


BADNAWAR MICRO LIFT IRRIGATION PROJECT

COST BENEFIT ANALYSIS PARAMETER FOR EVALUATION OF LOSSES OF FOREST

| S.No | PARAMETER | IRRIGATION PROJECT |
|------|--|--|
| 1 | Increase in productivity attributed to the specific project. | The Badnawar Micro Lift Irrigation Project is conceived to cater irrigation water to 50000.0 hectare of CCA in village Badnawar and Other 130 Nos Benefited of Dhamnod Tehsil of dist.-Dhar. Irrigation intensity is proposed to be increased from existing 100% to 143% in Command Area. Total amount annual benefits from increased productivity have been worked out as 79,815 Qt from 2,47,000qtl. Therefore total profit in next 100 years would be 58,469,09 lakhs for one year. |
| 2 | Benefits to economy | The main objective of Badnawar Micro Lift Irrigation Project is to provide benefit of irrigation water to 50000.00 ha. land, which is mainly owned by tribals. And after completion, assured water will be given to boost up their economy. |
| 3 | Number of population benefited | The Badnawar Micro Lift Irrigation Project is conceived to cater irrigation water to 50000.00 hectare of CCA in village Badnawar and Other 130 Nos Benefited of Dhamnod Tehsil of dist.- Dhar will be benefited by this scheme of irrigation. The total cultivators benefited through irrigation shall be nearly 21.85 lakh No. |
| 4 | Employment potential | During the construction stage temporary employment to 30000-mandays and permanent employment 50 persons shall be generated for 24 months |
| 5 | Cost of acquisition facility on non-forest land wherever feasible | No human commodity will be affected due to construction of project. |
| 6 | Loss of (a) Agriculture & (b) Animal Husbandry production due to diversion | No loss of agriculture envisaged. In fact present object has been proposed for the improvement of agriculture in this area. No loss in the animal Husbandry production. |
| 7 | Cost of rehabilitating the displacement persons as different from | Not Applicable. Based on the survey, it was found that there is no displacement due to project and as such there is no resettlement issue related to project |
| 8 | Cost of supply of free fuel-wood to workers residing in or near forest area during period of construction | The labor camps will be facilities with kerosene/LPG facilities and hence no tree cutting shall be there for fuel wood. |
| 9 | Total benefit due to project | Rs. 122.98 yearly in lakhs Rs. 12298.00 lakhs after 100 years |

Cost Benefits Analysis:

- (i) Total benefit due to project (Rs.12298 Lakh)
- (ii) Total Annual Cost (Expenditure 8598 Lakhs)
- (iii) Benefit Cost Ratio - 1.43
- (iv) Cost Benefit Ratio - 0.70


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COST BENEFIT ANALYSIS

BADNAWAR MICRO IRRIGATION PROJECT

On the basis of Guidelines for forest Land Diversion 2018

Table A cases Under Which A cost Benefit Analysis for Forest Diversion Area Required

| S.No. | Nature of Proposal | Applicable/Not Applicable | Remarks |
|-------|---|---------------------------|---|
| 1 | All categories of proposal involving forest land upto 20 ha. In plains and upto 5 ha in hills. | Not Applicable | |
| 2 | Proposal for defense installation purposes and of prospecting (prospecting only) | Not applicable | |
| 3 | Habitation establishment of industrial units tourist lodges, complex and other building construction | Not applicable | |
| 4 | All other proposal involving forest land more than 5 ha in hills including roads, transmission lines minor medium and major irrigation project hydro projects, mining activity, railway lines, location specific installation like micro wave station, auto repeater centers, TV towers | Applicable | These are cases where a cost benefits analyses is necessary to determine when diverting the forest land to non forestuse of overall public interest. BadnawarLift Micro Irrigation Schemeunder this category. |




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Table -B Estimation of Cost of Forest Diversion

| SI No. | PARAMETER | Remarks |
|--------|---|---|
| 1 | 2 | 3 |
| 01 | Ecosystem Services losses due to proposed forest diversion. | Ecosystem Services due to diversion of forest land suggested by the forest classification report of proposed Badnawar Micro Lift Irrigation Scheme. Cost of land 35.000 Ha x 12,28,590 = Rs. 4,30,00,650/- Eco class III consisting of tropical dry deciduous |
| 02 | Loss of animal husbandry productivity including cost of fodder | As per the cost of benefit guidelines i.e. 10% of N.P.V. 122859 per hac. 35.000 x 1,22,859 = Rs. 43,00,065/- |
| 03 | Cost Human Resettlement | There is no human settlement due to proposed Badnawar Micro Lift Irrigation Scheme hence cost of humans resettlement is NIL. |
| 04 | Loss of public facility and administrative infrastructure (road, building, schools, dispensaries, electric lines, railways etc.) on forest land if these facilities were diverted due to the project. | There is no loss public facility and administrative infrastructure (road, building, schools, dispensaries, electric lines, railways etc.) on forest land due to construction of Badnawar Micro Lift Irrigation Scheme. No cost has been added on this account |
| 05 | Possession value of forest land diverted | The possession value of forest land diverted is taken 30% of N.P.V. due to loss of forest i.e.= 47300715 @ 30% = Rs. 1,41,90,215/- |
| 06 | Cost of suffering to oustees | Not Applicable |
| 07 | Habitat fragmentation cost | Forest land is being acquired for lying of pipeline of Badnawar Micro Lift Irrigation Scheme. There is no amount is taken under this account. |
| 08 | Compensatory afforestation and soil and moisture conservation cost. | The cost of @ Rs. 6.00 lacs per hac. Is taken for Compensatory afforestation and soil and moisture conservation cost. Hence amount will be 35x6= 2,10,00,000/- |
| 09 | Total cost due to forest land diversion | Total cost due to forest land diversion for Badnawar Micro Lift Irrigation Scheme will be Rs. 43000650+4300065+14190215+21000000 = Rs. 8,24,90,930/- |


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Badnawar Micro Lift Irrigation Scheme

COST BENEFIT ANALYSIS

Total Cost due to forest land:-Rs. 8,24,90,930/-

Total Benefit due to project :-Rs. 12,29,80,000/-


Benefits Ratio of project :-1.43



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**Table-C Existing Guidelines for Estimating Benefits of Forest
Diversion in CBA**

| S.No. | PARAMETER | IRRIGATION PROJECT |
|-------|--|---|
| 1 | 2 | 3 |
| 1 | Increase in productivity attribute to the specific project. | The crop production benefit due to Badnawar micro lift Irrigation Project will be Rs. 58467 Lakhs in designed life of 50 year. The project is proposed to increase the existing irrigation intensity of 100% to 143% in command area of 50000 Hectare. The total annual benefit for increased productivity has been worked out as wheat 126000 Qtls. Gram 45000, Vegetables 56000 others 20000 total Qtls is 247000 from 50000 Hectare. |
| 2 | Benefits to economy due to the specific project. | The main objective of Badnawar Micro Lift Irrigation Project is to provide benefit of irrigation water to 50000.00 ha. land, which is mainly owned by tribal. And after completion, assured water will be given to boost up their economy & living standard. |
| 3 | No. of population benefited due to specific project. | The Badnawar Micro Lift Irrigation Project is conceived to cater irrigation water to 50000.00 hectare of CCA in village Badnawar and Other 130 Nos Benefited of Dhamnod Tehsil of dist.- Dhar will be benefited by this scheme of irrigation. The total cultivators benefited through irrigation shall be nearly 21851 No. |
| 4 | Economic benefits due to of direct and indirect employment due to the project. | During the construction stage employment of 300,000-man days & permanent employment of 10% is anticipated in this project. This project will indirectly boost the Argo based industry by increased Productivity. |
| 5 | Economic benefits due to compensatory afforestation. | An economic benefit due to compensatory afforestation has considered as per the benefit of C.A. guidelines of ministry for N.P.V. estimation. |


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