

Fisheries survey



There is a conservation issue called ‘shifting environmental baselines’. This refers to the situation where each generation thinks that what is familiar to it is the natural state of the environment. In failing to take account of the experience of older people, we can miss the big picture and fail to appreciate the seriousness of environmental change.

For this activity, you will be a fisheries scientist and do some research to record fishers’ recollections of their catches in the past compared to those now.

What you do

- Talk to different fishermen (and women). Try to find the oldest fishermen you can, as well as some younger ones who have just started, and some in between.
- Write down the fisherman’s age, and ask him about his catches. Ask what year he first started fishing, and then ask about the type of fish he caught, where he found them, and how big his catches were. Then ask the same questions about the situation now.
- You may want to have a survey form to fill in as you talk. It could look something like this:

Fisherman’s name:.....		Age:.....
	In the Past (Year started fishing.....)	Now
Types of fish caught		
Areas fished		
Size of catch		
	Other general comments:	

Things to think about

- What species are caught now compared to in the past? What are the differences?
- Have the areas fished or the size of catches changed?

Marine Protected Area role play

Managing the marine environment can be a real challenge for politicians, as there are so many conflicting arguments about how seas and coasts should be used. The scientific evidence clearly shows that we need to use our oceans more sustainably: if we don't try to conserve marine species and habitats now, there will be little left for the future.

In this activity, you will put yourselves in the shoes of people involved in making decisions about marine resource management.



The scenario

Lamorelle is a remote tropical island in the Indian Ocean. It is a small island, 12 miles long and 5 miles wide. The island is mountainous and rocky and is difficult to farm. Tobacco, coffee, limes and onions are grown to some extent. The weather is sub-tropical with occasional cyclones during the summer. However, water is very short due to poor collection and storage facilities. There are connecting flights to a nearby larger island twice a day and a ship that comes once a fortnight with essential supplies. The island has many beautiful beaches which have so far not been developed. Three hotels have been built on the island, but room occupancy is low.

Since the island was first permanently settled in 1742, the islanders have relied to a large extent on the sea and lagoon for their subsistence and livelihood. As the population grew during the 18th and 19th centuries several large fishing operations established themselves on the island and caught large quantities of fish that they exported to the mainland. Now, many of the stocks have been fished out. The island was once rich in forest, but this was cut down by colonial navies on their way to the spice islands. Lack of vegetation has caused a large build up of silt and mud in the lagoon.

The lagoon has been under increasing pressure recently. Silt has run off into the lagoon and smothered many corals. The lack of fish has led many women to start collecting octopus on foot, at the same time crushing corals.

A new Government has just been elected with a bold new Chief Commissioner. He is keen to tackle decades of poor and inadequate management to ensure that fish stocks and the marine environment can be sustainably managed. He is also keen to ensure that there is a better economy on the island with more tourists and agriculture. In particular, the Government has been advised that the best way of managing resources is through the creation of a Marine Protected Area.

The task

You are all present at a meeting called by the Chief Commissioner to develop his marine management policy. Your group leader will give you a role to play during the debate of the different options.

Endangered species poster



Human pressure on the marine environment has brought several species to the edge of extinction. Their numbers have declined mainly as a result of fishing, which either targets the animals directly or catches them accidentally when pursuing different species. Their survival is also threatened by the loss of their habitats – the places where they feed and shelter and where their young develop.

Endangered marine species include turtles, whales, sharks and bluefin tuna.

What you do

- Choose an endangered marine animal.
- Find out as much as you can about it: where it lives, what it eats, how many are left, what human activities threaten it, what measures are in place to try to protect it.
- Put this information, and some pictures, onto a poster to promote the cause for conservation of your chosen species.

Foods from the Sea

Our oceans, lagoons and shores have always provided a very wide range of different foods. Some of these foods remain very popular, like octopus curry in Mauritius, but sometimes people forget about the old ways.

We must be very careful to exploit our resources sustainably so that they can still be used by future generations. One way to do this is to use lots of different species for food instead of just a few.



There have been great changes in recent years in the availability of preserved foods, in refrigeration and in transport. With all these changes sometimes old traditional recipes and ways of using foods collected from the beach or lagoon can be lost. You might be surprised to learn what your grandparents used to eat when they were your age! Why not interview them and find out which lagoon creatures they used to eat, and how they used to prepare them? If you're feeling very brave you could even try them!

What you do

- Make a list of all the different sea foods that you have eaten
- Talk to your parents and grandparents about the different sorts of seafood they used to eat. It might help to show them a book and get them to point things out
- Ask in particular how they used to cook them
- Write down all the different foods your relatives remember
- Did your grandparents eat more different kinds of seafood than you do?

Things to think about

- Prepare a recipe book of traditional "Foods from the Sea"
- See if you can persuade your grandmother to cook something "old fashioned" and which you have never tried before. Try it – it might be delicious!

Conservation concerns quiz

1. Name two products (except food) that come from the marine environment.....
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2. Name three types of marine animal caught by fisheries
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3. Give one method used in a local fishery.....
4. What is bycatch?
5. List two other environmental problems caused by fisheries
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6. Name one of the problems caused by irresponsible aquaculture.....
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7. Why is tourism good for conservation?.....
.....
8. Why can tourism also be a threat to marine life?
9. Which species of tuna is critically endangered?.....
10. What are the two biggest threats to coral reefs from carbon emissions and climate change?
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