

## Coastal First Nations - Tsunami Debris Q & A

November 2012

### 1. How much tsunami debris can we expect?

Wind-blown material from the tsunami is already showing up on our shores and current-driven material is expected to arrive in the coming year. It is hard for scientists to accurately predict where and how much material will arrive on Pacific coast beaches. Given this uncertainty, it is critical that Coastal First Nations take an active role in monitoring the incoming debris and work with others to clean up and address the impacts of the debris that does arrive.

### 2. Why is it important for Coastal First Nations to help monitor the debris?

Communities are worried about the amount of debris that may arrive on beaches, how the debris will be collected and disposed of, whether the debris is contaminated, the possible impacts of invasive species, and other health and environmental implications of a quantity of debris of this magnitude arriving on the North and Central Coast. Since we can't fully predict the extent and potential impacts of the tsunami debris arriving in our territories, nor the potential impact to traditional harvesting areas it is important for Coastal First Nations to begin monitoring tsunami debris immediately. The debris is expected to begin arriving during the winter storm events this year and continue through to 2014. Establishing a baseline estimate before the tsunami debris starts to arrive is important for building a case for securing adequate funds and resources for communities to address the costs of cleanup and disposal. The Coastal First Nations Tsunami Debris Monitoring Protocol has been developed to provide direction to Coastal First Nations re. how to collect and record information on tsunami debris.

### 3. What kinds of Japanese tsunami debris are we likely to find?

The most likely objects that you will find while out on patrol are highly buoyant materials such as fishing nets, lumber, plastics, household items, foam pieces, and possibly chemical or oil drums. Up to now, confirmed items that have come from the Japan tsunami include vessels, buoys, sports balls, a floating pier, and a motorcycle in a container. *Remember safety first!* Use common sense and follow general safety guidelines when handling tsunami debris. If you don't know what an item is, don't touch it. If it appears hazardous, contact appropriate authorities.

### 4. How do we know if the debris that we find is from the Japanese tsunami rather than other marine debris from Asia or debris generated locally?

Marine debris is a common problem worldwide and because objects wash up on the Pacific coastline from Asia all the time, it is very difficult to identify debris that came from the Japanese tsunami. Over the next year, we are likely to see significant changes in the type and amount of debris on any given shoreline. You can expect to see an increase in items such as Styrofoam barrels, plastic bottles and fishing floats. Look for unique or identifiable markings such as serial numbers or vessel registration numbers.

### **5. Is the debris radioactive? Should we be concerned about radiation contamination?**

There is consensus among scientists, including those representing the US National Oceanic and Atmospheric Association and Canada's Department of Fisheries and Oceans, that the tsunami debris is highly unlikely to be radioactive for several reasons, including the marine debris from the Japan tsunami was generated and dispersed to sea several days before the Fukushima nuclear plant leak and the debris was generated over hundreds of kilometres along the Japanese coast while radioactive water leaked from just one place. It is also believed that radiation risk to marine species and ecosystems in BC is low. Visit the BC Centre for Disease Control website or the provincial Tsunami Debris Coordinating Committee website for additional information on radiation (see website addresses in "Further Information" section below).

### **6. Who is assessing ongoing risks of radiation?**

So far, radiation tests conducted on recovered objects have shown no increased levels of radiation, but periodic testing will be conducted to ensure that there is no radiation risk. The Public Health Agency of Canada, Health Canada, Canadian Food Inspection Agency, BC Ministry of Health, and BC Centre for Disease Control continue to monitor the risk in the marine environment and will provide updates as information becomes available. In addition, in September 2012, Health Canada offered assurance radiation monitoring training to approximately 40 individuals whose roles require them to be in the marine environment on a regular basis up and down BC's coast. A Metlakatla Guardian Watchman attended the workshop to learn how to use a handheld RadEye radiation detector to assist with monitoring background radiation to ensure public safety. He will monitor the background radiation of any tsunami debris that is found in the area and in the unlikely chance of radiation being detected, he will contact Health Canada and the BC Centre for Disease Control immediately.

### **7. What should we do if we find any potential aquatic invasive species attached to the debris?**

Tsunami debris that originated in the marine environment such as docks, piers, buoys, vessels, aquaculture floats, and other buoyant materials poses the greatest concern with respect to aquatic invasive species. There is a high likelihood that living Asian species not native to North America may colonize these items. Some of these animals and plants pose a serious threat to our native species and the environment by competing with native fish and wildlife for food and habitat. If you come in contact with tsunami debris that you suspect to be contaminated with aquatic invasive species take the following measures:

- a) If debris is encountered that is suspected to carry aquatic invasive species, take clear photos of the piece of debris, close-ups of the attached organisms and any identifiable marks on the debris. Record the date and location of the sighting.
- b) Report your sighting by phone to your local DFO officer and by email to [DisasterDebris@noaa.gov](mailto:DisasterDebris@noaa.gov).
- c) If the suspicious debris has landed onshore and it is safe and feasible to do so, it should be disposed of in a landfill as soon as possible. If the debris cannot be disposed of in a landfill, attempt to move the item well above the high-tide line so that any organism living on it will not survive or return to the ocean during high tide and storm events.
- d) If the suspicious debris is located offshore, you are encouraged to retrieve debris if it is safe to

do so and deck space permits. If you are able to retrieve the debris, please indicate when and where you will be landing when you make your report, as you may be given drop-off or disposal instructions. Do not attempt to tow large debris items, as they may be heavily contaminated with animals or plant material. Movement may increase the risk of dislodging and transporting potentially invasive species. Instead report the debris to the Coast Guard by phone at 1-800-889-8852 or by radio on Channel 16 VHF and report to your local DFO officer.

- e) Record your sighting using the Coastal First Nations Tsunami Debris Monitoring Protocol and Regional Monitoring System field cards.

## **8. How should we handle the debris that we find while out on patrol?**

Below are different types of material that you may find and how best to respond. Please see the Coastal First Nations Tsunami Debris Monitoring Protocol on how to collect and record information on tsunami debris. Any and all tsunami debris found should be recorded and entered into the online Regional Monitoring System database.

### ➤ **Litter and other typical marine debris items**

*Examples: Plastic bottles, aluminum cans, buoys, Styrofoam*

Common marine debris types may vary by location. If you are monitoring a shoreline on land (conducting a beach survey following the Coastal First Nations Tsunami Debris Monitoring Protocol) and it is safe and practical, we encourage you to put the debris in garbage bags and move it to an appropriate location that is protected and well above the highest tide mark. Record the GPS location where you leave the debris, in the event that it will be possible for your community to collect and dispose the debris at a later date.

### ➤ **Potential hazardous materials (HAZMAT)**

*Examples: Oil or chemical drums, gas cans, propane tanks, fumigation containers, shipping containers.*

Items that pose an immediate environmental or public safety threat should not be removed by untrained personnel and are to be reported to 911/local RCMP as soon as possible. If items are not an immediate threat but still pose a hazard, they should promptly be reported to BC's spill reporting line at 1-800-663-3456. If it is unclear whether an item is hazardous, do not approach it.

### ➤ **Derelict vessel or other large debris item**

*Examples: Adrift fishing boat, shipping containers*

In case of a derelict vessel that is closing in on BC's coast and presents a pollution threat, the Canadian Coast Guard is the responsible agency. To report a sighting, contact the Canadian Coast Guard by phone at 1-800-889-8852 or by radio on Channel 16 VHF and provide details, including location and any identifying features. In case of a derelict vessel that is in Canadian territorial waters and does not present a pollution threat, but presents an obstruction to navigation, the responsibility is with Transport Canada Marine Safety. Report details, including location and identifying features to Transport Canada by phone at 604-775-8867 or by email at [pacnwp-penpac@tc.gc.ca](mailto:pacnwp-penpac@tc.gc.ca).

➤ **Mementos or possessions**

*Examples: Items with unique identifiers, names, or markings*

If an item can 1) be traced back to an individual or group and 2) has personal or monetary value, it should be reported to [DisasterDebris@noaa.gov](mailto:DisasterDebris@noaa.gov). NOAA will work with local Japan consulates to determine if they can help identify its owner.

➤ **Remains**

It is highly unlikely that remains from the tsunami will reach Canada, but if you see human remains anywhere, contact your local RCMP and report what you observed. Do not touch or attempt to move them.

### Further Information

For more information about tsunami debris, check out the following websites:

- BC Tsunami Debris Coordinating Committee - <http://www.env.gov.bc.ca/epd/tsunami-debris/index.htm>
- BC Centre for Disease Control - <http://www.bccdc.ca/healthenv/Radiation/JapanFAQ/default.htm>
- National Ocean and Atmospheric Administration (NOAA) – Marine Debris Program <http://marinedebris.noaa.gov/tsunamidebris/>