



# Physical Research Laboratory, Ahmedabad

## Colloquium 19 - 09

**Speaker:** Dr. Dipankar Saha

Expert, Ground Water, Govt. of Gujarat

**Title:** "Groundwater- A Critical but Stressed Natural Resource in India"

**Time:** Wednesday, 15 May 2019, 16.00 hrs.

**Venue:** K.R. Ramanathan Auditorium, PRL

### Abstract

Food and drinking water security in India is critically dependent on the underlying aquifers. Presently 85% of rural drinking need, 64% of irrigation demand and more than 50% of urban water need is met from groundwater sources. About 8% of India's GDP is directly linked to groundwater. India is the world's largest groundwater extractor, with an estimated consumption exceeding a quarter of the global total. Relentless and unplanned extraction of groundwater, often exceeding the annual recharge, has resulted in multipronged undesirable consequences. The most important of them is desaturation of aquifers, being manifested through declining water levels, drying up of wells and diminishing well yield. The other adverse effect is deteriorating water quality, both in terms of increasing salinity and elevated concentrations of harmful contaminants.

The need of the hour is holistic understanding of the treasure trove of groundwater - the aquifers including the geometry of the aquifers, resource availability, the degree of desaturation and water quality. The intervention should look into both rejuvenating the resource availability (supply side) and optimal use of the available resource (demand side). The most important supply side intervention is artificial recharge and rain water harvesting while the demand side interventions include adopting proper cropping pattern and calendar, efficient irrigation practices, etc. Groundwater being a common pool resource requires participation and involvement of the community at all stages and aspects for its sustainable management through sensitization, capacity building and sharing of the knowledge on aquifers for sustainable livelihood and maintaining the related ecology. Science underlying groundwater scarcity in India and suggested solutions will be discussed in this colloquium.

### The Speaker

Dr. Dipankar Saha is currently the Groundwater Expert of Govt. of Gujarat. He has earlier served the country as a Member (Head Quarters) Central Ground Water Board, Govt. of India, Member Secretary, Central Ground Water Authority and Head of the National Ground Water Training and Research Institute, Raipur. He spearheaded the National Aquifer Mapping and Management Programme, the largest ground water mapping endeavor in the world, as National Coordinator. He obtained PhD on Ground Water Management from IIT Dhanbad. He has authored more than 50 papers in International Peer Reviewed Journals and delivered more than 300 lectures and key note addresses in national and International Seminars. He has Edited/Co-edited 5 books. He has led delegations of Govt. of India in various international platforms such as World Bank, IAEA, and International Association of Hydrologists. He is the recipient of National Geoscience Award conferred by Ministry of Mines, and Excellence in Ground Water conferred by the International Association of Hydrogeologist.

**Tea at 15:30 hrs**  
**ALL ARE WELCOME**

