

Ramthal Drip Irrigation Project, Ramthal, Karnataka

Problem statement: Around 60% water was being lost due to conveyance, evaporation, percolation and seepage in traditional methods of canal network and flow irrigation. Being a drought-ridden state, it was difficult for Karnataka to afford such huge water loss. There were other problems in the canal command areas including inequitable distribution of water, salinity problem due to excess irrigation, gap in design and actual area and flow, poor drainage, less water at the tail end of canals, no measuring device or control structures, uneven crop growth and yield, soil deterioration at canal head ends due to water logging and poor drainage etc.

Intervention: The Govt. of Karnataka launched Asia's largest drip irrigation programme under Stage II of Ramthal Lift Irrigation Project in 2017. This project is an example of Integrated Micro-irrigation. In this project, canal water is delivered directly using HDPE/PVC piping network to irrigate around 24,000 ha area. Salient features of this project:

- Mega community drip irrigation project
- Total beneficiary: More than 15,000 farmers
- Infrastructure cost borne by the Govt.
- System operation through wireless automation
- O&M of system for first 5 years by Krishna Bhagya Jala Nigam Limited (KBJNL)
- Formation of WUA and marketing linkages

Impact:

- 90% additional area coverage using same quantity of water (i.e. 12,571 ha area covered in stage I by flood irrigation through canals vs 24,000 ha area covered in stage II by integrated drip irrigation. In both stages, water requirement remains same i.e. 2.77 TMC)
- Doubled the no. of beneficiaries with same resources
- Equitable distribution of water irrespective of topography and distance of farm from the water source
- Improved standard of living of project beneficiaries
- Improved crop quality and produce

Replicability: Similar integrated micro-irrigation project can be adopted in other states where canal or other assured irrigation source is available. Govt. of Haryana is also planning for similar project powered by solar energy.

Sustainability: O&M by 3rd party, participatory irrigation management by WUAs and marketing linkages will be helpful for maintaining sustainability of this project.

(Reference: <http://pmksy-mowr.nic.in/aibp-mis/Manual/Ramthal%20Micro%20Irrigation,%20karnataka.pdf>;
<http://www.kbjnl.karnataka.gov.in/kbjnlenglish/content/ramthal-marol-lift-irrigation-scheme>)