

Marine Debris



Introduction

- ▶ What is marine debris?
 - any persistent solid material that is manufactured or processed by humans and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment

- ▶ [Video](#)



<http://bushwarriors.wordpress.com/tag/ocean->

Objectives

- ▶ Define marine debris
- ▶ Determine when a Marine Debris Encounter form is required
- ▶ Demonstrate your ability to complete the Marine Debris form

Marine Debris Encounter form

- ▶ Gear & vessel interactions
 - Longline, pots, gillnet, purse seine > each encounter
 - Trawl > vessel interactions only

Marine Debris Encounter
This information is being used to help determine the economic cost of marine debris impacts.

Page ____ of ____

Observer code	Vessel code	Trip ID	Haul No.
---------------	-------------	---------	----------

Time & Position of Encounter with Debris (includes vessel, gear and animals)

Date (dd/mm/yy)	Time (24-hr)	Lat-Deg	Lat-Min	N / S	Long-Deg	Long-Min	E / W
-----------------	--------------	---------	---------	-------	----------	----------	-------

Incident Type (check one or more):

Gear Interaction
 Vessel Interaction
 Entangled Species Caught (e.g., entangled fish)

Debris Type (check one or more):

Net: _____
 Cloth
 Plastic packing straps
 Rope
 Plastic sheeting
 Floats / buoys
 Monofilament line
 Plastic bags
 FAD (fish aggregating device)
 Metal (describe): _____
 Other (describe): _____

Biota Type (check one or more and list species names if known):

Fish
 Crustaceans
 Encrusting organisms
 No biota/organisms present

Marine Debris Encounter
This information is being used to help determine the economic cost of marine debris impacts.

Page ____ of ____

Observer code	Vessel code	Trip ID	Haul No.
---------------	-------------	---------	----------

Time & Position of Encounter with Debris (includes vessel, gear and animals)

Date (dd/mm/yy)	Time (24-hr)	Lat-Deg	Lat-Min	N / S	Long-Deg	Long-Min	E / W
-----------------	--------------	---------	---------	-------	----------	----------	-------

Incident Type (check one or more):

Gear Interaction
 Vessel Interaction
 Entangled Species Caught (e.g., entangled fish)

Gear

Gear interactions include any encounter with your vessel's fishing gear.

- trawl door gets entangled with an abandoned crab pot
- longline gear hooks a discarded washing machine

Vessel

Vessel interactions are with the vessel itself

- abandoned gillnet is caught in propeller
- vessel hits an anchored buoy

Marine Debris Encounter
This information is being used to help determine the economic cost of marine debris impacts.

Page ____ of ____

Observer code	Vessel code	Trip ID	Haul No.
---------------	-------------	---------	----------

Time & Position of Encounter with Debris (includes vessel, gear and animals)

Date (dd/mm/yy)	Time (24-hr)	Lat-Deg	Lat-Min	N / S	Long-Deg	Long-Min	E / W
-----------------	--------------	---------	---------	-------	----------	----------	-------

Incident Type (check one or more):

Gear Interaction
 Vessel Interaction
 Entangled Species Caught (e.g., entangled fish)

Debris Type (check one or more):


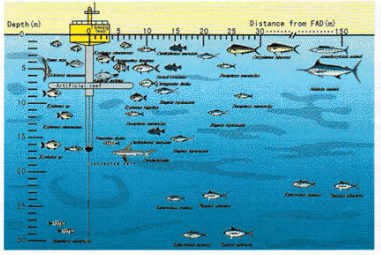
Net: _____
 Cloth
 Plastic packing straps
 Rope
 Plastic sheeting
 Floats / buoys
 Monofilament line
 Plastic bags
 FAD (fish aggregating device)
 Metal (describe): _____
 Other (describe): _____

Biota Type (check one or more and list species names if known):

Fish
 Crustaceans
 Encrusting organisms
 No biota/organisms present

What's a FAD?

- ▶ Fish Aggregating Device
- ▶ Fish aggregate below

<http://www.photolib.noaa.gov/htmls/fish5220.htm>
<http://snf.fra.affrc.go.jp/English/wwwsupl/supl10.htm>

FADs

- ▶ Fish aggregate below
- ▶ Floating objects – natural & man-made



FADs

- ▶ Fish aggregate below
- ▶ Floating objects – natural & man-made
- ▶ Allows tracking of objects



<http://forman.en.ec21.com/>

- Monofilament line Plastic bags FAD (fish aggregating device)
 Metal (describe): _____
 Other (describe): _____

Biota Type (check one or more and list species names if known):

- Fish
 Crustaceans
 Encrusting organisms
 No biota/organisms present

Description of incident type and debris object/material (describe the type of incident in more detail, diameter or width, length, colors and biota living on the debris):

Weight (kg): _____ Photos: Y / N Brought onboard for disposal: Y / N

Length of downtime (hrs): _____

Description of downtime and cost (describe what was done during downtime (e.g. propeller disentangled by divers) and details of cost):

- Monofilament line Plastic bags FAD (fish aggregating device)
 Metal (describe): _____
 Other (describe): _____

Biota Type (check one or more and list species names if known):

- Fish
 Crustaceans
 Encrusting organisms
 No biota/organisms present

Description of incident type and debris object/material (describe the type of incident in more detail, diameter or width, length, colors and biota living on the debris):

Weight (kg): _____ Photos: Y / N Brought onboard for disposal: Y / N

Length of downtime (hrs): _____

Description of downtime and cost (describe what was done during downtime (e.g. propeller disentangled by divers) and details of cost):

Activity

- ▶ Use information on handout to complete a Marine Debris Encounter form
- ▶ 15 minutes & then we'll pick them up

Summary

- ▶ What is marine debris?
- ▶ Would you need a Marine Debris Encounter form for...
 - Plastic sheeting caught in the trawl net?
 - Abandoned gillnet caught in propeller
 - Crab pot entangled with your demersal longline?
- ▶ Gear or vessel interaction for above?

- ▶ Thanks to Carey Morishige (NOAA Marine Debris Program, Honolulu, HI) for assistance with form design and development.

Activity – Marine Debris Encounter form

Name:

Observer code: GRR334

Vessel code: LIB 9997

Trip ID: 347

Haul: 21

On May 12, 2011, you are waiting to sample when the tension on the trawl warps suddenly gets noticeably tighter at 12:30pm. The captain immediately slows down and begins to retrieve the gear thinking he may have snagged a rock on the bottom. The position is 145° 22.3 W / 4°34.5 S. When the net comes up at 13:15, the starboard door and some of the cable has a FAD entangled in it. Part of the trawl mouth was also obstructed. The FAD is a bamboo raft-type and consists of ~15 pieces of bamboo with dimensions of 2x3meters. There is also a fair amount of netting clumped (although probably once hung underneath) next to the raft. The netting is made of some sort of orange synthetic line (<4mm) and has a mesh size of ~8cm. The net may have originally hung down 50 meshes or so. There are a few fish entangled in the netting but you are unable to determine the species due to deterioration.

It took the crew about 1 hour to cut out the FAD which the captain estimated as ‘costing’ about \$50 in down time. There was no permanent damage to the fishing gear. No photos were taken & the raft & netting were thrown overboard.

Marine Debris Encounter

This information is being used to help determine the economic cost of marine debris impacts.

Observer code	Vessel code	Trip ID	Haul No.
---------------	-------------	---------	----------

Time & Position of Encounter with Debris (includes vessel, gear and animals)

Date (dd/mm/yy)	Time (24-hr)	Lat-Deg	Lat-Min	N / S	Long-Deg	Long-Min	E / W
-----------------	--------------	---------	---------	---------------------------	----------	----------	---------------------------

Incident Type (check one or more):

- Gear Interaction
 Vessel Interaction
 Entangled Species Caught (e.g., entangled fish)

Debris Type (check one or more):

- Net: _____
 Cloth
 Plastic packing straps
 Rope
 Plastic sheeting
 Floats / buoys
 Monofilament line
 Plastic bags
 FAD (fish aggregating device)
 Metal (describe): _____
 Other (describe): _____

Biota Type (check one or more and list species names if known):

- Fish
 Crustaceans
 Encrusting organisms
 No biota/organisms present

Description of incident type and debris object/material (describe the type of incident in more detail, diameter or width, length, colors and biota living on the debris):

Weight (kg): _____ **Photos:** Y / N **Brought onboard** for disposal: Y / N

Length of downtime (hrs): _____

Description of downtime and cost (describe what was done during downtime (e.g. propeller disentangled by divers) and details of cost):
