

PREFACE

Leonardo da Vinci once said "the greatest river of the earth flows underground. Ninetyseven percent of the fluid fresh water is underground. Half of this fluid fresh water is lying 800 meter below ground surface where its salt content is often too high and nearly in all cases the recovery is too expensive. The exploitation of groundwater is energy consuming and expensive specially when the water table is deep. However, if one includes in the annual expenditure also the relatively high investment required for hydraulic structures, such as storage dams, diversions, canals, and pipes, the overall economic picture may show a clear advantage of groundwater. Development of groundwater should not be made in isolation from surface water. What is surface water at one point on the earth may become groundwater at another, then may emerge again as surface water at a third point.

At present, utilisation of ground water has become a tenet in every nation's water resources development policy. The rational limit of ground water exploitation is that quantity which may be withdrawn from a ground water reservoir with a prescribed development policy during a definite planned period taking into account the technical and the economic efficiency and the water quality within the adopted standard. The rational limit of the rate of ground water exploitation should be such that protection from depletion is provided, protection from pollution is provided, negative ecological effects are reduced to a minimum and economic efficiency of exploitation is attained.

In view of the vital importance of water for human and animal life, for maintaining ecological balance and for economic and developmental activities of all kinds, and considering its increasing scarcity, the planning and management of this resource and its optimal, economical and equitable use has become a matter of the utmost urgency. The success of our national water policy will depend entirely on the development and maintenance of a national consensus and commitments to its underlying principles and objectives.

This seminar is an endeavour to disseminate the research made at NIH and elsewhere in the country in the recent past.

Satish Chandra
(SATISH CHANDRA)