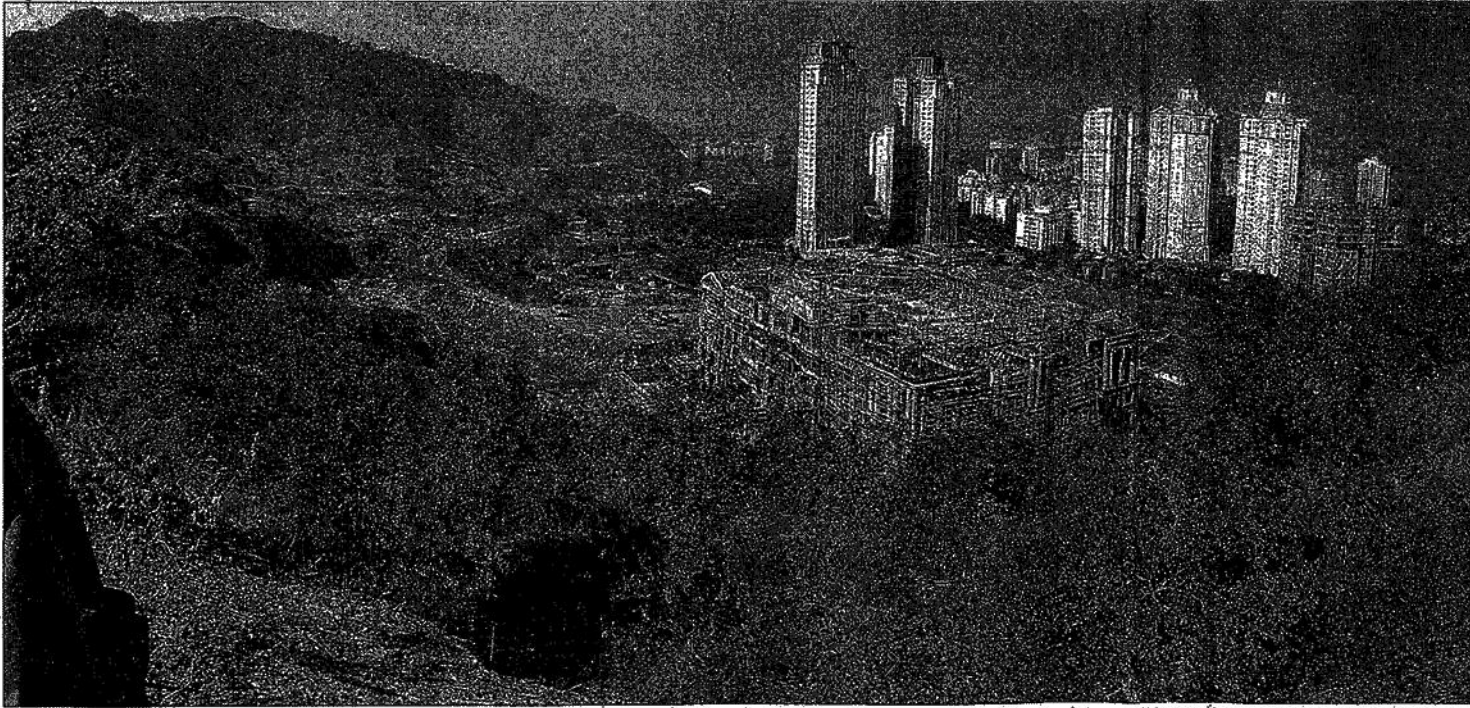


# The stressed environment of Mumbai



HOW GREEN WAS MY VALLEY?: Technopark in the Powai area shows clearly how the topography around our lakes is under attack

PHOTO COURTESY: K RAHEJA VIDYANIDHI INSTITUTE

The region also plays an important role in water and soil conservation. The lakes and their catchments form key factors of the natural rainwater harvesting system. Apart from filtering the polluted city air, any vegetative cover also helps to slow the water running off the land, absorbing it into the ground and reducing soil erosion. No man-made plantation can duplicate the water-harvesting ability of a natural forest.

## Plight of the Mithi river

Even worse than the lakes is the condition of the Mithi, which along with hundreds of little streams used to be the principal natural drain of the city during the monsoon. Today the overflow of the Vihar and Powai lakes form the source of this river, and takes no time to become a gutter. Adding to this are problems of cementing over and clogging. Recent satellite images show the Mithi disappearing while travelling through Saki Naka, Bandra-Kurla and Dharavi because of immense construction activity. There are many unauthorised factories on the Mithi's banks, as well as lakhs of slum dwellers. Even its natural river basin has been disturbed and diverted leading to regular floods in areas of Sion, Matunga, etc. While the river meets the sea it naturally flows through a wider network forming an estuary. Today under the guise of development, the discharge outlets have been narrowed resulting in flooding.

Although there have been many apparently beneficial socio-economic trends generated by recent urban development in this area, the damage to the environment was never assessed. The Growth projection model clearly shows the environmental impact of the current trends. The study has proposed immediate and long-term measures for development in this region.

The Development Control Rules

and Regulations incorporate measures to minimize environmental damage. And these are certainly well intentioned. But there is a dark side to their application. Their scope rarely extends beyond the boundaries of individual project sites. These mitigation measures embodied in the local ordinances are directed towards on-site control of acknowledged negative environmental impacts. These mitigations give a false sense of assurance that such impacts can be readily ameliorated on each site; and even if they cannot, the effects on the natural environment are alleged to be inconsequential. The established use of EIA (Environment Impact Assessment) excludes the additive impacts or the impacts of secondary developments, for example, the proliferation of retail and informal housing developments that follow on from the opening of high-density residential townships or hotels. The proliferation of slums is also because our planning regulations do not make it mandatory for providing housing for domestic help and class four sectors.

Over the years, concerned citizens have formed interest groups to protect the Powai Lake and its environment. Their work indicates there is a will amongst citizens to protect the environment. But without a master plan, these measures remain isolated and limited. There is an urgent demand for an informed and long-sighted management of the natural environment and resources, and a need for concerted efforts to radically improve pertinent knowledge, methods and techniques. Mandatory and effective Environment Assessment and taking into account environmental concerns in local land use planning is the critical need of the hour.

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*The lakes and their catchments form key factors of the natural rainwater harvesting system.*

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Mumbai

**T**he recent downpour and consequent flooding has brought many environmental issues to the fore. The city's infrastructure and its governance have come under the scanner. Despite warnings like extreme water shortage, drinking water contamination, rising pollution levels, the current focus of planning in the city of Mumbai is on the proposals designed to project an up-market and global image. Just this month, a government notification allowed "special town-

ships" in no development zones in the city. In the process the city environment is under strain like never before.

A recent study of the lake region of the city commissioned by the MMR Environment Society and conducted by the author through the Design Cell of Kamla Raheja Vidyanidhi Institute for Architecture and Environmental Studies, has clearly indicated how this major green belt of the city is under severe threat today. The main culprits—haphazard development, growing population density, relaxation of the building restrictions of no-development zones, and the de-

velopment of fast moving traffic systems.

This crucial green zone of Mumbai, which is actually part of the rich forest belt of the Western Ghats, also constitutes a huge part of the catchment of the three fresh water lakes of the city—Tulsi, Vihar, and Powai. These lakes were formed in the late 1800s by impounding the Mithi River to hold the monsoon run-offs to meet the drinking water needs of the city. The lakes with their catchments and surrounding areas, extending right up to Bassein Creek in the northern suburbs of Mumbai, form one integrated rich ecosystem.