

## BEFORE THE NATIONAL GREEN TRIBUNAL

## SOUTHERN ZONE BENCH AT CHENNAI

## APPLICATION NO 14 OF 2022

M. Yuvadeeban  
S/o Maragret Lawrence,  
Aged about 26 Years,  
B2, Ramaniyam Marvel, Seshdripuram, 1<sup>st</sup> Main Road,  
Velacherry,  
Chennai – 600 042. ... Applicant

-AND-

**1. Department of Fisheries**

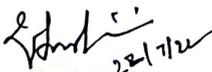
Government of Tamilnadu  
Rep by its Executive Engineer  
Fishing Harbour Project Division  
Nandanam, Chennai – 600 035  
Ph: 9566254546.  
tnfisheries@nic.in

**2. Tamil Nadu State Environment Impact Assessment Authority**

Rep by its Member Secretary,  
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Chennai-600 015,  
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Tel: 044-24359973  
[mstnselaa@yahoo.com](mailto:mstnselaa@yahoo.com)

**3. Principal Chief Conservator of Forests & Chief Wildlife Warden**

Forest Department  
Government of Tamilnadu  
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[pccf-tn@nic.in](mailto:pccf-tn@nic.in)

**4. Government of India**

Represented by its Secretary to Government,  
**Ministry of Environment, Forest and Climate Change,**  
 Paryavaran Bhavan,  
 Jorbagh Road,  
 New Delhi-110003.  
 Tel: 011-24695132

**5. Tamilnadu State Coastal Zone Management Authority,**

Represented by the Member Secretary,  
 Panagal Building, Saidapet  
 Chennai-600 032.  
 Tel: 044-24336421  
[mstnsc2ma@yahoo.com](mailto:mstnsc2ma@yahoo.com)

... Respondents

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**FURTHER REPORT OF THE 1<sup>st</sup> RESPONDENT**

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I, M. Murugesan, S/o C. Muthian aged about 59 years, do hereby solemnly affirm and sincerely state as follows.

1. I am discharging my duty as the Executive Engineer, with the First Respondent, having office at 2<sup>nd</sup> Floor, Integrated Office Complex for Animal Husbandry and Fisheries Department, Nandanam, Chennai - 600 035, as such I am well acquainted with the facts and circumstances of this case from the available records. I am filing this further report in order to assist the Honourable Tribunal.
2. This report contains of three parts, which are as follows:
  - i. Increase of Olive Ridley Nesting Area
  - ii. Prevention of seawater enter into freshwater lake; and
  - iii. Littoral drift

  
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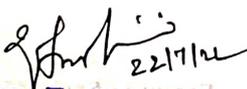
  
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### Increase of Olive Ridley Nesting Area

3. The following table shows, number of fishing boats available in the villages falling within Villupuram District, which are going to be benefitted due to the construction of wharves in Kaluveli backwater.

#### Details of Village wise Fishing boats available in Villupuram District

S.No	Name of Base of Operation	Mechanized Fishing Vessels (hereafter MFVs) (24m x 5m)	Motorized non Mechanical (12m x 2m)	Non-Motorized (10m x 0.8m)	Coastal area occupied by boats (Sq.m)	Coastal length occupied by Boats (m)
1.	Muttukadu Alagankuppam		43		1032	86
2.	Vasavankuppam		91		2184	182
3.	Kaipanikuppam	1	63	24	1704	145.20
4.	Ekkiyarkuppam	7	196	30	4944	416
5.	Mandavaipudhukuppam		80	6	1968	388
6.	Komuttichavadi		83	1	2000	166.80
7.	Anumandaikuppam	24	167	3	4032	336.40
8.	Chettinagar		34	7	872	73.60
9.	Nochikuppam		24		576	48
10.	Koonimedu		94		2256	188
11.	Mudhaliyarkuppam		50	1	1208	100.80
12.	Anichankuppam		95		2280	190
13.	Pudhukuppam		30	22	896	77.6

  
22/7/22  
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14	Pillaichavadi		27		648	54
15	Bommiyarpalayam		66	1	1592	132.80
16	Chinnamudaliyarchavadi		88	49	2504	215.20
17	Thandhirayankuppam		19	33	720	64.40
18	Nadukuppam		94		2256	188
19	Sothanaikuppam		19		456	38
	TOTAL	32	1363	177	34128	3090.80

It is submitted that there are 19 fishing villages along the coastal boundary of 40.70 km in Villupuram District having 32 Mechanized Fishing Vessels (hereafter MFVs), 177 Non-Motorized boats and 1363 Motorized Non-Mechanical boats. From the above table shows that, coastal length occupied by boats is 3.09 Km and coastal area occupied by boats on the seashore is 34128 Sq.m.

4. As per G.O. Ms. No. 146, Animal Husbandry, Dairying and Fisheries (Fs-3), 27th September 2016 Prohibition of Fishing by any kind of Fishing Vessels in a Radius of 5 Nautical miles around the Potential Nesting and Breeding sites of Sea Turtles in the Coastal Areas under the Tamil Nadu Marine Fishing Regulation Act, 1983.

The Potential nesting sites of Sea Turtle along the coast of Tamil Nadu in Villupuram District are shown in the following table:

  
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Potential Nesting Sites	Mechanized Fishing Vessels (hereafter MFVs) (24m x 5m)	Motorized non Mechanical 1 (12m x 2m)	Non-Motorized (10m x 0.8m)	Coastal area occupied by boats (Sq.m)	Coastal length occupied by Boats (m)
1.Alagankuppam		43		1032	86
2.Vasavankuppam		91		2184	182
3.Kaipanikuppam	1	63	24	1704	145.20
4.Ekkiyarkuppam	7	196	30	4944	416
5.Anumandaikuppam	24	167	3	4032	336.40
6.Mudhaliyarkuppam		50	1	1208	100.80
7.Pudhukuppam		30	22	896	77.60
8.Bommiyarpalayam		66	1	1164	132.80
TOTAL	32	706	81	17164	1476.80

5. For the Construction of Training walls in Azhagankuppam, the coastal length to be used is 150 m. From the above table, it shows 1.48 Km coastal length were so far till the date in the potential nesting sites. Due to construction of fishing wharf in kaluveli backwaters, all the boats from potential nesting sites will be shifted to the Wharf for berthing. So, that the 1.48 Km coastal length and 17164 Sq.m area on the seashore in potential nesting sites is made available for free movement of Olive Ridley Turtles for their nesting. It is important to note that, the Construction of Fishing wharf in Kaluveli Waters will proportionately increase the Olive Ridley Turtles nesting area.

6. As there is no fishing wharf in this district, all MFVs are being operated from the inner sea, about 300-400m from the seashore, and the fish catches are being transported from these MFVs through Country crafts/Out board motorised boats (hereafter OBMs) to the seashore for marketing. Non-Motorized boats and Motorized Non-Mechanical boats are berthed in as beach landing. I understand that, it creates lot of inconvenience to the

  
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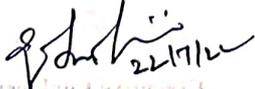
fishermen and also spending additional manpower and fuel costs, which interrupts the movement of Olive Ridley Turtles and cause injuries to them. Besides, during the cyclone and other natural calamities, these MFVs need to be moved to either Chennai Kasimedu Fishing Harbour or Cuddalore Fishing Harbour for safe berthing, where those fishermen are already facing congestion and other local issues. Few MFVs are being operated from the Chennai Kasimedu Fishing Harbour or Pudhucherry Fishing Harbour and those harbours are also facing traffic congestion issues. Due to Construction of Fishing Wharf in Kaluveli Waters, all 32 MFVs, 177 Non-Motorized boats and 1363 Motorized Non-Mechanical boats will be safely berthed.

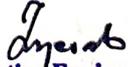
**Check Dam constructed by Water Resources Department**

7. Reclaiming Kazhuveli tank for storage of freshwater and sea water intrusion control measures and Recharge Shaftwell/ Shafts in Marakanam Block of Villupuram District at a cost of Rs.161.00 Crore. The scheme envisages the following:

Kazhuveli tank lies at a distance of 21 Km from the seashore of Bay of Bengal in Marakanam Taluk of Villupuram District. It is about 71.20 sq.km in extent and links with Yedayanthittu Swamp or Kanthadu swamp on the North by a tidal creek which in turn opens into sea in north of the Marakanam. The tank is getting contaminated more often by the invasion of sea water during periods of high tides which in turn causes deterioration of the quality of surface water and ground water quality in the adjoining villages of Marakanam block. Due to the presence of marine sediments nearby, Only dry crops are raised in the nearby villages and the crop yield is poor due to presence of salinity, aquaculture, prawn culture and salt pans have been established and for that heavy pumping of sea water into land is taking place which adds to the problem.

8. Hence, a proper regulating arrangement becomes necessary to prevent the entry of seawater into swamps during high tides and the existing storage capacity of tank has to be increased by increasing the storage level by 0.75 m. The increased storage will gradually

  
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dilute the salinity and improve the quality of water over a period. The top level of crest is +1.50 m and tide level is +0.780 m. The invasion of sea water during periods of high tides is not possible due to construction of fishing harbour.

### Littoral Drift Distribution

1. M/s Danish Hydraulic Institute, Denmark, is a organisation addresses all challenges in water environments through consultancy services and their MIKE software tools for water environments are worldwide famous. They have conducted numerical analysis on shoreline changes due to the construction of training walls to assess the littoral drift along Tamil Nadu coast near Kazhuvveli waters, the one dimensional model of Littoral Process FM (Flow Model) is applied. The Littoral Processes FM module is an integrated modelling system that simulates non-cohesive transport in points and along quasi-stationary coastlines using an n-line approach. The model has the capacity to simulate the influence of structures like groin, breakwater, jetties etc.on longshore transport. The model also predicts variations in shoreline position within a stipulated period of time under the combined action of waves and currents. The input data required for the model are cross-shore profile, initial shoreline position, sediment grain size, water level, currents and annual wave climate. The model is simulated for the baseline conditions of the shoreline during 2018 and shoreline changes with the presence of proposed harbor structures. The cross-shore profile and the shoreline position are digitized from bathymetry file. The boundary wave climate is obtained from the spectral wave model at 10m water depth.
2. The structures like breakwaters/training walls are introduced on either side of the proposed entrance channel and the model is simulated under the same wave climate. It is evident from the studies that the sediment is blocked on the southern side of the structure as well as northern side due to both the prevailing monsoon conditions. Along, Kazhuvveli coastline, the sediment transport takes place northward and the movement of sediment is

  
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getting trapped at southern training wall hence supply sediment on the other side of the groin is reduced during southwest monsoon and during north east monsoon sediment transport takes place towards south and getting trapped at northern training wall.

- Under varying annual wave conditions, the model predicted the littoral drift for one (1) year and five (5) years. The simulations indicate that under the layout conditions the northward movement of the transport is in the order of 1,56,482 m<sup>3</sup> /year, southward movement is in the order of 49,419 m<sup>3</sup> /year and the net transport in the order of 2,05,900 m<sup>3</sup> /year for the given wave conditions. The prediction clearly indicates that the coast will undergo accretion in the immediate vicinity of the structures because of different monsoon seasons. But the North side of the northern breakwater small erosion may occur due to the deficiency of the materials. To protect the area from the erosion on northside of breakwater a series of groynes of 3 Nos each 100 m length will be provided. The same has been suggested in the shoreline management plan.

Hence, in the above circumstances, it is respectfully prayed that the National Green Tribunal South Zone may be pleased to pass orders or other orders may be deemed fit and proper according to the circumstances and thus render justice.

Signed:

 22/07/22

Date:

22.07.22

#### Verification

I, M. Murugesan, S/o C.Muthian Executive Engineer, 2nd Floor, Integrated Office Complex for Animal Husbandry and Fisheries Department, Nandanam, Chennai - 600 035 herein do hereby verified the contents of this Report and they are true to my personal knowledge based on the records and I have not suppressed any facts.

Signature:

Official stamp:

  
**Executive Engineer**  
**Fishing Harbour Project Division**  
**Chennai.**