Har Ghar Jal
Jal Jeevan Mission

Centre for Science and Environment

AFFORDABLE TECHNOLOGIES FOR GROUNDWATER RECHARGE TO SUSTAIN DRINKING WATER SOURCE IN AREAS OF DECLINING GROUNDWATER: TRAINING I

Mode of delivery for training programme:

Virtual training- 3 hours per day for 2 days

Date: 25-26 November, 2021

Participants: Middle Management Level from Jal Jeevan Mission

Objective: To train the participants on sustainability of drinking water source in declining groundwater areas.

Outcome: The participants learn to sustain groundwater based drinking water in areas of declining groundwater – using advanced tools like Remote Sensing and Geographic Information System

Day 1			
Module 1: Overview – the water sources for drinking purposes			
Time	**Topic**	**Outcomes**	**Resource person**
10.00–10.15	Setting the context	• Climate change • Need for sustainability of drinking water • Connecting water and health • Groundwater recharge (video)	Sunita Narain, Director General. CSE
10.15–10.35	Overview of Jal Jeevan Mission and understanding the funding mechanisms for sustaining groundwater based drinking water schemes	• Understanding the long-term sustainability schemes under JJM • Convergence of funds for sustaining the groundwater sources	Jal Jeevan Mission
10.35–11.00	Community participation and its benefit in sustaining the village drinking water supply and conserving the water source	• Social contribution towards sustainability of the drinking water supply after hand over • Case example for portraying the successful management of – groundwater-based schemes	Manvendra Singh Shekhawat, Managing Director, MRS Group
11.00-11.05 BREAK			
11.05–11.30	Understanding water demand and working on water budgeting for households and village level	Key demand centres and their requirement - deficit/surplus	Prof. Ashok Kumar Gupta, Environmental Engineering Division, Indian Institute of Technology, Kharagpur
11.30–12.00	Factors affecting quantity and quality of groundwater, introducing basic principles to make groundwater-based source sustainable	Factors affecting the availability of groundwater resources and broad overview of the mitigation plan	Durjoy Chakrabarty, Former Senior Scientist, Central Groundwater Board

Module 2: Step by Step Planning of sustainability of groundwater based drinking water source			
12.00–12.15	Overview of traditional water harvesting systems in different ecological regions	Understanding on traditional water harvesting systems and their importance in different ecological regions	Sushmita Sengupta. Senior Programme Manager, CSE
12:15–12:30	Sourcing data, introducing basic concepts of RS and GIS	Introduction to GIS and RS in understanding scientific approach and methodology towards groundwater recharge plan for sustainable drinking water supply.	Pradeep Kumar Mishra, Programme Officer, CSE
12:30–1:00	Rainwater harvesting to recharge the village water source and its protection - Energy efficient and water saving practices	Different kinds of interventions to ensure sustainability of groundwater sources	Shashank Shekhar, Professor, Department of Geology, University of Delhi
Day 2 Module 3: Basic Designing concepts using GIS and RS Tools			
10:00–11.00	Delineate a catchment, drainage pattern, interpretation of topography, identify recharge zones	Understanding the concept of watershed and its importance in designing interventions.	Bhaskar R Nikam, Scientist SF, Indian Institute of Remote Sensing, Dehradun
11.00–12.00	Developing a decision matrix - Deciding the type and design of sustainability structures for groundwater sources	Understanding different source of water resources by the use of GIS tools; matrix of interventions for creating structures for resource sustainability.	NSR Prasad (Assistant Professor), National Institute of Rural Development, Hyderabad
12.00-12.05 Break			
Module 4: Monitoring the impact of the sustainability structures			
12.00–12.30	Understanding the process of monitoring groundwater recharge systems - use of piezometers and aquifer maps for long term sustainability of source	Introduction and methodology of groundwater monitoring; its importance in sustainability of resource.	Durjoy Chakrabarty, Former Senior Scientist, Central Groundwater Board
12.30–12.45	Monitoring the impact of recharge systems on water quality - collecting protocols, periodicity and understanding the physical and bacteriological contaminants	Understanding the scientific approach to monitor the impact on quality of groundwater resources and mitigation plan.	Arvind Singh Senger, Environment Monitoring Lab, CSE
12.45–1.00	Quiz, Feedback and open floor discussion		CSE

For further queries:

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