

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,  
SOUTH ZONE BENCH AT CHENNAI**

[Original Application under Section 14 r/w Section 15 of the  
National Green Tribunal Act, 2010]

---

**Original Application No. 160 of 2020**

**IN THE MATTER OF:**

E.A.S. Sarma&Anr.

...Applicants

Vs.

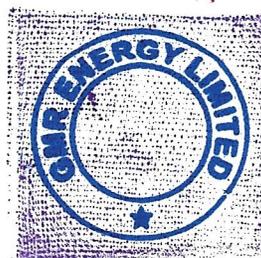
Union of India&Ors.

...Respondents

**AFFIDAVIT ON BEHALF OF RESPONDENT NO. 8 -  
GMR ENERGY LTD.**

I, Ravishankar son of Shri R. Balasubramaniam, aged about 44 years, having office at Third Floor, OldNo. 248/New No. 114 Royapettah High Road, Royapettah, Chennai – 600014, do hereby solemnly affirm and state as under:

1. That I am the authorized signatory of the Respondent No. 8 Company, namely, GMR Energy Ltd. ("Respondent No. 8"), a company incorporated under the provisions of the Companies Act, 1956, having its registered office at 701, 7<sup>th</sup>Floor, Naman Centre, Plot No. C-31, Bandra Kurla Complex, Bandra East, Mumbai Bandra Suburban – 400 051, and thus, am well-conversant with the facts and circumstances of the present case and competent to swear this Affidavit.



2. I state that the Respondent No. 8 has filed the counter affidavit in the present Original Application and I crave leave of this Hon'ble Tribunal to read the contents thereof as a part and parcel of the present affidavit and the same are not reiterated herein for the sake of brevity.
3. I state that I have perused the contents of the Report of the Joint Committee dated nil filed before this Hon'ble Tribunal on 12.01.2021 and the further report dated nil filed before this Hon'ble Tribunal on 01.03.2021. I crave leave of this Tribunal to set forth the following as the objections on behalf of the 8<sup>th</sup> Respondent and also the status report on the steps taken by the 8<sup>th</sup> Respondent to restore the mangroves.

**STATUS REPORT REGARDING THE IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE JOINT COMMITTEE**

4. At the outset, it is stated that the 8<sup>th</sup> Respondent has not carried out any activity that is prejudicial to the environmental interests in any manner whatsoever. It is stated that the activities of the 8<sup>th</sup> Respondent were carried out only in the lands owned by the port and far from the eco sensitive areas mentioned in the Original Application by the Applicant.
5. Without prejudice to the contentions made in this Affidavit and in terms of the orders of this Hon'ble Tribunal, I state



that the 8<sup>th</sup> Respondent, in compliance of recommendation made by Joint Committee and in good faith, has conducted a detailed study of the area by engaging the services of experts. Following works have been undertaken by 8<sup>th</sup> Respondent under the supervision of Andhra Pradesh Maritime Board during the period between March'21 and April'21 for regrowth of Mangroves in the area:-

- a. Cleared dried plants from mangroves area.
  - b. Main and Pre channeling work are completed.
  - c. Sub channeling work in progress.
  - d. Tidal water flow established in the mangrove area.
  - e. Monitoring of tidal water flow on hand.
  - f. The existing mangrove saplings are healthy and well established.
  - g. Large area of mangrove new saplings that have germinated is well established
6. I state that in respect of aforesaid a report by expert consultant with regard to rehabilitation and current status of mangrove vegetation near 8<sup>th</sup> Respondent, site in Kakinada and plan for restoring the mangroves in triangular area to bring back mangrove vegetation as on 30<sup>th</sup> April 2021 is attached herewith and marked as **Annexure A.**
7. Further, I state that in the month of May 2021 and June 2021, we have carried out the following activities:



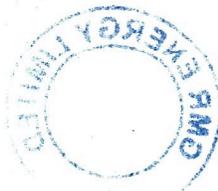
- a. Curing of additional channels by water flowing through the channels for establishing water regime was undertaken during May - June 2021.
- b. Planting of additional mangrove saplings will be undertaken during June to July coinciding with Southwest monsoon for ensuring better survival rate.
8. I state that the Channels are being dug to a length of 1,370 mts, which includes -150 mts. of Feeder Channel and 220 mts. of Sub Feeder Channel and 1,000 mts. of side channels. Further mortality if any, will be replenished up to September, 2021 and site will be handed over to Port. The estimated time required for restoration of mangroves is six (6) months from March 2021. The Recent Photographs of the site in question is annexed as **Annexure B**.
9. I state that it is pertinent to note that till date the 8<sup>th</sup> Respondent has incurred the following expenses in the course of the above activities for restoration of mangroves:

Vendor Name	Details of Work	Contract Price (Rs)
Kumar Tippers Transport	Creation of canals for free flow of sea water	4,92,060
Sai Durga Builders	Removal of debris, muck and other waste material	88,500
Sai Durga Builders	Extension of canals	59,000
Sai Durga Builders	Additional samplings	92,040



Vendor Name	Details of Work	Contract Price (Rs)
	wherever required	
Ravishankar T	Consultant for mangrove rehabilitation	2,25,000
Sai Durga Builders	Rehabilitation and maintenance of affected mangroves area for 3months	5,31,000
Sai Durga Builders	Additional mangroves Rehabilitation works	7,43,400
	Total	22,31,000

10. In addition to the above, the 8<sup>th</sup> Respondent has also incurred additional miscellaneous expenditure including but not limited to mobilization of men, resources and time, which cannot be quantified in terms of money and the same are not mentioned in the chart above. At any rate, it is to be pointed out that the Joint Expert Committee had indicated that Rs. 20,00,000/- (Rupees Twenty Lakhs Only) would be required for the purposes of restoration of mangroves in the affected area. On the other hand, the 8<sup>th</sup> Respondent as a matter of policy and values of 8<sup>th</sup> Respondent to protect the environment has gone further and has already incurred more than Rs. 22,31,000/-, which is much more than the amount of Rs. 20 lakhs mentioned by the Joint Expert Committee.

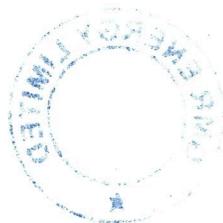


11. I state that the above rehabilitation work was undertaken in good faith by engaging the subject expert under the supervision of Andhra Pradesh Maritime Board and without prejudice to its rights and contentions before this Hon'ble Tribunal in the present Original Application.

**OBJECTIONS TO THE REPORT OF THE JOINT COMMITTEE**

12. At the outset, I state It is stated that the Joint Committee had inspected the site on 10.01.2021 when the representatives of the Applicant and the 8<sup>th</sup> Respondent were present. However, it is denied that the representatives of the 8<sup>th</sup> Respondent had admitted to the damage caused to the mangroves. In fact, the representatives had informed the Committee that considering the importance of environmental concerns, as a bonafide initiative, 8<sup>th</sup> Respondent would take steps to improve the growth of the mangroves in the area. Not only that, it was pointed out to the Committee that steps had already been taken by the 8<sup>th</sup> Respondent under the supervision of Andhra Pradesh Maritime Board, even without the indulgence of any person, to enable growth of mangroves in the area.

13. I state that the Report of the Joint Committee ought to have also considered the fact that the activities of the 8<sup>th</sup> Respondent was not carried out in the mangrove area and the same were carried out in the lands owned by the Port. In



A handwritten signature in blue ink, appearing to be a stylized name or set of initials.

such a case, when the activities are carried out in the lands owned by the Port, there could not have been any issue of damage to the environment. Further, with respect to Kumbhabhishekam mudflats, it is pertinent to note that same are far away from site of 8<sup>th</sup> Respondent and same is within jurisdiction of Andhra Pradesh Maritime Board and has nothing to do with 8<sup>th</sup> Respondent.

14. In the light of the above, I most humbly stated that the 8<sup>th</sup> Respondent in compliance of this Hon'ble Tribunal orders and as recommended by Joint Expert Committee has taken all steps to re-grow the mangroves even in the port area. Therefore, I pray that this Hon'ble Tribunal would be pleased to dismiss the instant Original Application with exemplary costs and pass such other or further orders as this Hon'ble Tribunal may deem fit and proper in the facts and circumstances of the case and thus render justice.



A handwritten signature in blue ink, appearing to be "G. R. Srinivas" or similar, written over the word "DEPONENT".

**DEPONENT**

**VERIFICATION**

Verified at Chennai on this 23<sup>rd</sup> day of June 2021 that the contents of the above affidavit are true and correct to my personal knowledge and belief. No part of it is false and nothing material has been concealed therefrom.



**DEPONENT**



  
**R. SRIDHARAN**  
**ADVOCATE & NOTARY PUBLIC**  
Flat No. 7, "Rajavenu Apartments",  
No.7, (New No.13), Raja St., (Next to Agastiar Temple)  
T.Nagar, Chennai - 600 017.  
☎: 24344771

23/06/2021



**Report by Consultant with regard to Rehabilitation and Current Status of Mangrove vegetation near GMR Energy Ltd, site in Kakinada and plan for restoring the mangroves in triangular area to bring back mangrove vegetation as on 23<sup>rd</sup> June 2021**

**Dr. Ravishankar Thupalli**

Mangrove Restoration Advisor

GMR Mangrove Project

Kakinada

23-06-2021

**Brief Profile of Consultant/ Mangrove Expert:**

Dr Ravishankar Thupalli is an International Mangrove Rehabilitation and Management Specialist with over 24 years of experience in mangrove forest assessment and restoration and more than 36 years of experience in biodiversity conservation in the Asia Pacific countries. He has carried out mangrove restoration work in Andhra Pradesh and Odisha in east coast. He has worked in several projects on mangrove management implemented by FAO, UNDP GEF, ICEF, and Government of India. He has worked on mangroves management projects for FAO in Maldives, Sri Lanka, Myanmar, Indonesia, Solomon Islands, and Vanuatu. He has worked for JICA in developing a mangrove restoration project in Gujarat. He has restored mangroves using canal method in more than 1,500 ha in both Andhra Pradesh and Odisha States. He was a special invitee of the National Committee on mangroves and Coral reefs. He was a member of the Global Mangrove Work Plan that met in Colombia, South America.

**Mangrove restoration expert/advisor**

GMR engaged consultant Dr Ravishankar Thupalli to help in restoring the mangroves in the land opposite to Port Administration building Kakinada.

Dr Ravishankar visited the site and observed along with GMR officials that removal of soil in canal shape to allow free flow of tidal water will enable restoration of mangroves. As per the advice a canal was dug parallel to the road, which further could not be continued due to the soft structure of soil at that time.

During the period it was observed that there was natural growth of mangrove saplings in the degraded area as a result of canal digging that brought in sea water during the tide.

During the periodical visits, it was observed that the existing saplings are well establishing and new saplings were sprouting over the area. As per the advice of the expert, with interventions like trapezoidal canal construction, water can be brought into the degraded area and mangroves will establish by natural means and proliferate. In fact, the entire area is a reclaimed land and mangroves established by natural means.

Further field visits were conducted on 03-02-2021, 27-03-2021, and 27 & 28-04-2021 the mangrove vegetation site and observed that there is a large number of mangrove saplings that have established in the entire area.

At present, there is natural regeneration of mangrove saplings as bund was removed as per the photographs enclosed herewith in this report as Annexure I. This is a positive sign indicating that the area is still suitable and promoting the growth of mangrove seedlings by natural means. As mentioned above, large number of mangrove saplings have germinated and established, which is an indication that the soil has retained the moisture, given to sub soil water availability due to tidal water flow. Thus, the naturally regenerated saplings are able to survive presently. With this development, by making trapezoidal channels which will facilitate further water flow, the entire area can be restored which remained affected from last couple of years due to climate change and various other reasons..

### **Restoration of mangroves**

In order to restore the affected mangroves in good faith, the rehabilitation procedures including channelling and planting of mangrove saplings have been undertaken in a scientific manner by GMR Energy Ltd by engaging the subject expert.

### **Present condition of mangrove saplings and plan for restoration by canal construction method**

The mangrove saplings are healthy and well established. The height of saplings vary from 0.5 to 3.0 feet in height. As there is already a large number of mangrove saplings established by natural means, the efforts through canal construction and planting of saplings enabled the survival and establish very well. Photographs attached as Annexure I.

As the current naturally regenerated saplings are able to establish and survive with external support like maintenance etc., further inflow of water is facilitated by constructing trapezoidal canals for inflow of water in order to restore the entire area.

Three types are canals are being constructed in trapezoidal shape 1. Feeder Channel, 2. Sub Feeder Channel and 3. Side Channels in fish bone shape to facilitate water inflow during high

tide and water receding during the low tide. Feeder channels and Side channels are already constructed and Sub feeder Channels digging is in progress.

Further, mangrove saplings will be sourced and planted along the side walls of the channels.

#### **Restoration includes the following works**

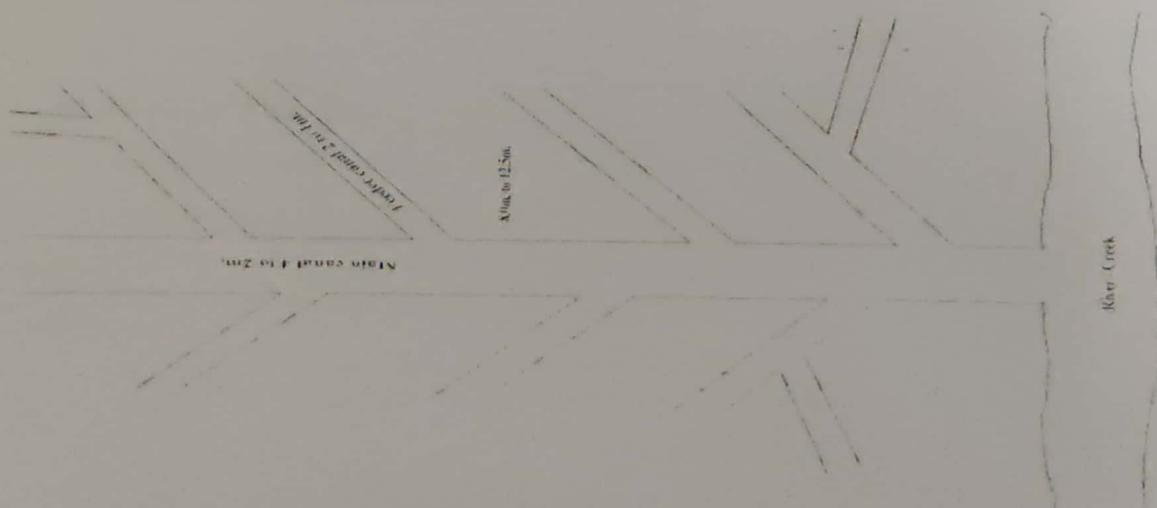
1. Clearing of dried plants.
2. Pre channelling work.
3. Channelling work using manual labour and machinery.
4. Sourcing of saplings
5. Planting of saplings- planned during monsoon.

For the proposed area, Channels is being dug to a length of 1,370 mts, which includes -150 mts. of Feeder Channel and 220 mts. of Sub Feeder Channel and 1,000 mts. of side channels.

#### **Layout of fishbone channels in the proposed area of rehabilitation**

Fish bone type channels has been dug to facilitate tidal water inflow and outflow during high tide and low tide respectively. The channels have been designed in such a way that the main channel is connected to a creek or tidal water source thus bringing in and flushing out the water during tidal action. The feeder channels is dug at an angle of  $45^{\circ}$  forward to take the inflow deep into the restoration area. Depending on the size of the area being restored the length, top and bottom width and depth of main and feeder channels is determined. The slope of the canals is determined as per the length of main canal.

Figure 1. Diagrammatic representation of the Layout for channel digging



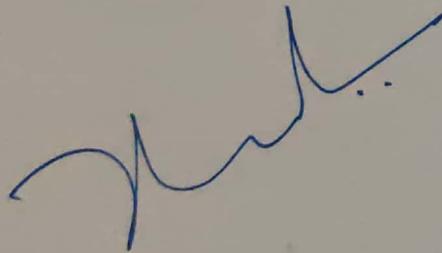
### **Timeline for the work**

1. Channelling work including pre-channelling carried out during March and April 2021.
2. Curing of Channels by water flowing through the channels for establishing water regime during May 2021 to June 2021.
3. Planting of additional mangrove saplings will be undertaken during June to July coinciding with Southwest monsoon for ensuring better survival rate.

### **Work Progress and Current Status of Mangrove vegetation near GMR site in Kakinada and plan for restoring the mangroves in triangular area to bring back mangrove vegetation.**

As per our schedule, the following works have been completed during the period between March'21 and April'21.

1. Clearing of dried plants from mangroves area.
2. Main and Pre channelling work are completed.
3. Sub channelling work in progress.
4. Tidal water flow established in the mangrove area.
5. Monitoring of tidal water flow on hand.
6. The existing mangrove saplings are healthy and well established.
7. Large area of mangrove new saplings that have germinated is well established



**Dr. Ravishankar Thupalli**

Mangrove Restoration Advisor

GMR Mangrove Project

Kakinada

23-06-2021

- Details of Activity photos in **Annexure – I**

**MANGROVES STATUS as on 23<sup>rd</sup> June'2021**







Jun 23, 2021 08:56:53



Jun 23, 2021 08:56:51



Jun 23, 2021 08:56:48

