

Marine Debris



Photograph: Eduardo Munoz/Reuters

<http://www.guardian.co.uk/environment/gallery/2009/jun/05/waste-world-environment-day>

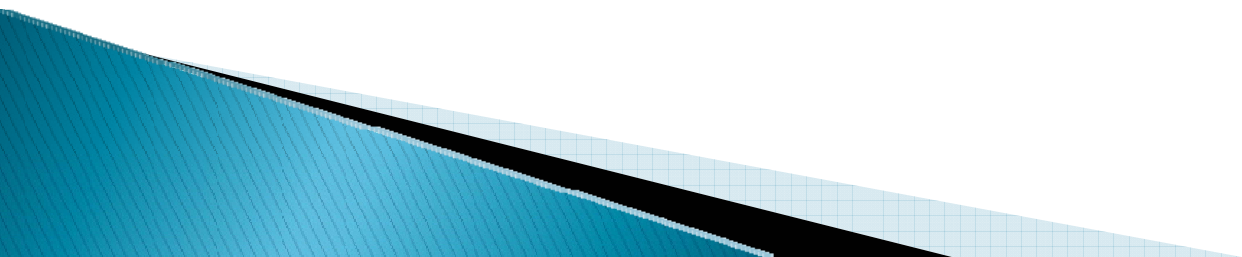
Introduction

- ▶ 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



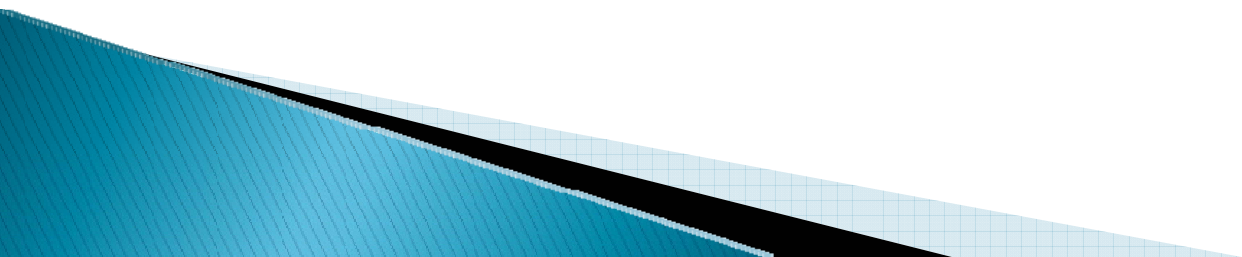
Objectives

- ▶ 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.
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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
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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

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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

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What's a FAD?

- ▶ Fish Aggregating Device
- ▶ Fish aggregate below

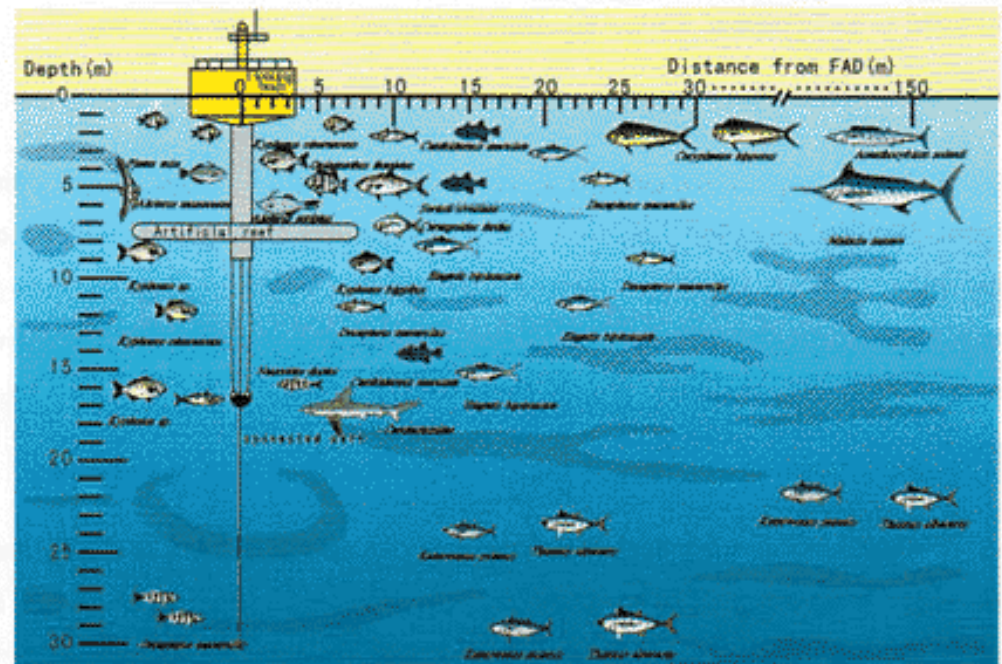


Fig. 2 Fishes aspect around large-scale FAD.

<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



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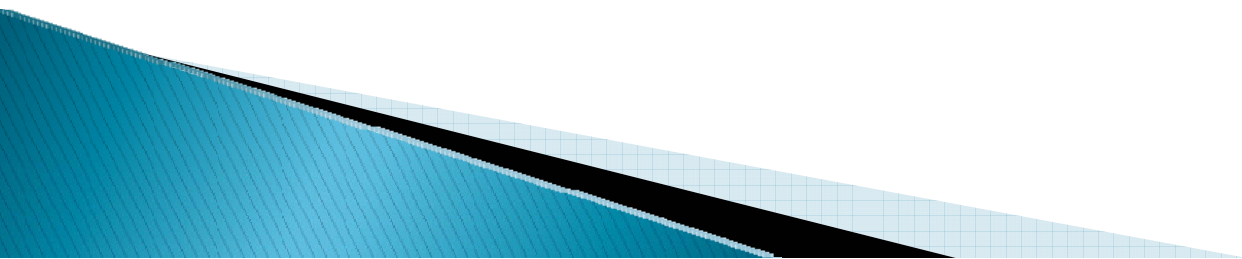
Weight (kg): _____ Photos: Y / N Brought onboard for disposal: Y / N

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.

Marine Debris Encounter

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

Observer code <div style="font-size: 1.2em; color: blue;"><i>GRR 334</i></div>	Vessel code <div style="font-size: 1.2em; color: blue;"><i>LIB 9997</i></div>	Trip ID <div style="font-size: 1.2em; color: blue;"><i>347</i></div>	Haul No. <div style="font-size: 1.2em; color: blue;"><i>21</i></div>
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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
<i>12/05/11</i>	<i>1315</i>	<i>04</i>	<i>34.50</i>	<i>S</i>	<i>145</i>	<i>22.30</i>	<i>W</i>

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 *unidentifiable (decayed)*

☐ Crustaceans

☐ Encrusting organisms

☐ 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):

Old FAD entangled in net door/warp. Bamboo-type raft (~2x3m). It had some netting (4mm orange synthetic 8mm diameter). Estimate the netting may have hung down ~4m

Weight (kg): _____

Photos: Y / **(N)**

Brought onboard for disposal: Y / **(N)**

Length of downtime (hrs): *1 hr*

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

~ US\$50 – lost fishing time & labor