



National Environmental Trust  
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Helga Pedersen, Minister  
Norwegian Ministry of Fisheries and Coastal Affairs  
Postboks 8118  
Dep. 0032  
Oslo, Norway  
10 January, 2006

Dear Minister Pedersen:

I write on an urgent matter seeking assurance that there are sufficient government mechanisms to safeguard international consumers from contaminated farmed salmon and farmed salmon feed originating from Norway. I am the campaign director for the Pure Salmon Campaign, a global effort working to improve the way farmed salmon is produced. Human health and environmental concerns related to farmed salmon are central to our campaign and I write to you in the hopes that you can answer some questions I have about the possibility of cadmium and lead contamination of Norwegian farmed salmon and salmon feed and urge you to respond to the concerns raised by Russia.

As you are aware, on 29 November 2005, Russia announced a ban starting 5 December 2005 on Norwegian farmed salmon due to cadmium (and lead) contamination<sup>[1]</sup>. In one sample, the lead content exceeded the permissible limit by 18 times and cadmium - by 3.7 times. In a second sample, the contents of lead and cadmium were exceeded, respectively, by 10 and 2.5 times<sup>[2]</sup>. Finally in December 2005, the Russian ban was extended to all fresh Norwegian farmed salmon starting January 2006<sup>[3]</sup>.

The Russian ban prompted the Pure Salmon Campaign to research this issue further and in doing so we found the 29th April 2005, 'Notification of Emergency Measures' issued by the World Trade Organization's Committee on Sanitary and Phytosanitary Measures pertaining to "certain feed products with high content of cadmium". This notification, listing Norway as the notifying member and specifically the Norwegian Ministry of Agriculture and Food and The Norwegian Ministry of Fisheries and Coastal Affairs as the

local government agencies involved, identified Norway, Scotland, the Faroes and Canada as the countries affected and added that countries “likely to be affected” were “all trading partners,” such as Russia.

It has come to our attention that Dr. Claudette Bethune, Senior Scientist at the National Institute of Nutrition and Seafood Research (NIFES) has expressed concern surrounding issues regarding feed contamination of cadmium, and the resulting reports from the Veterinærinstituttet (28.4.05) and VKM (13.4.05). The area of dispute centers on the failure of VKM to issue any official warning about potential contamination of farmed salmon. In its opinion of 13 April 2005, the Panel on Animal Feed of the VKM acknowledged that feed containing high levels of cadmium was provided to farmed salmon for as long as four months but determined that the feed could not have led to elevated fish tissue concentrations.

As we understand it, Dr. Claudette Bethune of NIFES, has expressed the concern that VKM’s contention of minimal potential contamination was in error given the properties of cadmium, and several other studies that showed the possibility of significantly greater accumulation of cadmium in fish muscle tissue beyond those suggested by VKM. Dr. Bethune cites six studies (see below for studies) that show fish tissue concentrations above  $0.1 \text{ mg Cd kg}^{-1}$  under a range of conditions. VKM, on the other hand, appears to cite only the Berntssen 2001 study as definitive. VKM also contends that cadmium would be relatively rapidly eliminated after the contaminated feed was withdrawn. Dr. Bethune disagrees with that assessment as well, citing a longer redistribution period than that cited by VKM

Given the disparity of findings in the studies, we contacted Dr. Dennis Lemly, an expert on metals uptake in fish with the U.S. Forest Service for an opinion. He has seen no reason to dispute Dr. Bethune’s contention that cadmium can accumulate in fish tissue above  $0.1 \text{ mg Cd kg}^{-1}$ . While it is not possible to predict a precise cadmium concentration given a particular scenario, it is not unreasonable to predict – with caution – that such an elevated concentration could occur. Accordingly, we are concerned that VKM’s conclusion erred in its certainty, and should have allowed for the possibility, taking appropriate precautionary action.

I understand that Norwegian Government officials, including you, are meeting with Russian officials in Moscow on Thursday 12 January to discuss this issue<sup>[4]</sup>. I urgently request reassurance that Norway’s response to this matter is adequate to protect public safety. I am concerned that Norway is only interested in convincing Russia to lift the ban on fresh Norwegian farmed salmon. Given the above noted concern about your own scientist, the issue needs to be investigated more thoroughly.

I therefore ask you to address the following questions:

- How much Norwegian salmon feed (in tonnes) has been contaminated with cadmium and what were the concentrations in the feed?
- How many companies are involved in the production of this feed?
- Who are they?
- Have all the salmon farming companies using this feed been notified?

- Which countries are involved in the production of this feed?
- Which countries are recipients of this feed?
- What is the linkage between this batch of feed, Norwegian farmed salmon and the contaminated Russian farmed salmon?

I look forward to your prompt response to these questions. In closing, I extend an open invitation for further dialogue on these matters so that we can be mutually satisfied that they are adequately addressed.

Sincerely,

Andrea Kavanagh  
 Director  
 Pure Salmon Campaign

Copy: Geir Isaksen, c/o Peter Williams  
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#### **Studies that show fish tissue concentrations above 0.1 mg Cd kg<sup>-1</sup>**

1. Kraal, et. al. "Uptake and Tissue Distribution of Dietary and Aqueous Cadmium by Carp." *Ecotoxicology and Environmental Safety* **31**, 179-183 (1995)
2. Cinier, et. al. "Cadmium Bioaccumulation in Carp Tissues During Long-Term Exposure." *Ecotoxicology and Environmental Safety* **38**, 137-143 (1997)
3. Cinier, et. al. "Kinetics of Cadmium Accumulation and Elimination in Carp Tissues." *Comparative Biochemistry and Physiology Part C* **122**, 345-352 (1999)
4. Szebedinszky, et. al. "Effects of Chronic Cd Exposure via the Diet or Water on Internal Organ-Specific Distribution and Subsequent Gill Cd Uptake Kinetics in Juvenile Rainbow Trout." *Environmental Toxicology and Chemistry* **20(3)**, 597-607 (2001).
5. Chowdhury, et. al. "Gastrointestinal Uptake and Fate of Cadmium in Rainbow Trout Acclimated to Sublethal Dietary Cadmium." *Aquatic Toxicology* **69**, 149-163 (2004).
6. Hattink, et. al. "The Toxicokinetics of Cadmium in Carp under Normoxic and Hypoxic Conditions." *Aquatic Toxicology* **75**, 1-15 (2005).

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[1] "Russia to ban fish imports from several Norwegian firms from December 5<sup>th</sup>" (Itar-Tass, 1<sup>st</sup> December 2005): <http://www.itar-tass.com/eng/level2.html?NewsID=2682977&PageNum=0>

[2] "Heavy metals found in some Norwegian farmed salmon; Russia bans some companies this afternoon" (Seafood Intelligence, 1<sup>st</sup> December 2005): [www.seafoodintelligence.com](http://www.seafoodintelligence.com)

[3] <http://www.planetark.com/dailynewsstory.cfm?newsid=34143&newsdate=21-Dec-2005>

[4] <http://www.norwaypost.no/cgi-bin/norwaypost/imaker?id=20729>