Learning by Ear – Environment
09 – Destructive Fishing Methods

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Intro

Hello and welcome to Learning By Ear's special series that takes a look at the environment. On Today's programme we'll be talking about the devastating effects of dynamite fishing on our coral reefs. Coral reefs take centuries to form but they can be destroyed in no time at all. And coming up in today's Radionovela, we'll tell you about what happens to the marine life dependent on coral reefs when the corals blown quite literally to pieces. We'll also take a look at other destructive forms of fishing and discover the fascinating role mangrove swamps play in the development of young marine animals. And we'll hear why it's so important to conserve the ocean's coral reefs. Did you know they're sometimes referred to as the rain-forests of the oceans the marine life around them is so abundant...

Music – 0:30

Radionovela

SFX_Waves

1. Monica: Look at those beautiful turquoise waters.

2. Moses: I went fishing over the weekend, with my father.

3. Monica: Moses, I have always thought it must be boring towing a line through the water. Maybe you catch something, maybe you don't.

4. Moses: [excitedly] Monica, that kind of fishing is. But we used explosives!!

5. Monica/Gladys: [exclaim of horrow] No you didn't?!

6. Moses: We did! And you should have seen what we caught. All sorts. We got parrot fish, snapper and even a grouper fish. [laughing].We ate well on Saturday night.

7. Monica: [curiously] But how exactly does it work? I know they call it dynamite fishing, but how do you make an explosion under water?

8. Moses: [laughing] You don't literally use a stick of dynamite!

9. Monica: Oh.

10. Moses: What we do…

11. Gladys: You mean you've done this before?!

12. Moses: Yes, Gladys, many times. We use bottles filled with explosives made from potassium nitrate. It's a common fertiliser, it's easy to buy.

SFX_flapping_sail

13. Moses: Gladys, look at these fishermen…they're still using sailboats and nets…no wonder they don't catch much! Why would they?

14. Gladys: [indignantly] Because, Moses, blast fishing is illegal. And not only that, it is destroying our coral reefs.

15. Monica: How do the fish actually die?

16. Moses: Ah, Monica, my father just explained this to me. You see, the explosives create an underwater shock wave. This ruptures the fishes' swim bladders, so they float to the surface. It's too easy!

17. Gladys: [clicking her tongue in disgust] Moses, Moses, Moses…

18. Moses: What?

19. Gladys: Have you ever looked underwater at the damage you are causing to the marine ecosystem?

20. Moses: No, we don't even have to get into the water…we just throw the bottles!

21. Gladys: Recently I went snorkelling with my brother John. He's a fisherman. He showed me these huge craters in the seabed caused by the explosions. He said the coral reef used to be like an underwater kingdom, full of life and colour. Now there's nothing living there. Let's go find him, he's normally at the end of the beach.

X-fade into SFX_hauling_nets_onto_beach

22. Gladys: Hi John

23. John: Hello, Gladys.

24. Monica: John, what was your catch like today?

25. John: [sigh] Very poor. A few years ago we used to fish over the reef…you see where the waves are breaking, about 500 metres away. Now the reef is destroyed and we are having to search for new fishing grounds.

26. Gladys: John, can you take us to the reef in your boat? Our friend Moses wants to learn more about how blast fishing is damaging the coral…

27. John: damaging…annihilate would be more like it! Sure, I'd be happy to…

SFX_outboard_engine_starts_up

X-fade into SFX_running_outboard_engine +
SFX_boat_through_water

28. John: Many fishermen who use explosives have no idea how devastating their actions are.

29. Gladys/Monica: We know!

30. John: The explosives kill everything. Not only are fish killed but also other inedible reef animals. Often an area of reef is dynamited twice, first to kill the smaller fish, then again

to kill the larger predators attracted by the carnage.

Fade out SFX_running_outboard_engine. X-fade into SFX_lapping_water

31. Gladys: [with sorrow] Monica, look now you can see what's left of the reef.

32. Monica: [puzzled] But I thought coral reefs are full of colour – it's just…just grey.

33. John: Yes, Monica. You see the shockwaves from the explosion not only kill the fish, they pulverise the living coral. After repeated blasting all that's left are vast deserts of loose coral rubble.

34. Moses: Do the explosions really kill all the coral?

35. John: Even the strongest, most well established coral colonies are destroyed.

36. Moses: Will it grow back?

37. John: Maybe, but it will take many, many years. Perhaps more than one hundred. Large blasted areas are slow to recover because corals have difficulty growing on loose

material. Young corals may try and establish on the shifting rubble, but sand and algae quickly smother them.

38. Gladys: And any surviving reef fish disappear too because they lose their habitat.

39. John: That's right, Gladys.

[Hum of Agreement]

40 Monica: Are there other forms of fishing that are equally devastating on the marine environment?

41. John: Yes there is. We call it Cyanide fishing…

42. Moses: People do that here?

43. John: Well it's more of a problem in Asia.

[collective 'Oh']

44. John: What happens is that divers squirt a poisonous cyanide solution from bottles onto fish resting on the surface of the coral. This stuns the fish but it doesn't kill them. This way they can catch the fish alive.

45. Monica: Why would they want to do that?

46. Gladys: Apparently, in Asia people in restaurants pay big money to choose their fish from a tank while it's still alive!

47. Moses: And does this cyanide fishing also kill the corals.

48. John: Yes, corals too are living creatures. What's more, the fish often hide behind the coral before the poison takes effect, so the fishermen have to break apart the reef to get to their paralysed prey. If you have time, there's another fragile marine environment I'd like to show you…

Fade up into SFX_ SFX_running_outboard_engine + SFX_boat_through_water

49. John: Have you ever visited the mangrove swamps before?

50. Moses/Gladys/Monica: No, never

51. John: Mangroves are fascinating. You find them where the tides rise and fall. So sometimes they are partially submerged and

sometimes they are exposed to the open air.

SFX_Engine_cuts_out

52. John: From here we should use paddles…you see how shallow it is.

SFX_Paddling_through_water

53. Moses: Look at the mangrove roots…

54. John: The roots play a special role. They form a sort of maze in which only very small species, or the offspring of larger species can live and move around.

55. Monica: So the mangrove swamps are a sort of marine nursery?

56. John: Absolutely, Monica! Here you find juvenile fish, crabs and shrimps. The roots offer the young animals protection form larger predators.

57. Gladys: But in a science class I recently learnt that the mangrove swamps are also under threat from man.

58. John: They are indeed… Gladys, do you remember why?

59. Gladys: Once again it is man's fault. In some areas we're reclaiming the land and draining the swamps dry. In other places we're cutting down the mangroves to make charcoal. And we're over-fishing the mangrove waters as well!

60. John: That's correct, and if we are not careful we are going to destroy this habitat that is vital for young animals to mature in.

61. Monica: [sigh] It's too depressing. When will we ever learn to look after our environment?

[Hum of agreement]

Music – 0:30

Did you Know? – Coral Reefs

Coral reefs are one of Earth's most vital ecosystems. They're home to thousands of highly specialized species and are considered by scientists to be the most diverse marine ecosystem. Sometimes they're called the rainforests of our oceans. It's thought coral reefs harbour more than 25 percent of all know ocean fish.

Just as fish find refuge on the reefs, many marine organisms live inside the corals, adding up to nearly a million species of fish or other marine life that make up a coral reef ecosystem.

But how does a coral reef grow? Well, by using the sun's energy and minerals from seawater, corals secrete limestone skeletons. These provide habitat and shelter for fish and other reef animals. The accumulation of coral sediments over thousands of years creates tall oceanic islands. Extensive barrier reefs are able to withstand the most powerful storms, even powerful tsunamis.

Coral reefs are also highly productive, and are a critically important fishery for many tropical nations. And in areas where dive tourism has been developed, coral reefs earn millions of dollars annually for local economies as tourists dive down to these underwater kingdoms.

Of course all these benefits depend on the presence of living coral cover. Tragically, coral reefs are seriously threatened by human activities in many areas of the tropics. In some countries, it is estimated that more than 50% of the coral cover has been destroyed. As we've just heard, destructive fishing methods such as blast fishing are largely responsible.

Climate change is another cause of coral reef degradation. Many reefs survive at or close to what scientists call their temperature tolerance levels. So any rise in sea surface temperature creates a more hostile living condition for the corals. As temperatures rise, corals expel the colourful organisms that live inside them and appear "bleached". Although these organisms do re-colonise the corals once the temperatures return to a more tolerable level,

repeated or prolonged bleaching have proven to be fatal for some reefs.

Outro

And that's all for today's Learning By Ear special environment focus on destructive fishing methods and the destruction of coral reefs, written by Richard Lough. So take note and remember that our coral reefs are homes to more than a million living organisms…but can be wiped out in no time at all. Thanks for being with us. If you want to hear the programme again or tell friends about it, go to our website at www.dw-world.de/lbe. Good Bye.