**Annexure III**

## Conducting cost-benefit analysis for projects involving forest diversion

**Table-A: Cases under which a cost-benefit analysis for forest diversion is required**

| S. No. | Nature of proposal | Applicable/ not applicable | Remarks |
|---|---|---|---|
| 1 | All categories of proposals involving forestlandupto20 hectares in plains and upto5 hectare in hills. | Not applicable | These proposals may be considered on a case-to-case basis and value judgment. |
| 2 | Proposal for defence installation purposes and oil prospecting (prospecting only). | Not applicable | In view of national Priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use. |
| 3 | Habitation, establishment of industrial units, tourist lodges complex and other building construction. | Not applicable | These activities being detrimental to protection and conservation of forest ,as a matter of policy, such proposals would be rarely entertained. |
| 4 | All other proposals involving forestland more than20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centers, TV towers etc. | Applicable | These are cases where a cost-benefit analysis is necessary to determine when diverting the forestland to non-forest use nthe overall public interest. |

**Table-B: Estimation of cost of forest diversion**

| S. No. | Parameters | Remarks |
|---|---|---|
| 1 | Ecosystem services losses due to proposed forest diversion. | Ecosystem loss due to proposed Forest Diversion **= Rs. 6040 lakh** |
| 2 | Loss of animal husbandry productivity, including loss of fodder. | We may take as 10%of NPV**= Rs. 604 lakh** |
| 3 | Cost of human resettlement. | Cost of Human Resettlement **Rs. 7189 lakh** |
| 4 | Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forestland, which would require forest land if these facilities were diverted due to the project. | **In Phase-I no extra forest land is required for these infrastructures** |
| 5 | Possession value of forest land diverted. | We may take as 30%of NPV = Rs. 6040 lakh = **Rs.1812 lakh** |
| 6 | Cost of suffering to oustees. | Cost of Rehabilitation as per R&R Plan is **Rs. 169097 lakh** Tentative earning of outstee if they have not shifted= 1748*86108*2=Rs. 3010 lakh (Assuming per capita income of J&K Rs. 86108) Cost of Suffering =Rs. 3010*1.5=**Rs. 4515 lakh** |
| 7 | Habitat Fragmentation Cost. | Cost due to fragmentation is Rs.6040lakh*0.50 = **Rs.3020 lakh** |
| 8 | Compensatory Afforestation and soil& moisture conservation cost. | The cost of Compensatory afforestation is **Rs. 1267.74 lakh** |

**Total Cost = 24447.74 lakhs**

**Table-C–Existing guidelines for estimating benefits of forest-diversion in CBA**

| S. No. | Parameters | Remarks |
|---|---|---|
| 1 | Increase in productively attribute to the specific project. | As per DPR increase in productivity due to introduction of irrigation is **Rs. 29284 lakh** |
| 2 | Benefits to economy due to the specific project. | As per DPR the net benefit from agriculture, drinking water supply and flood protection is **Rs. 34376.50 lakh** |
| 3 | No. of population benefited due to specific project. | As per census 2011, about 35000 population shall be benefited in Kathua and Samba |
| 4 | Economic benefits due to of direct and indirect employment due to the project. | During Construction phase about 800 workers and 200 technical staff may be employed at site **Total Cost = 19000 lakh** |
| 5 | Economic benefits due to Compensatory afforestation. | Benefits from such Compensatory Afforestation accruing over next50years monetized and discounted to the present value pending should be included as benefits of Compensatory Afforestation. *For benefits of CA the guideline of the Ministry for NPV estimation may be consulted. |

**Total benefit= Rs. 82660.50 lakhs *(This does not include benefits due to compensatory afforestation.)**

**Benefit Cost Ratio: = Rs. 82660.50/ 24447.74 = 3.38**