



Tel. (819) 953-1398

Fax (819) 953-1583

Our file Notre référence

Place du Centre
200 Promenade du Portage
4th Floor
Gatineau, Quebec
K1A 1K8

616-01/06
M05W0110

19 January 2006

Mr. David Bevan
Assistant Deputy Minister
Fisheries and Aquaculture Management
Fisheries & Oceans Canada
200 Kent Street
13th Floor, Station 13228
Ottawa, Ontario
K1A 0E6

Dear Sir :

RE: Marine Safety Advisory No. 01/06 - Weight Specifications for Prawn Traps and Effects on Fishing Vessel Stability

On 29 June 2005, at about 1641, while en-route from the Queen Charlotte Strait to Gibsons, B.C., the small fishing vessel *Morning Sunrise*, with 500 prawn traps on deck and approximately 4 500 kg of frozen prawns in boxes in the freezer hold, listed heavily to port and gradually sank in 152 m of water. All four crew members on board, wearing immersion suits, abandoned the vessel into a liferaft and were soon picked up by the Coast Guard vessel *Cape Caution*.

The Transportation Safety Board of Canada investigation into this occurrence (M05W0110) is ongoing. To date the investigation has revealed that the weight and location of the 500 traps stowed in high stacks above the main deck and the sudden dynamic external heeling forces combined to compromise the vessel's transverse stability.

In 2002, the Transportation Safety Board of Canada conducted an investigation into a similar accident involving the fishing vessel *Fritzi-Ann* (M02W0102) under similar circumstances. On 07 July 2002, while en route from Port Hardy, B.C., to Comox, the *Fritzi-Ann*, sailing light with 500 prawn traps on board, capsized while attempting to counter strong tidal rips in the vicinity of Kelsey Bay harbour. All three crew members abandoned the vessel into a liferaft and were later picked up by the fishing vessel *Serena Joye*. The vessel was recovered and subsequently declared a constructive total loss.

Both of the above mentioned vessels were operating under DFO's 'Reallocated Trap Limits' (RTL) Policy, whereby two licenses are attached to one vessel, making them eligible to carry 500 prawn traps, in place of the 300 trap limit for a single license.

As a result of the *Fritzi-Ann* occurrence, the Assistant Deputy Minister of the Department of Fisheries and Oceans (DFO) was apprised, via TSB Marine Safety Advisory (MSA 02/03), of the risks associated with the lack of weight specification on prawn traps. The risks include:

- the incremental increase in deck weight since license holders acted to make their traps more robust so as to increase the weight of their catch; and,
- the subsequent adverse effects on vessel stability.

In response, DFO issued a caution to License holders through their Integrated Fishery Management Plan, to consider the stability of their vessels while transporting trap gear.

Further to the risks identified in the aforementioned investigations, the TSB recently received a report, through the confidential SECURITAS reporting system, informing that during the 2005 'Prawn By Trap' fishery season (May 01 to June 28), a new larger and heavier type of Prawn Trap had been introduced on the fishing grounds, and was being carried on board two B.C. registered vessels.

While these new traps conform to Fisheries and Oceans Canada regulations their significantly larger size will greatly limit the available deck space for stowage. The traps would thus have to be stacked higher, substantially raising the vessel's centre of gravity.

The following is a comparison of weight and size between the traps presently in use and the new traps:

	<u>Old Traps</u>	<u>New Traps</u>
Upper Ring Diameter:	0.71 to 0.86 m	1.03 m
Weight:	2.7 to 5.2 kg (Av: 4 kg)	12.18 kg
Volume	84 to 140 litres (approx)	174 litres (approx)
Total weight of 300 traps	1 200 kg	3 654 kg.
Total weight of 500 traps	2 000 kg.	6 090 kg.

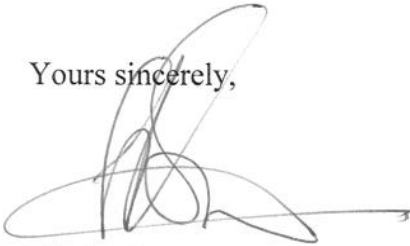
As can be seen from the table above, the new traps are approximately three times heavier and exert an extra deck load of about 2 400 kg for a single license, (300 traps), and 4 100 kg for a 'Stacked License' (500 traps) at a higher centre of gravity, thereby further detrimentally affecting vessel stability.

Furthermore, since the physical dimension of the newer trap is much bigger, smaller fishing vessels that have already carried out modifications to allow for the increase in trap carrying capacity from 300 to 500, are now spatially challenged to accommodate the newer traps. This may encourage vessel operators to resort to other unsafe modes of carrying these traps to and from the fishing grounds.

It is understood that in 2005, of the 252 prawn fishing licenses that were awarded on the West Coast, 35 vessels carried 'Stacked licenses' under DFO's RTL policy.

Given the number of vessels engaged in prawn fishing, and in particular the number with stacked licenses, the DFO may wish to review its current volumetric specifications for prawn traps and, in consultation with TC, consider means to help ensure that these operators are not unwittingly exposed to risks associated with the larger and heavier new traps and their adverse effects on vessel stability.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Eric R. Snow', with a long horizontal stroke extending to the right.

Eric R. Snow
Acting Director, Investigations - Marine

BACKGROUND INFORMATION

TSB Contacts: Captain Raymond Mathew
Marine Investigator
Transportation Safety Board of Canada
#4-3071, Number Five Road
Richmond, B.C. V6X 2T4
Tel: (604)-666-4957
Fax: (604)-666-7230
E-Mail: raymond.mathew@tsb.gc.ca

Captain John Mein
Regional Manager
Transportation Safety Board of Canada,
Tel: (604) 666 4956
Fax: (604) 666 7230
email: john.mein@tsb.gc.ca

Captain Eric R. Snow,
Manager, Head Office Operations
Transportation Safety Board of Canada
Tel: (819) 953-1572
Fax: (819) 953-1583
E-Mail: eric.snow@tsb.gc.ca

cc. Mr. Paul Sprout
Regional Director General
Department of Fisheries and Oceans, Pacific Region
Suite 200-401 Burrard Street.
Vancouver, B.C.
V6C 3S4

Mr. Jim Morrison
Shellfish Biologist
Fisheries Management
South Coast Division
3225, Stephenson Pt. Road
Nanaimo, B.C.
V9T 1K3

Mr. Gerard Macdonald
Director General
Transport Canada Marine Safety (AMS)
330 Sparks Street
Place de Ville, Tower C, 11th Floor
Ottawa, Ontario
K1A 0N8