

# DAMODAR RIVER VALLEY CORPORATION

## 1. BACKGROUND

The catastrophic Bihar floods of 1943 triggered the Government of Bengal to appoint a board of Enquiry titled "Damodar Flood Enquiry Committee" with the Maharaja of Burdwan and the noted physicist Dr. Meghnad Saha as members for suggesting remedial measures.

This Damodar Flood Enquiry Committee suggested the creation of an authority similar to the Tennessee Valley Authority (TVA) in the USA and recommended the construction of dams and storage reservoirs at the sites with a total capacity of 1.5 million acre-ft. (1.850 million cu. M) and highlighted the possibilities of multipurpose development in the valley area. The Government of India then commissioned the 'Central Technical Power Board' to study the proposal and appointed Mr. W L Voorduin, a senior engineer of the TVA to study the problem at the Damodar and to make his recommendation for comprehensive development of the valley. Accordingly, in August 1944 Mr. W L Voorduin submitted his 'Preliminary Memorandum on the unified Development of the Damodar River.'

Mr. Voorduin's "Preliminary Memorandum" suggested a multipurpose development plan designed for achieving flood control, irrigation, power generation and navigation in the Damodar Valley. By April 1947, full agreement was practically reached between the three Governments of Central, West Bengal and Bihar on the implementation of the scheme and in March 1948, the Damodar Valley Corporation Act (Act No. XIV of 1948<sup>1</sup>) was passed by the Central Legislature, requiring the three Governments to participate jointly for the purpose of building the Damodar Valley Corporation (DVC). The Corporation came into existence on 7 July 1948 as the first multipurpose river valley project of independent India.

## 2. INTRODUCTION

The Damodar Valley Corporation popularly known as DVC is the first multipurpose river valley project of independent India. The Corporation is vested with the authority and autonomy for the integrated development of the Damodar River Valley.

Command area: Approximately 24,235 km<sup>2</sup> spread across the Damodar basin. Jharkhand: 2 districts fully (Dhanbad and Bokaro) and parts of 8 districts (Hazaribagh, Koderma, Chatra, Palamau, Ranchi, Revanth Loherdaga, Giridih, and Dumka) West Bengal: 6 districts (Purba Bardhaman, Paschim Bardhaman, Hoogly, Howrah, Bankura, Purulia). The Damodar Valley Corporation has been generating and transmitting power since 1953.

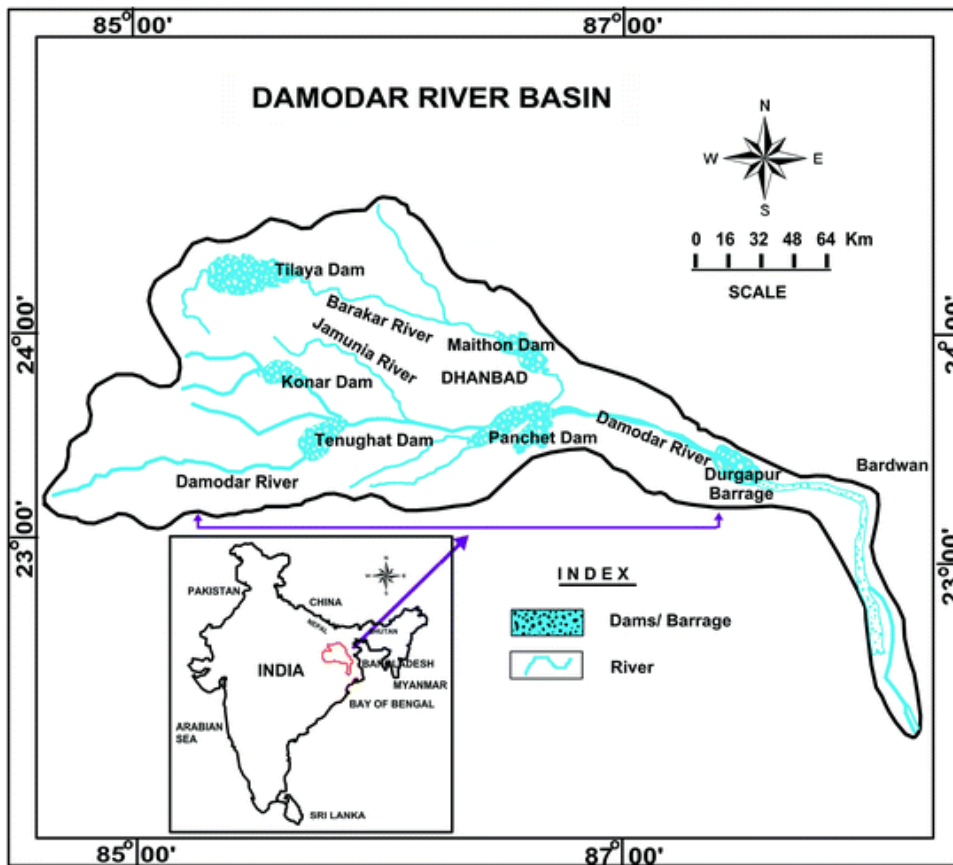
River Basin : Damodar river basin

Basin area : 24,235 square kilometers

---

<sup>1</sup> <https://www.dvc.gov.in/>

Project type : Multipurpose (power generation, irrigation and flood control)  
 States : West Bengal, Bihar (\*Now Jharkhand)



### 3. ABOUT THE RIVER BASIN

The Damodar river basin is a sub-basin and part of the Ganges river basin spreading over an area of about 24,235 square kilometers in the States of Jharkhand and West Bengal in India. <sup>2</sup>

The Damodar River emerges from a highly dissected plateau surface in the Palamau District of Bihar at a height of approximately 610 meters above the mean sea level. The river first flows eastward and then flows southward for 540 kilometers until it joins the Hooghly River about 50 kilometers downstream of Calcutta. The Damodar river basin represents about three-fourths of its area as the upper catchment situated in Jharkhand while the low lying flood plains lies entirely in West Bengal.

### 4. FUNCTIONS OF DVC

The functions of DVC as per the Act are:

- a. the promotion and operation of schemes for irrigation, water supply and drainage

<sup>2</sup> Damodar River Basin- A brief Review

- b. the promotion and operation of schemes for the generation, transmission and distribution of electrical energy, both hydro-electric and thermal
- c. the promotion and operation of schemes for food control in the Damodar river and its tributaries and the channels, if any, excavated by the Corporation in connection with the scheme and for the improvement of flow conditions in the Hooghly river
- d. the promotion and control of navigation in the Damodar river and its tributaries and channels, if any.
- e. the promotion of afforestation and control of soil erosion in the Damodar Valley, and
- f. the promotion of public health and the agricultural, industrial, economic and general well-being in the Damodar Valley and its area of operation

5. **PLAN**

The main feature of the plan was the proposed construction of seven multipurpose dams on the Damodar river and its main tributaries. Two of the dams at (Panchet Hill and Aiyar) were to be on the Damodar river while three (Maithon, Deolbari and Tilaiya) were to be on the Barakar, and one each on two of its minor tributaries, the Bokaro and the Konar. Out of the seven proposed dams, only four dams were built. The DVC power map is shown in figure 2, with colour coding for demarcation of the States of Jharkhand and West Bengal.

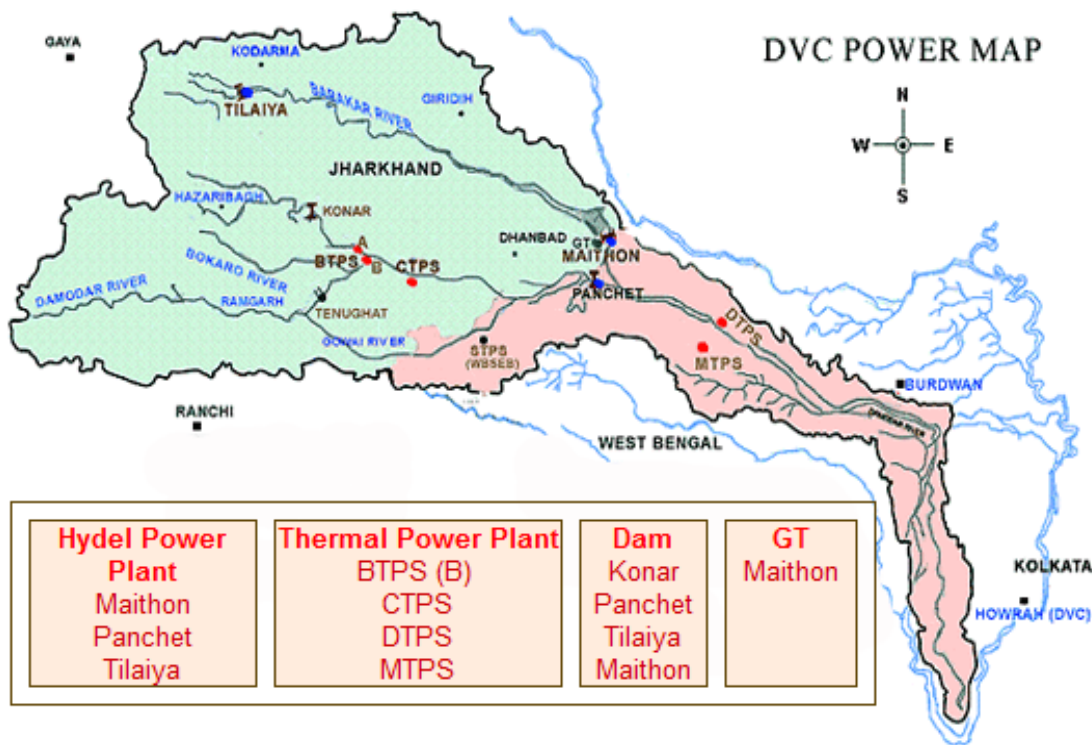


Figure 2 DVC Power Map

## 6. SCOPE OF AUTHORITY

The Damodar Valley Corporation (DVC) is vested with the authority and autonomy for the integrated development of the Damodar River Valley. However, over the last more than sixty years, the role and expectations from DVC have changed significantly due to industrial development in the valley area. The demand for power by industry, especially coal, steel, railways and other consumers has gone up considerably, DVC has built power plants and stepped up its generation capacity over the years.

The Damodar Valley Corporation (Amendment) Bill, 2007 was introduced in the Lok Sabha on 4th May, 2007 and the Union Cabinet approved introduction of Damodar Valley Corporation (Amendment) Bill 2011 on 16th June 2011 for the reconstitution of the DVC with four full time members.

The DVC was established as a quasi-independent corporate body and its authority and planning activities are not restricted by existent State and District boundaries. The Corporation consists of a Chairman, Member (Technical), Member (Finance) and Member Secretary; and six part-time members, namely – one representative from the Central Government; two representatives – one each from the Government of Jharkhand and the Government of West Bengal; three independent experts- one each from the field of irrigation, water supply and generation or transmission of electricity. The Chairman also holds the post of the Chief Executive Officer (CEO) of the Corporation.<sup>3</sup> The corporate body represents the interests of the three participating governments – the Central Government and the Governments of the States of Jharkhand and West Bengal. The legislation that created DVC grants authority to construct dams and barrages, to dig canals, and to maintain navigable waterways.

All the finances required for the accretion of capital assets as well as for the working capital are provided by the three participating governments (2 State Governments and the Central Government). Capital expenditures (CAPEX) for power generation are shared equally between the three Governments. Costs for irrigation are divided between the two State Governments in proportion to their withdrawal of water from the canal system and all expenses for flood control are borne by the West Bengal Government, except for an annual contribution by the Central Government. The statutory functions of the corporation are:

- Flood control
- Promotion and operation of irrigation schemes
- Generation, transmission and distribution of electric power
- Promotion and control of navigation
- Promotion of afforestation and soil erosion control in the Damodar valley

---

<sup>3</sup> <https://pib.gov.in/newsite/PrintRelease.aspx?relid=72721>

## **7. ENVIRONMENT MANAGEMENT AND POLLUTION CONTROL**

The DVC has taken measures for the mitigation of environmental pollution caused by generation of power. The Environment Management & Pollution Control (EM& PC) cell at Corporate Office in co-ordination with their counterparts at each Thermal Power station monitors the environmental parameters as laid down by the Ministry of Environment, Forest & Climate Change (MoEF&CC) and ensures compliance of statutory guidelines as issued by the Central & State Pollution Control Board (CPCB/SPCB) for environmentally sustainable development. In order to ensure the compliance of all norms stipulated by DVC, various pollution control systems/ devices are installed for controlling air and water pollution. Stack emission parameters are regularly monitored and opacity meters are in service in all the running Thermal Power Stations (TPSs). As per the directives of CPCB/SPCB, installation and commissioning of on-line monitoring of emission through stack are implemented in all TPSs and data is being transferred to CPCB/SPCB on regular basis. Also the online monitoring of effluent discharge has been implemented in all the TPSs and data is being transferred to CPCB/SPCB on a regular basis.<sup>4</sup>

## **8. IRRIGATION**

DVC releases water for irrigation from its reservoirs as per advice of the Member Secretary, Damodar Valley Reservoir Regulation Committee (DVRCC) and CWC based on indents placed by the Govt. of West Bengal for cultivation.<sup>5</sup>

Konar, Maithon and Panchet Dams have been included under Dam Rehabilitation and Improvement Project (DRIP). DVC has been included in the National Hydrology Project which is a grant-in-aid Central Sector Scheme under the aegis of Ministry of Jal Shakti (MoJS) and funded by the World Bank.

## **9. CORPORATE SOCIAL RESPONSIBILITY**

In 1981, DVC launched the Social Integration Programme (SIP) commonly known as Corporate Social Responsibility (CSR) with the objective of socio-economic upliftment of the communities residing around its major projects. The CSR aims at improving the quality of life of people, supplementing the socio-economic development of Govt. and convergence with development programme for greater outreach, ensuring people's participation in every stage of development process through consultation and by organizing communities into Self Help Groups (SHGs).

---

<sup>4</sup> DVC Annual Report (2017-18)

<sup>5</sup> DVC Annual Report (2013-14)