



Name of Work: Diversion of 12.1801 Ha of forest land in F.Sy.No.17 (New Sy.No.20) of Ittigehalli Village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District (Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favour of the Executive Engineer, Karnataka Nigam Ltd (KNNL) No.3 Bhadra Canal Division, Malebennur,-reg.

Proposal No: FP/KA/WATER/146299/2021

Sl No	Observation	Compliance
1	2	3
1	The corrected B:C ratio in compliance to condition A(4) of the in-principle approval has not been provided. Therefore, the B:C ratio has to be provided as per prescribed guideline ( please refer Annexure-1 "Conducting cost benefit analysis for project involving forest diversion" at Page 110 of consolidated guidelines and clarifications issued under Van (Sanrakshan Evam Samvardhan) Abhiniyam, 1980 and Van (Sanrakshan Evam Samvardhan) Rules, 2023 by MoEF&CC, New Delhi).	Cost Benefit Analysis report enclosed
2	The evidence in the form of photographs showing the boundary demarcation of forest area proposed for Diversion is not provided in compliance to condition No.A(8).	GPS Photographs enclosed
3	The compliance regarding uploading in e-green watch portal is not verifiable, Submit the GPS id of the KML file uploaded in e-green watch portal with regard to forest area proposed for diversion and CA area and GPS id in compliance to condition No.A(6).	GPS id of the KML file enclosed

  
 ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್  
 ಕರ್ನಾಟಕ ನೀರಾವರಿ ನಿಗಮ ನಿಯಮಿತ  
 ನಂ. 3, ಭದ್ರಾ ನಾಲಾ ವಿಭಾಗ,  
 ಮಲೇಬೆನ್ನೂರು-577 530.

  
 ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್,  
 ಕ.ನೀ.ನಿ.ನಿ, ನಂ.4.ಭದ್ರಾ ನಾಲಾ ಉಪ-ವಿಭಾಗ,  
 ಧಾರವಾಡ-577224.

# **KARNATAKA NEERAVARI NIGAM LIMITED**

( A Government of Karnataka Enterprise )



## **BHADRA PROJECT**

### **COST BENEFIT ANALYSIS REPORT**

**Name of Work: Diversion of 12.1801 ha. of forest land in F.Sy.No.17(new Sy.No.20) of Ittigehalli village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District (Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favor of the Executive Engineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur.**

**Office of the  
Executive Engineer,  
KNNL, No.3 Bhadra Canal Division,  
Malebennur.**

**Office of the  
Assistnat Executive Engineer,  
KNNL, No.4. Bhadra Canal Sub Divisio  
Sasvehalli.**

## COST BENEFIT ANALYSIS

Name of Work: Diversion of 12.1801 ha. of forest land in F.Sy.No.17(new Sy.No.20) of Ittigehalli village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District (Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favor of the Executive Engineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur.

Table A: Category of Proposals for which Cost Benefit Analysis are Applicable

SL No	Nature Of Proposal	Applicable /Not Applicable	Remarks
<b>COST BENEFIT ANALYSIS FOR DIVERSION OF FOREST LAND</b>			
1	All categories of Proposals Involving Forest land up to 20 Ha in plains and Up to 5 Ha in Hills	Not Applicable	Nil
2	Proposals for defense installation purposes and oil prospecting (Prospecting only)	Not Applicable	Nil
3	Habitation, establishment of industrial units, tourist lodges/complex and other building constructions.	Not Applicable	Nil
4	All other proposals involving forest land more than 20 Ha in plain and more than 5 Ha in hills including transmission lines, medium and major irrigation projects, hydel projects, mining activities, Railway lines, location specific installation like Micro wave station, auto repeater center, TV towers, etc.	Applicable	These are where a benefit analysis is necessary to determine whether diverting the forest land to non-forest use is in the overall public interests.
5	Proposal for renewal of Mining Lease for forest land.	Not Applicable	Nil



**Table-B: Estimation of Cost of Forest Diversion**

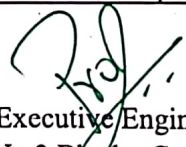
SL No	Parameter	Criteria	Cost per Year (lakhs)	Cost for 50 years (lakhs)
1	Ecosystem services losses due to proposed forest diversion	Economic Value of loss of eco-system services due to diversion of forest shall be the Net Present Value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF&CC). Present NPV for 1 Ha of forest land = 9,57,780/- lakhs Present NPV for 12.1801 Ha forest land = $12.1801 \times 9,57,780 = 116.65$ lakhs	116.65	5832.50
2	Loss of animal Husbandry Productivity, Including loss of Fodder.	10% of the NPV	11.67	583.25
3	Cost of Human resettlement	No R&R involved in the project	-	-
4	Loss of public facilities and administrative infrastructure (roads, building, schools, dispensary, electric lines, railways, etc)	No loss public facilities involved in the project	-	-
5	Possession Value of Forest land Diverted	30% of the NPV	35.00	1749.75
6	Cost of suffering to Oustees	No R&R involved in the project	-	-
7	Habitat Fragmentation Cost	50% of the NPV	58.33	2916.25

8	Compensatory afforestation and Soil &% moisture conservation Cost	Rate of C.A. for 1 Ha of forest land = 19,30,000 (as per Karnataka Forest Dept Guideline) Economic benefits due to Compensatory afforestation Value of C.A. for 12.1801 Ha forest land x 19,30,000 = 235.07 lakhs	235.07	11753.5
<b>Total:</b>			<b>456.705</b>	<b>22835.25</b>

  
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**Table-C: Calculation of the Benefits**  
**(Parameters for Evaluation of Benefits)**  
**(Not withstanding loss of forest)**

SL No	Parameter	Criteria	Cost per Year (lakhs)	Cost for 50 years (lakhs)
1	Increase in Productivity attribute to the Specific project	Not Applicable for Drinking water projects	-	-
2	Benefits to economy to the Specific project	Not Applicable for Drinking water projects	-	-
3	No of Population Benefited due to specific project	Ittigehalli, Gudumaghatta, Anavery, Diggenahalli villages of Bhadravathi Dist will be benefitted due to consruction of This New tank. The total population benefitted by Construction of New 6141. Population of Ittigehalli and Nearby villages of Bhadravathi Taluk as per 2011 Census	6141	
4	Economic benefits due to of direct and indirect employment due to this project	More local people will be benefitted during construction .Total employment = 200 (Per day wages as per minimum wages notifications 2025-26)	-	-
5		75 skilled employees X Rs. 573.29/- (per day) X 30 days X 12 months = Rs. 1,54,78,830/-p.a.	154.78	7,739.00
6		150 unskilled employees X Rs. 563.39/- (per day) X 30 days X 12 months = Rs. 2,53,52,550/- p.a.	304.23	15,211.50
7	Economic benefits due to Compensatory aforestation	Benefits from compensatory afforestation accruing over next fifty years monetized and discounted to the present value should be as benefits of C.A. The Compensatory Afforestation will be done in 12.1801 hactare of degraded forest land. Which is down the line would be having a density of minimum 0.7 The ecological value for a 50 years period for the density of 10 is Rs. 126.74 Lakhs per hectre By considering minimum 0.7 density the ecological gain for the project would be $126.74 \times 0.7 \times 12.1801 = \text{Rs. } 1080.59 \text{ lakhs}$	-	1080.59
<b>Total:</b>			<b>459.01</b>	<b>24,031.09</b>

  
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## Calculation of Benefit/Cost Ratio

Total Benefits (As per II calculations) = Rs. 24031.09 Lakhs

Total Losses (As per I calculations) = Rs. 22835.25 Lakhs

Hence, Benefit/Cost Ratio =  $\frac{24,031.09}{22835.25} = 1.05$

Thus, the project gives positive Benefit/Cost Ratio with minimal environmental Losses



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## POSITIVE IMPACTS

Long term Environmental and Social benefits from the projects will arise mainly from traditional sources, viz: Recharging of Ground water leads to enhancing of socio-economical status of formers in and around the Proposed project site area. but exact quantification is difficult as it is a time dependent phenomenon .



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## Reports

## View Remarks on Polygons Uploaded by States

Use  to download KML File

State\* : Karnataka

Circle : Shimoga

Division : Bhadravathi

Range : Santhisagar














Site Type\* : Diverted Land

GPS ID :



कैप्चा कोड प्रविष्ट करें.

View Sites for which polygons uploaded

GPS ID	Updated On	Updated By	State	Division	Range	Site/Work/Asset Name	Area(In Ha.)	Download
17588	22/09/2025 15:35:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	Ittigehalli	12.180	
30485	22/09/2025 15:14:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	Guduaghatta 43p	12.180	
103910	15/01/2025 17:08:00	Administrator	Karnataka	Bhadravathi	Santhisagar	25 Ha. Plantation work at Basavapura sy. no.11, 12 During 2024-25	25.000	
103909	15/01/2025 17:07:00	Administrator	Karnataka	Bhadravathi	Santhisagar	50 Ha. Plantation work at Vailipura Sy No-28 and Guddabenahkanahalli SY No-14 During 2024-25	50.000	
85745	15/01/2025 16:12:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	25 Ha. Plantation work at Basavapura sy. no.11, 12 During 2024-25	25.000	
85744	15/01/2025 16:13:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	50 Ha. Plantation work at Vailipura Sy No-28 and Guddabenahkanahalli SY No-14 During 2024-25	50.000	
111746	10/09/2024 15:57:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	CREATION OF CPT WORK AT DAGINAKATTE SY NO.44 DURING 2017-18	0.000	
111643	04/09/2024 12:01:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	UPGRADATION OF EPT AT Komaranahalli s no.2 Manjappa jameenu to hanumanthappa jameenu yerehalli 4	0.000	
111642	04/09/2024 12:00:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	UPGRADATION OF EPT AT k.Ganadakatte s no. 43 vijayakumar jameenu to mayappa master thota	0.000	
111641	04/09/2024 11:59:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	UPGRADATION OF EPT AT k.Ganadakatte s no.43 mayappa thota to komaranahalli s no.2 manjappa jameenu	0.000	
111640	04/09/2024 11:57:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	UPGRADATION OF EPT AT hanumthappa s/o karisiddappa (haronalli naganna jaminu timmappana) yerehalli	0.000	
111639	04/09/2024 11:56:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	upgradation of EPT GOPNAL SY NO 8 to Nagenahalli Sy no 1	0.000	
110061	07/08/2024 11:31:00	DFO Bhadravathi	Karnataka	Bhadravathi	Santhisagar	CPT WORK AT HANCHINASIDDAPURA SY NO:27 B-3	0.000	



**Photograph showing Demarcation of Forest land at Ittighalli  
Village of New Sy No: 20**



ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್,  
ಕ.ನೀ.ನಿ.ನಿ, ನಂ.4.ಭದ್ರಾ ನಾಲಾ ಉಪ-ವಿಭಾಗ,  
ಸಾಸ್ವಹಳ್ಳಿ-577224.

ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್  
ಕರ್ನಾಟಕ ನೀರಾವರಿ ನಿಗಮ ನಿಯಮಿತ  
ನಂ. 3, ಭದ್ರಾ ನಾಲಾ ವಿಭಾಗ,  
ಮಲೇಬೆನ್ನೂರು-577 530.