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"Inter Basin Water Transfer (IBWT)"-A Case Study of Krishna-Bhima Stabilization

[1.] Mr. Aniket M. Jadhav, [2.]Mr. Praniket P. More, [3.]Mr. Aniket P. Mahajan
[4.] Mr. Maheshkumar Gavandi *(BE Civil)*
Civil Engg Department, JSPM's ICOER wagholi, Pune

[5.] Dr.Navnath Khadake
Prof. & Head, Civil Engg. Department, JSPM's ICOER Wagholi, Pune, Maharashtra, India

Abstract
The interlinking of rivers involving inter basin water transfer has canals, tunnels or water lifts, for water to flow from one river basin to another and making use of excess water. In India rainfall independent on the south-west and north-east monsoons or on the shallow cyclonicdepressions and disturbances and on violent local storms which form regions where cool humid winds of the sea meet the dry winds from the land and occasionally reach cyclonic dimension.
Hence some areas are affected by the droughts while other areas are affected by seasonal floods. There is a general perception that with growing human population and rising standards of living, the available supplies of fresh water on the planet are becoming insufficient to meetdemand. It will be scarce, expensive to develop and maintain and valuable in use.

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I. INTRODUCTION

River interlinking Is project is to connect two or more rivers by creating network of manually created canals, and Providing water tothe land areas that does not have river water access and reducing the flow of water to sea using this means. It is based on assumptions that surplus water is some rivers can be diverted to Deficit Rivers by creating a network of canals to Interconnected the rivers.

Water is oneof the principle elements which not only governs life on earth but alsoinfluences economic, industrial and agricultural growth of mankind. India has an average of one in five below-normal rainfall years. India is basically an agricultural country, and all its resources depend on agricultural output. In India, 55% of agricultural output is from irrigated lands.

Moreover, average farm incomes have increased from80-100%as a result of irrigation, while yields have doubled comparedwith those achieved under the former rain-fed conditions.

Water will no longer be cheap and plentiful. It will be scarce, expensive to develop and maintain and valuable in use. At this point interlinking ofIndian rivers will open new avenues for developing new supplies. Butwe are at cross roads, creating new supplies when we face problem leads to bad management of resources.

So there is also a need to develop strong policies for efficient use of water resources.

The main aim of present research work is to find out the types research relationship with various physical and cultural features of theregions & to give the management and conservational measurements for the study region

Objectives

a. To identify steps to promote water conservation and preservationand enhancement of water quality.
b. To achieve proper distribution of water resources to increase irrigation, and distribution of water resources to increase irrigation
c. To fulfils water needs of all states of India and to stop naturaldisasters like floods and water shortage.
d. Reducing disparities in different river basins by transferring waterfrom 'surplus' basin to 'deficit' basins.

IBWT

The interlinking of our rivers to transfer the floodwater from the surplus rivers to deficit areas is one of the most effective ways to increase the irrigation potential, for increasing the food grain production, mitigate floodwaters and reduce regional imbalances in the availability of water.

Why Interlinking Is Needed?

With these vast water resources our agriculture is still struggling to get water for irrigation. This is mainly because of the improper planning, impracticable policies and failure of the successive governments to implement the policies effectively. To harness the potential of our water resources it is proposed that we interlink our surface water resources. However sufficient attention should be given to the environmental factors affecting the project.In last 50 years availability of water had been decreased by 1/3 per head and due to which every one out of four persons facing problems of pure water. 'first decade of 21st century will have the problem of scarcity of water' says international institute for sustainable future and also water management institute. According to this institute 4.5 crore peoples from major parts of India along with 29 states are facing serious problems of water now. Not only this much but these institute says upto 2025 worlds 1/3 population will have to fight for water. In India continental zone main source of water is monsoon. 80% of water in Indian rivers are due to monsoon.

Challenges

Social Challenges: The large-scale submergence of land has to be compensated by displacing people in that area. Especially, the poor and tribal people located near the forests. So, the government not onlyneeds to face challenges in displacing people but also in the Rehabilitation of people.

International Challenges: Countries like Bhutan, Nepal, and Bangladesh will get impact due to the Interlinking of Rivers project.For example, Bangladesh strongly objects to transferring the Brahmaputra water to the Ganga. Considering this, the smooth implementation of the project is not expected.

Political Challenges: Water is a state subject in India. So the implementation of the NRLP primarily depends on Interstate co- operation. Several states including Kerala, Andhra Pradesh, Assam,and Sikkim have already opposed the NRLP.

Environmental Challenges: Submergence of vast areas of land in reservoirs , The construction of dams leads to large-scale submergenceof land. The government has to acquire large-scale lands for the smooth implementation of the project.

Economic Challenges: NRLP(National River Linking Project) is a highly capital-intensive project. The project will need Rs.5.6 lakh crores estimated cost with the base year of 2000. Investing billions ofmoney in the interlinking of rivers might yield benefits Only for a short time.

Case Study of Inter-Linking of River:Krishna-Bhima Stabilization.

The Krishna River basin is the fourth largest in India with a total catchment area of 258,948 km2 and a long-term average annual surface flow of 78 km3,of which 58.0 km3 is considered to be utilizable The cultivable area in the basin is about 20.3 million ha.

Plans to draw water for Marathwada from Ujjani dam hinges on NABARD support Aurangabad: The Krishna-Bhima stabilization project involves KrishnaMarathwada irrigation project and three lift irrigation schemes, including two in Osmanabad and one in Beed. The capacity of much-delayed project has been reduced to only 7 TMC initially during the first phase as per the ruling by the Krishna Water Disputes Award Tribunal (KWDT) while deciding the issue of diversion of water from one river basin to another.

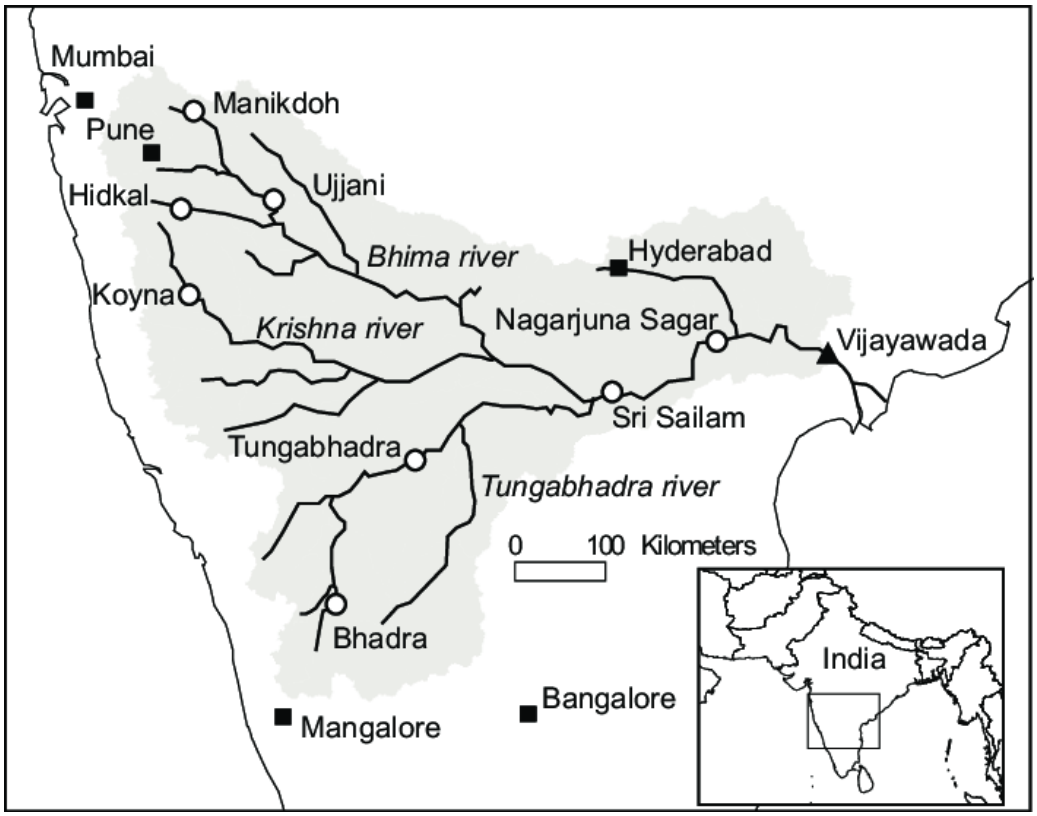
In a first phase, around 288 villages from Osmanabad and Beed districts will be free from the water scarcity if the multicrore irrigationproject, scheduled to fetch seven TMC water becomes reality. Also, itis expected to irrigate nearly 33,945 hectare of agricultural land from total three districts during first phase. When asked about the progress of project so far, authorities said, "As a part of Krishna-Bhima stabilization project, the construction of Somanthali barrage on Nira River, a tributary of Bhima River is almost 95% complete, while suchwork related to Udhhat barrage is on progress. The work of laying down nearly 24.5 kilometer-long tunnel between Nira and Bhima rivers is also progressing a fast pace." As regards to Krishna-Bhima irrigation project, the work of laying down Jeur tunnel to channelize water from Ujjani dam upto the boundaries of Osmanabad district as apart of the lift irrigation scheme I is also on the progress. The work of four storage tanks as a part of the scheme has been accomplished whereas those of three others is in progress, authorities said Under liftirrigation scheme II, the work of Ghatane barrage is over, while that of Naldurga I and Naldurga II is in progress. The work of constructionof two out of four storage tanks has been over, while that of remaining two is on the progress. "The project of drawing water from Ujjani dam for parts of Marathwada received a push post the special cabinet meeting held at Aurangabad during October 2016. Funds worth over Rs 550 crore could get arranged after the special cabinet meeting, giving impetus to the different groundwork," WRD official said.
Declining to specify any particular time frame by which the Krishna-Bhima stabilization project would be over, authorities said the progress of the work depends solely on the fund- flow.

Mr. Nagare, expert member (Irrigation) of Marathwada Development Board, said the works under Krishna-Bhima irrigation project must beexpedited to end water woes of Beed and Osmanabad districts. "We demand that total at least 23 TMC water must be released from the Basin of Krishna River towards Marathwada

instead of 7 TMC as perthe principle of equitable distribution. To this effect, we have alreadyknocked the doors of the Maharashtra Water Resources Regulatory Authority (MWRRA)," said Nagare, former executive director of Godavari Marathwada Irrigation Development Corporation (GMIDC).The project is going to benefit parts of Western Maharashtra.

The Government of Maharashtra is well-aware of all these happenings. The KWDT Cell of the Water Resource Department (WRD) of the Government of Maharashtra itself has stated that diversion for Krishna Bhima Stabilization scheme has been rejected and that there is no availability for 21 TMC water from Ujani for Krishna Marathwada Project. The Secretary of Water Resources in aletter in 2009 had stated that Krishna Marathwada Scheme cannot bedesigned at 21 TMC water availability from Ujani, but has to be scaled down at 7 TMC only because of Tribunal considerations.

Amazingly, there is no clarity about the source fo this 7 TMC water



Krishna River and its tributaries

Future Scope

1) To study difference in ground water table before After interlinking for different districts.
2) Flood disaster management.
3) To study socio-economic development of different watersheds

II. CONCLUSIONS

1) This river linking project in Maharashtra, India, is based on innovative methods of linking of natural and artificial water drainagefor inter-basin and intra-basin water transfer.
2) This is a unique technique of rain water conservation; utilization offlood water run-off and replenishing natural and artificial water bodies through natural and artificial water drainage channels.
3) The excess water in a river is utilized to recharge the ground waterbodies and dry wells in its command areas.
4) The project is designed for the optimum utilization of rainfall- runoff for inter-basin and intra-basin water transfer through innovative technologies of both surface water transfer and groundwater recharge.
5) This river linking project in Maharashtra, India, is based on innovative methods of linking of natural and artificial water drainagefor inter-basin and intra-basin water transfer.

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