

BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

Original Application No. 195 of 2023 (SZ)

In the matter of:

Tribunal on its own motion – SUO MOTU

Based on the news item in The Express News dated 27.12.2023, titled
“Ammonia Gas leak from fertiliser manufacturing unit

Triggers panic in Chennai’s Ennore”.

And

The Principal Secretary to Government of Tamil Nadu,

Health and Family Welfare Department,

Chennai and Ors.

...Respondent(s)

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Through

Dr. D. Shanmuganathan

Standing Counsel of Tamil Nadu

National Green Tribunal

Southern Zone, Chennai

**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE,
CHENNAI**

Original Application No.195 of 2023 (SZ)

IN THE MATTER OF;

Tribunal on its own motion - SUO MOTU based on the News item in The Express News dated 27.12.2023, titled "Ammonia gas leak from fertiliser manufacturing unit triggers panic in Chennai's Ennore".

Vs.

The Principal Secretary to Government of Tamil Nadu, Health and Family Welfare Department, Chennai.

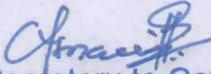
and others.

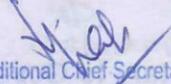
.... Respondent(s)

REPORT FILED BY THE 10th RESPONDENT

I, Mangat Ram Sharma, son of Mai Sharma, Hindu, aged about 57 years, residing at Plot No.6, 10th Cross Street, Balaji Nagar, Ranga Reddy Garden, Neelangarai, Chennai – 600 115, do hereby solemnly affirm and sincerely state as follows:-

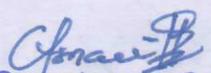
I am the Additional Chief Secretary to Government, Animal Husbandry, Dairying, Fisheries and Fishermen Welfare Department, Secretariat, Chennai – 600 009, Tamil Nadu, the tenth respondent herein filing the report on the ammonia gas leakage at Ennore on 26.12.2023 as below:

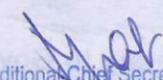

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Additional Chief Secretary to Government
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The Assistant Director of Fisheries, Chennai, based on the report of Sub-Inspector of Fisheries, Tiruvottiyur has submitted the report in letter No.1694/B2/2023, dated 28.12.2023. On 26.12.2023 at 11.45 P.M. occurrence of Ammonia leakage from Coramendal International private limited., in Ennore was noticed due to which the fisherfolk residing near by this industry were subjected to health problems such as vomiting, dizziness, eye irritation, blood oozing from ear and nose, breathlessness etc., Due to the incidence of Ammonia gas leakage 54 fishers were admitted in Private and Government hospitals. Out of 47 fishers of Kathivakkam Periyakuppam fishing village 46 were admitted in Private hospital including 11 men 35 women and 1 woman was admitted in Government hospital. All 6 fishers of Kathivakkam Chinnakuppam fishing village were admitted in Private hospital including 2 men and 4 women and 1 fisherwoman of Ernavurkuppam was admitted in Private hospital. Details pertaining to admission and discharge of fishers of the aforesaid villages are submitted below:-

Sl. No.	Fishing village	Date of admission	No of fishers admitted	Date of discharge	No of fishers discharged
1	Kathivakkam	27.12.2023	46	28.12.2023	39
	Periyakuppam	28.12.2023	1	29.12.2023	6
					30.12.2023
2	Kathivakkam	27.12.2023	6	30.12.2023	5
	Chinnakuppam			01.01.2024	1
3	Ernavurkuppam	27.12.2023	1	29.12.2023	1
Total			54		54


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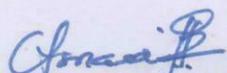

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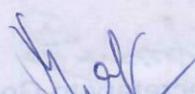
About 250 fisherfolk of 3 fishermen villages namely Kathivakkam Periyakuppam, Kathivakkam Chinnakuppam and Ernavoor kuppam adjoining the Coramendal International Ltd., staged agitation for the permanent closer of the Coramendal International Ltd.

It is submitted that pertaining to mortality of fishes due to Ammonia leakage and the quantum of dead fishes were witnessed as follows:-

Sl. No	Fishing village	No of dead fishes (approx)	Size [range (in gm)]	Average size (in gm)	Quantity (in kg) (colmn 3X 5/1000)	Varieties
1	2	3	4	5	6	7
1.	Nettukuppam	220	20-150	85	19	Carangids, Cat fishes, Croakers, Flat fishes, mullets, Flying fishes, Pomfrets, Rabbit fishes, Sea bass, Sillago, Silver bellies, Snappers, Surgeon fishes, Sweet lips, Terapons, Tripod fishes, Barracuda and Eels.
2.	Thazhankuppam	550	25-150	88	48	
3.	Kathivakkam Periyakuppam	430	20-200	110	47	
4.	Kathivakkam Chinnakuppam	310	25-200	113	35	
5.	Ernavoor Kuppam	160	70-150	110	18	
6.	Indira Gandhi Kuppam	120	25-150	88	11	
7.	Palagaithottikuppam	20	20-250	135	3	
8.	Kasivishwanathar Koil Kuppam	30	20-200	110	3	
9.	Bharathiyar Nagar Beach	20	20-300	160	3	
Total		1860			187	

Further, it is submitted that, due to impact of Ammonia gas leakage in the sea shore of Kathivakkam Periyakuppam mortality of fishes were


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witnessed in the shores of the aforesaid fishing villages. The quantum of mortality of fishes amounts to 1860 number of fishes of approximately 187 kg in varying size ranges. Moreover, the aforesaid quantum of mortality was in accordance to the observations witnessed on 27.12.2023 and 28.12.2023. **However, there is possibility that the fishes washed ashore would have been consumed by predators and that the fishes would also have been retrieved back into the sea due to high tide.** Since, the aforesaid varieties of fishes washed ashore in the fishing villages varied in number and size and hence as such the market rate could not be quantified for the number of fishes washed ashore. However, as the market value of fishes ranges from Rs.100/- to Rs.500/- and considering the mean Market value of Rs.250/- per kg of fish an approximate market value of Rs.46,750/- is estimated for the aforesaid numbers of fishes washed ashore.

The Dr.M.G.R. Fisheries College and Research Institute, Ponneri has submitted a field investigatory Report on the prevalence of post leak impacts on 30.12.2023 as below:

Sl. No.	Particulars	Details
1.	Place	Ennore
2.	Co-ordinates	Lat 13.216584 N; Long 80.326208 E
3.	Pollutant	Ammonia (NH ₃)
4.	Nature	Gas
5.	Point Source	Subsea pipeline
6.	Date and Time of leak	26.12.2023/11.40 PM
7.	Tidal Status during leak	Low tide (decreasing)
8.	Boiling point of Ammonia	-33.34°C @ 1 atm

Subsequent to the discussion with the local people and fishermen society members of Ennore revealed that ammonia gas leak took place on

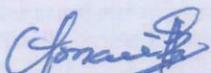
26th December 2023 around 11:40PM due to possible cracks during a maintenance work in the 2800m subsea underwater gas transfer pipeline owned by a fertilizer industry (Coromandel International Ltd). The leakage being from an underwater pipeline, the gas had dissolved in the seawater and causing an increase in ammonia concentration in the seawater which is highly toxic and lethal to all aquatic life forms. The saturated and dissolved ammonia has also mixed in the air.

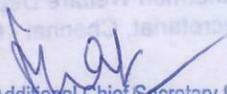
On the next day (28.12.2023) dead fishes were observed washed to the shore on the beach adjacent to the gas pipeline spanning about 1 km on both North and South directions.

Report on Dead fishes

The species composition of dead fishes washed ashore comprised of 19 varieties near the fertilizer or industry (listed below) and found to be the inhabitants of all the coastal sea water column (Pelagic, demersal and benthic). The diversity of dead fish groups washed ashore clearly proves that the entire water mass in and around the pollutant leak site was then affected with the higher concentration of Ammonia. However no fresh dead specimens were observed on the day of sampling on 30.12.2023 which is an indication of return of normalcy of sea water parameters.

Sl. No.	Fish variety	Local name
1.	Carangids	பாறை
2.	Cat fishes	கெழுத்தி
3.	Croakers	பண்ணா
4.	Flat fishes	நாக்கு
5.	Flying fishes	கோலா
6.	Mulletts	மடவை
7.	Pomfrets	வாவல்
8.	Rabbit fishes	ஓரா


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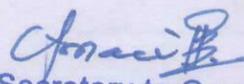
9.	Sea bass	கொடுவா
10.	Sillago	கிழங்கான்
11.	Silver belliles	காரை
12.	Silver biddies	ஊடான்
13.	Snappers	சிப்பிலி
14.	Surgeon fishes	கோழியீன்கள்
15.	Sweet lips	உதட்டி
16.	Terapons	கீச்சான்
17.	Tripod fishes	முல்லாறு
18.	Barracuda	சீலா/ஊழி
19.	Eels	விலாங்கு

Algal composition

The plankton density of the water sample is found to be 15 X 10³ cells/litre. The phytoplankton species observed in the water samples are as follows

Cosinodiscus gigas, Cosinodiscus bipartitus, Amphipora gigantea, Asterionella glacialis, Cyclotella meneghiniana, Luderia annulata, Amphora sp., Pleurosigma sp., Cyclotella striata, Synedra sp., Gyrosigma obtusatum, Bellerochea malleus, Paralia sp., Oscillatoria sp., Nitzschia sp., Guinardia flaccida, Prorocentrum micans, Rhizosolenia styliformis, Chaetoceros decipiens, Odontella sinensis, Odontella mobiliensis, Bacteriastrium desicatum, Microcystis sp., Thalassiothrix fraunfeldi, Rhizosolenia imbricata

The water samples collected by Dr.MGR Fisheries College and Research Institute and Tamil Nadu Fisheries College, Ponneri, was analyzed for parameters and the observations are as below:-


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Sl. No.	Parameters	Observed level	Optimum level	Critical limit
1	pH	8.16 - 8.24	7.0 - 8.5	Above 9
2	Carbonate (mg/l)	10 - 20	10 - 20	-
3	Total alkalinity (mg/l)	100 - 110	Upto 200	>300
4	Ammonia (NH ₃ - N) (mg/l)	0.057 - 0.115	0.02 - 0.05	Above 1 mg/l
5	Nitrite (NO ₂ - N) (mg/l)	0.075 - 0.120	Nil	>0.1 for fresh water >0.5 for sea water
6	Nitrate (NO ₃ - N) (mg/l)	0.705 - 0.856	-	-

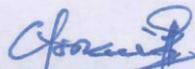
Considering the above aspects, I kindly submit that on the day of observation and collection of samples (30.12.2023) the water samples were collected during morning hours and it was observed that at the time of sampling there was high tidal wave impact. Hence the samples collected did not reflect any off odour or colour changes. And on observation of water samples in the lab the above results obtained reflects that the ammonia levels are in permissible range.

It is therefore prayed that this Hon'ble Tribunal may be pleased to accept the report on file and pass such further other orders which it deems fit to the case and thus render justice.

Solemnly affirmed and signed his name in my presence at Chennai, this 30th day of January 2024.


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Verification

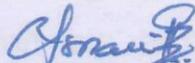
I, Mangat Ram Sharma, son of Mai Sharma, aged 57 years, Additional Chief Secretary to Government, Animal Husbandry, Dairying, Fisheries and Fishermen Welfare Department, Secretariat, Chennai - 600 009 Solemnly affirm that the contents of this Report are true to the best of my knowledge based on the records and I have not suppressed any facts.

Verified on this
30th day of January 2024



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