

**BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA
(THROUGH PHYSICAL HEARING WITH HYBRID MODE)**

Original Application No.60/2023/EZ

IN THE MATTER OF:

Arun Das,
Aged about 55 years,
S/o Late Ashwini Das,
R/o Village-Tengabari, P.O.-Mulukgaon,
District-Dibrugarh, P.S.-Chabua, Assam,

...Applicant(s)

Versus

1. Union of India,
Department of Fisheries, Ministry of Fisheries,
Animal Husbandry and Dairying, Government of India,
Krishi Bhawan, New Delhi,
Pin – 110001,
2. The State of Assam,
Represented by Commissioner and Secretary to the Government of Assam,
Fishery Department, Janata Bhawan, “E” Block, 1st Floor,
Dispur, Guwahati, District-Kamrup (M), Assam,
Pin – 781006,
3. The Deputy Commissioner, Dibrugarh,
District-Dibrugarh, Assam,
Pin – 786003,
4. The Superintendent of Police, Dibrugarh,
District-Dibrugarh, Assam,
Pin – 786001,
5. The Department of Biology, Nowgong College,
Old A.T. Road, Nagaon – 782001, Assam,
Represented by “Head of the Department”,

...Respondent(s)

Date of hearing: 09.04.2024

**CORAM: HON’BLE MR. JUSTICE B. AMIT STHALEKAR, JUDICIAL MEMBER
HON’BLE DR. ARUN KUMAR VERMA, EXPERT MEMBER**

For Applicant(s) : Mr. Sibojyoti Chakraborty, Advocate

For Respondent(s) : Mr. Ashok Prasad, Adv. for R-1, (in Virtual Mode)
Ms. Malabika Roy Dey, Advocate for R-2-4,

ORDER

1. Heard Mr. Sibojyoti Chakraborty, learned Counsel for the Applicant and Mr. Ashok Prasad, learned Counsel appearing (in Virtual Mode) for Respondent No.1, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, and Ms. Malabika Roy Dey, learned Counsel appearing for Respondent Nos.2 to 4, State Respondents, Government of Assam.
2. This Original Application has been filed by the Applicant stating that fish caught far away from Assam are sold in Assam in addition to fish procured from the fisheries in the State of Assam. It is stated that so far as the fish procured from the fisheries in Assam are concerned, the procedure for catching and sale of such fishes is governed by the Assam Fishery Rules, 1953, and guidelines of the Assam Fishery Development Corporation.
3. However, the allegation of the Applicant is that fish which is brought from outside Assam through transportation, such fish are found to have traces of Cadmium, Arsenic and Formalin as per the report of a study conducted by the team of researchers from the Department of Biology, Nowgong College, which also finds mention in Newspaper Report, copy of the Newspaper Report has been filed as Annexure-I to the Original Application. Copy of the report itself has not been filed by the Applicant. He shall file the copy of the Research Report on affidavit by the next date of listing.
4. The Applicant has prayed that the import of fish from outside the State of Assam into Assam by road or Railway, found laced with Formalin or tainted with Cadmium and Arsenic be banned till adequate scientific method for testing of such fish and plying

vehicles having cold storage refrigeration is not implemented by the Government.

5. Reference has also been made to the Regulation 2.6.2 of the Food Safety and Standards Authority of India Notification dated 11.01.2023 which prescribes the permissible standards of formaldehyde residues as under: -

“2.6.2. Limit of Formaldehyde-

(1) The amount of naturally occurring formaldehyde shall not exceed the limit prescribed in the column (2) for different species of fish as mentioned in the table given below: -

Group & Species	Mg/kg. Max.
Group-I (marine)	
<i>All finfishes (including Barracuda, Ballifishes, Bombay Duck, Bullseyes, Catfishes, Croakers, Eels, Filefishes and Puffers, Flat fishes, Goatfishes, Groupers (Rock Cods), Half Beaks and Full Beaks, Horse Mackerel, Leather Jacket (Queen Fish), Mackerel, Mulletts, Other Carangids, Other Clupeoids, Anchovies, Other Perches, Pigface Breems, Pomfrets, Ribbon Fish, Sardines, Seer Fishes/Spanish Mackerel, Silver Bellies/Biddies, Snappers, Tarpons, Threadfin Breems, Threadfins, Tuna and Bonitos, White Fish and any other commercial varieties), elasmobranchs, crustaceans and molluscs except those under Group III & IV</i>	4.0
Group- II (Freshwater Origin)	
<i>Finfishes (including Indian Major Carps, Minor Carps, Exotic Carps, Freshwater Catfishes, Snakeheads/Murrels, Tilapia, Trout and all other freshwater fin fishes), crustaceans and molluscans</i>	
Group- III (Marine)	
<i>Lizard fishes and any other marine fishes not</i>	8.0

<i>covered under Group I</i>	
Group- IV (Frozen Stored marine fish products)	
<i>All frozen stored marine fish products</i>	100

6. The Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2020, prescribes standards with respect to limit of naturally occurring formaldehyde in fresh water and marine fish. The relevant extracts of the Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2020, read as under:-

“III. Specific requirements for establishment engaged in handling, processing, manufacturing, packing, store, distribution and transportation of fish and fish products:

In addition to Part-II of Schedule 4, as operationalized vide direction F. No. 1(80) 2016/Enf-II Info/FSSAI(Pt.) dated 28th August, 2019, following are specific requirements.

1. Internal Structure and fittings

All interior structures (including floors, walls, ceilings, doors, windows, partitions, overhead fixtures, working surface that come into direct contact with fish and fish products, such as stairs, elevators, etc.) shall be constructed of materials that are corrosion-resistant, light-coloured, durable, impervious to minimize the build-up of fish slime, blood, scales and guts and to reduce the risk of physical contamination, with no toxic effect in intended use, shall be unable to provide pest harbourage and be easy for cleaning and disinfection.

2. Equipment and containers

2.1 Conveying equipment for live and dressed products shall be constructed of suitable corrosion-resistant material that doesn't transmit toxic substances and shall not cause mechanical injuries.

2.2 Cooling chambers for storage of fish and fish products shall be equipped with temperature recorder and with/without

automatic air temperature controllers in the chamber as well as with temperature recording devices.

3. Procurement of raw materials and ingredients

3.1 Both the raw material and ingredients shall, wherever feasible, be procured from registered, or approved supplier. Raw material shall be washed or cleaned as necessary to remove soil or other contaminants using clean and microbiologically safe water. Other raw material or ingredient or any other material used in fish and fish products shall not be accepted by a food business operator, if it is known to contain chemical, physical or microbiological contaminants. It is recommended that temperature of fish and fish products at the time of delivery shall be in the range of 0°C to +4.0°C. In case of frozen products, receiving temperature shall be -18°C or below.

3.2 Shrimps shall be procured from registered farmers and use only approved aquaculture inputs.

3.3 Fish shall free from fishy, sour, or ammonia-like odour and the eyes shall be clear and shiny.

3.4 Whole fish shall have firm flesh and red gills with no odour. The flesh shall spring back when pressed. Fresh fillets shall have firm flesh and red blood lines, or red flesh if fresh tuna.

3.5 Fish fillets shall display no discoloration, darkening, or drying around the edges.

3.6 Shrimp, scallop, and lobster flesh shall be clear with a pearl-like colour and little or no odour.

4. Food and packaging materials storage including warehousing

4.1 It is recommended that temperature of fish and fish products at the time of storage shall be in the range of 0°C to +4.0°C for fresh/chilled/refrigerated and - 18 OC or below for frozen. Too long storage time and severe fluctuation shall be avoided. Where the product is susceptible to temperature abuse and / or weather damage, covered bays shall be provided for loading and unloading.

5. Processing

5.1 *Fin fish and shellfish shall be handled and conveyed with care during processing operations to avoid physical damage such as puncture and mutilation. Food contact surfaces shall be made of food grade material.*

5.2 *Personnel shall put on clean protective clothing and wash their hands before entering processing area.*

5.3 *Ice used in cooling and holding raw material shall not be mixed with ice used to store processed and packed products.*

5.4 *Wherever steam is used directly on food during processing, the steam shall be generated from clean and microbiologically safe water.*

6. Packaging

6.1 *Avoid packages with signs of frost or ice crystals, which may mean the fish has been stored a long time or thawed and refrozen.*

6.2 *Avoid packages where the "frozen" fish flesh is not hard. The fish shall not be flexible.*

6.3 *Packaging used for storing ice cooled fish and fish products shall ensure the drainage of the melt water.*

6.4 *The packaging of fish and fish products shall ensure safety of fish and fish products and shall not alter the organoleptic properties before the expiration date.*

7. Food Transportation

7.1 *Transportation facility for fish and fish products shall have chilling equipment either to maintain a temperature at or below 4 °C (OR) maintain a temperature at or below -18 °C, as appropriate.*

7.2 *Contamination, exposure to extreme temperatures and the drying effects of the sun or wind shall be avoided.*

7.3 *Free flow of chilled air should be made around the load when fitted with mechanical refrigeration means.*

7.4 Inner surfaces of transport vehicles shall be smooth and easy to wash and disinfect.

7.5 Cargo compartments of transport vehicles and containers shall be subjected to regular washing and disinfection with a frequency necessary to prevent cargo compartments of transport vehicles and containers from becoming sources of contamination (dirtying) of products

8. Quality control

8.1 fresh fish shall not contain any food additives including formaldehyde, contaminants and natural or synthetic hormonal substances. Fish products shall contain permitted ingredients and comply with the relevant regulations.

8.2 Biological water resources catchments and food products of aquaculture of animal origin shall be examined for parasites (parasitic affections).

8.3 The fish and fish products shall not contain any preservative including formaldehyde which is not permitted under these regulations.”

7. The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India, Respondent No.1, has filed affidavit dated 06.11.2023 referring to Ministry's letter No. F No. 35028/18/2018-fy (Trade) dated 03.08.2018 where the States and Union Territories were requested to take necessary safety measures and regulatory actions regarding use of chemical formalin as fish preservative wherein the following steps were recommended which reads as under:-

i. "Quality certification jointly by Department of Fisheries and Food Safety Agencies etc.

ii. A Task Force may be set up including concerned State Department/agencies for joint inspection and testing formalin content in fish loads using CIFT test kits/other suitable test kits in the respective States.

iii. Task Force may also establish inter state coordination mechanism with the concerned States exporting and importing fish for cross testing at exit and entry points for building confidence among States.

iv. Food Safety and Standards Authority of India (FSSAI) may be consulted for evolving suitable mechanism based in the States respective requirements.”

8. In the affidavit it is also stated that the method for “Determination of free formaldehyde in fish” is available in the manual of methods of Analysis of Foods: Fish & Fish Products. It is also stated that the FSSAI had issued a Guidance Note No.01/2018 which includes advice for consumers, food business operators and food testing laboratories.
9. The State Respondents, Government of Assam, have filed affidavit dated 07.09.2023 stating therein that fish produced locally in the State from sources such as – river fisheries, beels, individual and community group fisheries are governed by the Assam Fishery Rules, 1953, and are sold in local markets or through door-to-door sale by local vendors and such local fish are preserved by the traders using Insulated Ice Boxes. With regard to transportation of fish from long distance markets, it is stated that Fishery Department has provided 4-wheeler refrigerated fish carrying vehicles, 4-wheeler refrigerated vehicles with Insulated Ice Box and e-rickshaw with Ice Box under Rural Infrastructure Development Fund (RIDF) and Pradhan Mantri Matsya Sampada Yojana (PMMSY) sponsored by Government of India/National Bank for Agriculture and Rural Development (NABARD).
10. In the affidavit, it is also stated that since fish locally produced in Assam is not sufficient, private traders import fish from outside the State from major fish producing States like – Andhra Pradesh,

Telangana, Uttar Pradesh etc. It is also stated that there is no record of fish being imported from Bangladesh.

11. Reference has also been made in the affidavit to the Food Safety and Standards (Food Products Standards and Food Additives) First Amendment Regulations, 2023, which came into force w.e.f. 01.08.2023 Annexure-B (page nos.53-62 to the paper book). Para 2.6.2 Limit of Formaldehyde has now been inserted vide amended regulations mentioning that the amount of naturally occurring formaldehyde shall not exceed the limit prescribed in column (2) for different species of fish as mentioned in the table which is already extracted herein above.
12. The State Respondents, Government of Assam, have filed further affidavit dated 20.11.2023 bringing on record the Draft Standard Operating Procedure (SOP) dated 14.11.2023 which reads as under:-

“GOVERNMENT OF ASSAM
FISHERY DEPARTMENT
DISPUR, GUWAHATI-06

No. FISH 26/2013/142 (NGT) Dated Dispur the 14th November, 2023

NOTIFICATION (DRAFT)

Sub: Standard Operating Procedures (SOP) for restricting import/stock/sale of Fish imported from other self sufficient States by Road/River Route using formaldehyde keep fish in marketable condition for long duration.

Ref: Order/direction of the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata, vide order dated 27.09.2023 in Original Application No.60/2023/EZ (Arun Das Vs. The Union of India & Ors.)

Introduction:

State of Assam is deficient in Fish production whereas majority of the population consume fish. To make up the deficit in supply, fish is

imported from other States having sufficient or surplus production like Andhra Pradesh and other such States from far off South India.

The exporter of such fish mostly use road transport which takes considerable time from the South of the Country to reach the other corner of North East. But such vehicles lack proper refrigeration facilities. So the unscrupulous traders use Formaldehyde to keep such fishes fresh during transit as well as in storage on arrival by wholesalers before such fish reaches Retail market points throughout the State.

IMPACT OF FORMALDEHYDE IN HUMAN BODY:

It is submitted that Formaldehyde is an organic compound with the Formula CH_2O and structure $HCHO$. The compound is a pungent colourless gas that polymerizes spontaneously into Para formaldehyde. It is stored as aqueous solutions which consists mainly of the hydrate $CH(OH)_2$. Formaldehyde is used by unscrupulous traders to prevent spoilage and keep fish in marketable condition for long duration.

It is worthwhile to mention that the solution is easily available in market. Fish Injecting huge quantity of formaldehyde consumed by human is harmful and may cause severe abdominal pain, vomiting, renal injury even may be fatal in extreme cases.

A recent study was conducted by a Team from the Department of Fish Processing Technology & Engineering, College of Fisheries, Central Agricultural University, Tripura and the result of the study showed adverse impact on human health as well as quality of the fish.

Another study conducted by the International Agency for Research on Cancer (IARC) categorized formaldehyde in Group 2A “as probably carcinogenic to human” (IARC 2004).

LACK OF PROPER INFRASTRUCTURE FACILITIES FOR STORAGE AND TRANSPORTATION FACILITIES

The cause of such use of Formaldehyde is lack of appropriate post harvest management infrastructure for storage, inadequate insulation during domestic transportation and lack of warehousing facilities with built in refrigeration facilities for bulk storage of fish at Whole Sale markets of the State.

NECESSITY OF CARRYING OUT TESTS ON FISH FOR DETECTION OF FORMALDEHYDE:

It is obvious that use of formaldehyde in fishes is not visible to the human eye nor it can be detected by smell. So to the human eye, the fish looks normal and fresh like a normal fresh fish.

Thus Govt of Assam took into earnest consideration the recent reports of the team of Nagaon College wherein samples collected found to contain during Laboratory Tests formaldehyde with alarming percentage of 14.95 to 14.99 against permissible limit 4 mg/Kg or 0.0004% .

Since it is matter of public health, it was widely reported in Print & Electronic media eventually the Hon'ble High Court as well as National Green Tribunal took cognizance of the matter based on Public Interest Litigation filed by a few conscious citizens.

Hence to stop the menace considering the harmful affect on human body due to consumption fish laced with formaldehyde, now Govt has proposed some administrative measures initially in the form of SOP is necessary.

CONSTITUTION OF TASKFORCE FOR EFFECTIVE ENFORCEMENT OF THE SOP

The whole exercise shall be supervised and monitored by State and District level Task Force which will review the whole issue periodically and take corrective /remedial measures.

(1)..State Level Task Force (STF)

The State Level Task Force will be under overall control and management of Fishery Department comprising of following officials:

- (i) The Senior Most Secretary of Fishery Department as Chairman*
- (ii) The Dean, College of Fisheries, MU, Raha.*
- (iii) The Director of Fisheries, Assam Convener.*
- (iv) The Marketing Officer, Directorate of Fisheries, Assam Co-Convener*
- (v) Representative of Food Safety Department not below the rank of Joint Secretary.*
- (vi) Representative of Heath & FW Department not below the rank of Joint Secretary,*

(vii) One Senior Police Officer of the rank of DIG representing DGP, Assam.

(viii) Head, ICAR —Central Inland Fisheries Institute (CIFRI) NER, Guwahati for technical guidance/assistance.

(ix) One representative of State Public Health Analyst.

The State Level Task Force will sit quarterly and review the situation with reports from District Task Force and issue further direction where necessary to enforce proper monitoring and follow up action to stop the harmful use of formalin in imported fish sold in the markets of the State.

(2) District Level Task Force (DTF)

Similarly District Level Task Force will be constituted in all the districts of the State which will be responsible for enforcement of the provisions of the SOP in each district comprising of following officials:

- (i) The District Commissioner or his representative preferably ADC (Health) As Chairman.
- (ii) District Fishery Development Officer Convener.
- (iii) Notified Nodal Officer of the district under District Fishery Development Officer.
- (iv) One representative of Supdt of Police not below the rank of Deputy of Supdt of Police.
- (v) Food Safety Inspector.
- (vi) One Representative of Health Department under Joint Director of Health Services,
- (vii) One Representative of Transport Department under District Transport Officer preferably Enforcement Inspector.

DUTIES AND FUNCTIONS OF GOVT OFFICIALS OF CONCERNED DEPARTMENTS LIKE FISHERY & FOOD SAFETY & OTHERS AS MEMBERS OF DFT:

1. The Nodal Officer of Fishery Department along with Food Safety Inspector in Dhubri and Kokrajhar districts with Inter State Border Check Gate at Chagolia in Dhubri District and Sreerampur in Kokrajhar district will arrange conduct of tests/checks at regular intervals at such Check gates on vehicles carrying imported fish for the State with taking samples and also verify the documents like Challan /Bills with certificate, if any issued by authority of exporting

State whether such imported fish are free from formalin. They will be assisted by Police of the concerned PS/OP under whose jurisdiction the Inter-State Check Gate falls.

(Action: Nodal Officer, Fishery /FSI/Supd of Police, Dhubri/Kokrajhar)

- 2. The Nodal Officer and FSI in other districts will conduct checks in wholesale markets in each district where imported fishes are delivered including Test before such fish reach the Retail markets throughout such districts.*

(Action: Nodal Officer, Fishery /FSI)

- 3. The vehicle carrying such imported fish must carry valid challan with the name of the consignee and details of consignment along with contact number including details of Consignor (supplier) of the State of origin for transportation to Assam and other details.*

(Action: Nodal Officer/FSI)

- 4. The **CIFT Rapid Formalin testing Kit** will be used for testing samples for detection of Formaldehyde in such fish.*

(Action: DFDOs /Nodal Officer of All district)

- 5. The fish samples so collected by the Food Safety Inspector as per their protocol will be sent to the State Public Health Laboratory, Guwahati for testing and analysis of the samples.*

(Action: FSI & Public Health Analyst)

- 6. The vehicle containing contaminated fish, if detected during preliminary tests must not be allowed to proceed for delivery of such fish to retail markets as they could contain harmful preservative injurious to human health.*

(Action: NO/ FSI/DTO of concerned District)

- 7. The vehicles carrying the contaminated fish will be detained by N.O./FSI and reported to the nearest Police Station for legal action through process of Law for confiscation and destroying with permission of the competent Court.*

(Action: Supdt of Police & DTO of concerned District)

- 8. The Nodal officer shall maintain a data base of the samples collected for analysis, source of import along with the name of the traders with due information to the concerned FSO of that District as per Food Safety Standard Act.*

(Action: N.O. Fishery)

9. For effective implementation, random checks are to be carried out in various wholesale and retail fish markets by the Nodal Officer of Fishery Department with assistance from subordinate officers/staff along with FSI from time to time.

(Action: Dist Task Force)

10. Such regulatory tests are to be carried out at regular intervals once in every month at district level especially in town areas where such imported fish have sufficient demand.

(Action: District Task Force)

11. The Task Force to conduct awareness campaigns among the Stakeholders on the impact of indiscriminate usage of formaldehyde and other such harmful chemicals.

(Action: District Task Force)

12. Identification of the source of production/supply is important for necessary Remedial measures. Thus proper documentation of the farmers and traders is very important.

(DFDO/N.O (Fishery)

13. Henceforth, the following information is to be maintained in registers by the whole sale traders/retailer of imported fish:

- Name of market whole sale/retail.
- Daily/ Weekly/Bi weekly market.
- Name of the supplier of imported fish with detail address, State of origin including contact number.
- Name, address and contact number(s) of source(s) of procurement of formalin by the local fish farmer/ trader/ supplier.

(Action: DFDO s/ Fishery Dept.)

14. The procedures outlined above is not exhaustive and State /District Task Force may suggest any other relevant issue as deem fit for inclusion in the SOP.

Commissioner & Secretary to the Govt. of Assam,
Fishery Department

Memo No FISH 26/2023/142-A(NGT) Dated Dispur the 14.11.2023”

13. A further affidavit dated 09.02.2024 has been filed by the State Respondents, Government of Assam, stating that the draft SOP has been finally accepted and notified by the Government and has come

into effect with effect from 20.01.2024 vide Notification dated 20.01.2024 prescribing detailed procedures to stop the menace of use of formaldehyde including constitution of a State Level Task Force and District Level Task Force. It is also stated that pursuant to the notification of the SOP, the Commissioner and Secretary, Fishery Department, Government of Assam, had directed all the District Fishery Development Officers throughout the State to take necessary follow up action for constitution of District Level Task force as per SOP for restricting import/stocks/sale of imported fish using formaldehyde forthwith in consultation with the respective District Commissioners. It is also stated that the State Level Task Force has been constituted on 02.02.2024 which shall meet quarterly and review the situation with reports and feedbacks from the District Level Task Force.

14. The Applicant has also filed rejoinder affidavit dated 07.04.2024 wherein it has been stated that 13 districts have already constituted the District Level Task Force and have forwarded the records of formation of such Task Force in respect of Karimganj District with details towards the steps initiated for execution of the SOP.
15. In view of the above, since Standard Operating Procedure (SOP) has been prepared and notified on 20.01.2024 by the State Government and a State Level Task Force and District Level Task Force have also been constituted to stop the menace of use of formaldehyde, nothing further remains for adjudication in the present Original Application.
16. We accordingly disposed of the present Original Application with a direction to the State Respondents to strictly conform to the

Standard Operating Procedure (SOP) in the matter of prevention of menace of use of formaldehyde for the preservation of fishes in the State of Assam.

17. I.As. if any, stand disposed of accordingly.
18. There shall be no order as to costs.

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B. Amit Sthalekar, JM

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Dr. Arun Kumar Verma, EM

April 09, 2024,
Original Application No.60/2023/EZ
AK