

# Environmental Issues

Define:

Interdependence \_\_\_\_\_

\_\_\_\_\_

Biodiversity \_\_\_\_\_

\_\_\_\_\_

Sustainability \_\_\_\_\_

\_\_\_\_\_

The **HIPPO** Dilemma represents the five major impacts on the Earth's biodiversity.

Write below what each of the letters stand for:

**H** \_\_\_\_\_

**I** \_\_\_\_\_

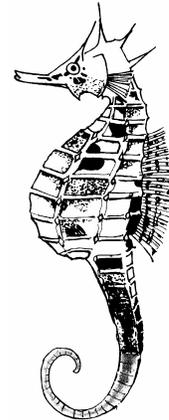
**P** \_\_\_\_\_

**P** \_\_\_\_\_

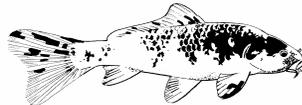
**O** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



New Zealand  
seahorses belong  
to the Hippo  
Family!



Name five introduced plants or animals that have impacted New Zealand's flora or fauna?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*Turtles and corals are two examples of organisms which are protected under CITES which are found in the aquarium. Why is it bad to collect turtle shells for tourist curios?? Hint: How long do turtles live for? Corals are a **very** important part of tropical reefs, how might coral collecting affect the other organisms that live on the reef?*

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**Is Undaria a problem???**

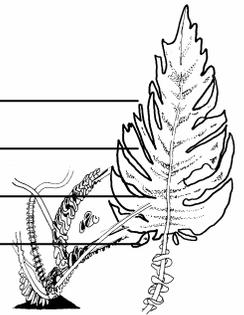
*How do you think the spread of Undaria could be minimised? Give your ideas...*

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## **Conducting a scientific clean up!**

### **The scenario:**

A group of scientists who, very recently, conducted an experiment to see how the oil leakage affected the organisms within fresh and estuarine water have decided to clean up the oil leakage but they need to know what is the best method of cleaning up oil slicks.

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### **The hypothesis:**

*WHAT IS YOUR HYPOTHESIS??*

*Your hypothesis clearly states what your predicted outcomes of the investigation are.... For example, do you think the environment, detergents or woollen booms will be effective at cleaning up oil? Which method would be the best?? Give your reasoning!*

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**Methods:**

In the lab there are wooden paddles, dishwashing liquid and tufts of wool. In four groups, work out how you would simulate the natural environment, the skimmers, dispersing agents and woollen booms to clean up oil spills. Test each method in separate containers with oil contaminated water and estimate how much of the oil was removed from the water surface. Write the results in the table.

**Results:**

Simulated methods of oil clean-up	Natural environment	Skimmer	Dispersal agent	Woollen boom
Estimated percentage of oil removed from water surface				

Which method was the most effective? Would you use one, or more than one method to clean up the oil leakage at the rubbish dump, the nearby freshwater pond and the small estuary? State your reasons.

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*At the aquarium we often have a thin film of oil forming on the surface of the water in some of the tanks, such as the Oceanarium Tank. This oil comes from the food fed to the fish (pellet food or the fish we break up). Which method or methods of cleaning up oil slicks do you think would be most effective in this situation? Explain your reasoning. Hint: Observe where the water flows out of the goldfish tank and Oceanarium.*

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