Recharge of groundwater sources; Case Study of Gokak Taluk of Belagavi district

Problem statement: The latest Assessment of Dynamic Groundwater Resources of the State 2017 is made jointly by the Central Ground Water Board and the State Ground Water Department. As per the last report, Gokak taluk was categorised as "Semi Critical" based on the stage of groundwater development ('Semi Critical' is where Groundwater extraction is between 70 to 90%).

Intervention: Karnataka Watershed Development Department is implementing PMKSY-WDC (formerly IWMP) in a phased manner all over the State. As per the department, the watershed development activities have helped in water conservation, groundwater recharge, reduction in soil erosion, increased productivity etc. The project (IWMP-20/11-12) was sanctioned in the year 2011-12 to treat an area of 2080 hectare in Gokak Taluk of Belagavi district at an estimated cost of Rs. 312 lakh under Batch-Ill. In an area of about 548 hectares bunding was done and 127 Water Harvesting Structures (WHS) was constructed by spending Rs. 265.77 lakh.

Impact: The interventions made through watershed development activities in the form of rainwater harvesting structures have led to a spurt in recharge of the aquifers in the area. Thus cumulatively 20,310 cubic metres of rainwater is made available for recharge to groundwater body in the area annually. However, the watershed development activities have helped in augmenting the water resources in the taluk and has restored the taluk to "Safe" category. The farmers were favourably impacted as their wells were getting groundwater inflows as before. The effect of watershed activities observed in the rejuvenation of defunct wells is demonstrated as the irrigated area increased from 0 to 37 acres in Kharif and 0 to 25 acres in Rabi.

Sustainability: The permeable topsoil and weathered and fractured rocks underneath are the factors that lead to good recharge. Such recharge has rejuvenated the defunct wells, can sustain additional wells in the area, and also can sustain the water yield from wells over an extended period.

(Reference: Rejuvenation of defunct Dug wells due to watershed development activities', 2020, Watershed Development Department, Government of Karnataka.)