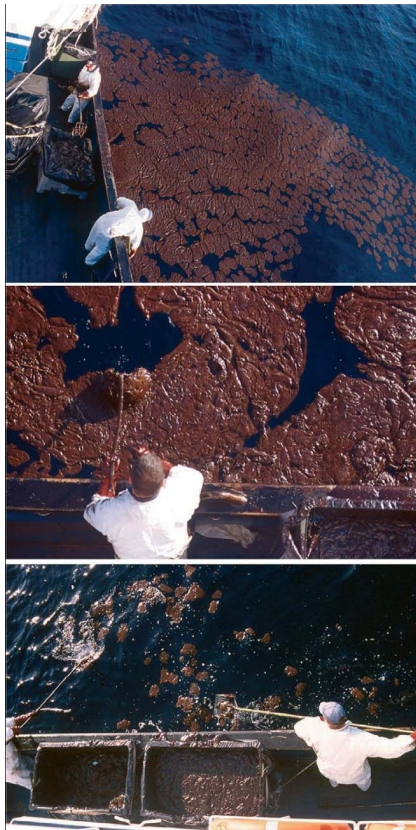


The Prestige Disaster

On November 13th, 2002 the petrol tanker Prestige, with 77.000 tons of petrol on board, sank off the coast of Galicia. The disaster produced the third largest oil spill in the Cantabrian Sea, after the wrecks of the Urquiola in 1976 and the Mar Egeo in 1992. The Prestige caused an ecological disaster for the coasts of Galicia, Asturias, País Vasco, Southern France and North Portugal.



Manuel collection of fuel from the *Prestige* in the gulf of Biscay by Basque fishermen, January and February 2003.

Photo taken from Investigación Marina, 2009, 12. Edition: Unidad de Investigación Marina de Tecnalia

In approximately one month (from November 13th to the end of December 2002), the contamination reached the Basque coast. In this first phase, a major part of the spill travelled more than 600 Km. from the area of the wreck. The next phase of the crisis and the most significant for the coastal areas of the Basque country and the South-Atlantic coast of France happened around February and March 2003. In this period, a task force of fishermen was set up by the Basque Government to fight against the pollution. They collected more than 21.000 tons of waste fuel and more than 3.200 tons of contaminated residues on the coast. The experts say that even today there are leftovers from the tanker that lost around 50 litres a day.

The contamination, produced by compact masses of fuel on the rocks and the seabed affected the flora and fauna of our seas. Molluscs, crustaceans, other invertebrates, birds and seaweed, etc. were suffocated and immobilised to death. Many organisms were also badly affected by the clean up operations.

As well as the loss of cetacean birds, fish, etc., each element of fuel in the water was a focal point of contamination. The major part of plankton in direct contact with oil becomes absorbed and the rest is affected.

In the case of Cormorants, the quantity of couples before the tragedy was more than 2500 and in March, 2009 there were only 1200 left. Between November and December 2002 more than 12.000 dead birds were found. The oil slick also affected seaweed, plants and many invertebrates which are the food of many fish species. According to a study by the University of the Basque Country, alterations in the size and digestive system of mussels in the Cantabrian Sea were recorded.

Another study by the Spanish Society of Pulmonologists and Chest Surgery revealed that many of the people who helped in the clean up of the disaster, especially sailors, had breathing difficulties related to the oil spill. The affected suffer cough

symptoms and breathing difficulties. After 7 years, the Prestige catastrophe is still news





Instructions

Read the text carefully and write schematic notes about the effect of human intervention. Think about... where humans interfered, modified or what other biotic and abiotic components were altered by their actions. These sentences will help you.

You have seen the different relationships between biotic and abiotic factors. In marine ecosystems we find that fish and mussels breathe underwater, while dolphins breathe out of the water. Sharks and rays eat small fish, some invertebrates feed on seaweed and many birds, like Cormorants eat fish and other invertebrates like crabs and jelly fish.

An ecosystem depends on the **balance** between all the factors within it. The Prestige disaster broke this balance in a spectacular way. There are other less spectacular and less evident ways to break this balance.

- What would happen if there were no limits on the quantity of fishing, or the size of the captures?
- How do you think unlimited waste dumping affects industrial estates, urban areas, etc.
- What about unlimited building on the coast?

