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Water Grid in Telangana

KEYWORDS

Dr.B.Ramesh

(PDF), Senior research scholar, Dept of public administration,Osmania university, Hyderabad.

ABSTRACT *In present situation every person want a purified water because of various factories established beside the villages and towns. Day by day ground water reducing and polluted.*

Smart water grid technology enables better management of the water network, meaning leakages, supply interruptions and uncontrolled discharges are fewer, helping combat any potential water shortage and protecting the environment. Through the creation of a Smart Water Network or smart grid, water companies can monitor and control pressure, flow rates, levels, water quality, detect and locate leakages, and reduce instances of bursts on the network. This will help them meet the increasing economic and environmental demands being placed on them.

The Telangana government has proposed to build a water grid that would meet the drinking water needs of all the towns and villages besides the requirements of the industry in the state.

A total of 126,000-km of water pipeline, including the main trunk line, secondary network and the distribution lines, is proposed to be built as part of the project under which the water will be pumped to places at higher contours at various locations and from there to different places by gravity wherever possible, according to a preliminary plan.

Chief minister K Chandrasekhar Rao, who held marathon meetings with senior government officials on the project on Monday, told them the project should be designed to meet the requirement,for.30, from now.

The government proposes to divert huge amount of water from Krishna and Godavari basins and about 80 tmc of water was estimated to be required for meeting the needs of the entire state, excluding the capital city, according to the chief minister's office. However, the government is yet to indicate as to how it is going to fund the project

The concept of National Water Grid for effective management of flood and drought situations in India has been introduced a long back by a number of eminent persons like Arther Cotton Dr K.L.Rao and Dr Abdul Kalam and many others. Recently, the Natural Water Development Agency (NWDA) under the ministry of Water Resources Govt. of India has provided the National Perspective Plan for transforming the Water from surplus areas to deficiencies by linking canals.

Water Grid is a region-wide, long term, water supply scheme that provides a sustainable water infrastructure network. Water grid technology enables better management of the water network, meaning leakages, supply interruptions and uncontrolled discharges and helps in potential water shortage and protects the environment. Though the creation of a Smart Water Network or smart grid, water companies can monitor and control pressure, flow rates, levels, water quality, detect and locate leakages, and reduces of bursts on the network.

The state thus undertook a sustainable measure to combat this problem by developing as state wide Water supply Grid.

Telangana is a state in the Southern region of India. It has an area of 114,840 km^2 and is the twelfth largest state in India. Most of it was part of the princely state of Hyderabad (Medak and Warangal Divisions), ruled by the Nizam of Hyderabad during the British Raj. In 1956, the Hyderabad state was dissolved as part of the linguistic reorganization of states, and the Telugu speaking part of Hyderabad state, known as Telangana, was merged with Andhra State to form Andhra Pradesh. On 2nd June, 2014, Telangana was separated from Andhra Pradesh as 29th state of India, with the city of Hyderabad as its capital. Hyderabad will continue to serve as the joint capital city for Andhra Pradesh and Telangana for ten years. Even before the separation of the state the Telangana people faced severe shortage of drinking water Governments used to spent billions of rupees on temporary measures to supply drinking water through carriers road tankers. Over drafting of water caused series of water quality problems due to excessive fluoride, nitrate and salisity. The number of fluoride affected people in Telangana region is increasing year after year. Flouride has been the cause of extensive health damages in many parts of the region. Dental flourosis causes permanent pigmentation of teath in children and bone deformes and carried by skilful flouosis even adults. Therefore the new government in newly established state decided to drew up an on ambitious strategy for creating a state wide drinking water grid. For bulk water transmission from sustainable surface water resources to water scarce and poor water quality habitatives.

The water grid is aimed to distribute drinking water supply from various reservoirs and river basins into the distribution of network of villages.

The proposed water grid provides a healthy and safety best purified water to entire Telangana State. In its first budget the state government has allocated an amount of Rs. 25,000 Crore. The pipelines spread over 1.26 lakh kilometer will assure water facility to each and every corner of the state. This project uses 160 TMC water from 80 TMC from Godavari and 80 TMC from Krishna Rivers. The government initiated steps to complete the Drinking Water Grid Project by the end of 2018. The Telangana government sanctioned Rs. 105 crore towards the survey of the Telangana State Drinking Water grid (TSDWG). The survey would include investigation, design and detailed estimate preparation of the proposed water grid.

The Telangana Government is contemplating to use the

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Geographical Information Systems (GIS) and Lidar Technology for conducting survey of all tanks under Mission Kakatiya and Telangana Water Grid as well as Mapping of Hyderabad. Initially 10 to 15 tanks will be surveyed on pilot basis that are close to Hyderabad city – Bhongir, Aleru, Munugodu, Medchel.

Water is planned to be pumped to places at higher contours and then by gravity wherever possible. To enable this, the survey would include collection of village level GPS coordinates for all streets, existing service reservoirs, distribution network and proposed distribution network, preparation of detail engineering specifications and others. The survey is expected to enable optimal planning between lift and gravity approach based on findings. Three permanent bases across the State would be established for the survey.

For supplying drinking water to all the households, the state government is going to divert water from Krishna and Godavari river basins. Sujala to deliver safe drinking water to every home in the Telangana state government.

Water Supply and infrastructure in the 9 districts of rural areas of Telangana State are as follows :

Borewell fitted with hand pumps : 1,58,496

Single rural drinking water schemes : 24,003

Multi-rural drinking water schemes : 147

Water quality testing laboratories : 76

As on 1.4.2014 in rural areas of the state

Villages full of water (55 LPSD) : 7,747

Partial Water villages (55 LPSD) : 15,570

Water quality is affected villages : 1279.

Rastrasujala is planning to 4 districts of Telangana were carried out on the basis of the number one priority. The most striking feature of the scheme is to supply water to 25 thousand rural settlements, 67 cities by the end of 2050. In addition to serving the safe drinking water, entire Telangana total the needs of the industry. 34 TMC of water will also be kept in inmind from theGodavari for the grid, 21.41 TMC of water from the Krishna to be usage initial estimate. Under the two rivers, the Srisailam, Srsp Komaram Bheem Paleru Juraala, Nizam Sagar, Mid Maneru, Singur, lower Maneru left, and use for other projects as required by the waters of the scheme was planned. The methods of pumping water to supply all overall plan in place by gravity.

The irrigation department of government of Telangana state is responsible for the construction of rural drinking water, irrigation water grid. The government is planning to use of the services of experts in the field of irrigation in the implementation of the scheme were total of 26 grids offices, set up by the executive engineers and attuned to the central office facilities, such as video conferences and to make the process events starts.

The estimated expenditures of proposed water grids in the state is given in the following table.

Programme	Estimated (In Cr.) Rs.
Krishna head works (Sunkisheela)	1008
Krishna fourth phase(for day 30 MGDs)	1916
Krishna Water Laxmi deveipally (MBNR) to Osman sagar (45 MGDs)	350
Laxmi deve pally to Himayat Sagar	315
Jurala to greater (90 MGDs)	1916
Scheme of Laxmi Devipally(35 MGDs)	600
Souring of outer ring road (175 Km)	2100
Souring of regional ring road to 320 Km main ring road	2560
Outer ring road-regional ring road 720 Km	1440
Construction of water pumping surrounding Municipalities 3653 Km	3030
Under the municipalities of HMDA and to supply various villages creates pipe lines 3520 Km	3408
Total	18,643 (In cr.)

The government of Telangana state decided to adopt Gujarat model mission mode approach which was appreciated by the experts of irrigation model in the state.

Recently Telangana minister K.T.R. and a few officials visited Gujarath taking care of the water grid. The team made discussions with Water Board officials and Pani Samithi members and enquired about the successful run of the watergrids. The team also visited Amarpur village in Gandhi Nagar district to study the e-Panchayat system.

The government planning to tap external borrowings for water Grid project, which will ensure safe drinking water to all households by providing taps to all houses. The government is contemplating to collect users charges keeping in view the funding agency wants to know the cost-benefit ratio. So, the water supplied through water grid will be counted and the money for the same will be collected from the people. The TS government is yet to fix the water cess tariff. The government is planning to tap loans from Korean Water Grid, Canada Pension Fund and Japan international cooperation agency JAICA.

The state government is proposed to set up a water grid corporation to plan and monitor and facilitate the working of Water grids in the state. If it comes in practice it will become a land mark in the filled of irrigation.

Conclusion:

Integrating of rivers is crucial problem, it has to be planned in a careful manner. Before integrating the water grids the feasibility of river limits and other alternatives to be examined. A master plan should be prepared adopting a strategy of implementing the different components of the master plan in a phased manner. Setting water grid projects is an outstanding step taken by the state government of Telangana.

References:

1. K.N., P.F. Folliot, H.M. Gregersen, and L.F. DeBano. (1997). *Hydrology and the Management of Watersheds; Second Addition*. Ames, IA: Iowa State Press.
2. Cotey, S. (2003). *Hamilton Creek Watershed Management Plan*.
3. Bhadra, Binayak, Water Resources Development and Management: Institutional and Legal Issues in a Regional Context.
4. Amarshinge, Upali, 2009 CPWF Project Report, Strategic Analysis of India's River Linking Project, Amarshinge, Upali, T. S. Amarsinghe, R.P.S. Malik, 2008- 2009, IWMI "Strategic Analyses of the National River Linking Project of India" by "Standing Committee of Water Resources (2008-09) – Interlinking of Rivers" Eleventh Report.

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5. Shankari, Uma (Compiled and edited by); "Interlinking Rivers – Contradictions and Confrontations".
6. Shah, T., U. A. Amarsinghe and P.G. McCornick, 2008, India's River Linking Project – The State of Debate. In "National River Linking Project-Analysis of Hydrological, Social and Ecological Issues". Strategic Analysis of National River Linking Project of India.
7. Series 2. Eds. Baharati R Sharma and Upali A Amarsinghe, Colombo, Sri Lanka: International Water management Institute.
8. Www.Narendra Modi.Com
9. Desai, V.R.,Ghosh, S.N.and Patro, J., National Water Grid-its Objectives and Challenges, ISH J. of Hyd. Engg., Vol. 11, No.1, March, 2005
10. Mazumder, S.K., Performance of surface irrigation schemes in India, keynote speech pub. in the proc. of all India seminar on water and environment-issues and challenges, org by IWRS and WRDTC, IIT (Roorkee), Oct. 2002.
11. Mazumder,S.K., Interlinking Indian Rivers-Issues and Challenges, Proc., National Conf. On Hydraulic and Water Resources Engg., HYDRO-2003, org. by ISH and CW&PRS ,Pune.
12. Iyer, S. S., Water resources of India, J. of IWRS, April, 1989.
13. Khitolya, A.K., Goyal, A.K. and Dhruv Kumar, Environmental and other Aspects of Interlinking Rivers, Proc. Recent Advances in Water Resources Development and Management org. by Deptt. Of Water Resources Development and Management (WRDM earlier known as WRDTC), IIT, Roorkee, 23-25 Nov. 2005.
14. Venkata Reddy, M., 2009. User organizations as a demand management option: potentials, problems, and prospects. In: R.M. Saleth, ed. Promoting irrigation demand management in India: Potentials, problems, and prospects. Colombo: International Water Management Institut