

Marine Debris and Entanglement - Slide Show

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MARINE DEBRIS AND ENTANGLEMENT

SLIDE

(Photographer)

NARRATIVE

- | | |
|---|---|
| 1. Ocean scene (Claire Flanders, Photographer) | Here's a familiar sight - the ocean. But have you taken a close look at the beaches lately? |
| 2. Trash on beach (Stephen Sautner) | These pictures were taken on beaches in the United States. |
| 3. Trash on beach (Linda Maraniss/CMC) | Beaches where people go for relaxation, enjoyment, and sometimes . . . |
| 4. Pile of trash on beach (Sue Barnett/CMC) | to leave behind their trash. |
| 5. Trash on beach (Doris Alcorn/NMFS-HI) | But this is an isolated island in Hawaii where few people have ever walked - much less gone for a picnic. |
| 6. Trash on beach (unknown) | The trash on these beaches is only a small portion of the amount of debris in the world's oceans which are becoming increasingly filled with garbage. |

SLIDE

(Photographer)

NARRATIVE

7. Graph of trash
(CMC)

In 1975, the National Academy of Sciences estimated that about 14 billion pounds of litter are dumped by ships into the world's oceans every year.

That's almost three times the weight of all fish and shellfish caught in the United States in one year.

8. Merchant ship at dock
(U.S. Maritime Administration)

A more recent study estimates that the world merchant fleet alone dumps more than 5 1/2 million metal, plastic and glass containers into the ocean every day.

9. Navy ship
(U.S. Navy)

That doesn't even include the trash dumped by the world's military ships, or by research vessels, or by passenger cruise liners.

10. Recreational boat
(John J. Domont/CMC)

And it doesn't include trash dumped by recreational vessels. According to U.S. Coast Guard estimates, 52% of all trash dumped into U.S. waters is from recreational boaters.

11. Fishing boats
(Linda Maraniss/CMC)

Nor do the figures include the amount of trash dumped by commercial fishing vessels. According to some estimates the world's fishing fleet dumps more than 100,000 tons of crew wastes and fishing gear into the oceans every year.

12. Old cans on beach
(Gene Daniels/EPA)

But dumping trash at sea is not new. Ships have gotten rid of their trash at sea for years. What's changing is the composition of the material.

You see in the past, most trash that ended up in the ocean was made of paper and cloth which decayed, or metal and glass which sank and conveniently disappeared from view.

SLIDE

(Photographer)

NARRATIVE

13. Plastic items
(Ray Carthy/CMC)

But today, plastic has become the ideal substitute for bags, bottles and fishing gear because plastic is lightweight, it is strong, and it is very durable. But the characteristics that make plastic so successful are also causing problems in the ocean.

14. Six-pack ring
(John J. Domont/CMC)

You see, plastic degrades very slowly . . . so the plastic dumped into the ocean today will still be around hundreds of years from now. According to some estimates, this plastic six-pack ring, for example, has an estimated life span of 450 years.
So what is so bad about trash in the ocean?

15. Trash at marina
(Tom O'Hara)

The most obvious complaint is that it looks awful and there's a lot of it.

16. Collection of trash
(Murray Gregory)

So much that it's even showing up on beaches as far away as Antarctica.

But plastic trash is more than a litter problem. A more serious environmental problem associated with plastic debris is entanglement.

17. Fur seal in trawl net
(Joe Scordino/NMFS)

This is a northern fur seal that lives on the Pribilof Islands of Alaska. It is entangled in a piece of fishing net. At one time fur seals were so abundant that they were commercially harvested. But in recent years scientists have noted that the fur seal population is declining drastically.

18. Fur seal in net
(Mike Goebel/NMFS)

Scientists now believe that entanglement is a major factor behind this population decline. They estimate that at least 30,000 northern fur seals die every year from entanglement.

19. Seal entangled in rope
(Doris Alcorn/NMFS-HI)

The Hawaiian monk seal and other species of seals are also threatened by entanglement. Monk seals are critically endangered with present population estimates between 500 and 1,000 individuals.

| SLIDE (Photographer) | NARRATIVE |
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| 20. Seal investigating rope (John Henderson/NMFS) | Seals in general, and especially young pups, are highly prone to becoming entangled in plastic debris because of their curious and playful nature. If they encounter a floating item they may stick their head through it, attempt to dive through it, or feed on fish that congregate under the plastic object. |
| 21. Seal with ring around muzzle (Doris Alcorn/NMFS-HI) | Unfortunately such curiosity involving a plastic item can lead to entanglement. But seals are not the only animals facing this threat. |
| 22. Canada goose in six-pack ring (Bill Burton/Blackwater National Wildlife Refuge-MD) | Here is a dead Canada goose that was strangled by a plastic six-pack ring. |
| 23. Pelican in fishing line (John J. Domont/CMC) | Many other birds die when they become entangled in plastic trash. Like this dead pelican, strangled by a piece of monofilament fishing line. |
| 24. Turtle in net (Dennis Allen/Belle Barach Marine Lab-SC) | Sea turtles are often reported to drown in discarded nets, fishing line, and other plastic debris . . . |
| 25. Turtle in lawn chair (Dolores Heiman/Friends of Wildlife) | including a plastic lawn chair. |
| 26. Fish in six-pack ring (Ohio Dept. of Natural Resources) | Even fish have been observed entangled in these items, |
| 27. Crabs in lost net (William High/NMFS) | and other sea animals, such as crabs. |

SLIDE

(Photographer)

NARRATIVE

28. Fish head in net
(William High/NMFS)

Another problem associated with entanglement is "ghost fishing" which is the ability of lost or discarded fishing gear to continue to catch fish. This fish entangled in a gill net, which operates like a chain link fence in the water. Anything that is not small enough to pass through the holes in the net will become entangled. A gill net like this one can continue to catch fish years after it has been lost or discarded.

29. Gill net on boat
(A. DeGange)

This lost gill net was found by a group of scientists. It was about three miles long and entangled in the net were hundreds of salmon. . .

30. Birds on boat deck
(A. DeGange)

in addition to 350 dead seabirds.

31. Fishing line on prop
(Tom O'Hara)

Plastic debris is also a danger to human safety. Boats can be disabled when floating plastic bags clog the engine. And plastic such as monofilament fishing line can become wrapped around the propeller causing engine failure.

32. Dolphin in net
(Michael Panz/Back Bay
National Wildlife Refuge-VA)

But for marine animals entanglement in plastic trash is just part of the problem,

33. Bags in stomach
(George Balazs/NMFS)

marine animals also die from ingesting plastic. This slide shows the stomach of a dolphin filled with plastic bags. Apparently marine animals mistake plastic for real food.

34. Turtle with plastic bag
(Rex Herron/NMFS-MS)

Sea turtles, in particular, have been found repeatedly with plastic bags in their stomachs. Considering that jellyfish are a major prey item, it is no wonder that a translucent plastic bag with a flowing motion appears to look like a jellyfish.

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(Photographer)

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35. Pieces of plastic
(George Balazs/NMFS)

It's not just the large pieces of net, rope and plastic bags that cause problems but the smaller pieces as well. This two pound sample of plastic was found in the stomach of a sea turtle that weighed only 11 pounds.

36. Birds eating plastic
(Robert Day)

Researchers have also found that at least eighty of the world's 280 species of seabirds eat plastic, mistaking it for real food.

37. Plastic pellets
(Robert Day)

The most common type of plastic ingested by birds is plastic pellets. Pellets are the raw form of plastic before it is melted down and molded into plastic bottles and other objects. The pellets shown here were ingested by a bird that feeds on crab's eggs that are similar in shape and color. Ingested pellets can fill a bird's stomach causing internal injury or a false feeling of fullness that will make the bird stop eating and cause it to starve.

38. Collection of plastic pieces
(Frans Lanting)

Not only do adult birds feed on plastic but they bring these items home to feed to their chicks.

39. Plastic on beach
(Tom O'Hara)

To summarize . . . we know that an increasing amount of plastic and other debris is accumulating in the world's oceans.

40. Entangled gull
(Anthony Amos)

We know that birds, marine mammals, sea turtles and fish are becoming entangled in trash.

41. Bird eating plastic
(NMFS)

We also know that fish, turtles, and an increasing number of the world's sea birds are eating plastic debris.

We don't know what other impacts the debris may have as it accumulates in the world's oceans.

Fortunately, steps are being taken to stop the flow of plastics into the oceans.

SLIDE

(Photographer)

NARRATIVE

42. Trash on beach
(K. Koski/NMFS)

On December 31, 1987 the United States signed on to an international treaty that regulates the dumping of garbage from ships at sea, known as Annex V of the MARPOL Treaty. On December 31, 1988 the law took effect. It is no longer legal for ships to dispose of any type of plastic trash at sea including plastic fishing nets, rope and garbage bags.

In addition, the U.S. Congress enacted a law that makes it illegal for ships to dump plastics in U.S. waters, and directs studies to address the problems caused by plastic debris.

43. People collecting trash
(Clean Ocean Action-NJ)

Other steps to combat this problem are being taken by citizens all over the world. For instance, thousands of people participate in beach cleanups, ridding the beaches of trash

44. People collecting trash
(Tom O'Hara)

and keeping records on the types of trash they find so that the sources can be identified. Every year, the Center for Marine Conservation coordinates an international coastal cleanup.

45. Trash on beach
(Tom O'Hara)

In 1993, 222,116 volunteers covered 5,572 miles of coastline worldwide that looked like this

46. Garbage bags on beach
(Tom O'Hara)

and they collected 5,243,663 pounds of trash (or 2,622 tons), in only three hours.

47. Sign on beach
(Tom O'Hara)

If people choose to ignore the problems caused by plastic trash, it can only get worse. The plastic bags, fishing gear and other trash thrown into the ocean today, will not only be around next year, but can last for hundreds of years.

YOU can become part of the solution!













**Amount of trash dumped annually
into the world's oceans.**

























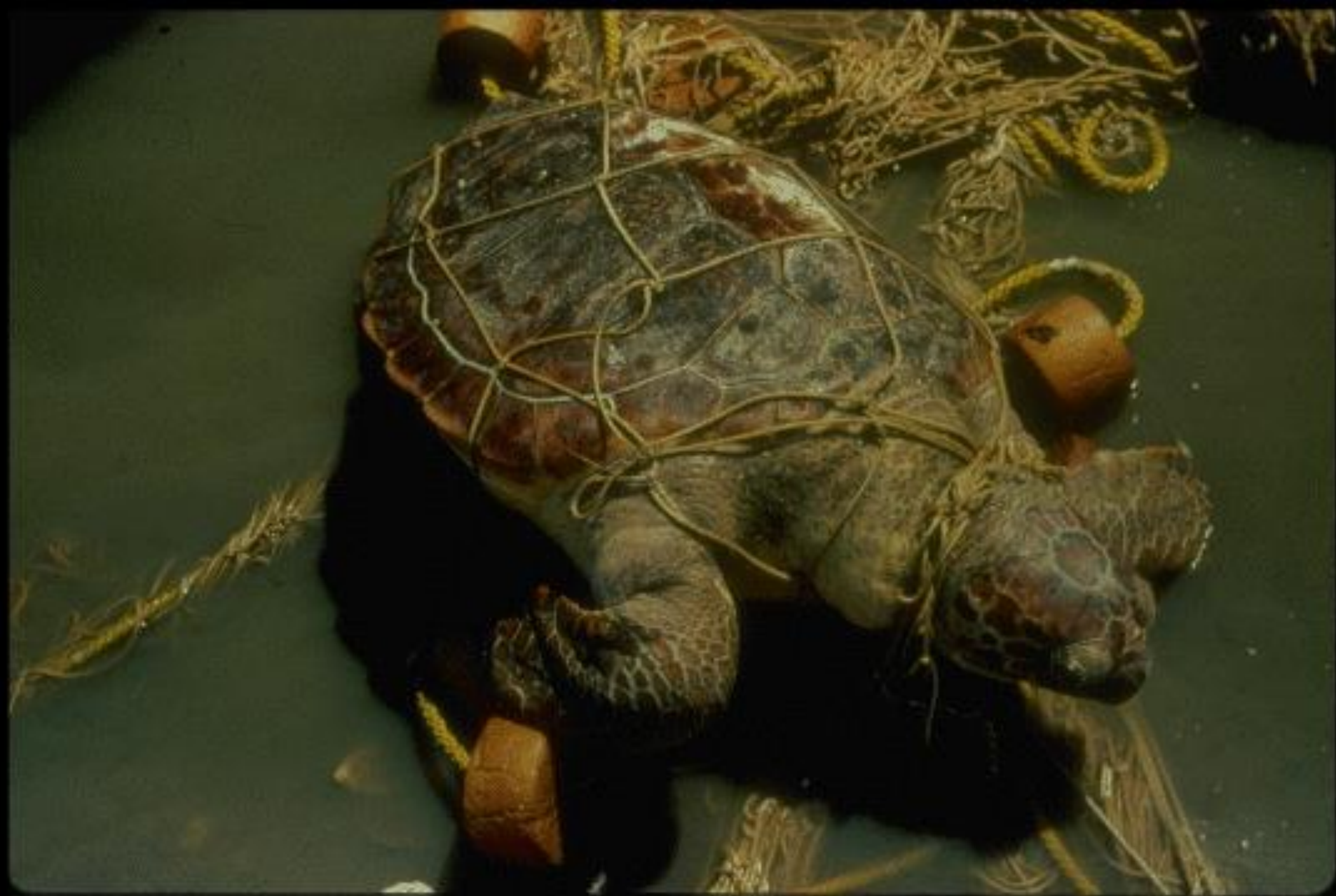




























































OUR OCEAN. IT'S DROWNING.

Stow your trash and prevent marine debris.



Center for Marine Conservation

Formerly Center for Environmental Education, Est. 1972