

GREEN CANVAS



INTRODUCTION

A brief look back at the events of history reveals that almost every civilization in the world was developed around waterbodies. Turning the pages of Indian history, we see that five hundred years ago, in the Indian sub-continent, Harappa and Mohenjodaro civilizations evolved in the Indus river basin.

A peek at the current scenario suggest that nothing much has changed since then. Water has been playing a pivotal role in the development and sustenance of livelihood of people of India.

Over the millennia, India has been continuously coping with annual floods and droughts, both occurring at the same time in different parts of country. These concerns are more profound today as the growing population and the resultant increase in water demand places a heavy burden on the unevenly distributed water resources.

In July 1982, the Government of India formed the National Water Development Agency (NWDA); under the Ministry of Water Resources to carry out the water balance studies on a scientific and realistic basis for inter basin water transfer link schemes in order to give a concrete shape to the linking of the Himalayan and the peninsular rivers. In order to do that, National Water Development Agency (NWDA) has proposed a project named National River Linking Project (NRLP). The present form of the project is the revision and modifications of early proposals, carried out by many scientists and officials.

River-linking is a project linking two or more rivers by creating a network of artificially created canals and providing land areas that otherwise do not have river water access thus reducing the flow of water to sea by using these means.

PROJECT STRUCTURE

Under the proposed project, 16 river links of the peninsular rivers and 14 links of the Himalayan rivers are proposed. NWDA has identified 30 links (16 under Peninsular Component & 14 under Himalayan Component) for preparation of Feasibility Reports. The projected cost of Inter-linking of Rivers as per National Perspective Plan (as per Task Force Report - Base year 2002) is 5,60,000 Crores. It includes two sections:

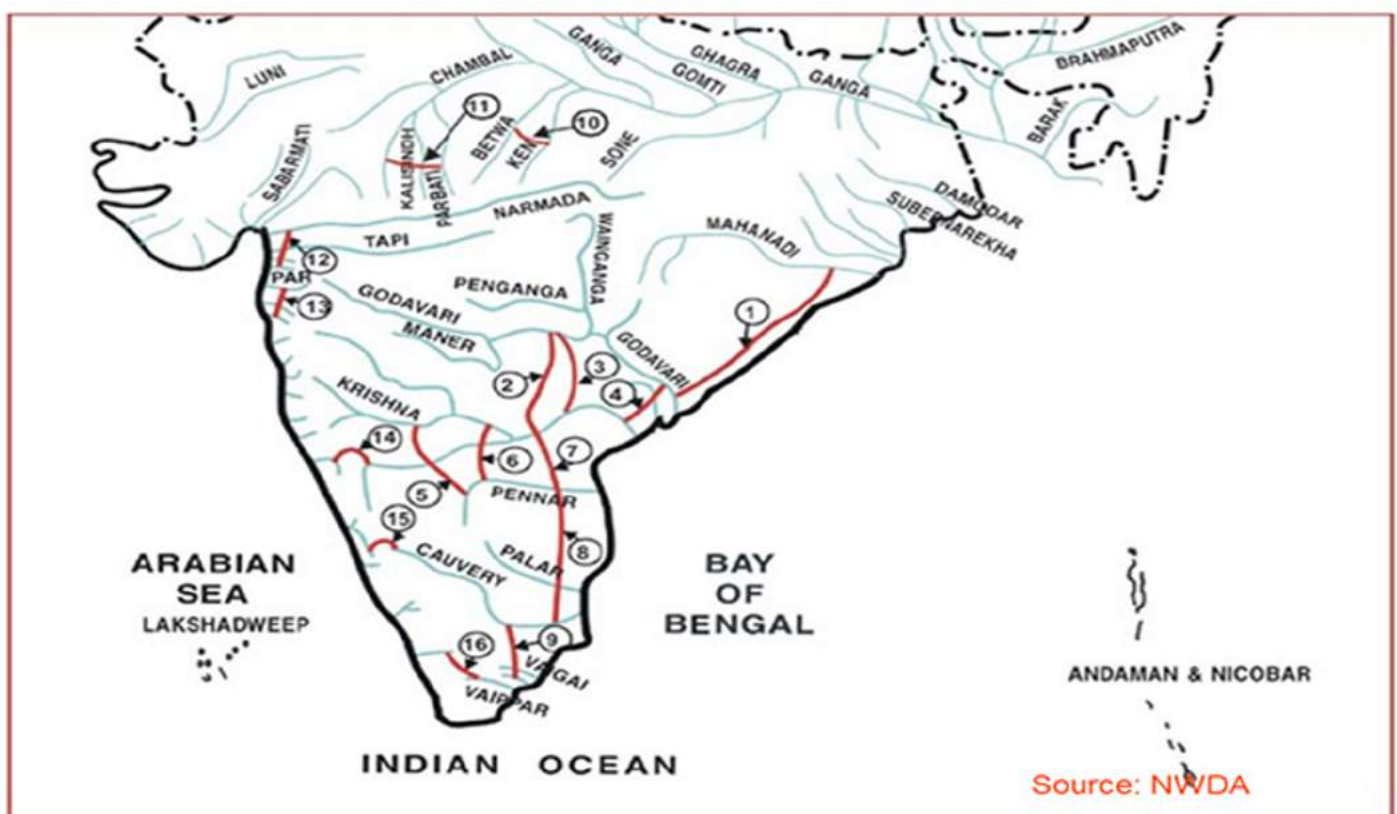
Peninsular Rivers Link

In this section of the project the main part is to send water from the eastern part of India to the south and west. Estimated project cost of this section is Rs. 1,85,000 Crores.

Component of this section are:

- Interlinking of Mahanadi-Godavari-Krishna-Palar-Pennar-Kaveri.
- Interlinking of West Flowing Rivers, North of Bombay and South of Tapi.
- Interlinking of Ken with Chambal.
- Diversion of a part of river flow from West Flowing Rivers.

PROPOSED INTER BASIN WATER TRANSFER LINKS PENINSULAR COMPONENT



1. Mahanadi (Manibhadra) – Godavari (Dowlaiswaram) *
2. Godavari (Inchampalli) – Krishna (Nagarjunasagar) *
3. Godavari (Inchampalli) – Krishna (Pulichintala) *
4. Godavari (Polavaram) – Krishna (Vijayawada) *
5. Krishna (Almatti) – Pennar *
6. Krishna (Srisailem) – Pennar *
7. Krishna (Nagarjunasagar) – Pennar (Somasila) *
8. Pennar (Somasila) – Palar- Cauvery (Grand Anicut) *

9. Cauvery (Kattalai) – Vaigai – Gundar *
10. Ken – Betwa *
11. Parbati – Kalisindh – Chambal *
12. Par – Tapi – Narmada *
13. Damanganga – Pinjal *
14. Bedti – Varda
15. Netravati – Hemavati
16. Pamba – Achankovil – Vaippar *

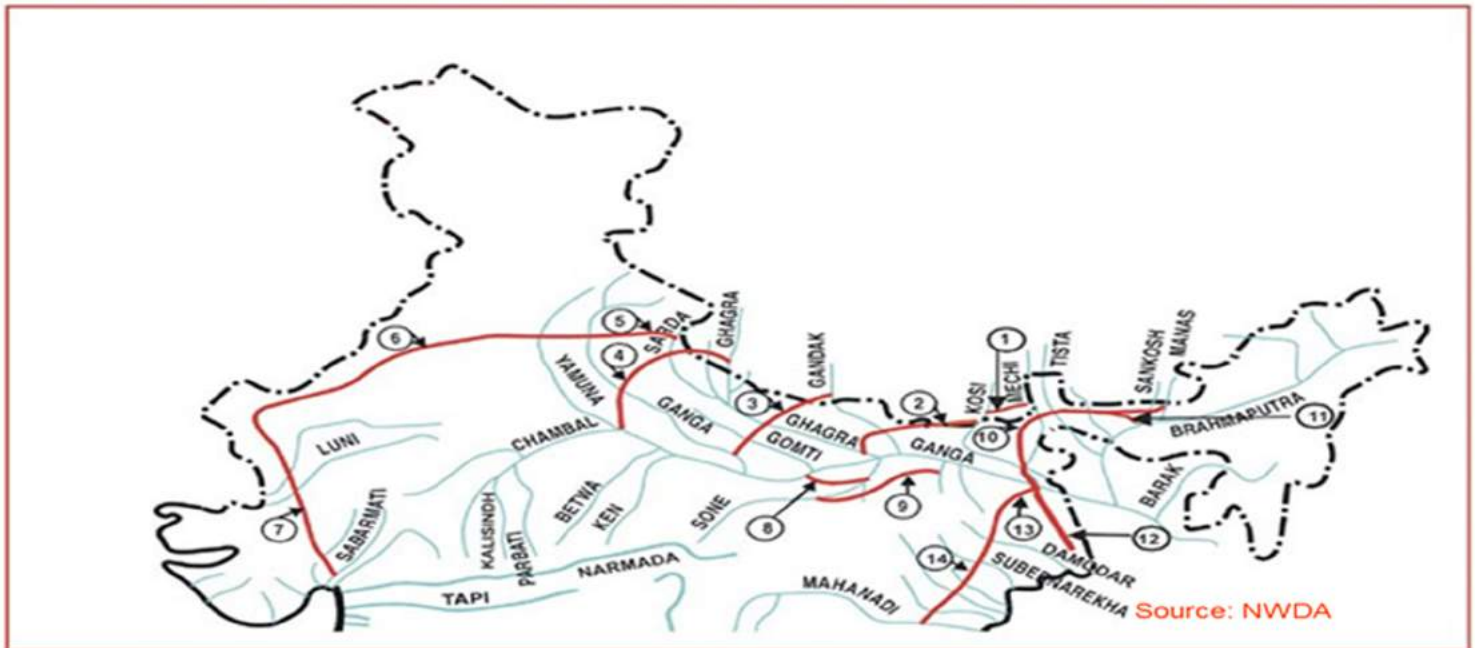
* FR Completed

FR : Feasibility Report

Himalayan Rivers Link

The Himalayan river component holds the idea of transferring water from the eastern part that is the Ganga-Brahmaputra system to the westwards covering the parts of southern Uttar Pradesh, Haryana, Punjab and Rajasthan and finally proceeding towards south meeting the peninsular component. It includes the construction of large storage tanks on main tributaries of the Ganga and the Brahmaputra in India and Nepal. It calls for interlinking canal systems to transfer surplus flows of the eastern tributaries of the Ganga to the West. It also proposes to link the main Brahmaputra and its tributaries with the Ganga, and the Ganga with Mahanadi. Estimated project cost of this section is Rs. 5,60,000 Crores.

PROPOSED INTER BASIN WATER TRANSFER LINKS HIMALAYAN COMPONENT



1. Kosi – Mechi
2. Kosi – Ghagra
3. Gandak – Ganga
4. Ghagra – Yamuna *
5. Sarda – Yamuna *
6. Yamuna – Rajasthan
7. Rajasthan – Sabarmati

8. Chunar- Sone Barrage
9. Sone Dam – Southern Tributaries of Ganga
10. Manas – Sankosh - Tista - Ganga
11. Jogighopa – Tista – Farakka (Alternate)
12. Farakka – Sunderbans
13. Ganga (Farakka) – Damodar – Subernarekha
14. Subernarekha – Mahanadi

* FR Completed

INSIGHTS OF THE PROJECT

River-linking project aims at the welfare of community by providing water access to drought prone areas and arid regions reducing the flow of water to suppress flood probability in water-rich areas. Some other advantages are:

- In agricultural sector by escalation in irrigation area.
- In power sector generating hydropower through the dams proposed under the project.
- In employment sector as implementation of this project will require huge manpower.

However, this project has many disadvantages with it. According to many critics, this project will put adverse impacts in the geological, hydrological and environmental aspects. River-linking is also facing state-politics. Bangladesh has also raised major objections over the proposed river-linking project. Some ill effects due to this projects are:

- Environmental deterioration is likely to occur by a massive project like this.
- Increment of dry-land salinity by evapotranspiration in the part of flow which is diverted for other rivers.
- Imbalance in the hydrological cycle which can cause negative impact on climate, plants and microbes present in the river-basin.
- Bad impact on natural land up-gradation process on the flood plains for cultivation carried out by rivers.
- Natural habitats of various animals, flora and fauna would be lost thus causing ecological imbalance and extinction.

PROBLEM STATEMENT

River Project is a dream project of Govt. of India. Currently, we do not have a proper plan of implementing the project. The project as such, has many shortcomings in the form of geographical and environmental issues as well as administrative and political limitations. We at Megalith expect from our perspective participants to study the major advantages and disadvantages of the project, concerned issues, and in result suggest some feasible ideas or techniques to implement the project which makes it economically viable and environmental friendly.

Few expectations from the participants are:

1. Describe in brief the current situation of River Interlinking project in India.
2. List some of the difficulties in implementing the project and ideas to overcome them.
3. Suggest some feasible techniques to implement the project and analyse their environmental and other major related-concerns.
4. Study the major effects in ecology if the project is implemented and advantages and disadvantages of the project.
5. Do a case study and compare our project with similar initiative from some other country.

RULES & REGULATIONS

- Teams must consist of a minimum of 2 and maximum of 5 participants.
- The event is open for participation from students of all departments.
- The event will be conducted in two phases:
 - Online submission of abstract
 - Final presentation by shortlisted teams at IIT Kharagpur
- Shortlisted teams from abstract submission round have to present their ideas in the form of powerpoint presentation during Megalith 2018 at IIT Kharagpur.
- The abstract should be submitted with minimum font size of 11 and single line spacing and must not exceed 5 pages.
- The abstract should be supported with valid references.
- Relevant statistics can be added to support your claim (you may add one extra page to include stats, image and hyperlink them wherever required).
- Mail your submissions to greencanvas@megalith.co.in with subject as GREENCANVAS_2018 on or before 10 FEBRUARY 2018, 11:59PM.
- All the teams are requested to provide contact numbers, Email IDs and name of the college of each member along with the attached submission file in the mail.
- The results of first round shall be given to the above listed e-mails and mobile numbers.
- The decision of judges shall be final and binding.

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