

Chapter 5

Conclusions and Recommendations

5.1 Conclusions

Although the TN government has made number of policies and programmes for water harvesting and water management but it has lacked in effective implementation and has not initiated any long term measure to address the increasing demand of water in the city of Chennai. In spite of RWH initiatives the city still faces severe water crisis in summer.

In the suburban areas around Chennai the Municipal authorities need to take more effective steps to monitor RWH implementation on regular basis. As it has been revealed by residents in Avadi area of Chennai that merely showing on the map is enough for approving the map by the authorities. There is no verification in most cases either by municipal authorities or by any development authority officials.

There is urgent need for effective implementation of TN Water Act 2003, as it has been revealed by the officials of CMWSSB that mere putting RWH structures in residential building is not enough. in addition water recycling plant (for kitchen and bathroom water i.e. **Grey Water**) is essentially required in all residential complexes. But this is not monitored neither by CMWSSB nor Chennai Metro Development Authority.

Deployment of geophysical and hydrological tools have effectively helped to map the groundwater resources in terms of depth, quantity, quality and the interface between the saline water - fresh water both laterally and vertically and planning & development of casing of the bore wells. The ground water level which was in between 7- 10 meter in July 2003 has considerably improved to 3- 5 meters.

Therefore the challenges of water resources in the coastal city like Chennai are significant and with better affect the development of the people with vulnerability and quality of life. The regular awareness campaign among the community members and other stakeholders is necessary to improve the level of understanding and further motivation to conserve the rainwater maintenance.

It is proven that the community based approaches will be more effective to understand the challenges of water resources and to transform them into opportunities with better sustainable solutions. The RWH on individual basis proved effective to address the water issues with better quantity and quality. The cumulative effect of the RWH reflects the effectiveness of the community to address issues for their own development with better sustainability and quality.

The development of check dams, reviving old ponds in temple complexes, open well and injection wells with need based strategies has to be continued to recharge the groundwater, further it would help to improve the storage capacity

of fresh water on the surface, But there is need to conserve more water in deep aquifers by effective implementation of RWH initiatives so as to check over the drain into sea, and to check over the inflow of brackish water towards inland. .

The cumulative efforts would enhance water resources in terms of quantity, quality and access with sustainable development.

RWH measures have resulted in the overall improvement of groundwater level in Chennai and thus enhanced the water resources but the real challenge lies in conservation of water resources.

Based on the information, data and arguments brought forward, rainwater harvesting is sustainable in Chennai. The Chennai experience can also be transferred to other Indian cities some of which have already legislated rainwater harvesting, namely, New Delhi, Bangalore and Mumbai – using more or less the same methods, technologies and concepts as found in Chennai.

5.2 Recommendations

- To meet the increased demand in future, recycling of industrial wastewater has to be planned and implemented. A centralised system of collecting effluents of treatment plants for recycling of water may be prepared separately for Adyar rivers and other canal systems of the city. Lining of vulnerable sections of canals and rivers is necessary to reduce ground water pollution by seepage of bad water as well as polluted effluents.
- Two pipe lines systems Viz. one line for drinking water supply and the other for recycled water for other uses may be initiated on experimental