

Bina Complex Multipurpose Project:-

1. Planning and Layout

The project is located in Sagar district, partly in Raisen District. The Bina and Dhasan rivers are tributaries of river Betwa. It is also proposed to construct 11.32 m high Semra Ghat Diversion Dam on Dhasan river, 35 m high Dehra Dam on Dehra Nalla and 23.55 m high Madia Dam on Bina river. Water stored in Semra Ghat Diversion Dam would be diverted to Dehra Dam. All water from Madia Dam and Dehra Dam would flow in Bina river and arrested by 25 m high Chakarpur Dam to irrigate 90,000 ha of CCA in villages located in Khurai, Malthone and Bina tehsils of Sagar district. Besides, 6000 ha area is proposed to be irrigated by local people through pumping from reservoir.

Further, brief description is given below:

a) Madia Dam:

The proposed Madia Dam is situated across Bina river in Sagar district. The 75% dependable yield works out to 294.10MCM. The FRL of the dam is 500.55 m and live storage capacity is 267.67 MCM. The length of main dam is 2070m and height of dam is 23.55 m. Total submergence area is 6435.60ha.

b) Semra Ghat Diversion Dam

The proposed Semra Ghat Diversion Dam is situated across Dhasan river. The 75% dependable yield works out to 86.30MCM. The FRL of the dam is 499.7 m and live storage capacity is 6.00 MCM. The length of main dam is 1440m and height of dam is 11.32m. Total submergence area is 575 ha.

c) Dehra Dam

The proposed Dehra Dam is situated across Dehra Nalla. The 75% dependable yield works out to 17.10MCM. The FRL of the dam is 491.60 m and live storage capacity is 72.36MCM. The length of main dam is 3509m and height of dam is 35m. Total submergence area is 754.60ha.

d) Chakarpur Dam

The proposed Chakarpur Dam is situated across Bina river. The 75% dependable yield works out to 51.00MCM. The FRL of the dam is 451.50 m and live storage capacity is 73.84 MCM. The length and height of dam are 751.68m and 25m respectively. Total submergence area is 1349.50ha. Total submergence area under the project works out to 9114.60 ha. Out of which, 1024.44 ha is the forest land. Total CCA of 90,000 ha in Khurai, Malthone and Bina tehsils of Sagar district is proposed to be irrigated by utilizing 324.95

MCM of water. Provision of 57 MCM , 31.40 MCM & 6.51 MCM of water has been kept for drinking purpose , industrial use and environmental releases respectively . 25 MW of hydro power is also proposed to be generated through this project. Besides , 6,000 ha land will be irrigated by local farmers by direct lift from reservoir .

The total cost of the project works out to Rs.4318.88croreat price level 2017-18 .

2. Irrigation & Command Area Development:

Total CCA of this Project Comes to 96,000 Ha in Khurai, Malthone and Bina Tehsil of Sagar District. 57 mcm water is kept for drinking purpose and 31.40 mcm water is kept for industrial use. 25 mw of hydro power is also proposed to be generated through this project. Besides, 6000 Ha Irrigation By Local Farmers By Direct Lift from Reservoir.

3. Socio Economic aspect & R&R:

This information given below in realted to Ken basin in general

Area: 1109.84 sq.km

Principal districts covered : Sagar and Raisen districts

Approximate Population: 1.162 millins

Approximate ST. Population : 90376

- i) **Submergence Area:** It has been estimated that 9114.60ha of land spread over 78 (9 fully & 69 partially) villages shall come under submergence.

It has been estimated that about 1404 families will be affected in these villages. A small population of peripheral villages would also be affected as lands of the people belonging of these villages will also be adversely affected.

- ii) **Cost Estimates:** Detailed Cost Estimates Have Prepared For Land Acquisition And Rehabilitation & Resettlement Infra - Structural Facilities for OUST These are based on Environmental Management and Rehabilitation and Resettlement Plan Prepared by the WRD, GOVT. of mp The Details are Given in table:

Expenditure for Land Acquisition, Rehabilitation and Resettlement Plan

Sl. No.	Description	Amount(Rs. In Lakhs)
1	Land acquisition	97637.20
2	Forest land	18716.21
3	R&R	10796.76
4	CAT Plan	13332.00
5	Cost of diversion of sagar-Bhopal Highway No.4 length 12Km	13250.04
6	Cost of diversion of Sagar-Vidisha Highway No. 4 length 20Km	22083.40
	Total	175815.61

Kotha Barrage:-

1. Planning and Layout

The proposed Kotha Barrage site is located on Betwa river near the village Kotha in Kurwai tehsil, Vidisha district of MP. The total catchment area upto Kotha barrage site is 8711 sqKm. The proposed barrage site is about 8 km from Kurwai which is the nearest town and the nearest railway station. Bhopal is the nearest airport, which is about 115 km from the site. Left bank piped canal having a length of 11.50 km taken up to river Keotan and whole command served by laying Telescopic Pressurized Irrigation System at average CCA level of 415.00 m. The single stage lift of 31 m has been proposed to serve the irrigation in Vidisha district of Madhya Pradesh. The capacity of canal is designed for 3.50 cumec. The GCA and CCA of left bank canal is 15,380 ha and 10,000 ha respectively.

Right bank piped canal having a length of 8.50 km and capacity of 3.50 cumec taken up to river Bina. Single stage lift of 26 m has been proposed to serve the irrigation in Vidisha and Sagar districts of Madhya Pradesh. The GCA and CCA of right bank canal is 15,380 ha and 10,000 ha respectively. The command area after confluence of Bina to Betwa is already included in Bina complex project.

2. Irrigation & Command Area Development:-

By providing micro irrigation between 0.60 ha to 1.20 ha in 10,000 ha of left flank and 10,000 ha on right flank by lifting the water and providing water in a pressurised irrigation network through booster pumping. Annual irrigation in Kotha Barrage is planned for 25,500 ha.

The proposed command of Kotha Barrage is on the left and right bank of river Betwa. On right bank, the command boundary is formed by Bina river and district boundary of Sagar (some small area of Sagar district is included in command) whereas on left flank, the command area is confined to Naren river on upstream side and Kethan river and by the district boundary of newly formed district Ashok Nagar on downstream side. The proposed command covers mostly Vidisha district with small coverage of areas in Sagar district.

As per the availability of water in barrage, a total CCA of 20,000ha will be irrigated in Vidisha and Sagar districts of MP. The project will provide an annual of 25,500 ha by utilizing irrigation 80.69 MCM of water. Provision of 7.5 MCM and 2.5 MCM of water has been kept for domestic water supply and environmental releases respectively.

The total cost of the project works out to Rs.708.73crore. at 2017-18 PL.

3. Socio Economic aspect & R&R:

According to submergence survey, no villages are coming under submergence when the barrage will be constructed. The submergence area of barrage is in the gorge portion and the total area under submergence will be 1389 ha. The whole area is coming under private land. The EMP studies are being carried out by Water Resources Department, Government of MP. Therefore, the details will be appended after completion of the study. However, a provision of Rs. 1000 lakh has been kept for EIA study and implementation of R & R plan and maintaining the environment & ecology of the project area.

Further, Submergence details are as follows

Sl. No.	Name of the project	Bina Complex Multipurpose project				Kotha Barrage
		Madia Dam	SemraGhat Diversion Dam	Dehra Dam	Chakarpur Dam	
1	2	3	4	5	6	7
a)	Villages	54	8	6	8	0
i)	full	6	0	2	1	0
ii)	partial	48	8	4	9	0
b	Land affected(ha)	6435.60	575.00	754.60	1349.50	1359.00
i)	Forest(ha)	130.98	0	378.64	462.52	0
	Non-Forest(ha)	6304.46	575.00	375.96	883.98	1359.00
c)	Families affected(no.)	-	-	-	-	-