

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

LC-LP.1/Circ.77
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**CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF
WASTES AND OTHER MATTER, 1972, AND ITS 1996 PROTOCOL**

Notification under article 8.2 of the London Protocol regarding a case of emergency

The Marine Environment Preservation and Marine Pollution Department of the Chilean Maritime Authority (Directemar) informed IMO on 7 March 2016, about a widespread *Chattonella* alga bloom, off the coast of Chile that had resulted in extensive mortality amongst farmed fish (Atlantic salmon, Pacific salmon and trout) in various stages of growth from 12 different salmon enterprises. Some 26,945 tonnes of fish were affected.

Having used all the capacity to process the dead fish and having exhausted all other waste management options available, Directemar authorized the emergency disposal at sea of 12,000 tonnes of fish on the grounds of protecting human health and the marine environment. The material had been assessed using the Fish Waste Assessment guidelines and found to be suitable for open water disposal.

Directemar offered to consult with IMO on this matter – as required under Article 8.2 of the London Protocol. The following explanation was offered in this regard:

"From 22 February 2016 onwards, massive *Chattonella* blooms occurred in the Reloncaví Sound, located in the Los Lagos Region of Chile. As a result of abnormal weather and sea conditions in the area (increased temperatures, lack of rain and wind), a severe mortality of salmonids occurred due to suffocation, affecting a total of 26,945 tonnes of farmed fish (Atlantic salmon, Pacific salmon and trout) in various stages of growth from 12 different salmon enterprises.

The National Fisheries and Aquaculture Service (Sernapesca) and the Chilean Maritime Authority (Directemar) required a series of measures from the aquaculture industry to ensure an appropriate disposal of fish waste was carried out under strict biosafety conditions and to speed up the emergency transfer of live fish. Up to now, actions taken aim to increase the amount and size of vessels used in logistics operations, transfer of wastes to authorized disposal sites, and fish waste processing into fishmeal and fish oil, in plants located within the region (Calbuco) and in the Bío-Bío Region (Coronel and Talcahuano, at some 600 km distance away). The result of these measures has allowed the processing of around 11,500 tonnes of dead fish.

On 3 March, after exhausting all waste management options available, the Salmon Industry Association (SalmonChile A.G.) requested the Chilean Maritime Authority to authorize the emergency dumping of 12,000 tonnes of fish at sea, on the grounds of

protecting human health and the marine environment. Directemar, using the London Protocol guidance, requested the Fisheries Authority to provide a technical report to establish: i) whether the dead fish were subjected to chemical treatment, ii) the lack of available capacity in fishmeal plants for processing the dead fish, and iii) the amount of waste that cannot be processed or transferred to disposal sites.

On 4 March, the National Fisheries and Aquaculture Service issued a report indicating the following: i) logistic operations have reached their full capacity; ii) the existing biomass does not satisfy minimum quality requirements to be processed into fishmeal or fish oil; and iii) removal of decomposing fish poses a threat to human health and the environment. Due to the above, it was deemed necessary to adopt exceptional measures for the disposal of up to 9,000 tonnes.

Actions taken

Based on the prescriptions under Article 8.2 of the 1996 Protocol, which allows Contracting Parties to issue a permit for the disposal of wastes or other matter at sea 'in emergencies posing an unacceptable threat to human health, safety or the marine environment and admitting that there is no other feasible solution to tackle this situation', an emergency dumping permit was issued. In parallel, Directemar is carrying out an assessment of the emergency situation in order to give compliance to the procedure established at LC 28/15 Annex 11, in particular those items related to Assessment, Consultation and Reporting to IMO.

As a result of the assessment made, the following consideration was taken into account:

- a. the potential risk to human health due to the sinking of cages of excessive weight (90% mortality) and the risk of infection from handling degrading matter;
- b. since fish waste is organic, its chemical, physical and biological properties do not affect the marine environment, human life, shipping lanes or the activities of other marine users;
- c. due to the amount (26,945 tonnes) and degree of degradation involved, it is not possible to send all fish waste to authorized landfill sites or to fishmeal processing plants. In accordance with the above, there is an excess of dead fish (9,000 tonnes) for which there are no viable waste management options other than dumping at sea; and
- d. the characteristics of the selected dump-site allow us to ensure that dumping will not affect neighbouring countries, the shoreline and bathing beaches; areas of beauty or significant cultural or historical importance; areas of special scientific or biological importance; fishing areas; spawning, nursery and recruitment areas; migration routes; seasonal and critical habitats; shipping lanes; military exclusion zones; and engineering uses of the seafloor.

The Fish Waste Assessment guidelines will be applied as much as we can during dumping operation and monitoring."

The Chilean Authorities issued emergency permit DGTM Y MM N°12.600/05/114, in annex 1, on 4 March 2016, authorizing the loading for disposal and the disposal of waste or other matter at sea.

In discussing this case with the Chilean Authorities, it was agreed to inform the Contracting Parties of this matter rather than seek their advice. This decision was based on the following:

- .1 the emergency permit would avert causing a risk to human health and the marine environment resulting from the mortality of salmonids, affecting a total of 26,945 tonnes of farmed fish (Atlantic salmon, Pacific salmon and trout) in various stages of growth from 12 different salmon enterprises;
- .2 the fact that the fish waste has undergone an assessment under the provisions of the London Protocol, and that the Fish Waste Assessment guidelines were adhered to as much as possible during the dumping operation and monitoring. The assessment took into account the information offered in paragraphs a) to d), above; and
- .3 no other State's interests would be affected.

If necessary, further enquiries can be directed to:

Enrique Vargas Guerra
Commander LT
National Focal Point for LC/LP
Head of Marine Environment Preservation and Marine Pollution Department
Directemar
Chile
Phone: +56-032-2208334
Fax: +56-032-2208385
Email: evargasg@dgtm.cl

ANNEX

ARMADA DE CHILE
DIRECCION GENERAL TERRITORIO MARITIMO
Y DE MARINA MERCANTE

D.G.T.M. Y.M.M. ORD. No 12.600/05/114/VRS

**AUTHORIZATION TO CARRY OUT
EMERGENCY DUMPING OF FISH
WASTE IN THE PUERTO MONTT
MARITIME JURISDICTION**

VALPARAISO, 4 March 2016

GIVEN the authority conferred upon me by articles 5, 142 and 143 of Statutory Order No. 2.222(M) 1978, Navigation Act and articles 3, 106, 109 and 110 of Statutory Declaration D.S. (M) No. 1 1992, Aquatic Pollution Control Regulation; and Statutory Declaration D.S. MINREL No. 136 of 11/2012 of the 1996 Protocol, relating to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and its 1996 Protocol,

CONSIDERING THAT:

1. The National Fisheries and Aquaculture Service, hereafter referred to as "SERNAPESCA", by Special Resolution Nos. 1340 of 29 February 2016 and 1359 of 1 March 2016, authorizes the *Agrupaciones de Concesiones* (Licensing Group) (ACS), for reasons of *force majeure*, to adopt exceptional measures, due to the extremely high mortality rate in salmon farming centres in the Los Lagos region, due to toxic algae bloom.
2. The exponential mortality rate of extremely large numbers of salmonids caused by the microalgae species *Chattonella sp.* which can bloom profusely particularly in summer and which is described as fatally damaging to the gills of the aforementioned salmonids. The causes of this unforeseen epidemic are proving impossible to manage.
3. The Chilean Salmon Industry Association, hereafter referred to as "SALMON CHILE A.G." by its Letter Nos.21 and 22 of 3 and 4 March 2016 respectively, applied, on behalf of its members, to carry out an emergency dumping of fish waste (Atlantic Salmon) in the Puerto Montt Maritime Area. This request relates to the following aquatic enterprises:

No.	COMPANY	Unique Tax Registration No.	Legal representative
1	AQUACHILE S.A.	82.247.400-7	Mr. Torben Petersen
2	AGUAS CLARAS S.A.	96.509.550-0	Mr. Torben Petersen
3	GRANJA MARINA TORNAGALEONES S.A.	87.752.000-5	Mr. José M. Ureta Rojas
4	TRUSAL S.A.	96.566.740-7	Sr. Gastón Cortéz Quezada

4. By Order of D.I.M. and M.A.A. No. 12.600/05/62 dated 3 March 2016, the Directorate of Maritime Interests Aquatic Environment (DIRINMAR), requested SERNAPESCA to provide a technical report in respect of their application to dispose of fish waste at sea introduced by SALMONCHILE A.G.

DATED:

5. By Order No. 087486 of 4 March 2016, SERNAPESCA submitted a technical report in respect of the records presented by SALMONCHILE A.G. to support the one-off request to dispose of fish waste at sea.
6. Mortality rates higher than 90% within a fish farm risk carry significant risk of sinking its cages and threatening its economic stability, constituting a threat to human health, the security of the installations and the marine environment.
7. The fish waste is envisaged in Annex 1 of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, and therefore its disposal can be authorized.
8. The technical report referred to above indicates that the fish waste is organic and that its chemical, physical and biological properties will have no effect on the aquatic ecosystem, on human life at sea, on shipping lanes, or on the activities of other maritime users.
9. Based on this same technical report it is concluded that it is not possible to entirely dispose of the aforementioned waste in authorized dump sites, or process it as fishmeal or fish oil, owing to the volumes involved and its level of decomposition. If the mortality rate continues to remain high, no other waste management options exist other than disposal at sea.
10. The proposed dump site corresponds to a circular area of 05 nautical miles (NM) radius, located 75 NM to the west of Punta Corona, centred on the following position:

CENTRE	LATITUDE SOUTH	LONGITUDE WEST
1	41°46' 15"	075° 43' 31"

11. Information available on the area proves that dumping will not affect recreational amenities; beauty spots or areas of cultural or historic interest; areas of particular scientific or biological importance; recreational or commercial fishing areas; spawning, reproduction and fish restocking areas; migration routes; seasonal and critical habitats; shipping lanes; military exclusion zones and/or areas for technological use on the seabed.
12. In accordance with the potential impacts evaluation, the composition of the material to be discharged, being of biological origin and without any kind of chemical treatment, implies that it will degrade rapidly in the marine environment without affecting the aquatic ecosystem.

D.G.T.M. Y.M.M. ORD. No 12.600/05/114/VRS.
DATED:

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I UNDERTAKE:

1. **TO AUTHORIZE** an emergency dumping permit under article 8.2 of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 D.S. (MINREL) No. 136/2012, for a total which will not exceed 9,000 (nine thousand) tonnes of fish waste, to the following aquatic enterprises:

No.	COMPANY	Unique Tax Registration No.
1	AQUACHILE S.A.	82.247.400-7
2	AGUAS CLARAS S.A.	96.509.550-0
3	GRANJA MARINA TORNAGALEONES S.A.	87.752.000-5
4	TRUSAL S.A.	96.566.740-7

TO ESTABLISH THAT,

1. The firms indicated in paragraph 1 above should inform the Local Maritime Authority and the Regional Directorate of the National Fisheries and Aquaculture Service of Los Lagos, 06 hours before setting sail, of their intention to dispose of fish waste at sea.
2. Captains of the ships carrying out the dumping of waste, should comply with the following:
 - a. To request authorization to sail in the appropriate Captaincy of Puerto. Their request should indicate that the voyage will be carried out in the framework of the London Protocol, incorporating details of: the company of origin, the volume and species to be discharged (in tonnes).
 - b. Keep the automatic positioning device powered up at all times, from setting sail to reaching port.
 - c. Speed during the disposal should be no more than 4 knots and always sited within the area indicated in paragraph 11 of the considerations listed in this present resolution.
 - d. Record in the ship's log the time and position of the start and end of the dump.
 - e. The fish waste to be dumped should be divided up and discharged in short bursts.
 - f. There can be no more than one ship dumping simultaneously within the authorized area.
 - g. An inspector should go on board (public health inspector or other competent authority) who will evaluate on-site compliance of the requested measures and carry out a visual inspection of the results of the disposal.
3. Once the activity has ended the applicant should obtain at least an aerial photographic record of the dumping area in order to monitor the changes in the organic remains discharged, presenting to the Maritime Authority of Puerto Montt a written brief within 10 days of the end of the event.

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DATED:

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4. The dumping activity will be carried out by means of the discharge of fish waste from the holds of the *Pesqueros de Alta Mar* (PAM), using the ships' pumping systems.
5. This resolution will be subject to a payment of US\$ 214.95 being received in accordance with arrangements set out in D.S. (M) No. 427 dated 25 June 1979.

WRITTEN, registered and communicated to whomever it may concern for their information and compliance.

OSVALDO SCHWARZENBERG ASHTON
VICE ADMIRAL
DIRECTOR GENERAL
