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Inter-Linking of Rivers: Are we on the right side?

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One may question the socialist character of the Mother Nature. There are reasons for it or else, how can one justify enormous dissimilarity in resources and resourcefulness among different countries, and even in various parts within a country? India is no different- when Guwahati fights the impunity of floods Chennai goes dry. Again when Kerala and Goa get plenty of rainfall, the hinterland of Andhra Pradesh, Maharashtra and Rajasthan get baked. In the following lines, we debate on the possible measures that could be taken up to arrest the situation to bring about a hue of socialism... ..where lies the answer?

Encouraged by some success stories in the world around, the Government of India is proposing to link several rivers flowing in the country to mitigate the extreme situations mentioned above. Interestingly this idea of inter-linking rivers, mooted originally in early nineteen seventies, was taken up seriously in recent years by the Government of India following a Supreme Court directive while reacting on a public interest litigation case (PIL 512 of 2002) on Government's perennial failure to contain damages caused by annual visits of drought and flood. The reason is- while only 3.8% of the potable surface water available on the earth flows through India, she could able to effectively use only 15% of that water resource to irrigate her agricultural land.

A Central Water Commission (CWC) analysis suggests that even a marginal increase in this usage can help irrigate several million hectares and can generate much-needed electricity. To this effect, the Government proposal to inter-link rivers thus involves interlinking of 37 major and large rivers through thirty tunnels and canals of approximately 4600 km long, controlled by twenty-seven dams of various dimensions. The cost of the inter-linking of rivers has now been estimated as Rs. 560 thousand Crores [source: CWC website].

The Gains

The government proposal to inter-link rivers, when implemented completely, shall provide much relief from drought to various parts of the southern India (Andhra Pradesh-Tamil Nadu), western Gujarat, coastal Maharashtra, Central Madhya Pradesh (Ujjain-Indore), and parts of Rajasthan. This would help irrigate additional 35,000 million hectares of land. Another major incentive of this project shall be to offer a respite from floods to various parts of the northern and eastern India.

Additionally the scheme would generate 34 million Kilowatt of electricity and enhance water movement along rivers, increasing in the process the depth of many of the dying rivers, and their carrying capacity. This would, in turn, help initiate cheap, non-pollutant water and river transport of passenger and goods in the country and in the process enhance the economic prospect of riverine and canalised regions of the country.

The linking of rivers may also augment domestic and industrial water supply, and has enormous potential to generate employment— both during and after the completion of the project. It should also give a boost to the cement and steel industry sectors pushing the country's economic growth-rate to an enviable level.

These gains sound immensely interesting. It is not that India is the only country aiming for such a scheme to network major rivers. China, in fact, has gone far ahead in this direction and is now implementing a project to transfer water from overflowing Yangtze in the south to a relatively dry Yellow River in the northern China. A similar project in Africa, when completed, should rejuvenate Chad Lake located in the Sahara desert by the waters drawn from the Oubangui River, a branch of the worlds second largest river Congo, through a 1000 kilometre long canal. Near to us, we have examples of successfully completed Mahaveli—Ganga link project in Sri Lanka and Irtysh—Karganda link project in Kazakhstan.

The Flip Side

Even after thirty-five years since the idea was conceived, the proposal to interlink rivers is not sufficiently discussed and seriously debated by the experts, even when the proposal would cost the exchequer approximately rupees 5,60,000 Crores. There has been a clear lack of public awareness in this regard. In spite of several favourable points attached to this major infrastructure project, eminent persons and groups have expressed divergent views on varied considerations. It is observed that

various issues, such as, environment impact assessment, rehabilitation of project-affected persons, long term effect on geology and climate of the country and techno-economic feasibilities are not addressed adequately. Moreover, consensus is lacking among the beneficiary states on the modality and exact equation to share water and electricity.

The major shortcomings of the proposal to interlink rivers are that the project would need to permanently shift about two million people and would need their appropriate rehabilitation. India cannot probably draw example from China in this regard as systems in China do not allow people's movement, or Medha Patkars to function. Again, many of the rivers proposed to be interlinked flow through Bangladesh, Nepal, Bhutan and Pakistan. India would be technically and ethically bound to obtain agreement of these countries to this proposal, which is not likely to come easily.

There are many other negative dimensions to the project. The northern rivers are largely polluted (having high toxicity) compared to those of the southern rivers. Any mix-up of waters of these two regions can destroy the biota, their habitat, fish resources and associated microenvironment for generations to come. This would have disastrous impact on economy, as well. Too much emphasis is given on the technology part and on the viability of completing the project, while not much thought is given to understand its impact on the science and social parts. For example, less flow of fresh water through rivers (due to diversion) may have serious consequences along the coast, adversely impacting on coral population, fisheries resources vis-à-vis tourism, directly affecting the national economy.

Again, there are areas that use excess water for irrigation, which in fact harms the topsoil and damages its fertility. It is apprehended that instead of being judicious, availability of excess water through inter-linking of river in some areas may encourage wastages. Another ill effect of inter-linking and diversion of water would be siltation of dams and non-availability of fresh silt to the agricultural lands. This would decrease yield due to lack of nutrients in the land. Example can be drawn from Egypt, where the deltaic region of river Nile lost fertility after the Aswan Dam became operational in the sixties.

Through the proposed interlinking of rivers, the drainage pattern and the geomorphology of the country would undergo a complete change. The great and historic input of the Himalayan sediments to the Bay of Bengal and to the Arabian Sea would be greatly modified and substantially reduced. This would corrupt any future studies to link intensity of monsoon, Himalayan erosion and sedimentation pattern in the sea.

Possible alternatives

A sensible assessment of the points in favour-and-against such a major project may leave one to look for any third alternative. Probably it is time one should co-exist with nature and learn adaptation, rather than going against the natural laws. In innumerable instances, nature has shown her might. Any disruption to a natural system is paid back with much impunity at some other time, at some other place, and in some other form. The super-mega project involving interlinking of 37 major and large rivers is one such endeavour that may not be in harmony with nature. It could be a technological marvel but not without much disaster.

Then what is the alternative? Probably the following measures could constitute the alternative path if we stop hiding from stark truth and do not overestimate our capacity to coordinate and manage super-mega projects like this one that would involve at least fifteen to twenty central ministries and equal numbers in each states involved.

Under an alternative scheme, people and the government should focus on how to conserve water. The country has numerous water storing bodies, like ponds, lakes, basins, and wells. These storages may be scientifically repaired and cleaned. Few more could be excavated, particularly in drought-prone areas. This would also generate employment. Water from these storages, collected during monsoon, can be used for irrigation and drinking after necessary purification. Ground water level would also rise. In fact, the culture of water harvesting should be spread over the country. Each and every individual can contribute in this movement of water harvesting. Arrangement to store rainwater on the rooftop, garden, etc may be encouraged. Installations of desalination plant, run by solar and wind energy, to transform seawater to potable water can also be encouraged in the coastal areas.

High amount of evaporation of water from these ponds and lakes is a challenge. Parallel efforts to scientifically reduce evaporation by laying a sheet of harmless chemicals over the water surface, or by using an age-old technique of covering the water bodies may be encouraged. To stop the menace of using more-than-needed water for irrigation, the use of sprinkler-drip irrigation can be taken up as a popular movement and if needed may be given subsidy in price.

A serious research effort and fresh thinking are needed to examine the prospect of overhauling the cropping pattern in the country. Areas with less rainfall can be encouraged to develop selected crops that do not require much water, and vice-versa. It is a challenge to the agricultural scientists to decide on this issue. Since the country is same, one region should be complimentary to the other, and not each region has to make the entire crop.

It is prudent that instead of making an uncertain high profile technological marvel by spending crores of rupees, one should lay importance to simple scientific sense and provide a cost-effective action plan as listed in the alternatives section. Such actions ought to be people and society oriented and fundamentally sustainable with the Mother Nature. At the most in the beginning a couple of rivers may be linked locally on an experimental basis to study the effect and results of such inter-linking over a reasonable period

More importantly water must be made to flow through taps in the village-houses. We do not see any such concrete plan yet. So long, as women in India carries water on her head, our heads should hang down in shame.

KEYWORDS:

- Re-examine the proposal of inter-linking of rivers
- Encourage complimentary cropping pattern

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