

EXCERPTS OF DISCUSSION BETWEEN (i) REPRESENTATIVE OF CWDL AND (ii) EXPERT FROM MIDS WHO HAS DONE CRITICAL EVALUATION ON DESALINATION PLANT

In an article “Relevance of desalination plant questioned” published in “The Hindu” daily on 12-Dec-2005, Community groups, local government representatives, residents’ associations, activists, students and public-interest professionals came together to critically evaluate the proposal of setting up of Rs. 500 crore desalination plant in Minjur, North of Chennai.

As a participant speaker, Prof. S. Janakarajan, Madras Institute of Development Studies, said economically viable and ecologically sustainable options that were needed to meet Chennai’s water supply should look into such as the revitalisation of water bodies and recycling of wastewater.

Prof. S. Janakarajan is an expert involved in addressing the issues relating to Agrarian Institutions, Inter-linked Agrarian Markets, Water Management, Water conflicts, Stake holder analysis, Multi stakeholder dialogues, Environment, Urban and peri-urban issues, Disaster management, livelihood resiliences.

Mr. Perraju is the Environmental Engineer and Manager, CWDL and looking after the Environmental Issues, has taken an appointment from S. Janakarajan and met him on 23-Feb-2006 at his MIDS Office Chambers, and discussed the Socio-economic and Environmental issues arising out of proposed desalination plant.

The excerpts of the discussions between Mr. Perraju and Prof. Janakarajan are given below:

Perraju:

Explained that CWDL is the promoter/developer of the 100 MLD seawater desalination plant in Kattupalli village near Minjur, on DBOOT basis.

Janakaraj:

Don’t you think the project is an expensive.

Perraju:

The potable water will be available for less than 5 paise per litre at the plant.

Janakarajan:

Alternative water sources have to be identified for augmenting the water supply.

Perraju:

The responsibility of managing the water resources vests with every individual. Government have considered identifying all the sources of water. Setting up of Seawater Desalination Plant does not mean that issue management of water resources will be neglected. Seawater Desalination is one form of the augmentation of water supply schemes to the water scarce Chennai.

Ground water resources, river water sources are dependent on rainfall. They have a peculiar characteristic of getting depleted if there is no rainfall. Whereas seawater is a reliable, dependable water source for unimaginable period of time, irrespective of rainfall in the region.

Janakarajan:

Calculated the price per litre as around 9 paise based on the number no of tanker loads plying in Chennai.

He opined ‘Power consumption will be more’.

Perraju:

Explained that power consumed will be between 15MW to 18 MW for the 100 MLD Plant.

Also explained that NIOT consumes Net 2MW power to produce 4356 cu.m. of water through the Ocean Thermal Energy Conversion (OTEC) project. This can be projected as around 45 MW for producing 100 MLD through this technology. But CWDL plant consumes only 15 MW to 18 MW.

Janakarajan:

He opined “ there will be seawater intrusion to the wells nearby and renders them non-potable”

Perraju:

Explained to him that the water intake is not by digging any well. CWDL is adopting Open Intake system. So there will not be any seawater intrusion to the wells nearby.

Janakarajan:

He opined that there will be additional requirement of power for this project.

Perraju:

For pumping of same quantity of water for augmentation either from Groundwater or River Water or from any other source, power requirement exists. Similarly, for augmentation of water supply, CWDL also consumes power. Burden on petroleum products used by the tankers for water distribution shall also be considered.

Janakarajan:

Asked whether the plant is commissioned.

Perraju:

CWDL is awaiting Clearance from MoEF. Also waiting for CMFRI, Kochi to conduct detailed studies on the Marine biological entities. We are awaiting for CMFRI, Kochi to initiate studies since 31-Dec-2005. As soon as we get clearance from Environmental Angle, we are geared up for starting construction activities.

Janakarajan:

The salinity effect on fish is of concern. The fish harnesses only upto 10% salinity.

Perraju:

The baseline salinity of Chennai seawaters is between 30‰ to 35‰. So the setting up of desalination plant does not have adverse effects on fish harness in the very limited zone of discharging and dispersion of brine.

The zone of influence of brine discharge is very limited and to the order of 200 m to 500 m from the discharge point based on the meteorological conditions.

Explained to him that MoEF has evaluated in detail the proposal of CWDL in Environmental Angle. MoEF has instructed CWDL that CMFRI, Cochin has to undertake a detailed study on the likely impact of the discharge of the saline water on the various biological entities especially fish and shell fish population in the area. The study as suggested by MoEF has indicated that the study should provide details for mitigating such impacts.

Also explained that the location of discharge point is selected considering that there is no fishing activity in the zone of discharge and dispersion.

Explained that EIA has addressed these issues and very detailed modeling studies were conducted for understanding the dispersion characteristics of brine discharge.

CWDL has considered all Environmental Effects due to setting up of the project. All the mitigative measures suggested by the CMFRI, MoEF, Pollution Control Board will be implemented and complied by CWDL. We are always open for the expert suggestion on identifying the Pollutational effects on Environment and suggesting the mitigative measures for minimizing or combating the pollutational effects.

Janakarajan:

RO membranes will be purchased from India or Abroad.

Perraju:

Explained to him that RO membranes of superior quality rejecting all types of Metals, Dissolved Solids are available in Market in India and all over the world. The treatment of seawater by RO membranes is worldwide accepted technology and suitable Seawater Membranes will be used for the project whether purchased from India or Abroad.

The Brackish water RO membranes are very well used all over Tamilnadu for treating groundwater for making it potable. Other specific types of membranes are also used in abundance to treat the Domestic wastewaters, Industrial Effluents.

Desalination is at present widely used by large industrial units in Tamilnadu including that are located in and around Chennai for producing huge quantities of water for their captive industrial consumption.

Though desalination plants are widely accepted throughout the world, CWDL is promoting the 100 MLD seawater desalination plant for producing desalinated potable water on a DBOOT basis to augment water supply plans of CMWSSB. This is the first of its kind in India.

CONCLUSION:

Prof. S. Janakarajan, is still critical of the 100 MLD Desalination Plant near Minjur, despite lot of technological developments are taking place in the RO technology and a number of Industrial units are adopting the RO Technology for seawater desalination for their captive consumption.