toxic air, where government inefficacy is the silent killer.

Since the past 15 years or so, smog has continued to be a paramount seasonal suffering for locals in Punjab, who have now almost adapted to the perpetual cloud of toxic air which surrounds them from October to February each year.

Although the current Chief Minister of Punjab assumed office this year, her party, the Pakistan Muslim League-Nawaz (PML-N), has held power for most of the years since 2008, during which air pollution levels steadily rose, ultimately leading to the current smog crisis.

According to IQAir, a Switzerland-based pollution watchdog, Lahore's current air quality has been declared hazardous, with the concentrations of the primary pollutant PM2.5 reaching levels which are 35.4 times more than the quantity declared safe by the World Health Organization (WHO)'s annual air quality guidelines



Although the Punjab government has announced the Smog Action Plan while declaring the environmental emergency a "crisis", experts believe that no green lockdown, electric bikes initiative or "climate diplomacy" move with India, can save Punjab from once again drowning in the sea of choking air in the coming months until or unless the state authorities consistently implemented a long-term plan of action for cleansing the air of Lahore, which has emerged to be the second most polluted city in the world.

While expressing his concerns over the Punjab government's smog reduction plan, Ahmed Rafi Alam, an environmental lawyer, was of the opinion that the plan replicated the government's past efforts, which had proven fruitless. "The plan neglects vital sectors like health since pulmonologists are absent from the government committee," highlighted Alam.

Similarly, Maryam Shah, Head of Communication at the Pakistan Air Quality Initiative shed light on the fact that the primary reason behind the province's worsening smog crisis was the overreliance on private transportation. "Vehicles are the primary source of smog, which cannot be controlled until the government upgrades the public transportation system," implored Shah.



Source: IQAir

**What is smog?**

Smog, once simply defined as a blend of smoke and fog, has evolved into a far more dangerous form of pollution.

According to Energy Education at the University of Calgary, modern smog is a complex cocktail of harmful pollutants, including particulate matter (PM) and ground-level ozone (O3), mixed with carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SOx), and volatile organic compounds (VOCs) largely a byproduct of human activities like the burning and extraction of fossil fuels.

Airly, an air quality monitoring service based in Krakow, points to the surge in vehicles on the road as a significant contributor to this worsening crisis in many countries.

**Why does Lahore choke?**

If despite the government's yearly plans, policies and assurances, smog continues its chokehold over Lahore, the most polluted city in the province, then surely something must be wrong in the state's handling of the seasonal epidemic.

According to Dawar Butt, an expert in environment and public policy, Punjab's excessive fuel-burning activity through transportation, industries, and power plants acted as the primary contributor to air pollution. "All these three sectors use substandard fuel, which exacerbates the issue. Since India uses Euro 5 and 6, we too must make it mandatory to use high-quality fuel.

In addition, it will be necessary to outlaw the use of diesel and outdated automobiles that emit a lot of smoke," urged Butt who felt that until or unless the trend of private transportation was discouraged, the smog crisis would continue.

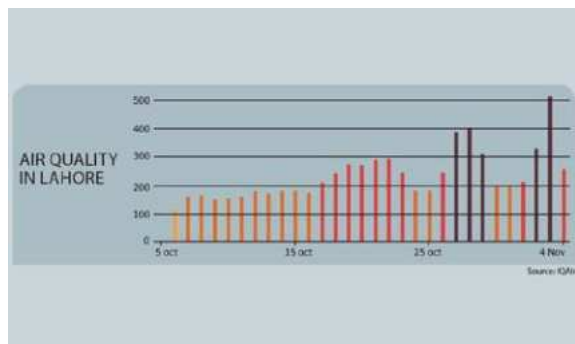
Data indicates that there has been no improvement in the smog crisis over the past one year in Lahore, despite the Punjab government's implementation of a smog mitigation plan. Lahore has consistently topped the list of the world's most polluting cities since mid-October.

In particular, on October 27 the level of Air Quality Index (AQI) cast doubt on the government's assertions that it was taking action to combat smog. In the last week of October, the city's AQI reached a peak reading of 707 between 7 am and 8 am before gradually dropping to 350 by 11am.

In 2023, Lahore's atmosphere was deemed good for only three days, satisfactory for 42 days, and unsatisfactory or unhealthy for a whopping 320 days. This year, from January 1 to October 30, Lahore's air quality showed minimal improvement, with four good days, 12 satisfactory days, and the remaining days classified as harmful or extremely harmful.

"The government's smog action plan cannot be expected to yield instant results, but it will produce positive outcomes in the long run with consistent effort," said Shah, who felt that Lahore too should implement similar legislation as Delhi, which prohibits the entrance of cars older than ten years.

Source: IQAir



### Do we have a health crisis?

Apart from the perpetually grey skies and hazy atmosphere perhaps the most profound impact of smog appears to be on the health of the inhabitant citizens especially those with chronic illnesses.

According to Airly, persistent exposure to smog can lead to the development of allergies, asthma, respiratory failure, decreased immunity, cardiovascular, and neoplastic diseases.

"Due to smog, many patients are coming to the hospitals these days with eye issues and respiratory problems. The risk of pneumonia and bronchitis is also much higher among those

patients who already have weakened lungs due to a chronic condition.

The infection causes a dry cough and a burning sensation in the chest while there is also blood in the saliva. In such conditions, the breathing capacity of the lungs also decreases. Hospitals are getting crowded these days," informed Dr Mohammad Riaz, a pulmonologist at a government hospital at Yakkhi gate.

According to Dr Saqib Shaikh, a thoracic and pulmonary specialist, smog causes inflammation in the respiratory tract, leading to difficulty in breathing. "Smog consists of components of carbon, sulfur and other various chemicals which are very dangerous for the health of humans and animals.

Due to this, asthmatic patients suffer a lot. Constant exposure to smog increases the likelihood of lung diseases while sometimes cancer can also develop. At first there is a cough, and then sputum and phlegm begin to flow, causing the airways to deteriorate due to inflammation," explained Dr Shaikh.

Dr Shaikh further claimed that apart from the elderly, smog was also very dangerous for small children, who were increasingly targeted by various diseases. "If precautions are not taken during smog, minor health issues can lead to big diseases. People with pre-existing chronic diseases can develop further complications including death," he warned.

### Which areas suffer the most?

The dense, choking air of Lahore, often bringing the city to a grinding halt, is particularly pronounced in ten hotspots, including Shimla Pahari, Badami Bagh, and Gulberg. According to Jehangir, the Environment Secretary, these areas are particularly prone to smog accumulation, exacerbated by the city's unchecked urban sprawl and pollution sources.

Although not all areas in Lahore have air quality monitoring devices, data taken from the few government and private air quality monitors revealed that other areas like Johar Town, Syed Maratib Ali Road, Town Hall, University of Punjab, Kot Lakhpat Factory Area, and Jail Road, were also among the most polluted areas in the city over the past week.

While the provincial government has committed to enforcing stricter regulations and limiting construction and commercial activities to combat the worsening crisis, those closely following the situation understand that it is not merely the words that hold significance at this stage; rather, it is the actions taken that will prevent the environmental disaster from recurring each year.

Is it too little, too late?

As the provincial capital grapples with an air quality crisis, officials tout progress in combating pollution, but the reality on the ground tells a very different story. According to Ali Ijaz, District Officer at the Environmental Protection Institute Lahore, three out of 156 brick kilns in Lahore have been dismantled, while the remaining kilns have all been moved to zigzag technology.

"In a similar vein, 500 of the 560 small and large industrial units have installed emission control systems. Recent statistics indicate a significant decline in pollution contributions from brick kilns and industrial units in Lahore," claimed Ijaz.

While Ijaz's claims of sustainable industrial developments might be valid, a 2023 report by the Urban Unit revealed that transportation was the primary contributor to Lahore's air pollution, responsible for 83.15% of total contamination levels. Industry accounted for 9.07%, followed by agriculture at 3.9%, waste incineration at 3.6%, commercial activities at 0.14%, and domestic sources at 0.11%.

"There are a total of 4.5 million motorcycles registered in Lahore while 1,800 more motorcycles are registered every day. Similarly, there are 1.3 million three-wheeler and four-wheeler vehicles of all categories in Punjab, which are increasing by 100,000 every year.

It is alarming to note that the total number of vehicles are increasing year by year," reported Raja Jahangir, the Environment Secretary, who further claimed that new vehicles with converters emitted less smoke than motorcycles.

Jahangir also informed that 500 electric buses had been procured by the government on the instructions of Chief Minister Punjab Maryam Nawaz while 20,000 electric bikes had also been ordered.

Opposing Jahangir's assurances was the Pakistan Air Quality Professionals Group, consisting of meteorology, law, economics, health and technology experts, who have termed the Punjab government's smog mitigation plan inadequate.

Specifically, they pointed out the lack of public consultation for the Punjab Clean Air Plan (2023) and Smog Mitigation Plan for Punjab/Lahore (2024), which in their opinion, is a critical oversight.

**Where does Lahore stand globally?**

During the past one week, Lahore's Air Quality Index touched 514, with the majority of days oscillating between "very unhealthy" and "hazardous" air days, surpassing India's New Delhi, which reported a highest AQI of 319 during the last week.

Although in 2018, Lahore ranked 10 in the list of the world's most polluted cities, six years later in 2024, the city has topped the list competing with New Delhi, which too notoriously holds the same rank.

The degree of danger is such that the health recommendations on the IQAir website have instructed citizens to wear a mask when outside, close windows in the house and avoid spending time outdoors alongside investing in air purifiers.

**Is there any solution?**

There was once a time when people used to joke about buying oxygen in a bottle. Considering the current state of air pollution in Punjab perhaps the humorous hypotheses could become the reality for the coming generations if the state authorities continue their sporadic and sluggish policies against air pollution.

According to a report published by the UN Environment Programme, reducing air pollution required a comprehensive plan of action which involved reducing the burning of coal and biomass, conserving energy and promoting public transportation.

"High-quality public transportation must be made available and also encouraged. Lower fares should be offered during peak hours in the morning and evening, while seniors and students should receive special discount cards. On weekends, public transportation to entertainment venues needs to be free or inexpensive," said Butt, an expert in environment and public policy. (With additional input by Mahnoor Tahir Ali)

(By Asid Mahmood & Muhammad Ilyas, The Express Tribune, 02, 06/11/2024)

**COP29: a fizzling climate summit?**

Over the past three decades since the first UN climate summit (COP) in 1993, a global consensus has emerged: climate change is the most significant threat facing our planet. The potential consequences, including a sixth mass extinction, are dire. Despite numerous international agreements and pledges, including the Paris Agreement, global efforts to mitigate climate change have been insufficient. While strategies have been proposed to reduce greenhouse gas emissions, many continue to haplessly rely on the end-of-use of fossil fuels, a major contributor to climate change.



With devastating climate disasters on the rise and record-high greenhouse gas emissions, the upcoming COP29 presents a crucial opportunity to accelerate global climate action. Scheduled to take place in Baku, Azerbaijan from November 11 to 22, 2024, the summit will prioritise increasing climate finance for vulnerable nations and communities. It also serves as a platform for world leaders to reinforce their national climate pledges and fulfil past commitments. However, considering the past

performance of COPs, it's difficult to remain optimistic about a universally agreed-upon, workable solution emerging from this summit.

To address the impacts of climate change, particularly in vulnerable regions, there's a growing call for financial support from historically high-emitting nations. This support aims to help affected regions adapt to the changing climate and build resilience. Whether it's mitigating greenhouse gases, transitioning to green energy, establishing carbon markets, or providing immediate relief to affected nations, all climate action requires significant financing. The most intriguing aspect of this scenario is that while plans for climate action are abundant, their implementation hinges on adequate financing. Without it, these plans remain mere aspirations.

In 1995, the Kyoto Protocol marked the first time developed nations were obligated to reduce their carbon emissions. However, several top emitting countries either refused to ratify the treaty or later withdrew, citing high costs of emission control or claiming their dual status as both contributors and victims of climate change. This strategic move delayed mandatory mitigation efforts and undermined the seriousness of the issue for less powerful nations.

From 1995 to 2015, the annual Conference of the Parties (COP) meetings, while held regularly, failed to achieve significant breakthroughs in addressing climate change. Despite persistent efforts from the Global South, which bore the brunt of climate disasters, these COPs often devolved into debates and discussions without concrete action. A notable exception was the 2009 agreement, where developed nations pledged to provide \$100 billion annually in climate finance to affected countries by 2020. However, this target remains unfulfilled.

Looking back at the 28 COPs preceding the Paris Agreement, it's evident that global efforts to combat climate change have been largely ineffective. While the Paris Agreement marked a significant step forward, its implementation has been slow and insufficient.

The outcome of these efforts can be summarised in a single word: "hype". Before every COP, there's a surge of anticipation and promises, followed by a barrage of reviews and analyses. Ultimately, a few institutions and the most affected countries are left to plead with developed nations to do more to combat climate change.

Confusion reigns supreme when it comes to promoting climate action through COPs. Questions abound regarding climate finance, such as: Who will contribute how much? How will the funds be allocated and managed? Who will oversee the auditing process? Similarly, the effectiveness of carbon markets remains uncertain. Are they intended to offset emissions or provide a loophole to avoid emission reductions? The criteria for assessing the success of adaptation projects, unlike mitigation projects,



are less defined. Will they rely solely on lengthy reports, or will there be quantifiable metrics? Even the definition of a "climate disaster" is subject to debate. If heatwaves are considered climate disasters, should losses in productivity due to heatwaves be compensated through loss and damage funds?

Despite the growing recognition of climate change and the increasing adoption of renewable energy, primarily driven by economic factors, the world remains far from achieving the necessary emissions reductions. While there's growing global recognition of the climate crisis, tangible progress in transitioning away from fossil fuels remains limited. Despite rhetorical commitments, concrete actions to reduce emissions are still in their early stages. The most vulnerable regions now have a unique opportunity to leverage this shared threat to secure the support and cooperation of wealthier nations.

Moreover, just 20 days before COP29, three shocking reports have dashed the artificially inflated optimism surrounding climate action. The WMO report confirmed that global emissions reached a record high last year, undermining claims of progress despite the growth of renewable energy. The UNFCCC and UNEP reports painted an even bleaker picture. The UNFCCC revealed that current national pledges are critically deficient to meet the 43% emission reduction target by 2030. UNEP's Emission Gap Report highlighted the yawning gap between climate ambitions and actual actions, with inaction prevailing globally.

It is a clarion call for the world's climate leaders to finally reach an agreement on the thorny issues that remain unresolved, even nine years after the Paris Agreement. While dissent is inevitable in collective action, the matter of planetary survival demands that the differences of opinion prevailing between the Global North and South be bridged effectively.

If all other methods fail to produce a decisive solution, perhaps a more drastic approach could be considered: key decision-makers could convene in a conclave-like secluded setting until they reach a consensus on the critical decisions necessary to address the climate crisis. The public could be informed of their progress through a symbolic indicator, similar to the process used by cardinals in electing a Pope. This method, inspired by the Vatican's tradition, could emphasise the urgency and significance of the climate crisis.

(By Mujtaba Baig The Express Tribune, 15, 07/11/2024)

### **KMC accused of destroying turtle nesting grounds at Hawkesbay**

Holding the land department of the Karachi Metropolitan Corporation (KMC) responsible for the destruction of turtles' resting and nesting grounds along Hawkesbay beach, the Sindh wildlife department has recently warned it in a letter of potential legal action.

The letter states that an FIR will be filed if the KMC fails to explain the legal authority under which it has allotted land and permitted "illegal construction" along the beach.

According to a copy of the letter available with *Dawn*, Hawkesbay beach serves as a vital nesting ground for marine turtles and other species. The protection of these animals is not only a moral duty for the present generation but also a legal obligation of the Sindh wildlife department.

"Regrettably, over the past two decades, dry sandy areas crucial for turtle nesting have been increasingly occupied by infrastructure development," the letter states.

"Encroachment, primarily through illegal construction and unauthorised allotments, has drastically reduced the space available for turtles to lay eggs."

*Wildlife dept warns KMC's land dept of FIR for allowing 'illegal' construction along the beach*

The letter accuses the KMC of recently constructing a building on a nursery site adjacent to the Sindh Wildlife Marine Conservation Information Centre. It also notes that infrastructure encroachment has caused significant damage, as evidenced by data collected by the wildlife department over the last two years.

The data shows a significant increase in the number of female turtles returning to the sea (during the September-February period) without laying eggs. "It is our responsibility to prevent and report illegal activities that threaten these protected species. The unauthorised allotment and support for construction on turtle nesting sites by your office, without lawful authority under provincial land grant laws, is a serious violation," the letter continues.

The letter demands that the KMC provide legal justification for its actions, citing relevant regulations under provincial Land Grant Allotment laws, and submit a list of all such allotments, including allotment letters issued. It warns that failure to provide adequate documentation will be interpreted as an inability to present a lawful defence.

"Consequently, an FIR will be filed under the Sindh Wildlife Protection Laws, holding your office responsible for aiding and abetting the destruction of sea turtle nesting sites. The case will be brought before the Honourable District and Sessions judge under the relevant provisions of these laws," the letter states.

Issued under Section 40 (c) of the Sindh Wildlife Protection Act, 2020, and sub-rule (7) of rule 9 of the Sindh Wildlife Protection Rules, 2022, the letter warns that "failure to comply shall result in the initiation of legal proceedings under Sections 9, 21, 73, and other applicable Sindh Wildlife Protection Laws.

#### **Demand for rent backfires**

Speaking to *Dawn*, the additional director of land at the KMC confirmed receiving the letter and stated he was working on a response. "I am not in a position to immediately respond since I have recently been transferred here. I need time to look into this," he said.

According to sources, the wildlife department's letter is a response to an earlier KMC letter demanding rent for the land used by the wildlife department for facilities, including nurseries that provide a safe haven for turtle hatchlings. Notably, the KMC's letter,

dated September 13, 2022, was received by the wildlife department on October 16, 2024—a fact mentioned in the wildlife department's letter dated October 22.

Wildlife department officials, speaking on condition of anonymity, said they had been waiting to take action against illegal infrastructure development along Hawkesbay beach, which has nearly wiped out turtle habitats over the past two decades. However, a lack of documentary evidence and legal authority previously hindered action. With the new law in place, the department can now protect both wildlife and their habitats.

"While turtles have always been a protected species under provincial wildlife laws, their habitats were not," an official explained. "The KMC's letter has provided the documentation needed to build a case."

#### Loss of habitat

Rab Nawaz, Senior Director of Conservation Biodiversity at the World Wide Fund for Nature-Pakistan, stated that a significant area of turtle nesting habitat along Sandspit and Hawkesbay beach has been encroached upon due to hut development over the decades.

"A 2009 study indicated a loss of almost 60 per cent. Though the report is dated, little has changed on the ground since then, and the situation may have worsened without environmental safeguards," he said, stressing the need for further studies on the impact of factors like pollution on turtle nesting habitats.

Mr Nawaz noted that WWF-Pakistan has advocated for the entire area, including mangroves and beaches, to be designated as Gifts to the Earth, yet the proposal has received little attention. "In many countries, strict laws would prevent such development on a beach, especially one with nesting turtles. We have weak laws for coastal habitats. While mangroves are just about protected, other habitats don't fall under this category," he added.

(By Faiza Ilyas Dawn, 13, 07/11/2024)

### Climate realities

THE Air Quality Index in Lahore once again shot past the 1,000-level mark on Wednesday morning, registering at an eye-watering 1,165. The suffocating pall that has descended over the city, and also wide swathes of the province, has forced the Punjab government to announce a slew of new measures to contain its harmful, potentially life-threatening effects. Among these measures are a bar on heavy traffic in the provincial capital till January 2025, the mandatory wearing of masks, closure of educational institutions till Nov 17, and enforcement of work-from-home for half the workforce in government and private institutions. Of course, each measure will incur immense direct and indirect costs, not just for the government but also for the people. Climate activists had long warned of such consequences when they had been cautioning against unchecked industrialisation and urbanisation, a culture of wanton consumption, and our authorities' lack of regard for the climate impact of their beloved 'development' projects. Alas, here we are now, with our largest province now choking on its own toxic fumes, struggling to breathe.

The Punjab government under Chief Minister Maryam Nawaz has already tried and failed to implement a new, more 'thorough' strategy to deal with smog. According to the Pakistan Air Quality Initiative, PM2.5 pollution, which causes the most damage to health, is up 25pc in 2024 compared to 2023; general pollution levels are also up by 23pc. Experts have already written off the band-aid measures taken by the administration, pointing out that 'green lockdowns' and declaring a 'climate calamity' will not help. It should, therefore, return to the drawing board and use the learnings from this year to plan ahead. The solution may be to enforce stricter controls to regulate heavy polluters, especially personal vehicles. Instead, public transport must be encouraged and existing facilities expanded so that people have access to options that do not cause as much environmental harm. Similarly, heavy traffic and high-emission industries must be moved away from population centres as quickly as possible. Lastly, while the CM has said she will talk to her counterpart in Indian Punjab to tackle the smog issue, she must also talk to her counterparts here in Pakistan. The prime minister, too, must take note. The climate crisis is a national issue, not just a provincial one.

(By Dawn, Editorial, 06, 08/11/2024)

### Climate-smart cities

WE must recognise the importance of adapting cities to climate change and develop a roadmap to achieve it. The world is rapidly urbanising because of the growing size and density of the urban population. Estimates show that some 4.4 billion people live in cities and this number is expected to double by 2050 when seven out of 10 people reside in cities. The massive growth in urban population presents innumerable socioeconomic and environmental challenges, including the provision and maintenance of essential services — health, water supply, housing and public transport — as well as job creation.



Since cities in low-income countries already face serious socioeconomic difficulties, climate change acts as an intensifier; it amplifies existing challenges. Thus, climate change unveils additional risks in terms of direct and indirect impacts, including extreme weather events, such as heatwaves, flooding, wildfires, storms, coastal inundation and vector-borne and waterborne diseases. Extreme weather events often disrupt economic activity and basic services, which disrupts households, businesses and communities. They hamper poverty eradication and social mobility and widen socioeconomic disparities. So, the cost of climate change is twofold for cities: socioeconomic regression and damaged essential services, which significantly burdens the national exchequer.

The urban poor residing in informal settlements with limited access to resources, such as water, energy and proper shelter, are disproportionately affected by climate change due to their precarious living conditions. Hence, enabling cities to adapt to climate change is critical to shielding their socioeconomic progress and to prevent losses to essential services. This requires an inclusive approach involving resources, manpower, strong coordination and effective collaboration among stakeholders, especially residents, local governments and businesses.

Furthermore, the projects conceived for climate change-resilient cities must be scalable and replicable with tangible impacts. This can be achieved by designing a comprehensive package of interventions and a concrete investment plan to initiate acclimatisation. Developing and deploying appropriate tools is critical to assessing the current situation and simulate future scenarios of cities' resilience and adaptive capacity. For example, a rapid assessment of a city's exposure to climate risk and vulnerability, its current level of preparedness and gaps is imperative to grasp the context and nature of risk and vulnerability for climate-informed strategic action and a project pipeline, whereby adaptation measures are aligned with the goals of urban development. A climate-informed, robust and transformational approach will also support resource mobilisation for the implementation of interventions.

*Climate projects for cities must be scalable and replicable.*

Low-cost and resource-efficient adaptation interventions are most effective in resource-constrained cities in low-income countries. For example, rainwater harvesting and water treatment systems, natural flood management, urban greenery and building insulation are some low-cost and efficient adaptation strategies for urban areas. Rainwater harvesting and water treatment systems facilitate water storage and conservation, reduce flooding, improve water supply and recharge underground aquifers, mitigating soil erosion and downstream silt.

Natural flood management entails strategically placed natural wetlands, ponds, floodplains and wet woodlands to slow the flow of water and protect cities from flooding. Similarly, urban greenery creates shady spaces, reducing the urban heat island effect and energy consumption, and protects people from heatwaves. Meanwhile, building insulation provides thermal resistance, minimises heat transfer and energy usage. Implementation of low-cost adaptation interventions can decrease household and business exposure to flooding, ameliorate productivity losses caused by rising temperatures and heatwaves, and shelter marginalised populations, the elderly, children and women.

While cities consume substantial amounts of natural resources and cause carbon emissions, they are also hubs of innovation, which assists socioeconomic and technological progress for prosperity and human well-being. This makes cities' resilience to climate change and adaptive capacity critical to lasting development. Thus, cities, especially in the Global South, must develop a comprehensive adaptation plan to address their unique climate vulnerabilities, with the involvement of all stakeholders to foster a culture of cooperation essential for inclusive urban planning and development.  
(By Ajaz Ahmed Dawn, 07, 10/11/2024)

### **Shifting climate priorities**

After years of urgent calls for climate action, global leaders from key economies are now opting out of the United Nations COP29 summit in Baku, Azerbaijan - a troubling signal for international climate efforts. The absence of the US in the summit starting today is particularly concerning.

President Joe Biden will not attend, citing post-election scheduling conflicts, and with former president Donald Trump now returning to office, many worry that the US may once again distance itself from global climate commitments.

Trump's history with climate policy includes withdrawing the US from the Paris Agreement in 2017, a move that disrupted global cooperation and emboldened climate-skeptic positions within and beyond America's borders.

If Trump's past policies are any indication, his approach to COP29 could mean a shift back toward fossil fuels and away from international climate cooperation. This absence of leadership is a critical setback that will affect the ambitious emission-cutting goals that major economies finally had accepted after much ado.

Unfortunately, the timing of this retreat could not be worse. COP29 is expected to address increased funding and stricter global standards for emission reductions. When influential nations fail to participate, they inadvertently signal that climate action is no longer an immediate priority, making it easier for other countries to justify a weakened stance.

Now, without their active participation, there is a legitimate fear that COP29 may not lead to the robust agreements necessary to curb global warming within manageable limits.

Solidarity is not a choice but an obligation if the world is to address the injustices of climate change. The impacts are not confined to one region or continent.

They ripple across borders, impacting food security, migration patterns and global economic stability. It is time for major economies to reaffirm their commitments, not only by attending summits but also by taking decisive actions and following through on promises made.

(By Editorial, The Express Tribune, 14, 11/11/2024)

### **US launches \$24 million 'Climate Smart Agriculture' project in Pakistan**

The US government on Monday launched a new five-year \$24 million 'Climate Smart Agriculture' project in Pakistan that is designed to support farmers with sustainable tools and practices – suitable for business and the environment.

"We will focus on better farming practices and technology; new digital tools; and assistance with business models, financing, and international connections. These programmes will improve crop yield while helping the environment - and putting more money in farmers' pockets. Together, we're planting the seeds of success," said US Ambassador Donald Blome while launching the project at the University of Faisalabad.

The five-year investment (2025-29) will equip farmers with climate resilient seeds, conservation practices and eco-friendly pest management to help communities adapt to a changing climate.

The climate-smart agriculture concept reflects an ambition to improve the integration of agriculture development and climate responsiveness. It aims to achieve food security and broader development goals under a changing climate and increasing food demand.

*Project designed to support farmers with tools, practices*

Elaborating details of the project, Ambassador Blome said: "Today, we are partnering with Pakistan to respond to climate change. Agriculture both affects -- and is affected by -- climate change. Unpredictable weather, heatwaves, and irregular rainfall are making it harder for farmers to grow the crops that support their families and feed the nation. We all know how important it is that agriculture in Pakistan continues to grow and thrive."

Together, we are working to help Pakistan become more resilient to climate threats. Through the US-Pakistan "Green Alliance" framework, the US is making strategic investments in renewable energy, water management, and smart agriculture to help better position Pakistan to mitigate and adapt, to meet the threat of climate change head-on. We have also contributed \$1 billion to the Green Climate Fund and have unlocked millions of these dollars in climate mitigation and adaptation projects to enhance Pakistan's resilience, he said.

In agriculture alone, US investments have benefited more than one million rural households, and have helped farms and firms increase the value of their sales by more than \$1.47 billion and create more than 100,000 new jobs.

The project will ensure Pakistani farmers can access cutting-edge agricultural technology to improve productivity. This includes supporting partnerships among researchers, businesses, and farmers' organisations to ensure that newly-developed, improved seeds are available to farmers.

"We will work with farmers to introduce modern machinery that will improve the efficiency and effectiveness of the planting process. We will also introduce automated irrigation systems to ensure water is used effectively, which is crucial in regions dealing with water scarcity. We will also make new technology available for crop monitoring, farm management, and weather forecasting. All of this translates into more productive crops, US ambassador said.

Under the new project, the US government will help farmers bring their goods to market and maximise their profits. This will be done by connecting farmers with financial services to help them buy better seeds, tools, and machinery.

The United States and Pakistan have a long and strong partnership in agriculture. Over half a century ago, a U.S. scientist partnered with Pakistani colleagues to revolutionize agriculture here and around the world. The story of Dr Norman Borlaug and his work with Dr Mohammad Manzur Bajwa is one of an enduring US-Pakistani partnership helping to bind our two countries together in friendship.

The resulting strain of wheat enabled Pakistan to double its wheat production between 1965 and 1970. This extraordinary yield was known as the "Green Revolution" - a term coined in 1968 by USAID administrator William Gaud.  
(By Amin Ahmed Dawn, 04, 12/11/2024)

### Children call upon adults to wake up to climate crisis

Children from across Pakistan came together to speak up for their rights at a World Children's Day commemoration held at the Arts Council of Pakistan, Karachi, asking decision makers to translate their commitments on child rights and climate change into reality.



Talented child musicians, performers and child rights champions shared their demands, hopes and dreams for the future through songs, words, and theatre.

"Climate change threatens our world, and we are worried about our future," said Taqwa Ahmad, a Unicef youth advocate in Pakistan. "Our voices are often silenced, and our rights are ignored. Our demands are simple yet significant. Listen to our concerns, value our emotions, and respect our rights. Take climate change seriously and turn your words into action."

World Children's Day is Unicef's global day of action for children by children, marking the adoption of the Convention on the Rights of the Child (CRC) in 1989, the most widely ratified human rights treaty in history.

*On World Children's Day event, activists ask decision-makers to translate promises of child rights into reality*

Pakistan was the sixth country to sign the CRC on Nov 12, 1990, affirming its commitment to promote, protect and fulfill child rights. Yet many rights remain out of reach for children and adolescents.

Pakistan has one of the highest neonatal mortality rates in the world, around 40 per cent of children are out of school and over 40 per cent of them under five are malnourished.

"Urgent attention is needed to tackle pressing issues such as 26.2 million out-of-school children, high rates of malnutrition, and lack of safe water access for millions, among others. We must renew our commitment to ensure that all children can grow in safe, nurturing environments," said Sindh Chief Minister Syed Murad Ali Shah.

A staggering 80-85 per cent of children experience violent discipline in Pakistan. Recently, the government of Pakistan pledged to end all forms of violence against children by 2027 at the Global Ministerial Conference on Ending Violence Against Children in Bogotá, Colombia.

"Today, I have seen the extraordinary talent, passion and vision of children in Pakistan. We need to ensure that girls and boys are given their rights, such as the right to health, to food nutrition, to protection, to clean water, to education... so they can survive, grow healthy and become educated," said Mohamed Yahya, a UN resident coordinator in Pakistan.

According to Unicef's 2021 Children's Climate Risk Index, children and young people in Pakistan face 'extremely high risk' from climate-related threats. Floods, heatwaves and air pollution have suspended schools in different parts of Pakistan this year, reducing children's opportunities to learn while the country grapples with an education emergency.

"Children make up almost half of the population of Pakistan, but they are rarely considered in the decisions that affect their futures. We need urgent action to uphold children's rights and ensure every child has the opportunity to thrive," said Abdullah Fadil, a Unicef representative in Pakistan, adding that as world leaders travelled to Azerbaijan for COP29, children were calling upon adults today to wake up to the climate crisis and prioritise their futures before it's too late.

### Focus on polio threat

Earlier in the day, the chief minister held a follow-up meeting with Unicef and UN officials where they discussed ways to effectively tackle the polio threat in the province.

The chief minister stated that currently 20 districts were affected in the province with 13 confirmed cases and that 66 per cent of tested environmental sites were positive for the wild poliovirus.

Mr Abdullah Fadil, acknowledging vaccine hesitancy as a challenge, said that the Sindh government's strategic Social and Behavioral Change Communication (SBCC) programmes to boost awareness and encourage vaccination would be helpful in that respect.

The chief minister responded by saying that parliamentarians were being engaged to support vaccination teams in areas where refusal rates were high.

"Our robust surveillance system along with coordinated routine immunisation (RI) efforts will help respond quickly to new cases," he said while describing the upcoming vaccination campaigns in December as critical.

(By Newspaper's Staff Reporter, Dawn, 13, 13/11/2024)

## Seminar sounds alarm on suffering of flood affectees

Human rights crusaders, environmental activists, legislators, lawyers, and academic scholars on Tuesday sounded the alarm about the suffering of communities still grappling with the aftermath of the 2022 floods in Sindh. While speaking at a seminar on Tuesday, they stressed the need to protect the rights of marginalised communities who continue to face the relentless impacts of climate change.

The seminar was organised in connection with International Human Rights Day jointly by the Centre for Law, Justice, and Policy, Sindh Human Rights Commission (SHRC), United Nations Development Programme (UNDP), and Denning Law School.

Experts highlighted the continuing struggles of Sindh's residents, especially those displaced and affected by the catastrophic floods, which occurred over two years ago. Despite ongoing rehabilitation efforts, many flood victims continue to live in precarious conditions. Rajvir Singh Sodha, Special Assistant to the Chief Minister on Human Rights, said that the provincial government is working to protect inheritance rights and provide relief for displaced families. He also pointed out ongoing efforts to improve infrastructure in rural areas and called for research into the alarming number of lightning-related deaths in Thar desert, as well as the challenges faced by communities in accessing water sources.

(By Newspaper's Staff Reporter, The Express Tribune, 05, 18/12/2024)

## Delivering clean air

In recent days, we saw economic and social life in almost all of Punjab and KP come to a standstill. The air quality in Punjab, the most populous and most urbanised province of the country and parts of KP endowed with pristine mountains has become a more serious climate crisis than the magnitude of the 2022 floods.



With almost 100 million people inhaling polluted air — 10 times more toxic than WHO standards — the scale of this crisis has become a health emergency. The rain will provide temporary respite as it will help improve visibility but not permanently bring pollution levels down to healthy standards.

The problem has not emerged suddenly, nor can it be resolved quickly. How can Pakistan reverse the rapidly deteriorating situation? We need to set realistic targets for 2047 to commemorate our first 100 years as a nation.

The brewing challenge was recognised in 2014, by a World Bank-compiled study Air Quality in Pakistan: A Review of the Evidence, revealing that Pakistan's urban air pollution ranked among the worst globally, and significantly exceeded international limits.

The report showed that air pollution contributed to approximately 235,000 premature deaths and over 80,000 hospital admissions annually. The air quality reduced life expectancy by up to 2.7 years across Pakistan. It seems that the report in 2014 was predicting the newspaper headlines of November 2024.

*The problem of pollution has not emerged suddenly, nor can it be resolved quickly.*

The warnings were ignored by policymakers, even though the study also pointed out that air pollution was costing up to 6.5 per cent of GDP annually. Healthcare expenditures amount to \$47.7 billion (about 5.8pc of GDP), while lost labour output reaches \$6.6bn. The cost of environmental degradation at the time was estimated at Rs365bn annually.

Given the gravity of the challenge, the study set a target of 70pc reduction in air pollutants by 2030 and 81pc by 2040. These goals required coordinated interventions across transportation, industry, agriculture, and waste management sectors, supported by strengthened institutional capacity and regulatory frameworks.

The Lahore High Court's Smog Commission (2017) and the Judicial Water & Environment Commission (2019), could not persuade the provincial government to bring the issue to the forefront.

Ironically, it was only in March last year that the National Clean Air Policy was approved. Within a month, it was followed by the Punjab's Clean Air Plan. Both NCAP and PCAP have shifted the signposts: achieving a 38pc reduction in PM2.5 emissions by 2030, compared to baseline levels, and to 81pc by 2040. In reality, a credible scientific baseline still does not exist. The policies' effectiveness is further compromised by limited air quality monitoring infrastructure. While Punjab has begun to install such infrastructure, Balochistan, KP, Sindh, and Gilgit-Baltistan lack monitoring networks entirely.

Several complex factors drive this crisis. Some developing countries have used the following five framework principles to orient their policy on clean air:

**First:** adaptation and mitigation are intrinsically linked. We need to bust the myth that as a developing country, emissions reduction or mitigation is not our priority, and only adaptation is. The present air pollution crisis is proof that it is perilous for Pakistan to ignore mitigation measures.

**Second:** policies are for implementation. Starting with the National Environment Policy (2005), a stack of policies have highlighted the need for ambient air quality. Despite several trillion rupees worth of PSDP, air quality hardly received any investments.

Further, the policies beg implementation, not a downward revision of targets. NCAP and PCAP have both relaxed air quality parameters that fall behind the WHO's 2021 guidelines. No reasons are offered for lowering standards. By reverting to pre-2021 WHO interim targets, Pakistan has effectively loosened the existing National Environmental Quality Standards from 2013. Some experts believe that it will potentially raise PM2.5 levels by more than 50pc.

Regrettably, some functionaries are now also arguing for reducing the ambitions of Nationally Determined Contributions (2021). Instead of assessing the barriers for its slow implementation, an important thought leader has recently stated that NDC 2.0 has "unrealistically high ambition". In reality, the NDCs still lack an implementation plan, costing, or a secretariat to monitor its progress. Far from scaling down its sovereign commitments, Pakistan needs to scale up climate action for a convincing narrative for greater access to climate finance.

**Third:** align with global trends. The present crisis provides Pakistan an opportunity to join the global drive for decarbonisation, now gaining new momentum after Donald Trump's announcement of exiting the Paris Agreement. This is the right time for Pakistan to commit to net zero. At this time, about 75pc of states have set net-zero targets accounting for 98pc of global GDP and 88pc of greenhouse gas emissions. The list includes our neighbours Bangladesh, China, India and the Maldives. This decision can serve as a compass for the direction of our journey.

**Fourth:** decentralised clean air plans and engaging stakeholders. Technical capacities as well as willingness exists in academia, think tanks, start-ups, and the private sector to engage in data generation, map emissions hotspots, deliver research analytics and carry out advocacy campaigns. This is particularly important as the data generated by the government is expensive, delayed, and unusable. The Punjab government can give legitimacy to independent datasets and spearhead their environmental data generation.

**Fifth:** formally engage with the government of Indian Punjab. Air quality is a transboundary issue, even if crop-burning is a small contributory factor. A dialogue is needed for cleaner air on both sides of the border, and for early closure of two coal-fired power plants closer to the border: Guru Hargobind Thermal Plant and Guru Gobind Singh Super Thermal Power Plant. The agenda and purpose, however, has to be collaborative rather than accusatory.

Finally, the 18th Amendment has not clearly delineated all environmental issues. The provinces can agree with the federal government to firewall Rs1.28tr to be collected as petroleum levy for urban transportation, pre-agree on the quality of imported fuel and vehicles, agree on subsidies and incentives for energy transition for two and three-wheelers away from combustion engines, and fast-track the phasing out of rickshaws. Afterall, 2047 is only 23 years away.

(By Ali Tauqeer Sheikh Dawn, 06, 21/11/2024)

### **\$300bn for climate finance falls short of expectations**

THE \$300 billion package, agreed upon at COP29 in Baku as the new finance goal, is nothing to write home about and many from the developing world and civil society organisations fear it will jeopardise their efforts to adapt to the changing climate.

For context, Pakistan alone needs \$380 billion by 2030 to meet its climate goals, and the delegation expressed its disappointment at the closing plenary.

"We are leaving Baku with mixed feelings and a heavy heart. We note critical gaps in the decision we all adopted here ... Global solidarity is important but the goal put forward by the developed countries does not match with the needs of the developing countries,"

Romina Khurshid Alam, the PM's aide on climate change, said in her speech at the closing plenary.

The Global South had demanded \$1.3 trillion annually, but after almost a week of delaying tactics, the first draft agreement only mentioned 'X' trillion instead of an actual number.

*Goal doesn't match needs of developing world, Romina tells final COP29 plenary*

Subsequently, \$250 billion was offered, which was termed 'insultingly low' by the developing bloc. Eventually, \$300 billion a year by 2035 was offered in the revised draft agreement, which was shared after midnight, and despite reservations on its quantum and quality, it was adopted by the plenary.

According to *AFP*, the applause had barely subsided when many developing states delivered a full-throated rejection of the deal, with the Indian delegate terming it a "paltry sum" and "an optical illusion".

Sierra Leone's climate minister Jiwoh Abdulai said it showed a "lack of goodwill" from rich countries, while Nigeria's envoy Nkiruka Maduekwe put it even more bluntly, saying, "This is an insult".

The agreement for the new collective quantified goal (NCQG) highlighted that "costed needs reported in nationally determined contributions of developing country parties are estimated at \$5.1–6.8 trillion for up until 2030 or \$455–584 billion per year and adaptation finance needs are estimated at \$215–387 billion annually for up until 2030".

According to the document, the gap between climate finance flows and needs, particularly for adaptation in developing countries, was concerning, and all parties were asked to work together to enable the scaling up of financing to developing countries.

One of the main points of disagreement was the quality of finance, as the Global South had been demanding public finance instead of mobilisation of private funding. The text, however, called on "all actors to work together to enable the scaling up of financing" to developing countries for climate action from all public and private sources to at least \$1.3 trillion per year by 2035.

According to journalists present at the plenary, the agreement was gavelled through, with the presidency hardly giving the delegates any time to register their protests.

The new agreement decided to periodically take stock of the implementation of the NCQG decision as part of the global stocktake and to initiate deliberations on the way forward prior to 2035, including through a review of this decision in 2030.

Sanjay Vashist, director of the Climate Action Network South Asia, said the developing world needs at least \$1.3 trillion for mitigation, adaptation and loss and damage, and by throwing \$300 billion on the table and kicking any and all real decisions down the road to 2035, rich countries had not only betrayed the people of the Global South, but also their own citizens, who had hoped that their governments will finally grow a spine and act responsibly.

"Tonight in Baku, the masks have come off [and] rich and developed countries' governments have revealed their true intentions, that they never intended to honour any of their commitments made under the Paris Agreement. Their addiction to fossil fuels has blinded them and they have allowed the over 1,000 fossil fuel industry representatives to hijack the COP29 negotiations," he added in his statement.

SDPI Executive Director Abid Sulehri, who was part of Pakistan's negotiating team, told *Dawn* that the \$300bn agreement doesn't match either; the urgency and ambition required to rescue the Paris Agreement, or the ambitious agenda that the developing countries are required to pursue to implement their NDCs.

"Although the number seems three times higher than what was agreed in Paris (i.e. \$100bn every year till 2020), one must keep in mind that after adjusting for US inflation, the \$300bn figure will be too little and too less. In the spirit of multilateralism we should cautiously welcome COP's decision but should keep on pressing the developed countries to pay for their historic emissions."

The only significant outcome, which made every government happy at this summit, was the carbon market guidelines adopted under Article 6 of the Paris Agreement.

*This story was produced as part of the 2024 Climate Change Media Partnership, a journalism fellowship organised by Internews' Earth Journalism Network and the Stanley Center for Peace and Security*  
(By Zaki Abbas, Dawn, 01, 25/11/2024)

### Madhubala goes to Safari Park today

The female elephant - Madhubala will be relocated from Karachi Zoo to Safari Park on Tuesday (today). All preparations have been completed in this regard.



The relocation process, which is expected to take around four hours, will be handled by a foreign NGO - Four Paws which earlier submitted a report that the zoo was unsuitable place for elephants, and recommend safari park as a better place.

The Karachi Metropolitan Corporation (KMC) has established an international standard enclosure and swimming pool for the elephant so that it can live in a healthy environment. The private organisation also took part in the construction of high-quality fencing around the enclosure and the pool.

The KMC has renovated the seven-acre elephant enclosure. There are also other female elephants named Malka and Sonia in the Safari Park.

According to the park administration, the operation to shift Madhubala to Safari Park will start from 8am on Tuesday. Madhubala will be shifted to the Safari Park from around 11am to 12 noon in a container. The route will be cleared for this operation and police personnel will also be deployed.

The zoo management said that the elephant will be sedated while being moved so that all the procedures can be carried out in a better manner.

Madhubala will spend time with her new companion elephants, Malka and Sonia, in the Safari Park.

The park management says that initially Sonia and Malka will be kept in Block B while Madhubala will be kept in Block A. However, as they become familiar, both the blocks will be merged.

Four Paws has installed wires and poles around the enclosure, which is called a century. Due to which this place is presenting a very attractive view and the visitors will have more enjoyment.

(By Newspaper's Staff Reporter, The Express Tribune, 04, 26/11/2024)

### Mammoth task of transporting Madhubala from zoo to Safari Park accomplished

An important milestone was achieved in Pakistan's history on Tuesday when a team of local and international experts and workers successfully relocated zoo elephant Madhubala to the recently developed sanctuary spread over five acres in the Safari Park, freeing her from zoo's captivity and reuniting her with her sisters — Malika and Sonia — after 15 years.



The 17-year-old African elephant weighing up to three tonnes had been left alone after the tragic death of her partner Noor Jehan over a year ago. The success story brought government officials, rights activists, foreign envoys and experts together to celebrate animal welfare — a crucial but a neglected subject in Pakistan.

“The aim of the whole exercise was to improve Madhubala's living conditions. She was confined to a limited space at the zoo and suffered from loneliness after Noor Jehan's death. Both factors

were affecting her health,” said Mayor Murtaza Wahab at the ceremony held at the Safari Park following the elephant's relocation.

The mayor expressed gratitude to Dr Amir Khalil leading the global animal welfare organisation Four Paws' team on behalf of Karachiites for assisting the Karachi Metropolitan Corporation (KMC) in the relocation process and building an elephant sanctuary at the Safari Park.

“Dr Amir convinced us that she needs to be reunited with her sisters. We are not experts. The Four Paws team guided us and in turn we facilitated them in their efforts. It was a dream come true,” he said, while congratulating everyone from the zoo department to the Safari staff who had been involved in elephant care.

The mayor also expressed his willingness to work with any international organisation interested in providing assistance to the KMC for animal welfare.

In his remarks, Dr Khalil said that it was a team work that led to the successful completion of the task.

“It was a great experience to work with the KMC and the local experts. Our job wasn't just Madhubala's relocation but also providing a species appropriate environment to the elephants so they could live a life closer to their natural habitat.”

Sharing his thoughts, Chief Executive Officer of FP Josef Pfabigan said that rehoming of Madhubala was a gigantic step for better animal welfare in Pakistan.

“It sends a strong signal to other countries around the world where elephants are still kept in private captivity for entertainment purposes,” he said.

The attendees included Ambassador of Bulgaria Irena Gancheva and Austrian Charge d' Affairs Hannes Machor.

#### Logistical arrangements

Earlier in the morning, the FP team — Dr Marina Ivanova, Dr Frank Goritz, Velizar Angelov, Mathias Otto, Nora Mihaylova and Pia Einheimler — led by Dr Khalil helped Madhubala voluntarily enter the crate.

The team carried out the logistical mammoth task to lift her up in the air with a crane and position her safely on a truck. As soon as the crate was secured, the convoy accompanied by the police, Rescue 1122, zoo officials and the FP team set off for the Safari Park. It first headed towards the Lyari Expressway and then moved onto Sohrab Goth before reaching Safari Park.

“First, Madhubala will stay in her own temporary enclosure to adapt to her new surroundings and to make first encounters, for now only audible and olfactory ones. Soon we will try to socialise the three sisters. And when the dawn rises tomorrow, a new



era is heralded as these three sisters mark living examples that the time of zoo captivity of elephants in Pakistan is finally over,” shared Dr Khalil.

It might be recalled that Madhubala along with her three sisters were separated from their herd in Tanzania and brought to Karachi as calves in 2009.

Their plight in captivity forced activists to file a case in the high court in 2020, which led to the intervention of international veterinary experts in their welfare.

While the fight for their well-being continued and the experts called for providing species appropriate environment to the animals, Noor Jehan met a tragic death in 2023, leaving Madhubala alone.

Since then, plans were announced several times for her relocation but none could be materialised.

The KMC finally signed an agreement with FP on Madhubala’s relocation with her sisters this year in Feb.  
(By Faiza Ilyas Dawn, 13, 27/11/2024)

### **Madhubala finds three’s company!**

After resting for a night in her room at the Safari Park’s newly built sanctuary, zoo elephant Madhubala finally met her siblings Malika and Sonia on Wednesday morning after 15 years’ long separation – a memorable moment not just for the three sisters but also for the whole team representing local and international experts and workers who made their reunion possible.

The first physical interaction was slow, calm and peaceful; they gradually moved closer, feeling and smelling each other and later flapping their ears, expressing relaxation and happiness. They also spent some time in the pool together.

“It’s an emotionally tough moment for us. The team is so happy to see the family together. I feel proud that we have been able to complete our mission,” said Dr Amir Khalil leading the Four Paws’ team.

The global animal welfare organisation assisted the Karachi Metropolitan Corporation in successfully relocating Madhubala from the zoo to the Safari Park a day earlier. The 17-year-old African elephant confined to a small enclosure at the zoo suffered from loneliness after the tragic death of her long-time partner Noor Jehan more than a year ago.

Over two months ago, the organisation had relocated an old lonely African elephant, Charley, from a zoo to the Shambala Private Reserve in South Africa.

Asked how the Karachi experience with Madhubala was different, senior team member FP Dr Marina Ivanova said: “All animals have their distinct identities and personalities. Hence, we have a new experience every time we interact with animals.”

About the KMC-FP cooperation, Dr Khalil explained that the organisation would continue to guide the local staff.

“Tomorrow, we plan to examine Sonia in detail as she has developed some swelling (between her hind legs),” he said, adding that it wasn’t something serious.

It might be recalled that four elephants were brought to Karachi from Tanzania as calves in 2009. Two were kept at the zoo while the other two at the Safari Park.

Earlier on Tuesday, the FP team led by Dr Khalil helped Madhubala voluntarily enter a crate. The team carried out the mammoth logistical task to lift her up in the air with a crane and position her crate safely on a truck.

As soon as the crate was secured, the convoy set off for the Safari Park. It first headed towards the Lyari Expressway and then moved onto Sohrab Goth before reaching Safari Park.  
(By Faiza Ilyas Dawn, 13, 28/11/2024)

### **All major parks to get free Wi-Fi: Karachi mayor**

Mayor Barrister Murtaza Wahab Siddiqi has announced the launch of free WiFi services at all major parks in the city to provide visitors with free internet access so that they can enjoy their time at the recreational places.

While inaugurating the free Wi-Fi service at Frere Hall on Friday, he said that the facility would be also expanded to other major public places under the administration of the Karachi Metropolitan Corporation, including popular spots such as Bagh Ibne Qasim, Kidney Hill Park, Lake Park and Safari Park.

“We are committed to providing maximum facilities at these recreational locations for the convenience of the citizens,” said Mayor Wahab.

“Karachi has now joined the ranks of cities offering such services to its residents. With the increasing use of smartphones among citizens, the availability of Wi-Fi at recreational spots has become essential,” he added.  
(By Newspaper’s Staff Reporter, Dawn, 13, 30/11/2024)

### **‘Poor nations bear the brunt of climate crisis created by rich ones’**

Historically, the Global North has been primarily responsible for creating the climate crisis in the world through industrialisation, which has contributed most of the carbon in the atmosphere whereas the Global South, which had no role in causing the problem, suffers most from its effects, with limited resources hindering its ability to address the issue.

This was said by Professor Emeritus Dr Partha Sen of the Delhi School of Economics at a lecture where he also urged the world, particularly the rich countries of the Global North, to take immediate action as time is ticking away.

Dr Sen joined via remote video link.

The lecture, ‘Climate Change in a Historical Setting and Countries of the Global South: Where are the Equity Considerations?’ was organised by the Irtiq Institute of Social Sciences under ‘The 23rd Hamza Alavi Distinguished Lecture’ series at Szabist on Monday.

*Prof Partha Sen urges the world to address the issue as ‘time is ticking away’*

Dr Sen said fighting climate change could not be done without taking into account the fact that the Global South had no role in creating the problem in the first place.

“Time is ticking away. The world must address the problem. Those who created the problem cannot be allowed to go scot-free. The historical responsibility for creating the climate problem rests with the rich countries, the so-called Global North, a fact recognised in the climate change discussions. It is their dirty industrialisation that resulted in the overwhelming share of the carbon in the atmosphere,” he said.

The Global South or the poorer countries, then, had no role to play in creating the climate problem, but had to cope with the effects of climate change. Their ability to tackle this is limited by the low levels of incomes, and the need to finance economic development, Dr Sen pointed out, adding that the Kyoto Protocol, under the United Nations Framework Convention on Climate Change (UNFCCC), recognised the so-called common but differentiated responsibilities of the Global North and the Global South.

So the countries of the North, he said, were required to make more stringent cuts in their fossil fuel use while the countries of the Global South were also asked to cut their emissions. The countries of the Global North promised to make financial transfers to those in the South for them to cope with the problem and make their infrastructure resilient to the effects of climate change, he added.

“But the aggregate flows are much lower than promised. Most developed countries have not come good on their promise of providing 0.7 percent of their Gross National Income (GNI) as overseas development aid, and the promised climate aid was over and above this,” he pointed out, adding: “The problem is serious. It is recognised by all parties but the Global North is dragging its feet over delivering the amount promised, and on the more up-to-date technology, that will reduce emissions.”

Dr Sen explained that in 1750, before the onset of industrialisation, atmospheric CO<sub>2</sub> levels were around 275 parts per million (ppm). Today, that figure has soared to 415 ppm, with the rate of increase accelerating from 1 ppm per year in 1960 to nearly 3 ppm per year now. Human activities currently release more than 30 billion tons of CO<sub>2</sub> into the atmosphere annually.

“The Industrial Revolution started sometime around 1760, and it gave rise to industrial capitalism. Output, productivity per worker grew very fast in the countries that experienced it. It began with the UK, and spread to other European countries, and the US. It was accompanied by moving labour from agriculture to industry. Industry is now based on technology, using coal for energy as opposed to animals, wind, or water,” he pointed out.

“Unlike traditional handicrafts, the Industrial Revolution marked the advent of manufacturing based on heavy industrial machinery to improve efficiencies and output. Steam power, for example, allowed for the creation of a semi-automated factory system, which meant that goods could be mass-produced, instead of labouriously created by hand,” he shared.

“Powering the heavy machinery central to industrialisation required vast amounts of energy, primarily derived from fossil fuels such as coal and later also petroleum and natural gas. What had started in the UK, soon spread across Europe and North America. With the new industry came a different form of relationship with the colonies: they were to supply raw materials of this new advanced industry and to serve as markets for the goods produced by it. The latter function was hamstrung by the widespread poverty in the colonies. But every trick in the book was used to ensure that demand did not leak away from the goods produced in the imperial countries,” he said.

“The industrial revolutions took place long before any meaningful environmental regulations. A pattern relating emissions of CO<sub>2</sub> and rising temperature was noticed only in the second half of the 20th century. This discovery, notwithstanding, a pattern of growth based on fossil fuel use continues to this day. The environmental impact of this is deforestation, loss of biodiversity, and the continuous rise in greenhouse gases, remains a major challenge,” he said.

He said the rich countries try to pass the costs of tackling the climate problem to the Global South, which has two consequences. Firstly, it is inequitable in a dynamic sense. The Global South is being asked to pay for something that it was not responsible for creating. Second, by starving the Global South of funds, it immediately kills off any incipient growth and development in those regions.

On the other hand, if there was a transfer of technology from the Global North, then in the course of industrialisation, the additional deterioration of the earth’s climate will be minimal, he pointed out and added that finance is required for this cleaner technology, as well as to cope with the consequences of climate change.

“International negotiations on climate change have been going on for over 30 years,” he said. “In the meantime, the earth has become hotter, wetter and wilder. Like scientists, the vast majority of governments now agree that urgent steps are needed to reduce our impact on global warming. The first attempt at addressing the problem was in 1992. The UNFCCC was adopted during the Rio de Janeiro Earth Summit in 1992. It acknowledged the existence of human-induced climate change and gave industrialised countries the major part of responsibility for combating it, but without specifying how,” the professor shrugged.  
(By Shazia Hasan Dawn, 13, 03/12/2024)

### Carbon trade for clean air

EMISSIONS trading rules have just been agreed to at the climate summit in Baku, creating a new wave of options and opportunities for countries and private sector companies to plan long-term transactions in emission trading.



What do the adopted rules on emissions trading mean for Pakistan? How can we build upon the new momentum, prioritise our early engagements, and still keep an eye on long-term projections on the regulated market by the Paris Agreement?

After almost a decade of negotiations, countries have formally recognised two different types of markets for trading emissions under Article 6. The first, Article 6.2, will facilitate voluntary cooperation among countries to achieve their Nationally Determined

Contributions (NDCs) by allowing the transfer of Internationally Transferred Mitigation Outcomes (ITMOs). The second, Article 6.4, will establish a regulated international carbon market overseen by a UN body. This mechanism is designed to ensure structured oversight and accountability in the trading of emission credits.

Experts are sceptical about the integrity of the rules adopted under 6.2, arguing that they could open the floodgates for the sale of junk carbon credits. Because of complex ambiguities surrounding 6.2, the informal market will risk unequal and non-transparent transactions. Countries with weaker governance and accountability mechanisms are likely to fall prey to such transactions, dealing particularly with their mangroves or forests.

Pakistan’s journey on carbon trading began in 2017 with the first voluntary market agreement for Delta Blue Carbon Project, followed in 2023 by a Statement of Understanding with Verra, the largest voluntary market certification body. Several companies are presently scouting provinces for opportunities to sign concessions with private and state-owned forest stocks.

Pakistan has now drafted its Carbon Market Policy Guidelines. It was launched in Baku last month to attract investments. The climate change ministry is now developing its ecosystem: carbon market regulations, sectoral inventories, a pipeline of carbon market projects, and integrating carbon market in the next edition of NDCs.

*Pakistan can follow a three-track policy in its carbon journey.*

Moving forward, Pakistan can follow a three-track policy: first, nature-based projects on mangroves, forests, and biodiversity; second, sectoral emissions interventions, particularly for energy, industry, agriculture, construction, and waste management; and third, air pollution in major urban areas such as Lahore, triggered by the transportation system. Since several provinces consider carbon stocks as their assets, each track will require substantial work on base-lining the provincial stocks. The federal government can trade, but only on their behalf and with their concurrence. For all three tracks, the provinces will need to develop or access scientific baselines of their emissions.

Here I am presenting a case for the third track, trading air pollution, based on a celebrated case study of the Thailand and Switzerland June 2022 agreement for a partnership for the Bangkok E-Bus Programme. The latter aimed at reducing greenhouse gas (GHG) emissions and improving the city’s air quality. The programme seeks to convert the existing fleet to electric buses, aimed at reducing air pollution by cutting emissions by approximately 500,000 tonnes by 2030.

For purposes of comparison, the total carbon emissions in Lahore are around 7.65 million metric tons, with 83 per cent coming from transportation, according to the 2023 Emission Inventory of Lahore released by Urban Unit.

This initiative is perhaps the first authorised programme under Article 6 of the Paris Agreement in Asia. It leverages the expertise and resources of four key partnering organisations.

**Proponent:** The Energy Absolute Public Company Ltd (EA) publicly traded on the stock exchange of Thailand, envisioned to unleash a sustainable emissions trading system. It will replace internal combustion engine buses with electric vehicles, establish a network of charging stations to support the new fleet, and convert privately operated bus routes from diesel to electric buses.

Looking ahead, EA is tasked with manufacturing electric buses, ensuring that at least 40pc of the material used, including batteries, are sourced locally. This initiative not only supports local industries but also aligns with the country’s goals of developing its EV infrastructure. The company focuses on integrating renewable energy solutions and advancing e-mobility initiatives as part of its broader business strategy.

**Financier:** The KliK Foundation secures financing through the sale of reduced emissions that are measured as ITMOs. The purchase of credits by the KliK Foundation will make the project financially viable. It has already purchased the first batch of ITMOs, from EA, for over \$30 per credit. The KliK Foundation was established in 2012 as a nonprofit by the Swiss Petroleum Association (Avenegy Suisse) to fulfil their legal obligations on emissions reduction.

**Verification:** The carbon certification firm South Pole is contracted to ensure that the emissions reductions achieved by the electric buses are quantified and verified, allowing EA to sell these credits on the carbon market.

**Credibility:** The programme's credibility is enhanced by partnering with UNDP's flagship Carbon Payment for Development. This programme is designed to promote climate action through a performance-based payment model that incentivises private sector investments in climate mitigation projects. It works through performance-based payments by de-risking investments and ensuring that payments are made only when specific emission reduction targets are achieved.

At a time when the governments in Sindh and KP were negotiating urban transportation projects with ADB, and Punjab with CPEC, and elbowing out the private sector from urban transportation system, the Thai government was engaged with ADB for a loan package to help purchase electric buses as part of their E-Bus programme. The Thai-Swiss programme is a significant step towards clean air through energy transition, sustainable public transport system, and reducing GHG emissions as committed to in Thailand's NDCs.

The project is still a work in progress. Is it really a model that can be emulated by Pakistan for clean air or other carbon trading options?

At present, Punjab, Sindh, and KP are developing their own carbon trading programmes, priorities, and even inventories and donor partnerships. They will certainly benefit from shared provincial frameworks.

Yet, they have the capacity to bring potential proponents, financiers, and quantification firms on one table to projectise provincial carbon trading priorities.

(By Ali Tauqeer Sheikh Dawn, 06, 05/12/2024)

### Elephant Sonia passes away at Safari Park

The city lost another captive elephant on Sunday — the second death in the (once) family of four in less than two years — leaving citizens in shock and grief.

Her post-mortem is expected on Monday (today) with the arrival of an expert from the University of Veterinary and Animal Sciences (UVAS), Lahore.

Sources said elephant Sonia was found dead in her enclosure at the Safari Park in the morning. The 18-year-old pachyderm, they said, had been treated for some parasitic infection this year in July.

Last month, the sources said, she was found visibly weak when she, along with her partner Malika, got reunited with zoo sister Madhubala after 15 years. At that time, she also had swelling between her hind legs.

The officials, however, dismissed concerns over her illness.

"We all are in shock as she was fine. It seems she had a (fatal) heart attack. The Four Paws looking after elephants' welfare has been informed about the tragedy and a detailed post-mortem will be carried out soon," Director Safari Park Amjad Zaidi told Dawn.

About Sonia's state of health, he said: "Nothing came out serious in her recent ultrasound report as well. The procedure was conducted by Four Paws, an animal welfare organisation, over a week back. There was no negligence involved as we were providing her the best of care possible."

Dr Amir Khalil of Four Paws, who is currently in Austria, also expressed his deep concern over the news. "This is very sad and bad news. I still need time to process it. She was doing well in the last days according to the report I received."

He further stated that he had asked the Safari Park staff to ask Dr Ghulam Mustafa (of the University of Veterinary Sciences, Lahore) to lead the team for the post-mortem.

"He will be arriving from Lahore tomorrow (Monday) morning. We have also asked them to keep her body in ice and cover it so that other elephants couldn't see her."

Asked about Sonia's recent lab test reports, he said that it pointed out protein deficiency. "But the post-mortem report will bring more clarity."

Sources said Karachi Mayor Murtaza Wahab has ordered an inquiry to ascertain the facts.

#### 'Official failure'

Meanwhile, (non-government) members of the Task Force on wildlife in captivity/ zoo and Safari Park in a letter to the task force's chairman have pointed to official failure in taking timely notice to Sonia's deteriorating health.

"While this news may come as a shock to some, the members of the Task Force have been aware of the issues surrounding Sonia since Aug 6, 2024, when it was first brought to your attention. Despite our repeated requests, the minutes from our Task Force meeting on July 5 were not documented, nor was another meeting convened to address Sonia's serious ailment.

"As a result, she did not receive the necessary treatment and has tragically passed away," the letter by members Nadeem Khalid (president of the World Wide Fund for Nature-Pakistan) and senior journalists Quatrina Hossain and Yusra Askari says.

"We feel that we have failed in our primary duty as a task force on captive animals and share the responsibility for this heartbreaking loss."

The members have appealed for an emergency meeting of the Task Force to review "our shortcomings and to evaluate the effectiveness of having such a Task Force in place".

**Once a family of four**

Earlier named Sonu, female elephant Sonia was believed to be a male by the Safari Park staff for 12 years prior to its examination in 2021 by Four Paws.

She, along with three other female elephants, was caught from the wild at a very young age in Tanzania and brought to Karachi in 2009 and later shifted to the zoo and the Safari Park. Their welfare had remained a subject of serious concern for a long time since the KMC lacked the interest and expertise to provide them a species-appropriate environment.

Last year, she was found to have a foot injury that seemed to have occurred due to the damaged concrete floor and persistent moist conditions in her enclosure. The matter was raised last year in an assessment report by the provincial Task Force formed after the death of zoo elephant Noor Jehan. The 17-year-old ailing African elephant underwent emergency treatment for health complications last year. She later collapsed in her enclosure and met a painful tragic death.

(By Faiza Ilyas Dawn, 13, 09/12/2024)

**Climate reckoning**

THE year 2024 has etched itself into climate history as the hottest year on record, bringing unprecedented challenges to countries across the world, with Pakistan bearing a significant share of the burden.

From scorching temperatures exceeding 50°C that forced millions of children to stay out of school, to devastating August floods that once again tested our resilience, the country witnessed firsthand the intensifying impact of climate change. Wealthy nations were not spared either, as Greece faced its earliest recorded heatwave, leading to wildfires and the closure of the Acropolis, while Spain suffered deadly flash flooding in Valencia that claimed over 200 lives.

The World Weather Attribution network found that nearly every analysed disaster in 2024 bore the fingerprint of climate change. For Pakistan, this reality has meant a relentless cycle of extreme heatwaves and flooding, straining our farm sector and urban infrastructure. Next year threatens to be tougher.

However, amid these challenges, Pakistan has shown initiative by joining a landmark nine-nation programme aimed at reducing the environmental impact of the fashion and construction sectors. This \$45m initiative represents a crucial step forward, particularly as these industries rank among the top three contributors to pollution and GHG emissions. The programme's focus on transforming supply chains and promoting sustainable practices could serve as a model for other sectors.

Moving forward, Pakistan must prioritise several key areas. To build climate resilience, it must implement initiatives such as climate-smart agriculture to assist farmers in adapting to changing weather patterns. The cities will benefit from sustainable drainage systems to manage floodwaters and prevent urban flooding. We should also explore wide-scale community-led renewable energy projects which can reduce emissions. Further, introducing improved early warning systems and disaster preparedness programmes can help minimise the loss of life and property during extreme weather events. Securing its share of international climate funds is crucial, and Pakistan must demonstrate transparency and efficiency in utilising these resources.

The outcome of COP29, with its paltry \$300bn annual pledge against the \$1.3tr needed to meet the Paris Agreement goals, has shown how lacking the global commitment to climate finance is. As we enter 2025, the message is clear: Pakistan cannot afford to wait for global consensus to act. While continuing to advocate for international climate justice and finance, we must also boost domestic climate action. We are indeed living in what scientists describe as "a dangerous new era".

For Pakistan to succeed, both the government and citizens must treat climate action as a shared responsibility. The steps taken in 2024 provide a foundation, but 2025 must be the year Pakistan keeps its eye on the ball and ensures accelerated implementation to secure climate resilience.

(By Editorial, Dawn, 06, 30/12/2024)