# Abstract in use. keywords: interlinking, rivers, canals, drought,

Business, Management

AbstractThe interlinking of rivers involving inter basinwater transfer has canals, tunnels or water lifts, for water to flow from oneriver basin to another and making use of excess water. In India rainfallisdependent on the south-west and north-east monsoons or on the shallowcyclonic depressions and disturbances and on violent local storms which form regions where coolhumid winds of the sea meet the dry winds from the land and occasionally reach cyclonicdimension.

Hence some areas are affected by the droughts while other areasare affected by seasonal floods. There is a general perception that withgrowing human population and rising standards of living, the available suppliesof fresh water on the planet are becoming insufficient to meet demand. It will bescarce, expensive to develop and maintain and valuable in use.

Keywords: Interlinking, Rivers, canals, drought, irrigation I. Introduction1. 1 General Water is one of the principle elements which notonly governs life on earth but also influences economic, industrial andagricultural growth of mankind.

There is a general perception that with growinghuman population and rising standards of living, the available supplies offresh water on the planet are becoming insufficient to meet the demand. Indiahas a monsoon climate. Except for a small coastal area in the South, almost theentire rainfall occurs during three to four monsoon months. Thus cultivationduring non-monsoon months is irrigation dependent. A characteristic of themonsoon climate is variability of rainfall from year to year. India has anaverage of one in five

below-normal rainfall years. India is basically anagricultural country, and all its resources depend on agricultural output.

InIndia, 55% of agricultural output is from irrigated lands. Moreover, averagefarm incomes have increasedfrom 80-100%as a result of irrigation, while yieldshave doubled compared with those achieved under the former rain-fed conditions. Water will no longer be cheap and plentiful. It will be scarce, expensive todevelop and maintain and valuable in use. At this point interlinking of Indianrivers will open new avenues for developing new supplies. But we are at crossroads, creating new supplies when we face problem leads to bad management ofresources.

So there is also a need to develop strong policies for efficient useof water resources. The main aimof present research work is to interlink the Godavari river of length 1465km and Manjira river of length724km passing through Beed district and thus increasing water avaibilityand agricultural yield of the region. 1. 2 Objectives The project aims to equitably distribute water andto resolve water scarcity for drinking and irrigation purposes by linkingvarious water channels. Its specific objectives are to: Divert water from water surplus areas to arid and semi-arid parts of the district. Conserve water by channelling it through canals ducts, drains, nallahs, natural drains etc.

into drought-prone areas. Carry out qualitative and quantitative assessment of water resources. Establish and evaluate long-term research on monitoring, measuring and planning for sustainable development in the area under

benefit. Assess the socio-economic impact of the river connectivity initiative

1. 3 Scope of theproject Irrigation by linking of therivers vast amount of land areas which does not have otherwise irrigated andunusable for agriculture become fertile. Flood Prevention By creating networkof rivers flood and drought problem can be greatly avoided by taking excesswater to the areas that are dry. Generation of Electricity with new canalsbuilt, feasibility of new dams to generate hydroelectric power becomes apossibility. 1.

4 Organization Of Project The project was developed with the goal ofcompleting the task within the limited time period of two to three years toensure that the surplus rainwater from the monsoon was used in time. Theproject entails a combination of rain water conservation and utilisation offlood water run-off to replenish natural and artificial water bodies throughnatural drainage channels. . This project deals with the connection of theGodavari River with Manjira River by constructing canals and transfers thesurplus water from Godavari to Manjira with gravitational flow. To create the linkage architecture, theadministration first took the following steps to assess on the ground scenario:· A detailed field level survey (undertaken by the irrigation department)to investigate water scarce areas and to study the efficiency of thegroundwater recharge structure.· Identification and assessment of existing infrastructure to minimiseconstruction of new canals.· An evaluation to understand the natural contours of the region thatcould be exploited to divert water.

· Discussion with beneficiaries to understand the needs of the localpopulation. II. literaturereview 1 SonaliA.

More, 2014 studied on ‘ Interlinking Of Rivers’ And Concluded that, this river linking project in Maharashtra, India, is based on innovative methods of linking of natural and artificialwater drainage for inter-basin and intra-basin water transfer. This is a unique technique ofrain water conservation; utilization of flood water run-off and replenishingnatural and artificial water bodies through natural and artificial waterdrainage channels. The excess water in a river is utilized to recharge theground water bodies and dry wells in its command areas. The project is designed for the optimum utilization ofrainfall-runoff for inter-basin and intra-basin water transfer throughinnovative technologies of both surface water transfer and ground waterrecharge. The principle of watershed management within the command area is usednot only for agriculture purposes, but also for drinking water and industrialpurposes. 2 UpaliA.

Amarasingh et. al, 2015, Studied On ‘ Interlinking Of Rivers’ AndConcluded that, Increasing reliance ofgroundwater and declining area under surface irrigation are the prominent recent trends in Indianirrigation. Given this changing face of irrigation, many issues in groundwater and surface irrigation require immediateattention. Recharging groundwater is an immediate requirement for sustainingthe present groundwater economy and for distributing irrigation benefits to alarger part of the population. Empowering local institutions on watershed development programs, combining several micro-watersheds within a radius of 400 m

withmeso-watersheds for development, recharging groundwater through millions of dug wells, converting small tanks topercolation ponds, increasing groundwater irrigation tank commands, andchanging irrigation scheduling in canal commands to increase conjunctive wateruse are some measures for sustaining groundwater irrigation.

Water productivity improvements could significantly reduce the requirement for additional water development. Increasing crop yield by providing supplemental irrigation in major rain-fed districts with low consumptive water use (below 325 mm), reducing the yield gap in many irrigated areas withoutincreasing the total consumptive water use (325-475 mm), deficit irrigation to provide deficit consumptive water use in irrigation districts with largeconsumptive water use (more than 450 mm), and increasing multiple water uses inwater-abundant rain-fed areas are some strategies towards increasing waterproductivity in agriculture. Demand management strategies can reduce the widening gap between supply and needs. If implemented with strongerpolicy backing, water pricing, formal and informal water markets, water rights and entitlement systems, energy-based waterregulations, water saving. III. METHODOLOGY 3. 1 Introduction: The river interlinking project in Maharashtra isbased on innovative methods of linking of natural and artificial waterresources.

This is a unique technique of rain water conservation utilization offlood water runoff and replenishing natural and artificial water bodies throughnatural and artificial water drainage channels. The excess water in a river isutilized to recharge the ground water bodies and dry wells in command areas. The

project is designed for the optimum utilization of rainfall-runoff. 3. 2 Proposed Methods: The methods used for the interlinking of rivers are Using canals:-River linking project can be done by linking two or more rivers bycreating a network of manually created canals, and providing land areas thatotherwise does not have river water access and reducing the flow of water tosea using this means.

It is based on the assumptions that surplus water in somerivers can be diverted to Deficit Rivers by creating a network of canals tointerconnect the rivers. In this project we are going to connectthe Godavari River with Manjira River by constructing canals and transfer thesurplus water from Godavari to Manjira with gravitational flow. 3. 2. 1 Requireddata: The list of data required for the study is as below:· Profile levelling: is a method ofsurveying that has been carried out along the central line of a track of landon which a linear engineering work is to be constructed/ laid.

The operationsinvolved in determining the elevation of ground surface at small spatialinterval along a line.· Meteorological data: rainfall· River data: length, discharge, velocity, slopes.· Contour data for the selected route.

· Drainage data obtained from Survey ofIndia Topographical map. IV. CONCLUSION Theinterlinking of our rivers to transfer the floodwater from the surplus riversto deficit areas is one of the most effective ways to increase the irrigationpotential, for increasing the food grain production,

mitigate floodwaters andreduce regional imbalances in the availability of water.

Godavari Riveroriginating from the Western Ghats are found to be surplus in water. If wecould build canals in the Godavari River and connect to Manjira River with lesswater Imbalances could be removed significantly. The project will eliminatedrought conditions, transformed desert waste lands into agricultural productiveareas by bringing irrigation and vegetation. The project will miraculouslychange the living conditions and the socio-economic conditions of the

people

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