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Over-exploitation of ground water - impact on aquifer systems and rural water supply schemes at Madhugiri Taluk , Tumkur District , Karnataka

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Earth is known as a blue planet because more than three-fourths of the surface area is covered by water. Of the total water on earth 97% is in ocean and the rest 3% constitutes fresh water. Of this fresh water , 77% of fresh water occurs as ice sheets in polar regions, 11% as ground water up to depth of 800 m and the rest 1 % is available in lakes , reservoirs, rivers and streams.

Even though the surface water/ground water gets renewed through monsoon rains, most of the are as facing severe scarcity of water for drinking ,irrigation and industrial needs of the society. The crises of water resources ,the development and its management is of great importance because required quantity of the water is not available for use and secondly it is characterised by a highly uneven spatial distribution. Excess use of ground water for irrigation has adversely affected drinking water supply needs in recent years, which has direct impact on the quality and quantity of ground water. Better water and ground water management practices and planning for artificial recharge of ground water with community involvement can only improve the sustainability of ground water resource in coming years.

Like in other places of India ,in Karnataka particularly Madhugiri Taluk of Tumkur District does not have any major surface water bodies to cater the irrigation and domestic water supply needs of the people. The entire area is by and large totally dependent on ground water for irrigation, domestic and industrial water supply needs. Due to continuous withdrawal of ground water to meet the demand, dug wells tapping the phreatic aquifers have been dry for the last 15 years, which has had a tremendous impact on the phreatic aquifer system and rural water supply schemes in the area and also on the quality of ground water. The various issues related to over exploitation and water quality/quantity management involving community is discussed in this presentation.

