

Underground Interlinking Of Tubewell

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Abstract : The river water in India is the most essential source of water supply to all the society and also for wild life. The river water have extreme role in the lives of community and wild life. The interlinking of tubewell involving water transfer through the one to another tubewells. The core objective of the paper is to study” UNDERGROUND INTERLINKING OF TUBEWELL’S in India. So as to avoid the scarcity of water,avoid the water losses through the evaporation and reducing salination of water .The interlinking of tubewell is the project aims to join the different villages ,citys to under the aim to fulfill the requirement of water. Interlinking of tubewell is the way to solve the problem of scarcity of water.

IndexTerms – Interlinking, Tubewells, Soil erosion

I. INTRODUCTION

The underground interlinking of tubewell in India is a the most important large-scale civil development project that aims to provide efficient water to society. As we know that river interlinking project has some dispute about implementation of project. So the interlinking of tubewell is the better way to overcome from the problem river interlinking . As we have an idea the average annual rainfall in India is about 3,000 billion cumec meters in this year, but this rainfall record drastically changes from year to year . Furthermore, the rain across the platue is not uniform, the east region and north east region having most of the rain, while the west region and south areas having very less rainfall. Indian currently facing problem regarding heavy rainfall and floods in some areas like Gujrat,Kerala and kokan region followed by below average or late monsoons with droughts in East regions. This variance in rainfall and the effect of change in atmosphere and time variance in availability of rain water versus the average annual demand for irrigation, drinking and industrial water creates a demand-supply gap.

Implementation of the tubewell inter-linking projects claim the answers to India's water problem is to conserve the surplus as well as infiltrate water, store it in wells, and deliver this water using inter-linked tubewells to the areas affected by scarcity of water and over times when water becomes scarce.

OBJECTIVES OF UNDERGROUND INTERLINKING OF TUBEWELL :-

Supplying water from area having sufficient rainfall to the area having depicit rainfall by interlinking a tubewell.

CURRENT ISSUES IN TUBEWELL INTERLINKING

Environmental And Ecological Issues

There is some knowledge gap and unknowns about the river interlinking because of lack of knowledge about this concept, similarly in case of interlinking of tubewell this might be happens.There is some facts and impacts that may rise with some questions, that It can controll the soil erosion, it can controll the evaporation loss , it can supply sufficient water , it can withstand in heavy pressure , and how maintenance to be carried out , how much water will be shifted and when, whether this may cause water logging, salinisation and the resulting desertification in the command areas of these projects .If we divert the flow of river for river interlinking then that may resulted in to land sliding or flood in its original path after an year. So river interlinking may fails after 100 years but if we maintain the tubewells with proper investigation and study then this project can be good alternative to the interlinking of river project .

Poverty and Population Issues

It is measure issue in india as with increase in population growth the dependency and requirement of water also increases . About 1000 million hectares of area has been irrigated through the rain water . Due to increase in population there is lack of water supply for irrigation as well for community supply.

More than 80% water has been supply through the rain water , so its clearly means that in India rain water is the primary source for community supply and for irrigation . As we have only four months of rainfall and thst is also vary every year .This uncertainty creates and supply and demand gap. So to overcome from this variance and uncertainty we need to store and conserve the water by some means, to which have many techniques and many methods to store the water. Interlinking is the one of the fact to store, recharge , and recycle the water. Through the tubewell interlinking we can supply the sufficient water to all the commodity

International Issues

Under ground inter-linking of tubewell initially appears to be a costly project in terms of economical terms, but the fact is that this one time investment will provides long time benefits in terms of agricultural and economy. It will defineatly support to Growth and change in life style.

Technological Developments

Cost of interlinking of under ground tubewell will be much more but might be equal to River Interlinking project , Technology might be play important role in this project . Because It’s a difficult task to connect tubewells underground with proper gradient and slope . Researchers and Scientist plays and important role in interlinking project .

Political Views

As like Indias ambitious project divided between those who believe in its potential to generate power and provide irrigation and those who warn about its environmental and ecological consequences.As river interlinking project has some distorious drawbacks and that can be removed by tubewell interlinking,this project is not viable in its current form .we have to come with new praposal and expert committee members to go through the study of tubewell interlinking . This interlinking project ensures the greater

equity in the distribution of water by enhancing the availability of water by enhancing the availability of water in drought prone areas.

3. Working And Planning Behind

Interlinking Project -

Working of tubewell interlinking completely depends upon Equilibrium of an aquifers water. The ground water or surface water when reaches through the tubewell then it will fill the spaces and when one tubewell is filled completely then water from one tubewell get transfer to another tubewell and this process moves forward until all the tubewell set to the equilibrium . Due to this equilibrium condition area under interlinking get the sufficient water and this water can be easily transfer to the area facing drought or scarcity. As water flows from the higher gradient to lower gradient or from elevation towards the slope .If we know the path of water flowing through the confined layer then we can connect the adjacent tubewells by linear connections . to connect the two tubewells we can use CPVC or high strength PVC pipes or medium density polythene.

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The ground water flow and path of flow can be determine by flow line and equipotential line . construction of flownet is often used for solving ground water flow problems . Darcys law also plays an important role in determining the discharge and flow through the tubewells. Darcys law gives the relationship among the flow rate of groundwater . C/S area of aquifer ,and hydraulic gradient .The flow of water through the confined aquifer can be determined by flownet presentation.

Why We Need To Interlink

Reduction in water loss:

In case of river interlinking the major problem cause is the reduction in water due to water losses , in case of heavy rain fall water loss in the form of infiltration , surface runoff water and water loss due to leakage . Inorder to minimize this loss this runoff water must be collected through some media , like river basin management or by interlinking of tubewell . surplus water can be diverted towards the tubewell and this water can be possibly transfer to another tubewell which is internally connected to one another .

Evaporation and Evapotranspiration loss :

This the second major loss from the river interlinking project , this drawback can be removed by interlinking the tubewell , as water stored in tubewell will not be cause by evaporation process , evaporation losses are highly take place when water flowing over ground the surface .

No Acquisition of land: Acquisition of land in India refers to the process by which the union or a state government in India acquires private land for the purpose of industrialization , development of infrastructural facilities etc. For river interlinking we need to acquire large area which are under the catchment , which may leads to dispute between government and local agency against the tenants , such situation will not be arises in case of tubewell interlinking ,because of less area will be required for this project .

Aforestation:

As in case of river interlinking project we diversify the original path of the river flow, that may leads to deforestation , which may leads to the disturbance to ecological system . tubewell interlinking will not go through this losses because its requires very les area to construct the tubewell and to connect it, and due to interlinking of tubewell excess of water can be stored which can be lead to increase in water table which can be helpful in increase in forest area.

Limiting soil Erosion :

Soil erosion is the naturally occurring process caused due to transfer of water that affects the landforms . It is the process of deposition of soil due to river or wind action . Heavy rain fall causes transfer or deposition of soil and land becomes fertile in nature This fertility results in to reduction in cropland .Greater the Rainfall intensity higher will be the erosion . Interlinking of tubewell. will not cause soil erosion problem , but to avoid the deposition of soil at the entrance of tubewell at the time of heavy rainfall , we need to provide screens and cover over the tubewells ,which can obstruct the entry of debris , soil and sediments. By taking proper precautions and proper suggestions from expertise we can implment this project with positive impact .

CONCLUSION

Interlinking of tube wells is definitely a good solution over the scarcity of water, but interlinking has to take place after a detailed study so that does not cause any problem to the environment . As discussed, interlinking Of tubewell water transfer is the key solution against the water crisis that country have been facing since century. Tubewell interlinking can play crucial role in strengthening agriculture and economy.

Implementation does not come with a huge environmental cost. All the challenges and issues need to be settled down much before the project is implemented and this can be achieved by conclusive negotiation with state government, proper environmental impact assessment and scrutinize technical verification of project.

Likewise River Interlinking We Can Spread The Net Of Tubewell Interlinking, Which Can Connect Citys To The Villages To Fullfill The Water Requirement.

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