

# Auroville & its Bioregion

## Issues, Concerns & Approaches

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Auroville's Future

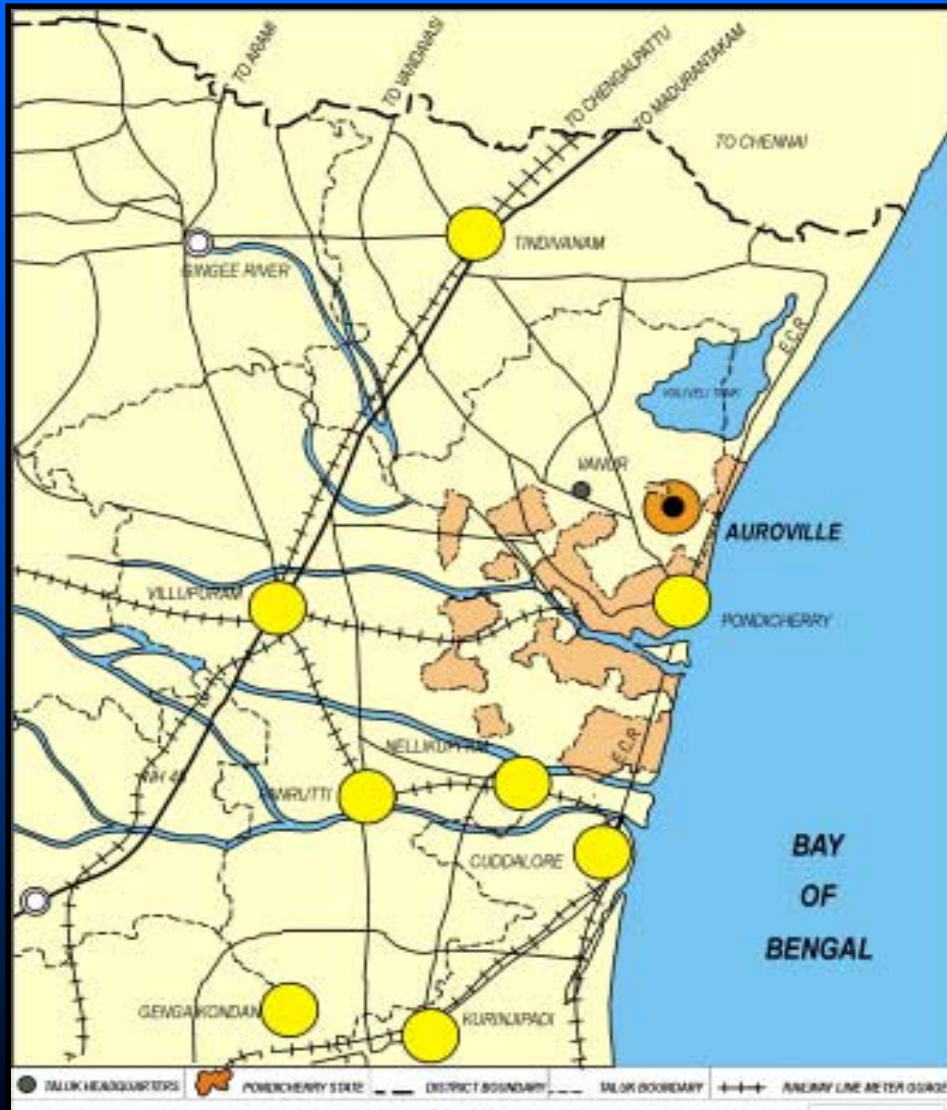
# Why Plan for the Bioregion..??

- Ecologically connected
- Manage developmental pressures in the region
- Better management of natural resources such as water, land
- Better agricultural practices in the region
- Conserving the ecologically sensitive areas
- Help for better & healthy economic & employment opportunities
- Improving social & physical infrastructure
- Waste land reclamation
- Biodiversity conservation

*And most importantly....*

- ***Because Auroville is sustained by the Bioregion***

# Regional Context



- Approx 750 km<sup>2</sup>
- 160 Villages
- 3.5 lakh people
- Surrounded by Pondicherry Urban Complex, Institutional Area & Industrial Area

# Ecological Planning

## Natural Elements:

- Geology (Bedrock & Surficial)
- Soils
- Topography (Slope & Aspect)
- Hydrology (Groundwater & Surface)
- Vegetation
- Wildlife

## Human Ecology:

- Land Use & Land Cover
- Demography & Ethnography
- Growth Trends
- Control Model – “Who controls what..??”

# Issues & Concerns

- Disappearance of Natural Resources
- Developmental Pressures
- High Impact Land Uses
- Social and economic problems

# Approaches & Interventions

## Long Term:

- Plan / Vision for the Bioregion

## Short – Medium Term:

- Kaliveli – Wetland of National / Intl Importance
- Biosphere Reserve
- Tank Rehabilitation
- Training & Outreach
- Etc..

# Kaliveli

A wetland of national / international importance..?

# What are *Wetlands*?

- *Wetlands* is the collective term for marshes, swamps, bogs, and similar areas. Wetlands are found in flat vegetated areas, in depressions on the landscape, and between water and dry land along the edges of streams, rivers, lakes, and coastlines
- *Inland wetlands* receive water from precipitation, ground water and/or surface water
- *Coastal and estuarine wetlands* receive water from precipitation, surface water, tides, and/or ground water

# Wetland values and Functions

- Flood Control & Shoreline Stabilisation
- Groundwater Replenishment
- Sediment and Nutrient Retention
- Climate Change Mitigation
- Reservoirs of Biodiversity
- Cultural Value & Wetland Products
- Recreation / Tourism

# Highlights of *Kaliveli*

- *Seasonal wetland* with salinity gradient from fresh to brackish water
- *Important stop* on the *migratory flyway* and a breeding ground for some migrants
- Plateau has some of the last vestiges of *Tropical Dry Evergreen Forest (TDEF) - Sacred Groves*

# Highlights of *Kaliveli* - Biotic Factors



- Various species of *birds*, *mammals*, *fish*, *amphibians*, *butterflies* and *reptiles* are found in the Area



- Many of them are listed on the *IUCN Red List*

# Highlights of *Kaliveli* - Human Factors

## *Traditional usage:*

- Fishing
- Reed & grass harvesting
- Salt manufacturing
- Cultivation of crops
- Prawn collection



# Threats to *Kaliveli*

- Encroachment by fields
- Forces of Tourism and Commercialisation
- Poaching activity
- Destruction of indigenous forests
- Unprecedented increase in commercial Prawn farming



## *"Ramsar" Site*

- The Convention on Wetlands, signed in *Ramsar, Iran, in 1971*, is an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

# Auroville Bioregion

A Biosphere Reserve..??



# UNESCO – Man & the Biosphere Program

## What are Biosphere Reserves?

- They are areas of *Terrestrial* and/or *Marine* ecosystems promoting solutions to reconcile the *Conservation of Biodiversity* with its *Sustainable Use*
- They are internationally recognized, nominated by national governments and remain under sovereign jurisdiction of the country where they are located
- They serve in some ways as *Living Laboratories'* for testing out and demonstrating integrated management of land, water and biodiversity



# UNESCO – Man & the Biosphere Program

## 3 Functions of Biosphere Reserves:

Each biosphere reserve is intended to fulfill three basic functions, which are complementary and mutually reinforcing:

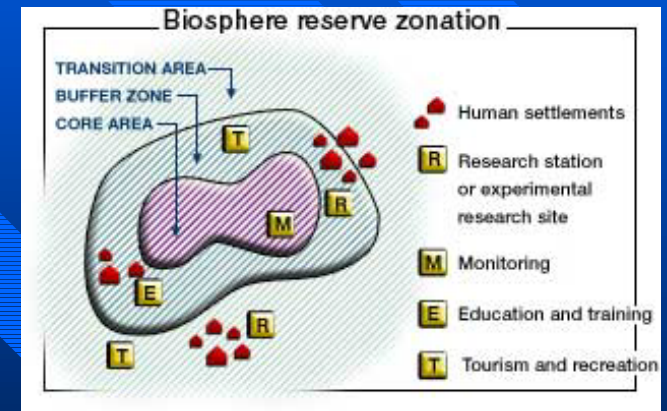
- ***A conservation function*** - to contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **A development function** - to foster economic and human development which is socio-culturally and ecologically sustainable;
- **A logistic function** - to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.



# UNESCO – Man & the Biosphere Program

## How are Biosphere Reserves Organized?

- They are organized into 3 interrelated zones:
  - **CORE AREA**
  - **BUFFER ZONE**
  - **TRANSITION AREA**
- Only the core area requires *legal protection*
- A number of biosphere reserves simultaneously encompass areas protected under other systems such as national parks or nature reserves, national wetlands etc. and other internationally recognized sites such as *World Heritage* or *Ramsar Wetland Sites*



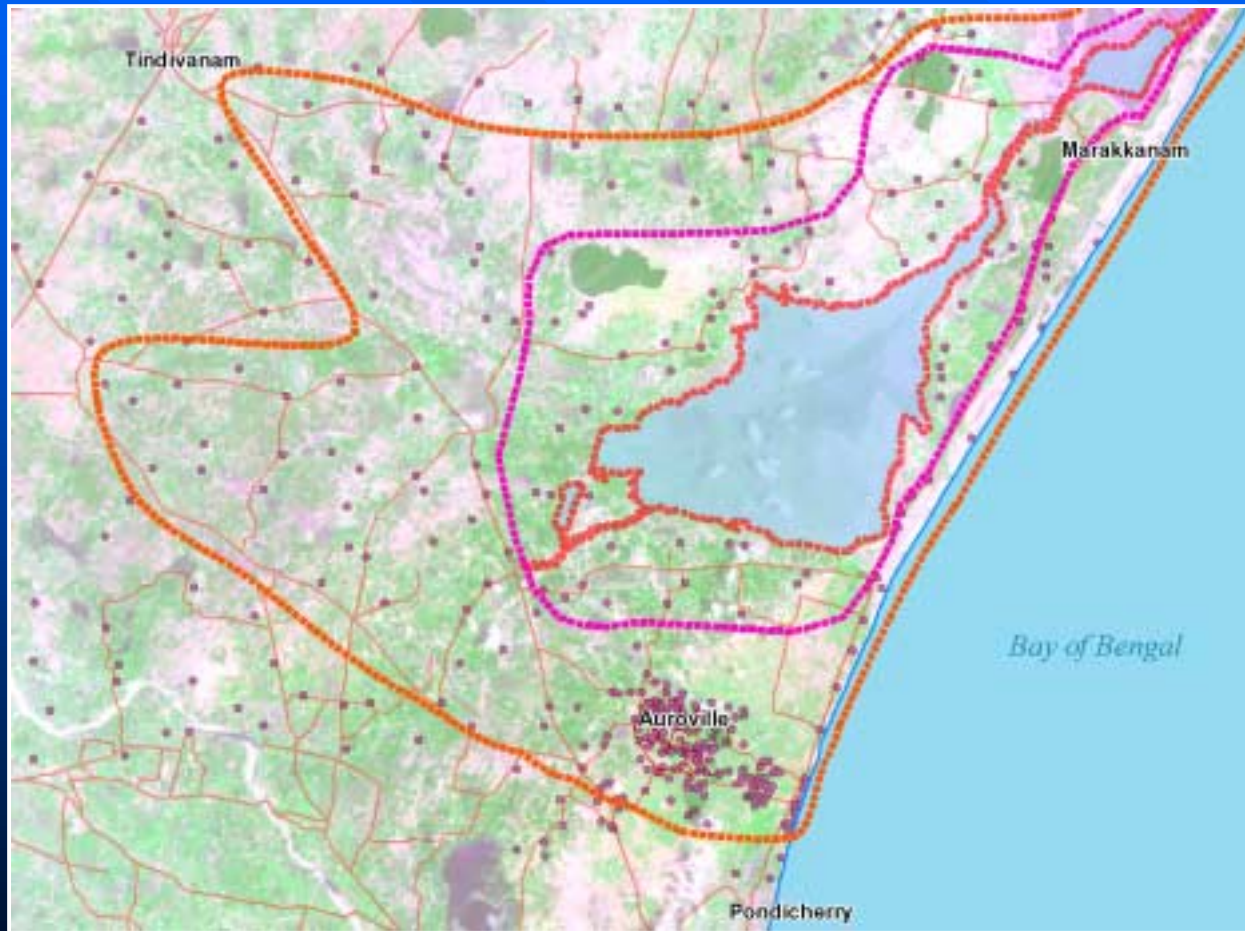


# UNESCO – Man & the Biosphere Program

## Why do we need Biosphere Reserves?

- Conserve biodiversity
- Maintain healthy ecosystems
- Learn about natural systems and how they are changing
- Learn about traditional forms of land use
- Share knowledge on management of natural resources in a sustainable way
- Cooperate on how to manage natural resources

# Biosphere Reserve: *Kaluveli* Core



Core:  
**Kaluveli Tank**

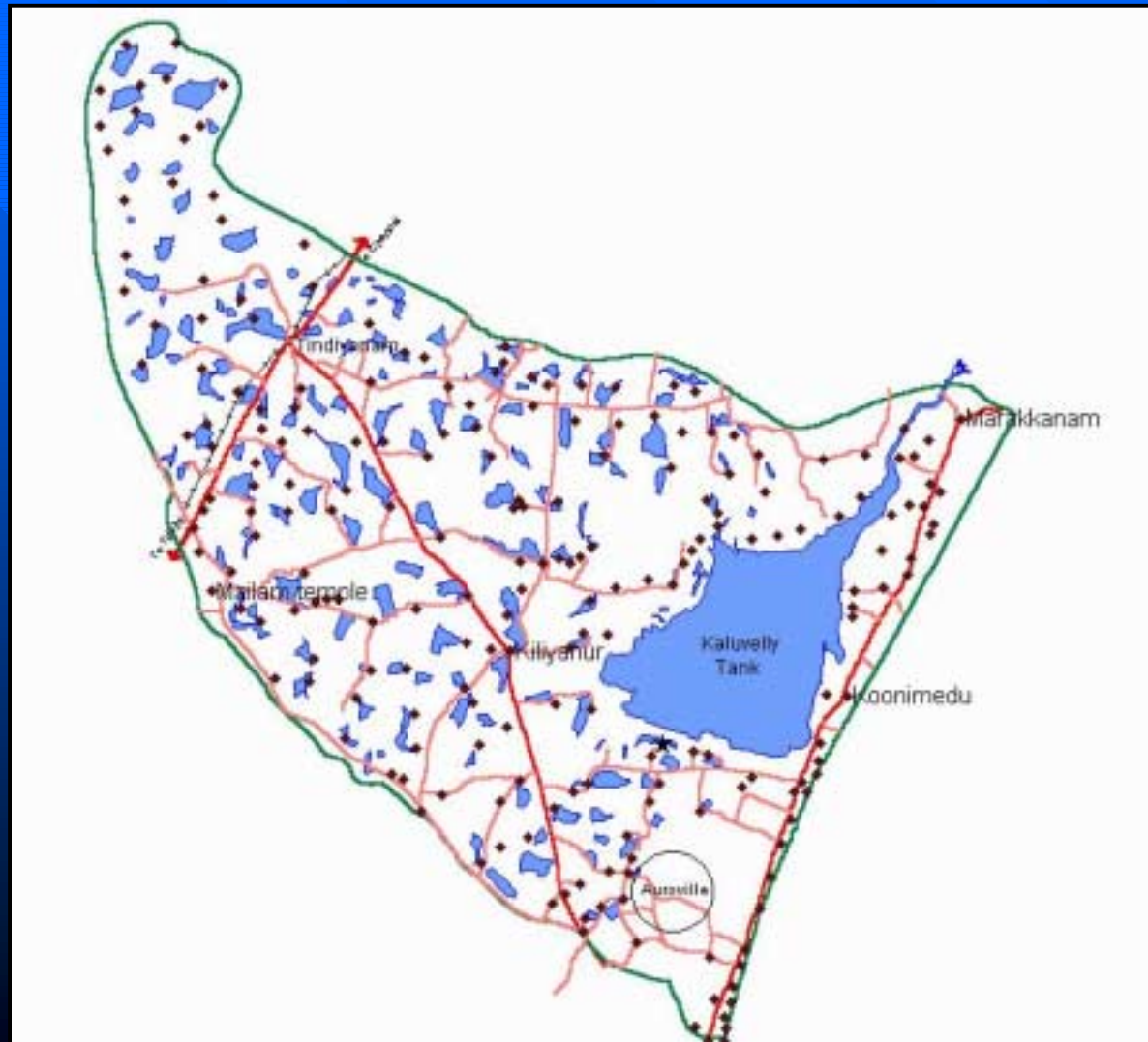
Buffer:  
**Area around  
Kaluveli**

Transition:  
**Watershed  
extent (incl.  
Auroville)**

# Auroville Bioregion

Project:  
Tank Rehabilitation

# Tank Rehabilitation





# Approaches & Interventions

## Summary:

- Ecological Planning
- Environmental Protection
- Training & Outreach
- Specific Projects for Specific Issues

**Thank You**

**Questions / Comments**