



“Understanding ecosystems of Puducherry and their restoration challenges”

Organised by:

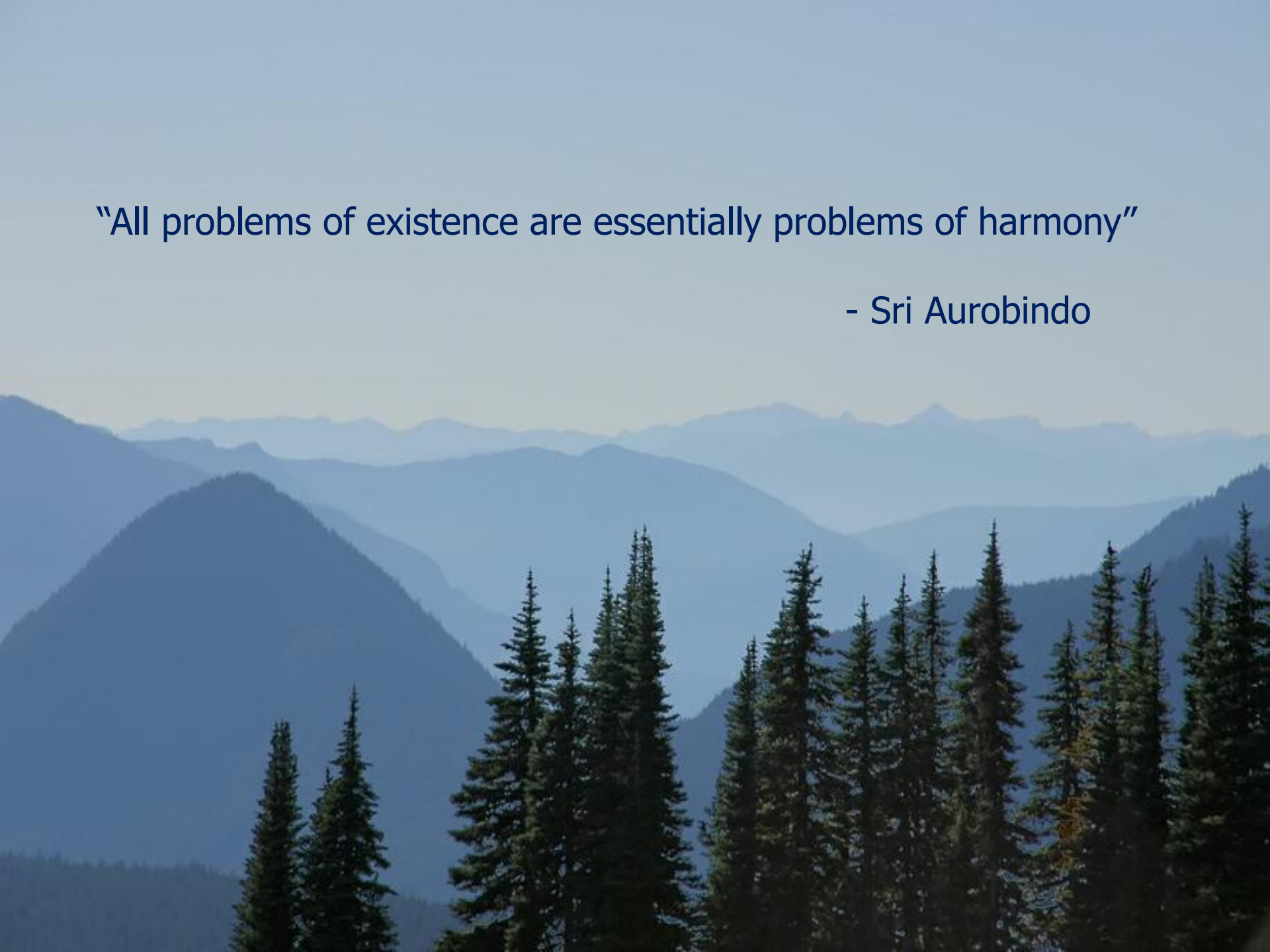


TOPIC: Tanks and Ponds Ecosystems

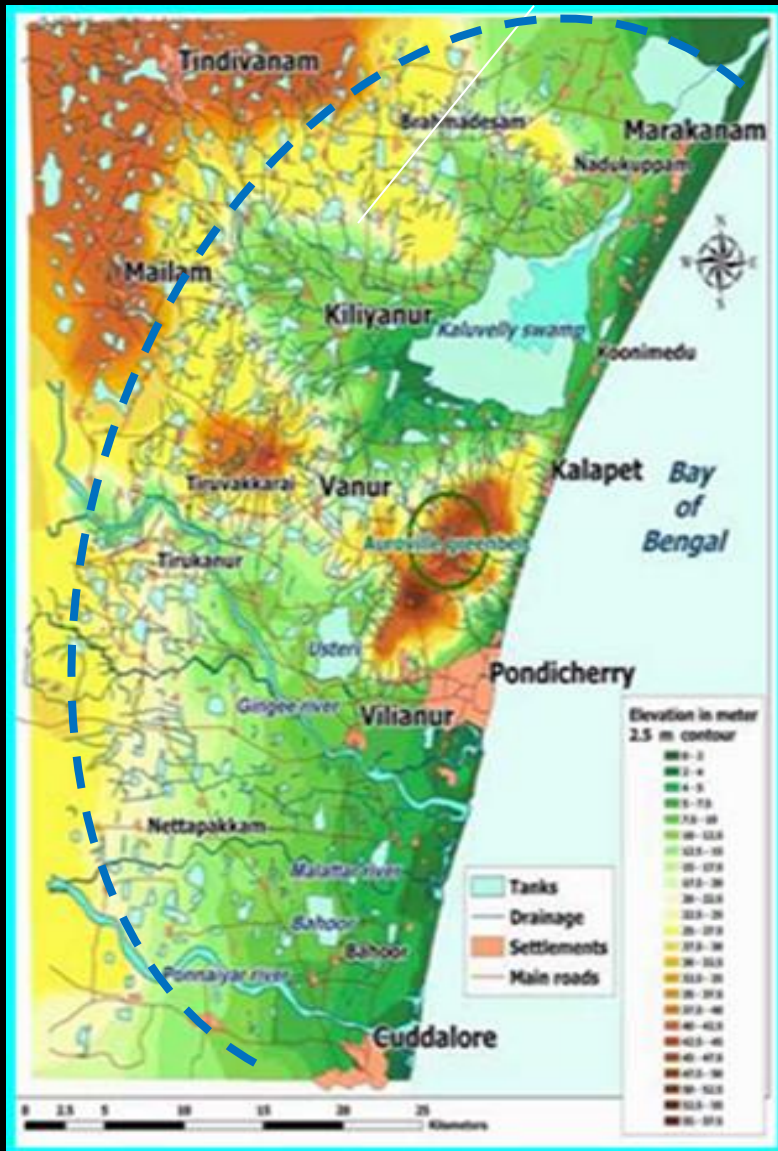
PROBIR BANERJEE, PondyCAN / AGG / All-for-Water-for-All
5th June 2021

“All problems of existence are essentially problems of harmony”

- Sri Aurobindo



BIOREGIONAL PLANNING



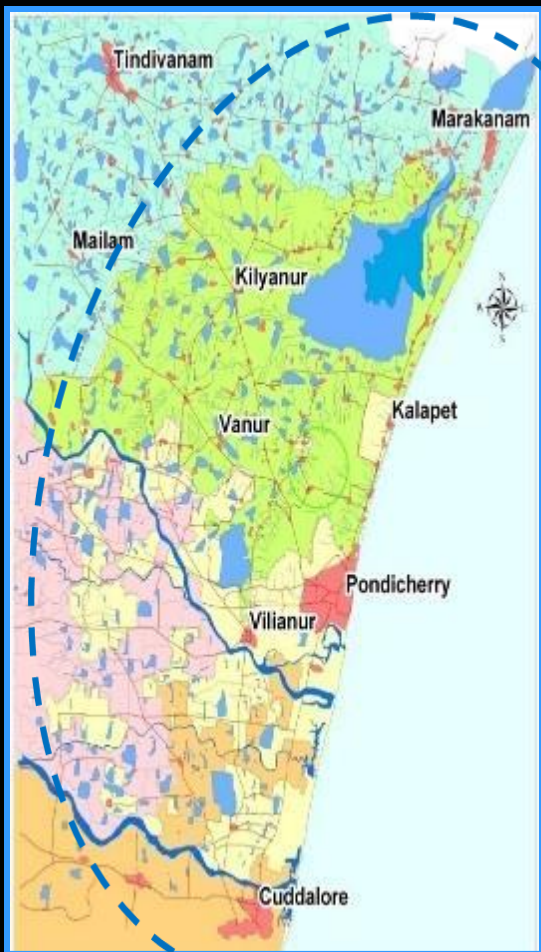
Bioregional Planning is a holistic and integrated approach to development which goes beyond political boundaries and expands the scope to a larger landscape of natural forms and living communities with watershed areas as the defining boundaries.

It is the most meaningful framework:

- Take into account the natural infrastructure
- Meet the aspirations of the people
- Create a rural urban continuum
- Design long term sustainable communities

This can be achieved and made sustainable only through a collaboration of all stakeholders - Government Agencies, Experts, Research Institutions, Industries, Farmers, Business enterprises, Educational institutions, Civic organizations and citizens.

PVAC (Pondy-Villupuram–Auroville–Cuddalore) BIOREGION



PVAC Bioregion forms part of an **integrated natural ecosystem**. The **2500 sq km area** is nestled between the eco regions of Kaliveli tank, Auroville, Ousteri, Bahour, Perumal lake and the 80 km coastal stretch.

Along the coast are the beaches, sand dunes, estuaries and mangroves.

Behind it are the coastal wetlands, tanks and ponds which hold the water flowing down the rivers and channels.

The forests help to support and protect these wetlands, regulate soil erosion and are crucial for biodiversity and carbon sequestration.

The PVAC bioregion is **closely interconnected** through natural resources, climate, cultural and historical linkages, tourism, trade and transportation and a **common coast**.



SEQUENCE OF EVENTS – PVAC BIOREGIONAL PLANNING

DATE	EVENT
Sept 1986	Letter from Joint Secretary, Ministry of Urban Development (MoUD) to Chief Secretary, Pondicherry to take up Interstate Regional Planning.
21 st Dec 2004	Reminder letter from MoUD for the formation of Working Group for Regional planning.
15 th May 2008	Consultation Meet in Auroville "Water management through Integrated Planning and Regional Collaboration".
25 th Jul 2008	Meeting held at the Chennai Secretariat with all the Secretaries by Dr. Harjit Singh Anand (then Secretary, MHUPA, GoI).
26 th July 2008	Meeting at the Pondicherry Secretariat on "Preparation of Regional Plan" attended by Dr. Harjit Singh Anand, Mr. K. Sellamuthu, Secretary Urban Development (TN) and Chief Secretary, Pondicherry Govt.
Feb 2009	"Sustainable Regions Collaborative Planning" a 3-day participatory workshop by JTP held in Auroville, inaugurated by the Lt Governor of Pondicherry, Shri Govind S. Gurjar.
24 th Jul 2009	Meeting held in the chamber of Chief Minister, Pondicherry, regarding preparation of Interstate Regional Plan
18 th Aug 2009	Letter from Secretary Town and Country Planning GOP to JS MoUD to take up Bioregional Planning with Govt of Tamil Nadu
31 st Aug 2009	Letter from Govt of Pondicherry to Prof. KT Ravindran requesting him to prepare a concept plan for the Interstate Regional Plan.
21 st Oct 2009	Letter from Mr. M. Ramaswamy, Secretary AV Foundation, MHRD mentioning names of the proposed members for the "Working Group for Regional Planning Study".
Dec 2010	Meeting in Delhi to discuss Regional Planning with - Dr Kasthurirangan, Member Planning Commission and former Chairman of ISRO. - Dr Radhakrishnan, IAS, Assistant Country Director, UNDP - Mr J.B. Kshirsagar, Chief Planner, TCPO, New Delhi
11 th Feb 2010	Brainstorming session organized in Auroville by TCPO, New Delhi for the 5 southern states on Regional Planning and expanding the urban planning programs.
24 th June 2010	Meeting held at Chief Secretariat, Pondy with team from ADEME and PondyCAN
8 th Oct 2010	Meeting at French Consulate on Bioregional Planning with French Consul and Chief Town Planner Pondicherry
30 th Oct 2010	Meeting with Chief Secretary, Pondicherry regarding the Pilot Project on Regional Planning funded by ADEME.
15 th Feb 2012	Completion of Report - "Sustainable Regional Planning Framework for Pondicherry-Villupuram-Auroville-Cuddalore".
24 th July 2012	Meeting with Dr Bhatt, ISRO B'lore for setting up Regional Level Remote Sensing Centre
April 2013	Workshop by Dr. KT Ravindran at Auroville organised by TDC on "Regional Development".
24 th Mar 2015	Meeting with TDC at Auroville to discuss "Bioregional Water Action Program".
5 th May 2015	Consultation meeting in association with US Consulate "Water Stewardship for the Sustainable Development of the Bioregion".
2016	Formation of the alliance "All for Water for All" with representatives from the entire bioregion (Concept note attached).
2nd Feb to 23rd Mar 2016	Water Festival for 50 days covering the entire bioregion. 2nd Feb (World Wetlands day) to 23rd Mar (World Water Day).
11 th Sep 2018	Consultation Meet at Hotel Atithi - PVAC (Pondy-Villupuram-Auroville-Cuddalore) Bioregion – Towards an integrated and inclusive development.
Since 2018	#WaterRichPuducherry / Neerum Oorum (Water & Village) / Rejuvenation of Ponds, Tanks and Channels in Pondy
June 2020	Collaboration for an Integrated Water Resources Management



SUSTAINABLE REGIONAL PLANNING FRAMEWORK FOR PUDUCHERRY – VILLUPURAM – AUROVILLE – CUDDALORE



Project Number: 1009C0056



SUSTAINABLE REGIONAL PLANNING FRAMEWORK
for

puducherry, viluppuram,
auroville & cuddalore

Final Report

February 15, 2012



PondyCAN!

The purpose of the Regional Planning Framework is to build on the **region's assets**, identify its **challenges and opportunities**, and develop a **road map** that will help guide the region's growth in a sustainable and equitable manner.

The four key sectors:

- Land use
- Transportation
- Water
- Energy

PROCESS:

Data compilation & GIS Mapping /Field visits
Community surveys / Stakeholder workshops

CONSULTATION MEETING ON 11th SEP 2018



Nature is united below and we are divided above because we work in silos. To reach prosperity, we need to come together.
Hon'ble Lt Governor of Puducherry, Dr Kiran Bedi

Providing forests, clean air and environment, and peaceful living situations is our duty. We need to work together with the Tamil Nadu government to preserve the environment – particularly our water levels and preventing sea water intrusion. I will meet with the Minister of Housing and Urban Affairs, GOI to discuss bioregional planning.
Hon'ble Chief Minister of Puducherry, Thiru V Narayanasamy

This new government is working to address impacts of urbanisation on waste, pollution, deforestation through responsible town planning in Pondicherry and the surrounding areas Auroville.
Hon'ble MLA, Thiru K. Lakshminarayanan

As the land mass of Puducherry and Tamilnadu are geographically interspersed, it is important that both states come together for regional planning. Both states need to collaborate and share ideas. Auroville is an intellectual powerhouse that can provide intellectual support around development in line with nature.
Shri Ashwani Kumar, Chief Secretary

The way people live in Tamil Nadu and Puducherry is intertwined between the two areas, so regional collaboration becomes very important. The government is now giving emphasis to regional planning in the 2018/9 budget and Tamil Nadu will prepare eight regional plans through a participatory process.
Thiru S. Krishnan, Principal Secretary, Govt of Tamil Nadu

CONSULTATION MEETING ON 11th SEP 2018

PRESENTATIONS:

- PVAC Bioregion
- Hydrogeology of the Bioregion
- Kaluveli Bioregion
- Auroville Bioregion
- Pondicherry Bioregion
- Ousteri Bioregion
- Bahour Bioregion
- Cuddalore Bioregion



GROUP DISCUSSIONS:

GENERAL TOPICS:

- Institutional Framework for Collaboration
- Coordinating action in each sub-region
- Information collection, analysis and dissemination

THEMATIC TOPICS:

- Water
- Transportation
- Coast



"A good plan is like a road map. It shows the final destination and usually the best way to get there."

H. Stanley Judd



WATER INITIATIVES

Pondicherry is gifted with a network of 87 tanks(only 84 remain), more than 609 ponds (many have disappeared) and canals linking the waterbodies built by the **Cholas** more than a thousand years ago. The "**Kudimaramathu**" system involved local communities in the management of the waterbodies – decision making, carrying out the desilting works, strengthening the bunds and planting trees.

The **French Govt** had institutionalised the system and named it "**Syndicate Agricole**" for the bigger tanks and "**Caise Commune**" for the ponds. Budgets were prepared every year and all the works were carried out by the local communities.

When the **Pondicherry Govt** took over, PWD was responsible for the tanks and the Local Administration for the Ponds. Over the years, the entire system had collapsed as the officials had no experience, the works were given on contract instead of to the communities and there is always fund constraint.

Several initiatives have been taken up since **2018**.

WATER IS LIFE ?????

Fresh water is vital for healthy ecosystems, human survival, health, and socio-economic development. The right to 'pollution free water' and the right of access to 'safe drinking water' is part of 'Right to Life' under Article 21 of the Constitution of India.

Our water resources face a host of serious threats all of which are caused primarily by humans: encroachments / pollution / over-extraction/ non-maintenance of water bodies / commercialization / coastal erosion etc.



Man is the most insane of species. He worships an invisible God and destroys a visible Nature, unaware that this Nature he destroys is the God he is worshipping.

- Hubert Reeves



COLLABORATION FOR AN INTEGRATED WATER RESOURCES MANAGEMENT

Thanks to the dynamic leadership of the Development Commissioner **Shri Anbarasu**, The **Puducherry Water Policy 2016** has been taken up seriously. The policy document has all the right elements for the equitable and sustainable management of our most precious resource – WATER.

- Information systems
- Water Resource Planning
- Institutional Mechanism
- Water Allocation Priorities
- Ground Water Development
- Rain Water Harvesting
- Drinking Water
- Irrigation
- Financial and Physical Sustainability
- Participatory Approach
- Water Quality
- Conservation
- Climate Change
- Flood Control Management
- Monitoring of Projects



A multi stake-holder meeting was held to discuss strategies for the implementation of the **Water Policy 2016** on **20th Aug 2020**.

INFORMATION SYSTEMS

The challenges are:

- Information is scattered with different depts
- Info is not updated regularly
- Though Public assets citizens have no access

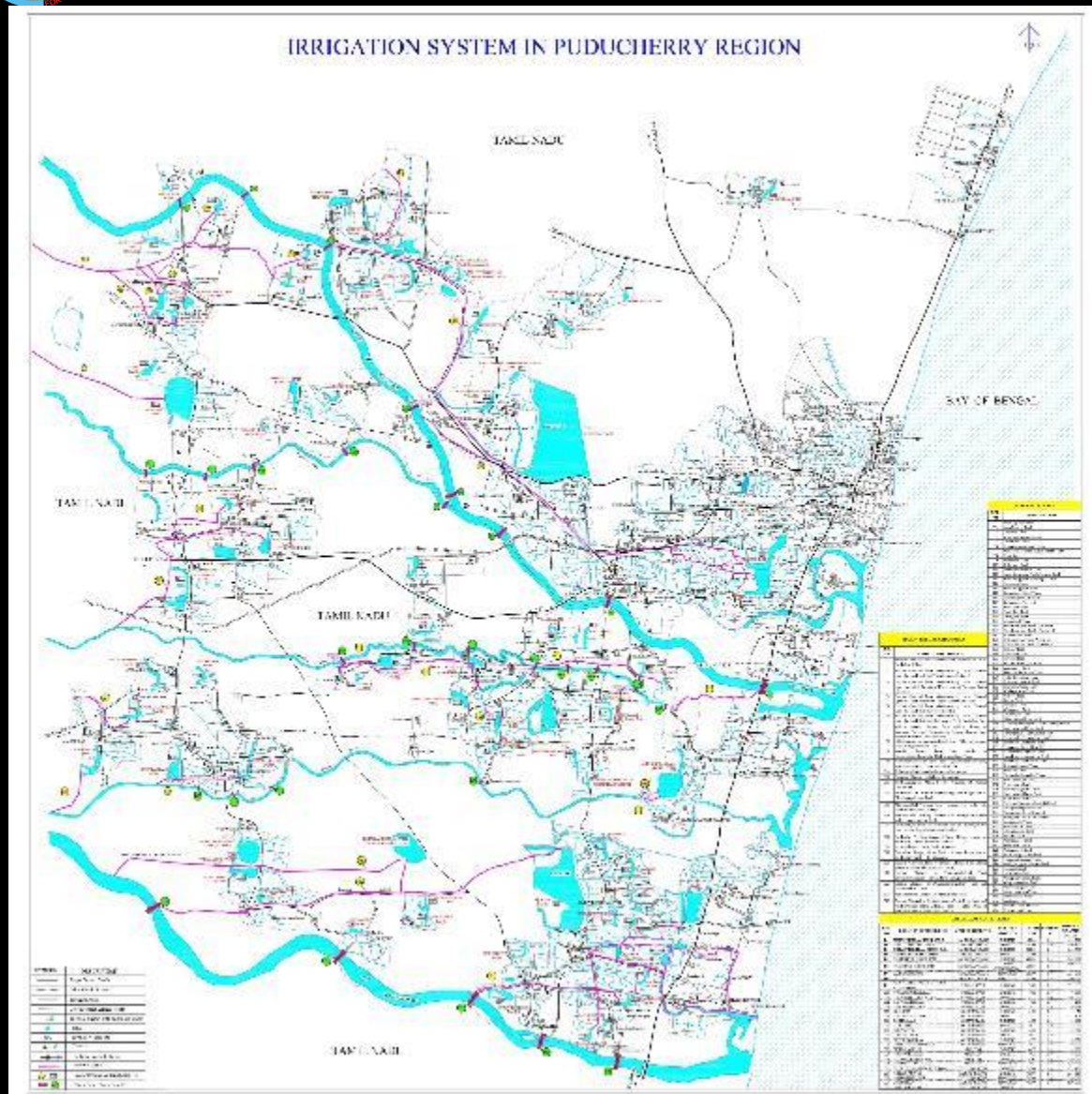


On 26th Aug'20 a meeting was convened to discuss about all relevant information to be put on a GIS platform and the collaboration with the civil society for collection and dissemination of this info for the protection and management of water bodies.

1. MAP LAYERS (STATIC)	
WATER	
1.1	Irrigation channels
1.2	Command area
1.3	Location of WB with inlet and outlet points
1.4	Contour of WB
1.5	Cadastral maps
1.6	FMB sketch of all WB as of 1969
1.7	Over head tanks and source of water
1.8	Temple ponds
1.9	Location of all the Borewells and purpose used
1.10	Water sources and recharge mechanism
1.11	Ground water recharge potential
1.12	Satellite imagery (monsoon & peak summer)
SEWAGE	
1.13	Potential buildings for rain water harvesting
1.14	Sewage lines
1.15	Location of STPs (existing and proposed)
1.16	Entry point into WB
OTHERS	
1.17	Forests (including urban)
1.18	Industries
1.19	Schools & Colleges
1.20	Police stations
1.21	Hospitals
1.22	Population data around water bodies
2. MAP LAYERS - DYNAMIC	
WATER	
2.1	Rain fall data
2.2	Seasonal water levels (both surface & ground)
2.3	Monthly water consumption (sector wise)
2.4	Water extraction from each borewell
2.5	Meteorological info
2.6	Initiatives in water harvesting
POLLUTION & WASTAGE	
2.7	Water quality of all WB and OHTs
2.8	Pollution sources (houses / drains)
2.9	Quality of water discharged by industries
2.10	Water wastage points



PROPOSALS FOR CLEARING UP 5 IRRIGATION CANAL NETWORKS



Bangaru Vaickal



Sitheri Vaickal



Guduvaikar vaickal



Abhishekapakkam
Vaickal



Vathanur
Vaickal

The clearing up will be carried out by the respective Tank Associations in 2021.

#WATERRICHPUDUCHERRY

Thanks to the initiative taken by Hon'ble Lt Governor Dr. Kiran Bedi, desilting works was taken up in in Bahour area through CSR funds - 86 km of canals was cleaned up.



Walking 6.7 km along the Sitheri Channel which was revived after many many years.

REJUVENATION OF PONDS

Challenge given to us by the District Collector of Pondicherry to restore Vannan Kulam (Marapalam), the biggest urban pond which was turned into a garbage dumpsite.



With the support of the local MLA and the District Collector we restored it. Water holding capacity is 50 lakh litres. This project is included in Smart City Project.

ERI AMMAN KULAM, ABHISHEKAPAKKAM



It took us 6 weeks to desilt the pond. The water holding capacity is 25 million litres.

MARAPALAM EB SUBSTATION – SMALL POND



This pond inside the EB compound was filled up and full of junk. The desilting was sponsored by Rotary Club of Pondicherry Elite

MARAPALAM EB SUBSTATION – BIG POND



← Before

After →



This pond, also inside the EB, compound was more than an acre and filled with junk
Now it has become a good recreation space for the surrounding houses.

VANNAN KULAM, KAMBAN NAGAR



← Before

After →



This pond was filled up to erect an overhead tank. The 9 neighbourhood associations around it have formed an association and contributing towards all the development.

SURIYAN KULAM, SARAM



← Before

After →
↓



This low lying area belonging to SRS GHSS, Saram has been transformed as a community rain water harvesting structure for the 3 surrounding neighbourhoods. The walk around the pond is 1 km and 2 playgrounds will be built at the 2 ends.



WaterFest '21 – STEWARDSHIP FOR WATER AND BIODIVERSITY

2nd Feb (World Wetlands Day) - 22nd Mar (World Water Day)

The Festival was held to celebrate the bountiful rains which had filled up all the ponds and to build collaboration between schools, local communities and the govt for creating healthy environments by rejuvenating the waterbodies.



The inauguration was held at SRS GHSS, Saram. The Neer Kudam was launched by Thiru John Kumar, MLA and the OSOP Program was launched by Shri Rudra Goud, Director of School Education.



OSOP (One School – One Pond) PROGRAM

The program has been taken up in the schools in association with the Education Dept. Each school will adopt a pond in the neighbourhood which will act as the eco lab to study the natural ecosystem and biodiversity.

Through OSOP we can integrate all the subjects – history, geography, maths, science, arts etc. with the pond as the central theme. It will be an experiential learning while understanding and serving community needs.



The students will take responsibility for its conservation and enhancement with the support of the local community. This will foster in students the ability to apply their knowledge and skills to address complex issues or challenges.

WaterFest '21 – NEER KUDAM YATRA

The Neer Kudams were filled with water from Ousteri Lake, the largest waterbody in Pondy (800 hectares) and considered as one of the important wetland in Asia. It travelled to all the schools where it was received ceremoniously. A little water was poured from the Neer Kudam into the pond adopted by the school and filled up with water from that pond symbolizing the interconnectedness of water on Earth.



WaterFest '21 – COMPETITIONS

During the festival 5 competitions were held in all the schools of Pondy:
 Drawing / Essay writing / Banner / School Neer Kudam / 3 m video
 Topic: My School My Pond



KAVIN, FROM BHARATHI GOVT HR SEC SCHOOL

"Water is essential for our life. It is part of our life, we cannot imagine a world without water. Water makes life possible on earth... To avoid a shortage of water, everyone should participate equally and refrain from misusing and overusing water resources."

EUNICE, FROM GOOD SHEPHERD ENGLISH SCHOOL

"We can all help ponds and their wildlife in some ways... if you can find a pond that you think needs improvement (e.g. rubbish or plant removal) perhaps you and some family or friends can try to renovate it."

JEEVITHA, FROM AAGHS SCHOOL

"Ponds provide water for agriculture, livestock, communities, aid in habitat restoration, serve as breeding grounds for local and migrating species, are components landscape architecture, flood control, general urbanization and mitigate particular pollutions and greenhouse gasses."

ANGELINE FROM ST. JOSEPH OF CLUNY HIGHER SEC. SCHOOL

In the future there may even be battles over water. So in addition to deforestation, saving water bodies is becoming essential for a better future."



Prizes will be awarded to the winners as soon as the schools reopen.



Thank you

"The future is not some place we are going to, but one we are creating.

The paths are not to be found, but made.

And the activity of making them changes both the maker and the destination."

— John Schaar