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MITIGATIVE MEASURES

1. INTRODUCTION :

The Forest area of Guduru (WLM) Division is 99755.90 Ha. The percentage of Forest area is about 40%. There are Three Forest Ranges in the Division namely (i) Guduru, (ii) Kothaguda and (iii) Gangaram.

In the above scenario, if the proposals is to be considered, it is necessary to take up the Mitigative Measures to counter the consequential problems, in order to protect not only Flora and Fauna.

Following are the few Probable Consequential problems for Diversion of 5.9359 Ha. of Laying of Road from R/F L032 Mattewada Road to Veerampet in Gudur (M) of Mahabubabad District in favour of District Panchayat Raj Engineer, Mahabubabad:

- 1) Continues human interference to the Serenity of the Vicinity.
- 2) Depletion of Forest Flora and Fauna.
- 3) Forest Fires.
- 4) Encroachments

Therefore, it is mandatory for addressing the above probable consequential problems with the following suitable Mitigative Measures, in order to conserve the Forest Eco System in an around in Reserve Forest area.

1. Fire Management
2. Habitat Management.
3. Water Management
4. Compensative Greenery
5. Publicity and Awareness

2. **NAME OF THE SCHEME** : Conservation Plan for Flora and Fauna along the PMGSY - R/F L032 - Laying of Road from L032 Mattewada Road to Veermpet of Gudur (M), Guduru (W.L.M.) Division of Mahabubabad District in favour of District Panchayat Raj Engineer, Mahabubabad.

3. LEGAL STATUS :

Sl. No.	Name of the Reserve Forest	Area in Ha.	G.O.M.S.No. & Date
1	Gudur	5.9359	Section-4 of G.O.Ms.No.84, Dt:08.09.1354 F

4. **DISTRIBUTION OF THE AREA:-** . The proposed Sanctuary area falls under the following compartments:

Sl. No.	Division	Range	Section	Beat	RF Compt. Nos.
1	2	3	4	5	6
1	Guduru (W.L.M.)	Gudur	Ootla (North)	Gudur	1006 1007
		Kothaguda	Karlai (North)	Karlai	1009

5. **COMPOSITION OF THE FOREST AND WILDLIFE:** - The Road which is proposed for laying of road from L032 Mattewada to Veerampet in Gudur (M) is passing through the forest area, which is falling in the Reserve Forest and the forest area is having the density

scrub of 0.60 to 0.80 present in this area. Hence keeping in view of the protection of Wildlife sanctuary necessary precautions have to be taken like painted speed breakers, sign boards such as **"Wildlife area", "no horns", "no glaring lights"** have to be provided by the User Agency wherever they are required and also speed limit has to be restricted to 25 Km/hr (this should be strictly followed during night hours).

Forest View

The important Flora and Fauna existing in this area is as follows:

- a) Flora:** As per the field inspection conducted by the Forest Divisional Officer, Guduru (W.L.M.) the commonly seen **Flora are Teak, Moduga, Nemalinara, Udugu, Tuniki, Vepa, Gummadi Teak, Sandra, Chennangi, Pala Kodisha, Pachari, Baddadriya, Kanuga, Chilla, Musthi etc.,** exist in the said area. The commonly seen flora in the said area is as follows:-

Sl. No.	Common Name	Zoological Name	Local Name
1	2	3	4
1	Teak	<i>Tectona grandis</i>	Teak
2	Are	<i>Bauhinia racemosa</i>	Are
3	Billudu	<i>Chloroxylon swietenia</i>	Billudu
4	Bojja	<i>Xylia xylocarpa</i>	Bojja
5	Chennangi	<i>Lagerstroemia parviflora</i>	Chennangi
6	Chinta	<i>Tamarinds indica</i>	Chinta
7	Ippa	<i>Madhuca longifolia var</i>	Ippa
8	Juvvi	<i>Ficus glomerata</i>	Juvvi
9	Kodisha	<i>Cleistanthus collinus</i>	Kodisha
10	Morri	<i>Buchanania lanzan</i>	Morri
11	Nallamaddi	<i>Terminalia tomentosa</i>	Nallamaddi
12	Palakodisha	<i>Wrightia tinctoria</i>	Palakodisha
13	Rela	<i>Cassia fistula</i>	Rela
14	Thuniki	<i>Diosphyros melanoxydon</i>	Thuniki
15	Vepa	<i>Azadirachta indica</i>	Vepa

- b) Fauna:** As per the field inspection conducted by the Forest Divisional Officer, Guduru (W.L.M.), the commonly seen **Fauna are Spotted Deer, Indian Gaur, Chousinga, Sambar, Blue bull, Leopard, Wild boar, Dhole etc.,** exist in the said area. The commonly seen fauna in the said area is as follows:-

Sl. No.	Common Name	Zoological Name	Local Name
1	2	3	4
1	Spotted Deer	<i>Axis axis</i>	Podala Duppi
2	Indian Ghar	<i>Bos gauras</i>	Adavi dunna
3	Chousinga	<i>Tetracerus quadricornis</i>	Duppi
4	Sambar	<i>Rusa unicolor</i>	Kanuju / Kaniti
5	Blue bull	<i>Boselaphus tragocmelus</i>	Nilgai
6	Wild Boar	<i>Sus scrofa</i>	Adavi Pandi
7	Dhole	<i>Cuon alpinus</i>	Nakka

6. Adverse Impacts of Road on Wildlife:-

The adverse impacts, due to the laying of road on the wildlife and surrounding forest areas are likely to be as follows:

i. Fragmentation and Edge Effect:-

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Due to depletion of the Forest the habitat of the wildlife will be fragmented and certain forest areas will be depleted leading to changes in micro climatic conditions thereby causing imbalance in habitat.

ii. Degradation of Forests:

Due to easy access to the Hilly Forest area, the Flora and Fauna will become susceptible for Degradation and poaching respectively by people from plain areas.

iii. Exploitation of Primitive Tribal Groups:

People from plain area exploit the innocent and dilute their unique culture.

iv. Encroachments:-

Existing Forest will become susceptible for encroachments by the encroachers from plain areas.

7. Goal and Objectives:

a) Goal:- *"To conserve, the Flora and Fauna"*

"To address genetic isolation of wild animal population"

b) Objectives:

1. Protection and improvement of the eco-system through mitigative measures.
2. Improvement of water resources through Soil & Moisture Conservation measures by catchment area treatment on watershed principles.
3. Habitat improvement through improvement of fodder availability by raising (Grass Plots) and protection from fire.
4. Publicity and awareness - conservation education to the stakeholders for protecting Flora and Fauna

**8. Strategies to meet the Objectives:-
Theme Plans:-**

For attaining the said objectives and for holistic treatment and management of the entire proposed area for mitigating the adverse impacts of the proposed gas pipeline, theme plans are proposed based on the objectives.

Holistic Habitat Management:

For holistic habitat management of the treatment area the following individual theme plans are proposed:

- I. Management of Eco-System through Habitat Restoration
- II. Water Conservation/ Rain water harvesting
- III. Publicity And Awareness

The management strategies are discussed under individual theme plans.

OBJECTIVES:

The main objectives of water conservation/rain water harvesting are as follows:-

- (i) To check soil erosion
- (ii) To conserve water in situ in the treatment area itself
- (iii) To improve moisture regime in treatment area and recharge ground water table.
- (iv) Improvement of vegetation of grassland and availability of sustainable food and cover to wildlife.

- (v) Check siltation of ponds and waterholes in treatment area and maintain the water holding capacity.

It is proposed to take up the following activities for harvesting the rain water and improving the availability of water to the wild animals, and to increasing the water table and improvement of the vegetation.

IV. Publicity and Awareness:

It is proposed to give wide publicity about the importance of Forest Protection, bio diversity and the wildlife conservation and also conservation of unique culture of the Primitive Tribal Groups of the area. An estimated cost of Rs.10.00 lakhs. The publicity and awareness campaigns are proposed as follows:-

- Sensitize the community and create awareness about the need to conserve bio-diversity through awareness campaigns, nature camps, conducting workshops, trainings etc.
- Arranging prompt and quick payment of compensation cases involving wild animal attacks.
- Building mutual confidence between protected area management and local people by frequent interaction between the two and also being responsible to the gender issues.
- Taking up initiatives in mobilizing community for controlling totally stopping the grazing.
- Display of hoardings (signage and hoardings) and brochures/pamphlets with messages of bio-diversity conservation at prominent places.
- Training the people, departmental staff and NGO's to enhance their technical, social, professional skills for effective planning, implementation and monitoring of the eco-development programme.
- Conducting regular Gram sabha's in the surrounding villages and making the people aware of the conservation. It is also proposed to take up all the habitat development activities by peoples participation to develop the sense of ownership and responsibility.

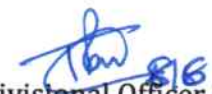
FINANCIAL OUTLAY:-

The scheme is prepared with financial outlay of Rs.458.00 Lakhs.

Sl. No	Name of the work's proposed presently to be taken up instead	Budget Required (In Lakhs)
1	<u>Habitat Management</u>	
	Solar Bore well with percolation tanks 10 Nos. @ 6.00 Lakhs / each with PT	60.00
	Maintenance & Development of Natural Grass Lands by removal of obnoxious weeds for three consecutive years	15.00
	Taking up plantations in encroached areas with fast growing species like EP, Bamboo etc., for 50.00 Ha. including Nursery and Nursery infrastructure	70.00
	Taking up Avenue plantation with fruit bearing species along road and purchasing of fruit bearing species plants for (3) years	56.00
2	<u>Water Management</u>	
	Taking up of Large percolation tanks for wild animals and other SMC works	30.00
	Installation of Checkpost	20.00
	Payment of wages to the Check Post Watchers (4 Nos. for 5 Years)	24.00

	SMC Line PT's and SCT's	30.00
3	<u>Providing of Infrastructure for improvement of Wildlife</u>	
	Inspection cum Supervising Huts at different locations and used for base camps.	30.00
	Procurement of Fire Equipment	5.00,
4	<u>Fire and Wildlife Management</u>	
	Construction of Watch towers	20.00
	Engaging of 5 Wildlife Trackers / fire watchers along with purchase of equipment for fire / wildlife watchers and wildlife trackers	8.00
	Hiring of Vehicle for patrolling by wild life trackers / fire watchers for (5) years	8.00
5	<u>Publicity & Awareness</u>	
	Hoardings & publicity to propagate the need for conservation of Flora and Fauna of the area	7.00
	Entry Point activities for adjoining villages to encourage them in Forest Protection	30.00
6	<u>Admin and Monitoring Cost:</u>	
	Engaging of DEO for monitoring activities for 5 Years	15.00
	Construction & Improvement of Environment Education Centre (EEC)	20.00
	Administrative Cost	10.00
	Grand Total::	458.00

Conclusion: The mitigative measures are proposed to prevent adverse effects of proposed Road to wildlife i.e., both Flora and Fauna and also at the same time improving the water resources and controlling soil and water erosion. There will be unaccountable loss due to laying of road from R/F L032 Mattewada to Veerampet of Gudur (M), Gudur and Kothaguda Ranges of Guduru (W.L.M.) Division in Reserve Forest Area.


 Forest Divisional Officer (FAC),
 Guduru (W.L.M.).