

# CONSERVATION AND MANAGEMENT OF URBAN LAKES

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# PROBLEMS FACED BY URBAN WATER BODIES

## ENCROACHMENT *(Loss of water bodies)*

- Building construction
- Playgrounds
- Cultivation
- Infrastructure development



Construction on Shivapura tank bed, Peenya

## POLLUTION *(Decrease in water quality)*

- Municipal solid waste
- Hazardous waste
- Bio-medical waste
- Building waste

### Effluent discharge

- Industrial
- Sewage
- Storm water
- Chemical fertilizers and pesticides
- Heavy metals



Construction debris in Bellandur tank



## DISTRIBUTION OF WATER BODIES IN BANGALORE REGION

<i>Type of lakes (in ha)</i>	<i>Bangalore Development Authority</i>		<i>Bangalore Metropolitan Region</i>	
	<i>Number of lakes</i>	<i>Water spread area (ha)</i>	<i>Number of lakes</i>	<i>Water spread area (ha)</i>
Minor (less than 2)	285	194.0	1,260	864.8
Small (between 2 and 8)	185	833.1	847	2,809.3
Medium (between 8 and 25)	94	1,220.0	469	4,258.0
Large (between 25 and 50)	29	1,003.4	117	2,742.1
Very large (more than 50)	15	1,322.3	96	7,586.0
<b>Total</b>	<b>608</b>	<b>4,572.8</b>	<b>2,789</b>	<b>18,260.2</b>

Source: Lake Development Authority:2003



# PROTECTION OF WATER BODIES

- ✿ **Eviction** of encroachments.
- ✿ **Demarcation** of water bodies by fencing and regular monitoring
- ✿ **Rehabilitation** and reclamation of closed quarries
- ✿ **Creation** of temporary buffer zones around water bodies
- ✿ **Reforestation** of existing buffer zones
- ✿ **Prevention** of overfishing, grazing, etc
- ✿ **Remediation** of severely polluted lakes (bioremediation, phytoremediation)
- ✿ **Rejection** of proposals harmful to wetland ecology



# PREVENTION OF WATER BODIES FROM POLLUTION

- ✿ BWSSB treats only 40% of sewage!
- ✿ Illegal discharge of industrial effluents.  
E.g. Textile, Pharmaceuticals, Paint, Chemicals, etc.
- ✿ Creation of **common treatment plant** facility for effluent treatment.
- ✿ **Regular monitoring** and prevention of illegal dumping of waste
- ✿ **Regular monitoring** of water quality



Drains polluted with dyes,  
Kamakshipalya



# LAKE MANAGEMENT STRATEGY PROPOSED

- ✿ Bring all the water bodies under one organization-“Lake Management Department”
- ✿ Have a core team of lake managers at State level
- ✿ Have a team of scientists and laboratory facility at State level
- ✿ Make use of the services of Deputy Conservator of Forests (Social Forestry) already available in each district



## STRUCTURE OF THE PROPOSED LAKE MANAGEMENT DEPARTMENT

