

EXECUTIVE SUMMARY

SUTHALIYA PROJECT

1 **PROJECT AT A GLANCE**

1.1 The Preliminary investigation of the **SUTHALIYA** Project was started in the year 2018 with a view to construct storage reservoir across river **PARBATI** to irrigate 48000 Ha. area coming under BIAORA tehsil of Rajgarh. The Gross & Culturable Command Area under this project is 77000 Ha (GCA) and 48000 Ha (CCA) respectively.

1.2 **LOCATION OF THE PROJECT:-**

1.2.1 The **SUTHALIYA** Project Dam Site is located near Berar village of Biaora tehsil of Rajgarh Dist. In M.P. It's Latitude is 23⁰-57'-26" N & Longitude 77⁰-10'-23" E. The River Parbati which is a tributary of the River Chambal which originates from Ashta tehsil in Sehore Dist.

1.2.2 The project site is approachable from Biaora town (located on NH3) via Suthaliya through state PWD road at a distance of 38 km. The nearest railway station is Biaora & nearest airport lies at a distance of 130 km from Bhopal.

1.3 **NECESSITY OF THE PROJECT:-**

Irrigation development in state of Madhya Pradesh is only 28.2 % which is below as compared to national average of 38.75%. The district of Rajgarh is located in Chambal region of MP, the irrigation development is below the state's average figure. Crop cultivation in this district is totally dependent on rainfall and on the vagaries of monsoon. Providing irrigation will improve the economic condition of the farmers and result in efficient utilization of soil and water resources of the region. State and the region are experiencing erratic rainfall, which has further worsened the situation. Fertile land is available in Biaora, Tehsil where reliable irrigation system can make a great difference and yield of crop may increase many fold. Thus, this will result in overall development of the region.

Also during summer season, the ground water table goes deep and the region suffers from the acute shortage of drinking water. Creation of water bodies and developing irrigation systems in the region will result in recharge of ground water and improvement in ecology and will have a great positive impact on the environment and wild life of the region.

To improve the scenario and to have overall development of the Rajgarh Distt., Govt of Madhya Pradesh has planned Suthaliya Project to provide irrigation in areas of Biaora, tehsil by constructing dam near village Berar in Biaora tehsil of Rajgarh dist.

1.4 **WATER AVAILABILITY:-**

The Catchment Area of the Suthaliya Dam is 4206 Sq.Km. eleven rain gauge stations are influencing this project area i.e. Biaora, Ashta, Berasiya, Ichhawar, Narsinghgarh, Sehore, Sonkatch, Shujalpur, Lateri, Kannod & Chachoda. Rainfall data is available for all above mentioned rain gauge station for period of 35 years respectively. The rainfall statistics of the project area is as follows.

Average Annual Rainfall	=	1100.00 mm
Maximum annual Rainfall	=	2351.28 mm
Minimum annual Rainfall	=	378.46 mm

There is observed gauge & discharge data from Pilukhedi G.D. site available at upstream of the proposed dam site. Hence the yield is worked out R.R. relationship and adopted after comparing with other projects in the basin. Rainfall data is available for Pilukhedi G.D. station for period of 30 years respectively. Weighted rainfall for the catchment is computed. This gives 75% dependable yield as 925.32 MCM.

1.5 **IRRIGATION PLANNING:-**

1.5.1 The area is predominantly of Rabi as the principle crop. Based on the existing cropping pattern the following good yielding crops are proposed to irrigate during Rabi season.

Rabi	Particulars
Wheat H.Y.V	22000 Ha.
Wheat OLV	10000 Ha.
Gram	10000 Ha.
Pulse/Oil seeds	6000 Ha.
Total	48000 Ha.
Annual Irrigation	48000 Ha.
Intensity of Irrigation	100%

1.5.2 The crop water requirements are worked out for 35 years as per Modified Pen-man method and based on the guide lines suggested by **T.C No.25 (with upto date amendments), MPWRD – Bodhi.**)

1.5.3 Flood : The computation of P.M.F. have been carried . The design peak flood values worked out as 29919 Cumec.
Adopting a silt rate of 0.75 Acre ft./ Sq mile / Yr.

1.5.4 The principal levels of SUTHALIYA Project are as follows:

- i) T.B.L = RL 432.00 M
- ii) M.W.L = RL 428.00 M
- iii) F.R.L = RL 428.00 M
- iv) Crest level = RL 416.00 M
- v) River Bed Level = 412.00

1.5.5 The Submergence area at F.R.L is 4330.52 Ha. out of which forest submergence area is 0. revenue land submergence is 564.00 Ha. and private land submergence is 3766.52Ha..

1.6 Main Components of The SUTHALIYA Project:-

Canal System is based on Lift irrigation system proposed to take-off from Rising main on left flanks .

1.7 Recommendation:

The site is located in un-irrigated area of Biaora Tehsil Distt. Rajgarh . People are in acute need of water for irrigating their fields and for domestic use. Also it will generate employment during construction period.

The unit wise cost of the project is estimated adopting USR (Govt. of Madhya Pradesh, Water Resource Deptt. in force from 01.09.2017. The estimated cost of the project works out to be Rs. 158970.00 Lakhs. The cost per Ha on CCA works out to be Rs 3.31 Lakhs per Ha.

Looking to current price the cost of scheme is reasonable. Therefore, the scheme is suitable for construction. It is therefore recommended that if the project is implemented, it will extend benefit to a large number of beneficiaries and it will improve the economic conditions of the project area and the nearby areas.

The government is also keen for the developing the backward region. Hence the **Suthaliya Project** is recommended for sanction & construction at an earliest.

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