

# Destruction of Bangalore's water bodies poses grave danger

By Ammu Joseph

The question of what and who were ultimately responsible for the recent, devastating disaster in Uttarakhand will, no doubt, be debated for weeks, if not months – as it should be so long as decisive, appropriate and effective action does follow. But equally important is the question of what, if anything, can be learnt from the Uttarakhand experience in other parts of the country.

The mid-June catastrophe may have been triggered by 'extreme weather' in the form of a cloudburst resulting in exceptionally heavy rainfall leading to cataclysmic landslides and ferocious flash floods, including glacier lake outburst floods (GLOFs).

However, the primary factor widely believed to have contributed to the scale and severity of the calamity is the rampant and unplanned development that has wreaked havoc on the fragile ecosystem of the Himalayan region over the years.

But then unchecked, indiscriminate, ecosystem-endangering development is the rule rather than the exception in most parts of India, including its cities. And few

places, including cities, are immune to 'extreme weather' and its consequences. In July 2005 Mumbai received 944 millimetres of rainfall in 24 hours thanks to a cloudburst, almost three times the amount (340-370 mm) recorded in Uttarakhand on 16-17 June this year.

The resulting, massive flash flood caused at least 1,000 deaths and substantial economic losses, damaged infrastructure and led to the contamination of the city's water and food supplies which, in turn, gave rise to a serious health crisis.

The twin water-related disasters awaiting Bangalore may be different but no less ominous. The land-locked and elevated city is not blessed with a major river but it was once known as the land of a thousand lakes, thanks to the farsighted construction – from the 16th Century onwards – of a series of inter-connected tanks meant to impound surface run-off water for agricultural and domestic purposes.

However, the number of water-bodies has declined over the years, with the decrease accelerated in recent times thanks to rapid, unregulated urbanisation and industrialisation: from 379 in 1973 to 246 in 1996 and 201 in 2010. Of these only 96



are perennial, 82 have dried up and the rest are seasonal. Some reports peg the number of 'live' lakes even lower: at 81. Lake beds have foolishly been taken over for both public and, increasingly, private purposes.

At a recent meeting two senior bureaucrats of Karnataka were forthright about the looming water crisis in the city. The current chairperson of the Bangalore Water Supply and Sewerage Board (BWSSB), Gaurav Gupta, warned that anyone investing in property in Bangalore's burgeoning suburbs does so at their own risk since wa-

ter supply to peripheral areas is by no means guaranteed.

## Disastrous action

The noticeable disappearance of lakes is not the sole reason for the dire state of affairs. The less conspicuous loss of drainage networks – the rajakaluves or primary drains and wetlands connecting the lakes – is equally disastrous. As the Energy & Wetlands Research Group (Centre for Ecological Sciences) of the Bangalore-based Indian Institute of Science (IISc) has been regularly and tirelessly pointing out over many years, wetlands are biologically diverse and productive but fragile ecosystems which not only support flora, fauna and local livelihoods, but also function like kidneys, removing contaminants from water as it passes through.

The continuous degradation of tanks, drains and wetlands through unplanned and ill-advised developmental activities – despite the existence of nearly a dozen policy and legislative measures for the conservation of wetlands – has steadily led to a drastic decline in water catchment and storage capacity. This, in turn, has driven the groundwater table down from 35-40

feet beneath the surface to 250-300 feet within a couple of decades (in some parts of Bangalore water can now be found only 1000 feet or more below the ground).

But the process of devastation by development continues, invariably with official sanction. The latest scandal to come to light involves a 72-acre, Rs 2,300 crore real estate project comprising apartments, offices, retail outlets, hotels and a Special Economic Zone (SEZ) taking shape in the Bellandur Lake catchment area in south-eastern Bangalore. The Karnataka Industrial Areas Development Board (KIADB), which acquired the land, apparently did not consult other governmental and municipal agencies, including the Lake Development Authority, before going ahead with the project along with a dubious private partner.

In May this year IISc scientists, who have been consistently tracking and cautioning against the degradation of this vital watershed – already under extreme environmental stress thanks to encroachments, dumping of debris and detritus (including sewage), etc. – issued a special report ("Conservation of Bellandur Wetlands: Obligation of Decision-makers to Ensure Intergenerational Equity," ENVIS

Technical Report: 55) which categorically states that the proposed project needs to be stopped and the lake, rajakaluves and wetlands rescued and restored.

According to the report, failure to take prompt and decisive action would not only deal a death blow to Bellandur Lake and the wetland around it but also, in the process, make adjacent residential areas vulnerable to flooding and associated disasters, exacerbate water scarcity and contamination. It is urging existing laws and judicial orders from both the Supreme Court and the high court of Karnataka, the report calls on decision-makers to learn from history about the grim consequences of plundering ecosystems and on citizens to thwart the irrational misappropriation and mismanagement of natural resources in the name of development. In recent weeks citizens have formed an umbrella group called the South-East Bangalore Forum for Sustainable Development to try and save the natural and common property resources threatened by the project. It remains to be seen whether the authorities here, like their counterparts in Uttarakhand, will wait for disaster to strike before taking corrective action.