

## **Chapter 14**

### **Other aspects**

#### **14.0 General**

All the pertinent aspects related to the detailed project report (DPR) of the Cauvery (Kattalai) - Vaigai - Gundar link project as per the DPR guidelines - 2010 are discussed in the relevant chapters. This chapter is dedicated to those aspects or issues which are worthy to be taken note of but could not find place in the previous chapters.

#### **14.1 Scope of the link project**

The nine-link system connecting Mahanadi - Godavari - Krishna - Pennar - Cauvery - Vaigai - Gundar under peninsular rivers development component of National Perspective Plan (NPP) is planned to be implemented in two phases. The Godavari (Janampet) - Cauvery (Grand Anicut) link project was initiated as a first phase in implementation of this component of the inter basin water transfer and the draft DPR was circulated in March 2019. The second phase of Mahanadi - Godavari link system will be implemented, once the storage and diversion structure at Manibhadra on river Mahanadi is materialized and the water availability in Himalayan rivers and Mahanadi is firmed up. In such case, the additional quantity will be transferred from Manibhadra to Dowlaiswaram, and the saved waters at Polavaram will be further transferred to Nagarjunasagar and beyond. The Cauvery (Kattalai) - Vaigai - Gundar link project is dependent on the implementation of phase II of the peninsular system.

#### **14.2 Rights of beneficiary states**

The proposed diversion of 2252 Mcum is arrived after considering the supplementation of Himalayan waters in Cauvery basin after duly considering the needs of upstream river basins. Therefore, the beneficiary states may have to enter an agreement with other states of the whole link system starting from north eastern states as well as co basin states.

### **14.3 CEIA studies**

The DPR of the link project is prepared to facilitate the concerned states arrive at a consensus on the implementation of the peninsular component of the inter basin water transfer. The comprehensive environmental impact assessment (CEIA) studies require a minimum observation period of one year and hence the same could not be included in the present DPR. However, these studies will be taken up in due course after firming up of the Phase I and phase II of the Mahanadi - Godavari - Krishna - Pennar - Cauvery - Gundar link system, with due consideration of the observations from various states on draft DPRs.

### **14.4 Piped conveyance system**

The piped conveyance is considered for distribution network in place of the conventional canal conveyance with the following objectives:

- a) To save the various categories of land and to keep the land use of the region intact.
- b) To minimize the quantum of land acquisition and the cost involved.
- c) To promote the demand for industrial steel for accelerating growth of domestic steel industry.
- d) To minimize the losses in transmission due to seepage and evaporation.

### **14.5 Storages**

The Himalayan waters are planned to be made available at Grand Anicut / Kattalai where there is no sufficient storage. The flows into the link project are planned to be regulated at Somasila reservoir on river Pennar which is located far away from the command area. Hence, there is immediate need for the modernization and capacity expansion of traditional irrigation tanks available in the command area, to efficiently utilize the precious waters brought from long distances.

## 14.6 Solar power potential

The canal top/ banks of the 256.82 km long link canal are proposed to tap the solar power. The Gujarat Energy, Research and Management Institute (GERMI), Gandhinagar has been assigned with the consultancy study for setting up of grid connected solar (PV) power plant on canal top/canal banks and to assess possible solar power potential along the 426.54 km long Wainganga (Gosikhurd) - Nalganga (Purna Tapi) link canal in Vidarbha region of Maharashtra. The study assessed the solar potential of the link project as 1884 MW. Considering 6 hours of sunshine on average in a day, about 11106 MU of energy can be generated per annum. The corresponding power and energy per km length work out to 4.4 MW and 8.8 MU respectively.

The solar potential of the Cauvery (Kattalai) - Vaigai - Gundar link project is estimated on the same lines. Thus, the solar energy is worked out to be 2260 MU with an installed capacity of 1130 MW all along the link canal. The solar power can be uploaded to the grid and will be a direct benefit to the country. However, the benefits from the solar power plants are treated as additional benefits and these are not considered while evaluating the link project for its economic viability.

## 14.7 Alignment of the link canal

The alignment of link canal as traced on ground while preparing the feasibility report is kept intact for preparation of the draft DPR. However, as considerable time has elapsed since the previous surveys, there might be development on ground at certain locations especially in the vicinity of the settlements. The final alignment has to take care of these developments while taking up the link project for implementation.

## 14.8 Financial resources

The detailed project report (DPR) along with the necessary CEIA studies, needs the following clearances by Govt of India and the respective agencies.

<b>Sl. No.</b>	<b>Clearance</b>	<b>Agency</b>
(i)	Techno-economic	Central Water Commission, TAC of MoWR, RD & GR
(ii)	Forest Clearance	Ministry of Environment, Forest and Climate Change (MoEF & CC)
(iii)	Environmental clearance	Ministry of Environment, Forest and Climate Change (MoEF & CC)
(iv)	R & R Plan of Tribal population	Ministry of Tribal Affairs (MoTA)

After obtaining the above clearances, the Detailed Project Report will be submitted to the Ministry of Water Resources, RD & GR/NITI Aayog for investment clearance. The year wise requirement of funds for the construction of the project is furnished in **Chapter 12: Construction Program, Manpower Deployment and Plant Planning.**

#### **14.9 Future utilisation of facilities created (Buildings)**

Various facilities and assets shall be created during the construction period as required in the project such as buildings, roads, heavy equipments and machineries. In order to facilitate the office accommodation, stores and residential accommodation for the construction teams, two categories of buildings i.e. permanent and semi-permanent/ temporary are proposed to be constructed at various construction colonies/ sites and also in the near vicinity of the link canal. After commissioning of the project, the permanent buildings will be utilized for operation and maintenance of the project while the remaining infrastructure can be utilized for the future projects likely to come up in the vicinity or for offices of other State/Central Govt. organisations.

#### **14.10 Role of the project in addressing the issues**

Cauvery, Vaigai and Gundar basins often suffer from water shortages. The cropping pattern in these basins predominantly comprises of water frizzling crops viz paddy, sugarcane etc. There is a need to educate farmers on economic use of water. Besides, identification of external sources of water

is essential to meet the reasonable additional demands after in-basin resources are optimally utilized. The link project by augmenting supplies in southern basins of Cauvery, Vaigai and Gundar, helps in attenuating their water shortages and thus, ensures an assured system of irrigation.

#### **14.11 Public co-operation and participation**

The project will provide impetus to all-round development of the region and reduce the socio-economic imbalance by enhancing agricultural production and employment opportunities. Hence, good co-operation and whole hearted participation is anticipated from the stakeholders of the beneficiary areas.

#### **14.12 Public awareness**

The benefits to be accrued from the proposed project have been brought to the notice of the general public during the field surveys and other investigation works of the project by the NWDA officials as well as by the respective state authorities from time to time highlighting the importance of the scheme to meet the water shortage of the region and its likely contribution to the overall development of the region in innumerable ways. Thus, the people in the vicinity are well conversant of the link project and are eagerly looking forward to its early implementation.