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The Ganga is Drying Faster Than Ever

By: Mehebub Sahana

The Ganga is more than a river. It is a lifeline, a sacred symbol, and a cornerstone of South Asian civilisation. But it is drying faster than ever before, and the consequences of inaction are unthinkable.

The Ganga, a lifeline for hundreds of millions across South Asia, is drying at a rate scientists say is unprecedented in recorded history. Climate change, shifting monsoons, relentless extraction and damming are pushing the mighty river towards collapse, with consequences for food, water and livelihoods across the region.

The Ganga-Brahmaputra basin is one of the most rapidly depleting aquifers in the world.

For centuries, the Ganga and its tributaries have sustained one of the world's most densely populated regions. Stretching from the Himalayas to the Bay of Bengal, the whole river basin supports over 650 million people, a quarter of India's freshwater, and much of its food and economic value. Yet new research reveals the river's decline is accelerating beyond anything seen in recorded history.

In recent decades, scientists have documented alarming transformations across many of the world's big rivers, but the Ganga stands apart for its speed and scale.

In a new study, scientists reconstructed streamflow records going back 1,300 years to show that the basin has faced its worst droughts over the period in just the last few decades. And those droughts are well outside the range of natural climate variability.

Stretches of river that once supported year-round navigation are now impassable in summer. Large boats that once travelled the Ganga from Bengal and Bihar through Varanasi and Allahabad now run aground where water once flowed freely. Canals that used to irrigate fields for weeks longer a generation ago now dry up early. Even some wells that protected families for decades are yielding little more than a trickle.

Global climate models have failed to predict the severity of this drying, pointing to something deeply unsettling: human and environmental pressures are combining in ways we don't yet understand.

Water has been diverted into irrigation canals, groundwater has been pumped for agriculture, and industries have proliferated along the river's banks. More than a thousand dams and barrages have radically altered the river itself. And as the world warms, the monsoon which feeds the Ganga has grown increasingly erratic. The result is a river system increasingly unable to replenish itself.

Melting glaciers, vanishing rivers

At the river's source high in the Himalayas, the Gangotri glacier has retreated nearly a kilometre in just two decades. The pattern is repeating across the world's largest mountain range, as rising temperatures are melting glaciers faster than ever.

Experts warn that millions of people across the basin could face severe food shortages within the next few decades.

Initially, this brings sudden floods from glacial lakes. In the long-run, it means far less water flowing downstream during the dry season.

These glaciers are often termed the "water towers of Asia". But as those towers shrink, the summer flow of water in the Ganga and its tributaries is dwindling too.

Humans are making things worse

The reckless extraction of groundwater is aggravating the situation. The Ganga-Brahmaputra basin is one of the most rapidly depleting aquifers in the world, with water levels falling by 15–20 millimeters each year. Much of this groundwater is already contaminated with arsenic and fluoride, threatening both human health and agriculture.



The role of human engineering cannot be ignored either. Projects like the Farakka Barrage in India have reduced dry-season flows into Bangladesh, making the land saltier and threatening the Sundarbans, the world's largest mangrove forest. Decisions to prioritise short-term economic gains have undermined the river's ecological health.

Across northern Bangladesh and West Bengal, smaller rivers are already drying up in the summer, leaving communities without water for crops or livestock. The disappearance of these smaller tributaries is a harbinger of what may happen on a larger scale if the Ganga itself continues its downward spiral. If nothing changes, experts warn that millions of people across the basin could face severe food shortages within the next few decades.

Saving the Ganga

The need for urgent, coordinated action cannot be overstated. Piecemeal solutions will not be enough. It's time for a comprehensive rethinking of how the river is managed.

India, Bangladesh and Nepal must do better at sharing data, managing dams, and planning for climate change.

That will mean reducing unsustainable extraction of groundwater so supplies can recharge. It will mean environmental flow requirements to keep enough water in the river for people and ecosystems. And it will require improved climate models that integrate human pressures (irrigation and damming, for example) with monsoon variability to guide water policy.

Transboundary cooperation is also a must. India, Bangladesh and Nepal must do better at sharing data, managing dams, and planning for climate change. International funding and political agreements must treat rivers like the Ganga as global priorities. Above all, governance must be inclusive, so local voices shape river restoration efforts alongside scientists and policymakers.

The Ganga is more than a river. It is a lifeline, a sacred symbol, and a cornerstone of South Asian civilisation. But it is drying faster than ever before, and the consequences of inaction are unthinkable. The time for warnings has passed. We must act now to ensure the Ganga continues to flow – not just for us, but for generations to come.

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