

New Delhi Letter No. 7-69/2011-FC(pt), Dated 01st August, 2017

Parameter-1	Ecosystem services losses due to proposed forest diversion Total forest land to be diverted -31.49 ha. Net Present Value for 1 ha of forest land to be diverted=@ Rs. 10.34 Lakh (maximum for eco class value-1) per ha . Hence total net present value for 31.49 ha of forest land will be Rs.325.60 Lakh 31.49 x 1034000 = 32560660 Rs. 325.60 Lakh
Parameter-2	Loss of animal husbandry productivity, including loss of fodder Estimated 10% loss of animal husbandry productivity due to diversion of 31.39 ha. of forest land which will be Rs 8.88 Lakh 10% x 32560660 = 3256066 Rs. 32.56 Lakh
Parameter-3	Cost of human resettlement As submergence area is within Nalla banks & on the forest land. Hence there will be no loss involved on account of Human Resettlement
Parameter-4	Loss of public facilities and administrative infrastructure (Roads,building,school,dispensaries,electric lines,railways,etc) on forest land ,which would require forest land if these facilities were diverted due to the project. As this project doesnot involved any loss of public facilities and infrastructure. Hence there will be no loss on account of the public facilities and infrastrucutur.
Parameter-5	possession value of forest land diverted. At present the possession value of forest land 31.49 ha to be diverted estimated to be 30% of the Net Present Value calculated (Maximum for eco class I) . The total maximum Net Present Value of forest land comes to Rs. 325.60 Lakh. Hence possession value comes out to Rs. 97.68 Lakh 30% x 325.60 = 97.68 Lakh
Parameter-6	Cost of suffering to oustees As this project doesnot involved any rahabilitation there will be no loss involved on this account.
Parameter-7	Habitat fragmentation cost this project involves forest land along nalla bank, which is habitat for various wild animals and birds found in that area . There is no Tiger project , National park , but there is Yawal Wildlife sanctuary and ecosensitive zone of existing protected area . habitat fragmentation cost calculated as 50% of value of maximum Net Present value realized for this project and which comes out to Rs. 162.80 Lakh 50% x 325.60 = 162.8 Lakh
Parameter-8	Compensatory afforestation and soil & moisture conservation cost As the project area is 31.49 ha and this being a State Government project the compensatory affprestation will be taken on alternate land provided by Collector Jalgaon I,e 31.49 ha of land . This compensatory Afforestation will be raised and maintained for period of 10 years at the cost of User Agency calculated at prevailing wage rates of forest Department and which comes out to Rs. 214283/- per ha. and hence this operation cost will be Rs. 27.68 Lakh 31.49 x 214283 = 6747771.67 Rs 67.47 Lakh

Evaluation of benefits from the project as per parameters in table-C New Delhi Letter No. 7-69/2011-FC(pt),Dated 01st August,2017

Parameter-1	Increase in productivity attribute to the specific project. a) Net increase in agricultural produce for 50 years. =Rs. 10613.69 Lakh Rs. 10613.69 Lakh b) It is proposed to develop fisheries produced reservoir, Hence overall benefits on this account for 50 years = Rs. 119.17 Lakh Rs. 119.17 lakh c) Animal husbandry produce for 50 years=338.73 Lakh Rs. 338.73 Lakh
Parameter-2	Benefits to economy due to specific project. It is assumed that there will be an overall benefit to the economy at 50% of increase in the agricultural output worked out under parameter 1 (a). Thus benefit due to project on this account will be.=Rs. 5306.84 Lakh. 50% x 10613.69 = 5306.845 Lakh
Parameter-3	Number of population benefited due to specific project. In all 5 villages are to be benefited in the command area due to construction of this project. Total population of these villages is 6242,assuming 6 members per family,total no of families benefited will be about 1040 , assuming on increase income per family Rs.50000/- per to the population on this account for 50 years,for 1040families willbe=Rs. 2600.83 lakh. 50000 x 1040 x 50 = 2600000000 Rs. 2600.83Lakhs Rs 2600.83 lakh
Parameter-4	Economic benefit due to of direct and indirect employment due to the project. a) Employment generated during construction period. Generally in construction project, ratio of labour component cost to material component cost is 30:70. Employment generated during construction of the project ,the total cost of the project is 1200 lakh. The labour component will be about about 30% ie Rs.360 Lakh 30% x 5600 = 1680 Lakh b) Employment generated after construction. It has been assessed from the statistics available for the irrigation project in operation that labour potential of 50 mandays /ha/year is generated perenially in the fiels and agro-based industries. In case of this project ICA of project is 264 ha. assuming wages at Rs 448/- per day ,the employment potential that will be created during 50 years will be Rs. 539392 Lakh. 50 x 448 x 264 x 50 = 295680000 Rs. 295.68 Lakh
Parameter-5	Economic benefits due to Compensatory afforestation. The compensatory afforestation will be raised over the land of 31.49 ha. The economic benefits realized from this project are calculated over the period of 50 years. At NPV rate of Rs 6.26 lakh/ha. Which comes out to Rs. 4043.96 lakh. 31.49 x 10.34 x 50 = 16280.33 lakh

CALCULATIONS OF BENEFIT COST RATIO

Total cost (as per table -B Calculation)	=	Rs 617.01 Lakh
Total Benefits (as per table -C Calculation)	=	Rs 20047.59 Lakh
Hence, Benefit/Cost ratio	=	32.49

Cost Benefit Analysis for forest land diversion in accordance with the MoEF & CC's guidelines dated 1.8.2017

Table-B: Estimation of Benefits for forest diversion for Handyakundya Storage Tank Tal Chopda Dist. Jalgaon

sr. no	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	Net Present Value for 1.00 ha of forest land=@ Rs. 10.34 Lakh per ha. Net Present value for 31.49 ha of forest land= 31.49×1034000 = Rs. 325.60 Lakh
2	Loss of animal husbandry productivity, including loss of fodder	10% of Rs. 325.60 Lakh of the Total Net Present Value calculated as above comes to:- Rs. 3.25 Lakh
3	Cost of human resettlement	There will be no loss involved on account of human settlement.
4	Loss of public facilities and administrative infrastructure (Roads, building,school,dispensaries,electric lines,railways,etc) on forest land ,which would require forest land if these facilities were diverted due to the project.	Not Applicable.
5	possession value of forest land diverted.	30% of Rs. 325.60 Lakh Net Present Value for possession value of forest land comes to= Rs. 97.68 lakh
6	Cost of suffering to oustees	Nil
7	Habitat fragmentation cost	50% of Rs.325.60 Lakh Net Present Value for habitat fragmentation cost= Rs.162.80 Lakh
8	Compensatory afforestation and soil & moisture conservation cost	Rs.214283/- per ha $\times$ 12.92 ha= Rs. 27.68 Lakh
Total Estimated Cost of forest diversion		Rs. 617.01Lakh

Cost Benefit Analysis for forest land diversion in accordance with the MoEF & CC's guidelines dated 1.8.2017

Table-B: Estimation of Benefits for forest diversion for Handyakundya Storage Tank Tal Chopda Dist. Jalgaon

sr. no	Parameters	Remarks
1	Increase in productivity attribute to the specific project.	a) Net increase in agricultural produce for 50 years . = Rs 10613.69 Lakh b)It is proposed to develop fisheries produced reservoir, Hence overall benefits on this account for 50 years = Rs. 119.17 Lakh c)Animal husbandry produce for 50 years = Rs. 338.73 Lakh
2	Benefits to economy due to specific project.	It is assumed that there will be an overall benefit to the economy at 50% of increase in the agricultural output worked out under parameter 1 (a). Thus benefit due to project on this account will be.= Rs.5306.84 Lakh.
3	No. of population benefited due to specific project.	In all 5 villages are to be benefited in the command area due to construction of this project. Total population of these villages is 6242,assuming 6 members per family,total no of families benefited will be about 1040 , assuming on increase income per family Rs.50000/- per to the population on this account for 50 years,for 1040 families will be= Rs. 520.16 lakh.
4	Economic benefit due to of direct and indirect employment due to the	a) Employment generated during construction period.
5	Economic benefits due to Compensatory afforestation.	The compensatory afforestation will be raised over the land of 31.49 ha. The economic benefits realized from this project are calculated over the period of 50 years. At NPV rate of Rs 10.34 lakh/ha. Which comes out to Rs. 3149 lakh.
Total Benefits.		Rs. 20047.59 Lakh

Place : Jalgaon

Date :

Dy Conservator of Forests
Yawal Forest Division,
Jalgaon