

Ecological Sustainable Distribution Net Work— A Case Study of Mukteshwar Irrigation Project

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ABSTRACT

Irrigation projects have a large impact on the world food supply, country's economy and environment. All of which can be quite fragile, developing countries are experiencing high rate of population and income growth which are putting increasing pressure on available water supplies. Agriculture utilizes some 80-90 percent of diverted water in developing countries, through large irrigation projects.

In arid and semi arid of North West India, where water supply is insufficient to meet the irrigation requirements of the entire Cultural Command Area (CCA), there is no control on cropping pattern, but it is effectively limited by the rigid schedules and the amount of available water. Readier (1980), Butterball (1978) observed that if operated according to plan, this system of water allocation has the virtue of relatively higher equity, easy in operation and less of management problem. There are many systems which are old and primarily intended for extensive irrigation, as an insurance against farmers with no great concern for increasing productivity. Even the new systems are often built accordingly, are outdated based on average conditions. Managing the well established irrigation system network throughout the country would be necessary to achieve the potential benefits of irrigation projects and minimize the unfavorable environmental consequences, like water logging and soil salinity. During the past few years valuable information on management system has been generated.

In morocco, pipelines have greatly improved the performance in the quaternary channels and also reduced the maintenance costs, Charles M Burt and Stuart W. Styles (2005). In Japan, the use of pipe line system was adopted widely, Hitoshi Fukuda (1988). In some irrigation projects of Gujarat like Karajan, Guhai, Sipu & Mukteshwar, where under ground pipe line has been adopted.

The under ground pipe line distribution system is advantageous over conventional open distribution system in harsh aridic, climatic conditions under light coarse texture soil, hyperthermic temperature regime with salic, gypsic horizon where, likely danger of system collapse exist.