COST BENEFIT ANALYSIS REPORT

(As per MoEFCC Guideline No. 7-69/2011-FC(Pt.) dated 1st August 2017)

Proposal for Diversion of 188 Ha. Forest Land

of Village – Hazira and Village – Suvali (Shivrampur)
in District – Surat of Gujarat State

for

Port Back-up Facilities

User Agency

ADANI HAZIRA PORT PRIVATE LIMITED

Hazira – Surat

INTRODUCTION:

Adani Hazira Port Private Limited has set up multi-commodity port in Hazira region of District Surat in the year 2012. The existing Port infrastructure is developed on reclaimed land. The port location is surrounded by Forest Land only. This is the only commercial port in the entire South Gujarat fulfilling the requirement of international movement of cargo. The port is growing since its inception and to meet the trade requirement of the nation, more port back up infrastructure including railway line is necessary. Hence the forest land requirement has arised.

To compare the benefits from the project against the loss due to diversion of the proposed 188 Ha forest land, this cost benefit analysis is conducted.

COST BENEFIT ANALYSIS:

As per the MoEFCC, GoI guidelines No. 7-69/2011-FC(Pt.) dated 1st August 2017 the following Cost Benefit Analysis is done.

Part – I: Estimation of Cost of the Forest Diversion

SN	Parameters	Remarks (Explanation)	Value / Detail
1	Ecosystem services losses due to proposed forest diversion	Economic value of loss of eco-system services due to diversion of forests shall be the net present value (NPV) of the forest and being diverted as prescribed by the Central Government (MoEF & CC) *Note : In case of National Parks the NPV shall be ten(10) times the normal NPV and in case of Wildlife Sanctuary the NPV shall be five(5) times the normal NPV or otherwise prescribed by the ministry or any other competent authority)*	As per the MoEF G R No. NPV – 102008/Court-8-F dated 9th September 2008, Surat District is falling in Eco-Class III. The proposed land for diversion is open forest land having less than 40% density. Hence the NPV rate applicable is Rs. 6,26,000/- per ha. The total NPV value for 188 Ha land is :- 188 x 6,26,000 = 11,76,88,000/- **Say Rs. 11.77 Crs**
2	Loss of animal husbandry productivity, including loss of fodder	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum	The proposed land for diversion is intertidal land, hence as such there is no animal husbandry activity is affected. However, 10% of the NPV is considered for the calculation of CBA. 188 x 6,26,000x 10% =

			1,17,68,800/- **Say Rs. 1.18 Crs**
3	Cost of human resettlement	To be quantified and expressed in monetary terms as per approved R&R plan	This is not applicable as no human settlement is displaced. **NIL**
4	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways etc.) on forest land, which would require forest land if these facilities were diverted due to the project	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion	There is no loss of public facilities and administrative infrastructure due to this project. No such facility exists within the proposed forest land diversion. **NIL**
5	Possession value of the forest land diverted	30% of environmental cost (NPV) due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum	30% of the NPV : 188 x 6,26,000 x 30% = 3,53,06,400/- Say Rs. 3.53 Crs Circle rates(Agri-Non-irrigated) Hazira Rs. 1.40 Crs x 73 ha = 102.20 Cr Suvali (Shivrampur) Rs. 1.10 Crs x 115 ha = 126.50 Cr Total = 228.7 Cr x 30% **Rs. 68.61 Crs**
6	Cost of suffering to oustees	The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not	Not Applicable. No existence of people on forest land. **NIL**

		been shifted	
7	Habitat Fragmentation Cost	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule	Not applicable. However, 50% of the NPV is considered to calculate CBA. 188 x 6,26,000 x 50% = 5,88,44,000/- **Say Rs. 5.88 Crs**
8	Compensatory afforestation and soil moisture conservation cost	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value	Rs. 4,21,545/- is considered for Compensatory Afforestation with 10 years of maintenance expenses The total cost would be Rs. 4,21,545/- x 188 Ha= 7,92,50,460/- **Say Rs. 7.92 Crs**

Total Estimation of cost of forest diversion is Rs. 95.36 Crs

Part – II: Estimation of Benefits of the Forest Diversion

SN	Parameters	Remarks (Explanation)	Value / Detail
1	Increase in productivity attribute to the specific project	To be quantified & expressed in monetary terms avoiding double counting.	Presently the Hazira Port is growing @ 15% per annum in terms of cargo handling. With the additional land available for Port Back-up facility and Railway Connectivity through the proposed forest land for diversion, we anticipate to maintain this growth rate. The revenue from the present port capacity is apx. Rs. 900 Crs which will be increased to Rs. 1800 Crs after use of the proposed forest land. Hence incremental productivity would be Rs. 900 Crs over a period of 5 years.

			Rs. 180 Crs per annum
2	Benefits to economy due to the specific project	The incremental economic benefit in monetary terms due to the activities attributed to the specific project	Due to port project, during and after construction of the project, people and the industry situated in this area will be benefited greatly. The construction of railway line will provide safe and speedy evacuation of cargo. The transportation business will flourish further with increased cargo handling by port. It is difficult to quantify the benefits in monetary terms. However, we anticipate this value to be Rs. 100 Crs. Also the revenue to the nation through Custom Duty during FY 2018-19 was apx. Rs. 5000 Crs **Rs. 5100 Crs**
3	No. of population benefited due to specific project	As per the Detailed project report	The population of Hazira village is 3000 and the population of Suvali (Shivrampur) village is 1500. They will be benefitted by extending support services to port and its customers. Also the CSR spends will be increased which will be benefited to local community.
4	Economic benefits due to of direct and indirect employment due to the project	As per the Detail project report	We anticipate more than 1500 indirect employment opportunities and more than 200 direct employment opportunities. If we consider Rs. 500/- per day wages for indirect employment, the annual monetary benefits will be Rs. 500 x 1500 x 365 = Rs. 27.38 Crs

			If we consider Rs. 1500/- per day wages for Direct employment, the annual monetary benefits will be Rs. 1500 x 200 x 365 = Rs. 10.95 Crs
5	Economic benefits due to Compensatory Afforestation	Benefits from such compensatory afforestation accruing over next 50 years monetized and discounted to the present value should be included as benefits of the compensatory afforestation. For benefits of CA the guidelines of the Ministry for NPV estimation may be consulted.	Rs. 4230/- per ha/year is considered as benefits from the CA. The total benefits for 50 years comes to as under : Rs. 4230 x 188 x 50 = 3,97,62,000/- **Say Rs. 3.98 Crs**

Total Estimation of Benefits of the forest diversion is Rs. 5322.31 Crs

Conclusion of the Report:

Benefit to Loss Ratio is = 5322 : 95

= 56

The benefits from the diversion of the above forest land are 56 times than the cost of diversion of the forest land.

Note :

i) *Conservative estimation is considered for productivity and revenue compare to present past 5 years growth.*

ii) *Monetary value of benefits to be population is not derived and not considered in benefits.*