

**The source of water  
in Puducherry (Pondicherry)  
region  
and  
future demands of the people**

**SEMBADUGAI  
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ENVIRONMENTAL  
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PRESENTS**

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## The Union Territory of Puducherry consists of four regions

Regions	Areas
* Pondicherry .....	290 Sq. Km
* Karaikal.....	161 Sq. Km
* Mahe .....	9 Sq. Km
* Yanam.....	20 Sq. Km
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	480 Sq. Km
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(This discussion is confined to Water Resource in Puducherry Region only)

- ❑ Puducherry region is embedded in the South Arcot (now Vizhupuram District) district of Tamil Nadu
- ❑ 162 Km South of Chennai and 22 Km North of Cuddalore is the Territorial Headquarters.
- ❑ The Region as whole is bounded by the Bay of Bengal on the East and by the South Arcot (now Vizhupuram District) on all the other sides.

# Chapter I

## Water Source in Puducherry Region

### LOCATION AND SIZE

#### River System and Water Resources

- ❖ As a flat country of average elevation of about 15 meters above sea-level, intersected by the deltaic channels of River Gingee and the Ponnaiyar and other streams forming the two main drainage basins, interspersed with lagoons, lakes and tanks.
- ❖ Other branches of Ponnaiyar and Kuduvaaiyar and Malattar rivers. These rivers are rain fed.

#### Water Bodies in Puducherry

- Ousteri lake, Bahoor lake, Karasur lake, Thondamanatham lake, Ozhandai lake, Vadhanoor lake, Panayadikuppam lake, etc., Previous figure is 23 Tanks. Now less than about 20 Tanks and related Ponds are available.

#### Rainfall

- ✓ Average annual rainfall in the Region is 1100 mm.

# Chapter II

## Water use and Management Issues (contd.)

- ❖ Water resource in the Region dependent not only on rainfall received during monsoons, but also from the rain fed rivers of Tamil Nadu reaching out to the Region largely before confluence into the sea.
- ❖ Irrigation needs are met out of rivers, tanks and other water bodies. Domestic needs of population, Commercial and Industrial needs are met out of ground water source.
- ❖ Fair quantity (volume) of rain water, lost as floods reach out to sea, without tapping and meaningful utilization.
- ❖ To the North-west of Puducherry, a girdle of low hills (or an elevated ground of about 30 meters high) emerges from the low lying alluvial plain country known as “Red Hills of Puducherry” or Gorimedu, ground water is saved naturally by pebble conglomerate of this landscape.
- ❖ This landscape is also gradually degenerating paving way for large scale urbanization process.

# Chapter II

## Water use and Management Issues (contd.)

- Since 1970 Agricultural irrigation has drastically come down.
- The ground water level existed from 25 feet to 60 feet in 1970, has depleted further and it is now put at 150 feet to 250 feet below surface
- The population explosion and consequent enhancement in consumption have driven the ground water source level to sink further.
- Ground water exploitation on a large scale deeper down the earlier levels have resulted in intrusion and percolation of sea water, turning ground water in to salinity.
- Many chemical industries licensed and set up early in the Region are responsible for the poor quality of ground water (alkaline and acidic) at some places.
- In recent times along with the Industrial wastes and effluents, Bio medical wastes, village and urban liquid wastes and solid wastes have accelerated in the issue of ground water pollution deepening the crisis.

# Chapter II

## Water use and Management Issues (contd.)

- Generally awareness on water issues / management among the people is quite inadequate. Availability of sufficient quantity of water for consumption perhaps may be a reason.
- In 1970, the population of the Region was 1.5 lakhs . The latest figure shows 12 lakhs. There is manifold increase i.e 10 times approximately now.
- In the circumstance, excessive dependence on ground water level will pave way for scarcity of water on a massive scale.
- The water at present available is much polluted, efforts are not taken for pollution treatment and recycling. Yet the ground water at many places also not spared in the process and quality leaves much to be desired.
- Solid wastes are not subjected to the process of recycling. They are dumped at particular place, get drenched in rain water continuously, seep into the ground and percolates into the ground water affecting quality.



# Chapter II

## Water use and Management Issues (contd.)

- ❖ On the one hand manifest action is to be undertaken for safeguarding water availability and on the other hand meaningful action for enhancing water resources are the need of the hour.
- ❖ Water polluting Industries should be instructed set up water treatment plants and put them into beneficial use. Treated water alone shall be permitted for their uses. At any cost Industrial wastes, and hospital wastes not to be allowed to discharge into the public drainage systems. Solid wastes not to be kept accumulated on the ground. Segregation, recycling activities have to be carried out with intense interest. Otherwise, the quality of ground water will totally / be inferior unsafe and unfit for usage. Further this will aggravate the problem of diseases.

# Chapter II

## Water use and Management Issues (contd.)

- ❑ Proper drainage systems are not in place during flood season. The French designed rain water / flood drainage system, as a result of encroachment by different sections, has shrunk. The Govt. has not retrieved / restored the system in its original level / position and the P.W.D continues its work on the drainage system in 'as is where is' condition. The Govt. should review this arrangement seriously.
  
- ❑ To enhance the ground water storage potential, in Govt. lands, a thick vegetation consisting of trees, plants, shrubs etc., should be grown and maintained. Even private lands shall be replace with dense vegetation has to be encouraged. Lands shall not remain dry and appear as barren ground.

# Chapter III

## Remedies

- Rain water Harvesting as plan of action should be implemented by individual households, Govt. Departments and Private enterprises, so that the sea water intrusion could be checked and driven out back to its destination and also help increase the level of ground water by the method of proper management of Rain water supplied by nature. This method is only a replica of old system of wells ground in each and every household in Puducherry in the past.
- Water usage in Marriage Halls, Hotels / Restaurants etc., is much more and uncontrolled. This usage has to be regulated with awareness. The water tariff, existing as of now, has to be increased considerably, so as to indicate the people and drive home the importance, utility and value of water resource.

At the same time abundant caution and scrupulous action by the Govt. are essential for supply of quality water to the people.

- In the garbage dumped in water canals, plastics are found in abnormal quantity. Hence awareness on the usage of plastics should be carried out emphatically in various dimensions at varied points.

# Chapter III

## Remedies (contd.)

- ✓ Historically important water bodies like Ousteri Tank (Lake) and Bahoor Tank (Lake) have their own legacy.

Construction activities and dumping of wastes in the Tanks and other Tourist related activities, affecting their environment have to be stopped forth with.

Desilting works, strengthening of boundaries / bunds, planting of disappearing indigenous trees, other afforestation activities etc., would certainly attract Tourists and people of other walks of life.

- ✓ In recent years, farm lands have been converted as real estate lands. The marked shift in land usage from agriculture to land sites for housing purposes, has adversely affected the use of water in the surface for farming and percolation into the ground. Food production is also affected. Water storage in tanks are primarily meant for Agriculture. This would increase storage of ground water. Otherwise, the storage of the Tanks will be lost in the process of evaporation.

# Chapter III

## Remedies (contd.)

- ❖ Rainfall received in the Puducherry Region, does not augment the ground water potential in the area, much more of it reaches out to the sea.

Especially, rain water received by some parts of Tamil Nadu like Gingee, Malaiyanur, Tindivanam, Veedur, Vizhuppuram areas are stored in the ground and intrude by the process of percolation into the Puducherry Region. This source is the boon for Puducherry. The Govt. of Puducherry in alliance / Co-ordination programs will have to be undertaken on a long term basis. This effort would sustain development.

## Chapter III

### Remedies (contd.)

- ❑ To enhance the water level, check dam / bed dam built across Chunnambar River is a commendable work.

At the same time, a check dam built across this river, near the estuary (Western side of the Puducherry - Cuddalore old bridge) is quite contradictory to the Ecological system. This spot is the confluence / merger point of back water of sea and river water, is congenial atmosphere for breeding and proliferation of proliferation of small sea life forms, plants etc., (flora and fauna).

The Govt. may undertake an expert study on this Eco-system and take appropriate decision.

# Chapter III

## Remedies (contd.)

- Though it is late, in order to reach / attain the Millennium Development Goals, the future water needs of the Region have to be assessed and in this directions, an appropriate water policy has become a dire necessity.

To this noble task, Govt. Departments, NGOs, Hydrologists, Ecologists, Executive member of Civil society, Engineers, media persons and other Stake-holders etc., have to converge in a Seminar or workshop or brain storming sessions, and discuss the problem / issues and arrive at a solution / or ascertain remedies.

# Chapter III

## Remedies (contd.)

- ❖ After finalising legal frame work / norms on water policy, the Government should take or adopt serious measures for its implementation.

On aligning with the Govt. Departments, NGOs, and taking in it's stride, the Education Dept, Dept of Art & Culture, Dept. of Information & Publicity, etc., awareness campaign coupled with a program of action would be set in motion on a mass education / propaganda basis.



## Chapter III

### Remedies (contd.)

- ❑ It is my prayer that under any pretext, the action schedule on proposed water policy by the Govt. of Puducherry should not be deferred.

# THANK U

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