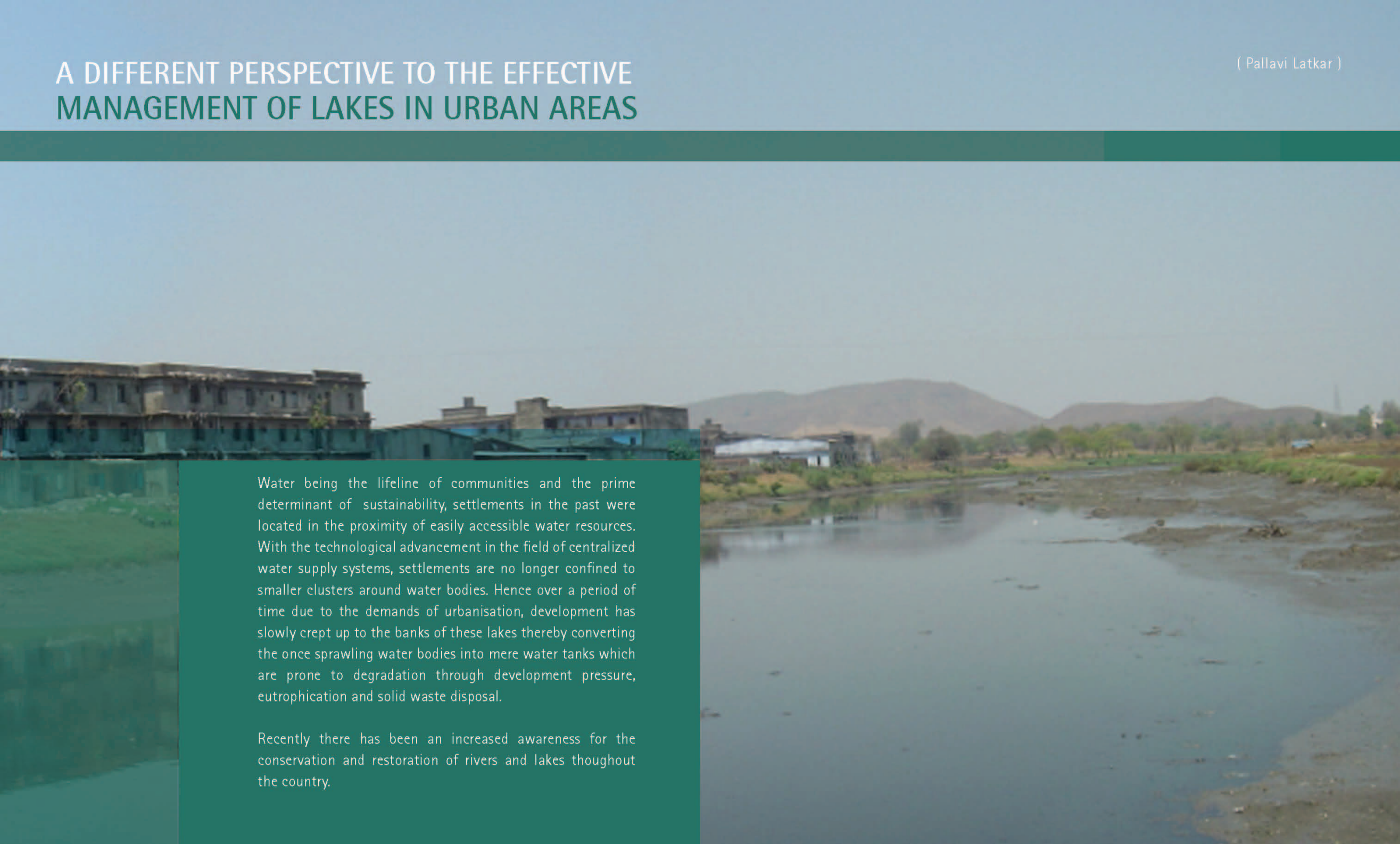


# A DIFFERENT PERSPECTIVE TO THE EFFECTIVE MANAGEMENT OF LAKES IN URBAN AREAS

( Pallavi Latkar )



Water being the lifeline of communities and the prime determinant of sustainability, settlements in the past were located in the proximity of easily accessible water resources. With the technological advancement in the field of centralized water supply systems, settlements are no longer confined to smaller clusters around water bodies. Hence over a period of time due to the demands of urbanisation, development has slowly crept up to the banks of these lakes thereby converting the once sprawling water bodies into mere water tanks which are prone to degradation through development pressure, eutrophication and solid waste disposal.

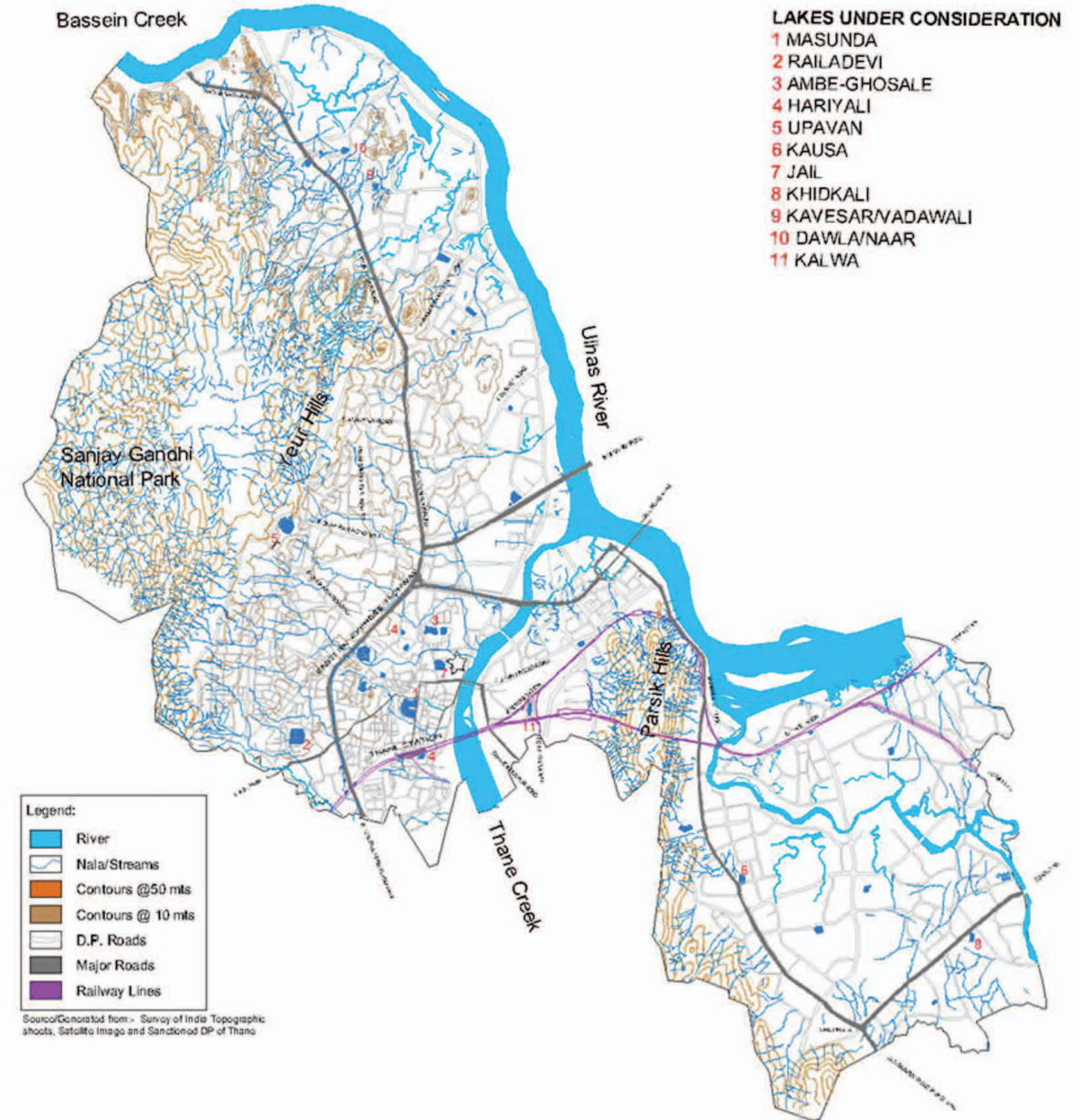
Recently there has been an increased awareness for the conservation and restoration of rivers and lakes throughout the country.



The need to manage freshwater resources in an integrated manner in order to facilitate their sustainable use has been addressed to varying degrees in previous international dialogues, examples including the Dublin Principles, Agenda 21 and the World Water Vision. However, none of these past efforts adequately address the unique features of lakes that must be considered in managing them for sustainable use. What is also lacking is the integration of the principles into a practical action program that can be tailored to specific lake management needs, depending on the nature of the threats facing them. The complexity of the organic /haphazard development in urban centres has raised several issues which need to be addressed and integrated into the water conservation programs. The entire sustainability of the lakes today with the current scenario of rapid urbanization depend on a complex, multilevel and multidisciplinary approach to effective management of the water body.

### MUMBAI METROPOLITAN REGION

The Mumbai Metropolitan Region receives its water supply from an intricate network of rivers and streams and catchments, which have been impounded to create lakes. Originally wells and tanks were the only source of water in Mumbai. With the growth of the city and in the absence of a perennial river harnessing of surface water was the only feasible solution. For this purpose as far as in 1845, lakes were created to supply water to the city, primarily they are Tulsi, Vihar and Powai. Today the city gets piped water from sources as far as 130 kms from the city viz; Tansa, Vaitarna and Upper Vaitarna and the Bhatasa Multipurpose Project, which form a crucial, water serving region for the city of Mumbai.





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Although the Mumbai Metropolitan Region receives its water supply from a number of sources, it's still not enough since they supply only 2900 mld as against a total demand of 4200 mld. To meet the projected water demand of 5400 mld for a population of 15.6 million in 2021, sources further north of the city are to be tapped. These proposals include Middle Vaitarna, Kalu, Gargai and Shai Projects.

This crucial water-serving region of Mumbai and its surroundings is actually a part of the Western Ghats. The Ghats by their mere topography and existing vegetation form catchment's for an intricate network of rivers and streams that flow through them. The region thus plays an important role in soil and water conservation apart from supporting a variety of flora and fauna. The western ghats have also been identified as one of the hot spots of bio-diversity regions of the world. The entire region is bestowed with many other natural resources which seem to be threatened by the impacts of development.

Mumbai city boasts of some very unique and varied environments, ranging from coastal belts, creeks and mangroves, to many hills, forests, streams, lakes and ponds, all of them in a state of intense stress and marginalisation today. The recent downpour and consequent flooding has brought many environmental issues to the forefront. Not only is the city's infrastructure under question but its governance has also come under the scanner. The catastrophic damage to the life and property during the deluge in the city are clear indicators for the urgent need of long term effective infrastructure and environmental planning.

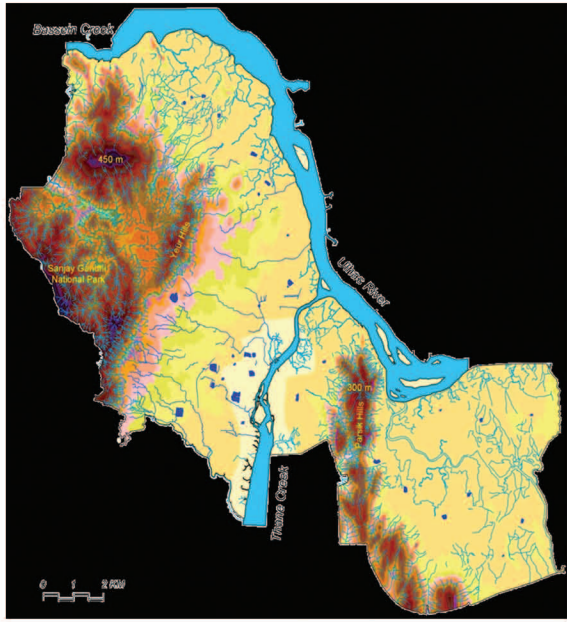
## PUBLIC PARTICIPATION, LOCAL GOVERNANCE AND LEGISLATIVE REFORMS AS A PART OF THE ECOLOGICAL LAKE MANAGEMENT PROGRAM

### A CASE:

Recently, the Thane Municipal Corporation has taken tremendous efforts to revive the natural resources of the region and improve the environment in totality. One of the initiatives is the Lake Conservation Programme.. The program not only included cleaning and bioremediation of the lakes but also took steps for creating lakes as the hub of economic activity, thereby providing an indirect source of livelihood for many people. This programme has been a collaborative effort of all sections of the society, including elected representatives, technological service providers, local educational institutions, Non Governmental Organisations and citizens for the re-development and restoration of lakes. Thane Municipal Corporation has also partnered with the Central Government of India through The Ministry of Environment and Forest (MoEF) and State Government through the Mumbai Metropolitan Development Authority.

The task of environmental conservation of the lakes was a mammoth one. It was at this point of time that the Municipal Corporation took the decision of involving the public themselves in the program. Public participation at various levels was sought. This unique program of ecological restoration of these shallow water bodies through maximum public private partnerships of various kinds has not only increased the public awareness but has led to the overall conducive social and physical environment





for the sustainability of the lakes. At the same time higher land values and high density development and other problems of rapid urbanization continue to be a major challenge for the lake conservation program.

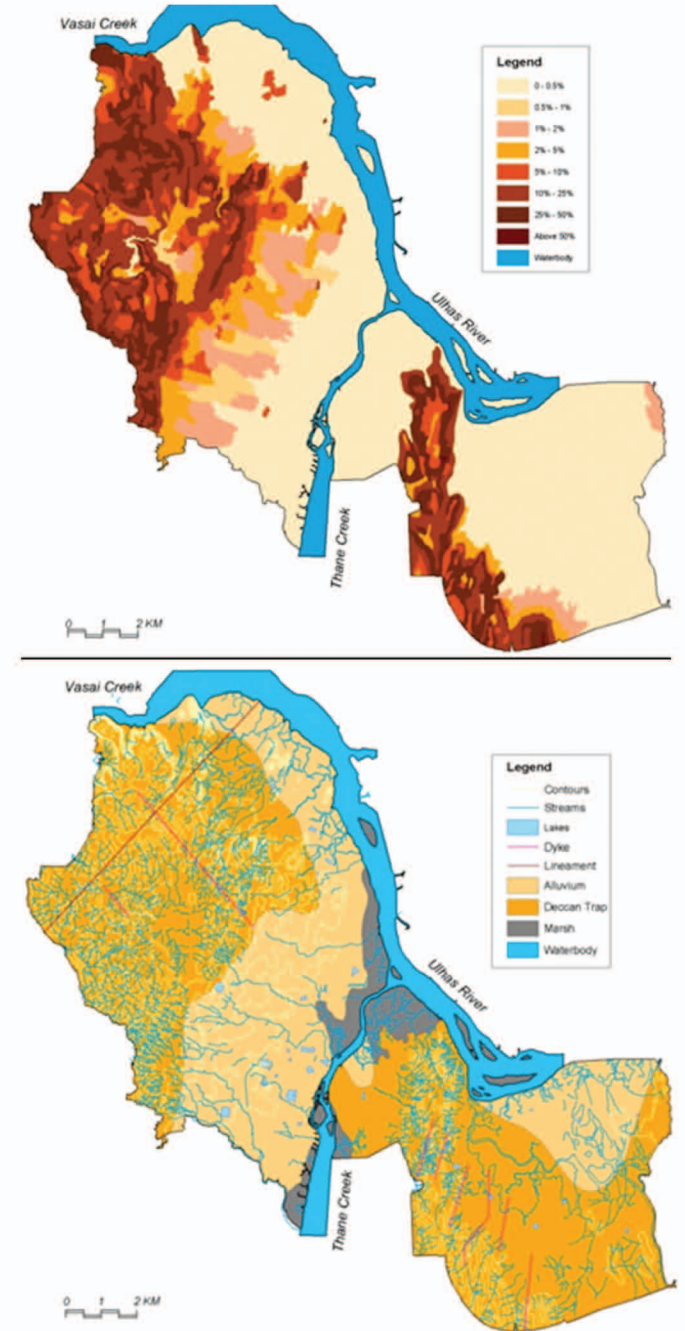
With this in mind the comprehensive program was designed to include participation from the public at various levels in different forms. Participation from Local Educational Institutions, residents associations, non governmental organizations as well as from advanced technology service providers was sought. The Thane Municipal Corporation has achieved success in attaining both these objectives through the concept of partnership.

- Mobilization of fund on the part of the corporation
- Towards Operation and maintenance.
- Environmental Infrastructure Management through Municipal Administration
- Public and educational material developed/used for public awareness programs
- Capacity building : Improvement of Managerial, administrative and technical capability of staff
- Dissemination of the latest technological trends in local educational institutions.
- Legal procedures
- Policy initiatives

## IN CONCLUSION

### INCENTIVES AND SUSTAINED EFFORTS:

Understanding the needs of development and the higher stakes involved particularly for a large city like Mumbai in the process incentives and sustained efforts from the local administration are required. At the same time the key to public-private partnerships for urban environmental management lies in the ability of local participants to induce and sustain a collaborative process involving a wide variety of organizations, groups and individuals in pursuit of a common goal. Abilities, in this sense, are both harnessed and developed in a virtuous cycle of personal and organizational development. But the impact of the broader context must be taken into account. There must be incentives for participation and a stable set of rules of the program. Patent and property rights frequently need to be defined and enforced. The capacity and independence of the judiciary can give participants more protection





against arbitrary action and predatory behavior. Efforts also need to be made to limit the impact of politicization on such arrangements. In general, the risks especially for the private sector participants need to be managed carefully.

There is an increased need for sustained efforts for innovative ways to bring about this partnership. They must be designed and managed to achieve two objectives. First, they must balance the need to produce both public value and private gain if they are to be sustainable. And second, they must serve a learning function which allows participants and stakeholders to build the collaborative and technical skills which the wider community needs. Such partnerships should be seen as a space and an opportunity to create new meaning and engage in collective inquiry rather than simply as a technique to use existing skills or fix old problems. Making a systemic impact may not be the immediate task but it should be seen as an indirect but essential outcome.

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