**The climate challenge**

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Human-induced climate change, also known as anthropogenic climate change, refers to the long-term changes in Earth’s climate system that are primarily caused by human activities, such as burning fossil fuels, deforestation, and other industrial and agricultural practices that release greenhouse gases (mainly carbon dioxide, methane, and nitrous oxide) into the atmosphere.

These greenhouse gases trap heat in the Earth’s atmosphere, causing the planet’s temperature to rise, which leads to changes in precipitation patterns, rising sea levels, and more frequent and severe weather events such as heatwaves, droughts, floods, and storms.

The overwhelming scientific consensus is that human activities are the leading cause of the current climate change, which is happening much faster than natural climate change cycles observed in the past.

In 2019, Pakistan’s greenhouse gas emissions stood at 433 million tons of carbon dioxide per year, equivalent to 0.9 per cent of global emissions. Climate change due to greenhouse gas emissions affects the social and environmental determinants of health, clean air, safe drinking water, sufficient food and secure shelter. Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress. We need to build Pakistan’s capacity to combat climate change-related flooding in the future. Building capacity for climate change damage is crucial for several reasons:

Adaptation: Capacity building helps individuals, organizations, and communities to adapt to the impacts of climate change. This includes developing the skills, knowledge, and resources needed to mitigate and manage the risks associated with climate change. By building capacity, communities can become more resilient to the effects of climate change, reducing the damage caused by natural disasters, extreme weather events, and other climate-related impacts.

Mitigation: Capacity building also supports efforts to reduce greenhouse gas emissions, which contribute to climate change. By developing the capacity to implement clean energy solutions and sustainable practices, individuals and organizations can reduce their carbon footprint and contribute to global efforts to combat climate change.

Economic benefits: Building capacity for climate change can also have economic benefits. For example, investing in renewable energy infrastructure can create jobs and stimulate economic growth. Similarly, developing the capacity to implement sustainable practices in agriculture, forestry, and other sectors can increase productivity and improve livelihoods.

Environmental stewardship: Capacity building can help promote environmental stewardship and encourage individuals and organizations to take action to protect the planet. By developing the capacity to understand and address climate change, communities can become more engaged and active in efforts to address environmental issues, protect biodiversity and preserve ecosystems.

This step towards a greener future needs a structured three-pronged approach. It should include financial resources, technical assistance, and human capacity building.

For the last 50 years, oceans have absorbed 90 per cent of global warming. In 2050, there will be more plastic than marine life in the oceans. We need to move towards a plastic-free lifestyle.

We need to build Pakistan’s water infrastructure, particularly new water reservoirs and dams. Pakistan is an agriculture-based economy, and water is a critical resource. Building dams and reservoirs can help control the flow of water and reduce the impact of floods, as well as create opportunities for generating hydroelectric power, which can help meet the energy demands of the country and reduce reliance on non-renewable energy sources. Building reservoirs and dams can help supply water to communities that lack access to safe drinking water. Reservoirs and dams can also have environmental benefits, such as mitigating soil erosion, providing habitats for wildlife, and promoting biodiversity.

Pakistan has been experiencing devastating floods for many years due to a combination of factors such as heavy rainfall, melting glaciers, and poorly maintained infrastructure. Despite this, the country’s flood management system has been inadequate in addressing the scale and frequency of flooding.

The Met office’s first alert was released on June 28, but it was not until early august that we realized the magnitude of this disaster that was unfolding. Pakistan’s infrastructure, such as drainage systems, dams, and levees, is often poorly maintained and unable to cope with the volume of water that floods bring. To stir the pot further, corruption and mismanagement in the allocation of funds and resources for flood management have further exacerbated the situation.

We need to be more proactive in our approach. One such step in the right direction has been the RBOD II project. The Realignment of RBOD II (Rasul-Qadirabad Link Canal) is a major infrastructure project in Pakistan that aims to improve water management and irrigation in the country. The RBOD II is a canal that runs from the Rasul Barrage on the Jhelum River to the Qadirabad Barrage on the Chenab River, and it is a critical component of the Indus Basin Irrigation System.

The realignment of RBOD II involves the construction of a new canal alignment and the rehabilitation of existing canal structures. The project aims to address a number of issues with the current canal system, including poor water flow, sedimentation, and erosion. The realignment is expected to increase the canal’s discharge capacity, reduce water losses, and improve water distribution to farms in the region.

The project is being implemented by the Water and Power Development Authority (Wapda) with funding from the Asian Development Bank (ADB). The estimated cost of the project is around $400 million, and it is expected to be completed by 2024.

The realignment of RBOD II is a significant infrastructure project for Pakistan, as it will help to improve water management and irrigation in the country, which is critical for agriculture and food security. It is also expected to have positive economic and social impacts, including increased agricultural productivity, improved access to water, and job creation in the construction sector.

Finally, it is imperative to educate the public about the causes and impacts of climate change and encourage them to take action. Partner with schools, universities, and community organizations to educate people of all ages and backgrounds.

In conclusion, mitigating the effects of climate change will require a comprehensive approach that involves the government, the private sector, and individuals. By working together, we can reduce greenhouse gas emissions, protect our natural resources, and build a more sustainable future for all Pakistanis by developing a sense of national unity and consensus.

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