



Conservation: What We Can Do

1. Put a check mark (✓) next to the answer that is most correct.

a) Increasing concentration of greenhouse gases in the atmosphere are a major cause of:

- A acid rain
- B skin cancer
- C climate change
- D falling sea level

b) Cod is a fish that was once part of many people's diet in North America. Why do few people eat cod today?

- A Cod were overfished.
- B Cod contains high levels of mercury.
- C Chicken became more popular than fish.
- D Polar Bears have reduced cod populations.

c) Most marine debris is some form of:

- A paper
- B plastic
- C rubber
- D wood



2. Circle the word **TRUE** if the statement is TRUE or Circle the word **FALSE** if it is FALSE.

a) Nitrogen is a greenhouse gas.

TRUE **FALSE**

b) Oil poured down a storm drain is likely to end up in the ocean.

TRUE **FALSE**

c) Some species of fish are being caught at a sustainable rate.

TRUE **FALSE**

d) An ocean dead zone is an area where all the fish have been caught.

TRUE **FALSE**

e) Human population has leveled off.

TRUE **FALSE**





Conservation: What We Can Do

Three problems threaten saltwater resources: climate change, pollution, and overfishing. There are two ways to approach these problems:

Governments can make laws that regulate how people treat the ocean and atmosphere, and individuals can make personal choices that help protect the ocean and atmosphere.

Climate change is related to an increased greenhouse effect which is caused by an increase in the atmospheric concentration of greenhouse gases.

An important greenhouse gas that people have some control over is carbon dioxide. This is increasing because of the great increase the use of fossil fuels in the 20th and 21st Centuries.

In 1997, representatives of almost 200 countries met in Kyoto, Japan to create a plan to reduce greenhouse gas emissions. One goal of the plan was to reduce greenhouse gas emissions to a level that is 5% lower than it was in 1990. It is not clear how successful this plan was in reducing global climate change, but it is certain there will be more such plans in the future.

Whatever the success of such plans turns out to be, the effect will be very gradual. Even if everyone stopped using fossil fuels tomorrow, climate would continue to change, and polar ice would continue to melt into the oceans for years to come.

Individuals can help by using less energy and by using alternative sources of energy.

Traveling by almost any other means than by car reduces greenhouse emissions.

Choosing appliances, light bulbs, and vehicles that are energy efficient also helps.

NO DUMPING



DRAINS TO OCEAN



Identify two problems threatening ocean water resources.

STOP



Conservation: What We Can Do

There are national and international laws about what may be dumped into the ocean. Many of these laws are hard to enforce. Once plastic trash has been carried to the ocean by winds and streams, it is impossible to tell where most of it came from. Many ships still illegally dump waste materials in the ocean, but catching them is much harder than catching someone throwing a soda can out of a car window. Some oil spills can be reduced by building ships with double hulls. Dead zones caused by agricultural runoff can be restored. The **Black Sea** was once a dead zone, but it came back to life when the farmers surrounding it could no longer afford fertilizer. Once again fishermen are catching fish in the Black Sea.

Individuals can help by carefully disposing of their plastic and toxic waste. One easy way is to put nothing but water down a storm drain. In most places, storm drains lead eventually to the ocean. You may have seen warning labels, like the one shown on page 36, near storm drains.

Overfishing will continue to reduce the supply of seafood from the ocean unless fishermen agree to catch fewer fish. Sustainable fishing keeps fish population unchanged. Some species need to be underfished if their populations have become very small. Not all species of fish are endangered by overfishing. Some are being caught at a sustainable rate. Overfishing will probably continue to be a problem unless regulations become more strict. No matter what happens, the supply of seafood will be greater than the demand for a long time to come.

Some nonprofit organizations do studies to determine which fish are being caught at a sustainable rate. They certify the companies that sell these sustainable catches and allow them to label the fish as sustainably caught. Individuals can help prevent overfishing by looking for these labels and by asking for lists of fish species that are not being overfished.

It is also important to work on the underlying problems that got us into this mess: We must find a way to reduce climate change by reducing the emission of greenhouse gases; we must find a way to slow or reverse the increase in human population; and we must educate people so they understand both the problems and the possible solutions.

NAME: _____



Conservation: What We Can Do

1. Fill in each blank with a word or group of words from the list. Use each word only once. One word will be left over.

climate change

overfishing

greenhouse gas

dead zone

plastic

storm drain

sustainable

- a) Most trash floating in the ocean is some form of _____.
- b) Releasing _____s into the atmosphere are a major cause of _____.
- c) Fertilizer runoff from agricultural fields can cause a part of an ocean to become a _____.
- d) Catching fish at the same rate they reproduce is _____ harvesting.
- e) Toxic waste dumped in _____s is likely to end up in the ocean.

2. Circle the word **TRUE** if the statement is TRUE or Circle the word **FALSE** if it is FALSE.

- a) Populations of many species of fish have been reduced by overfishing.

TRUE **FALSE**

- b) In 1997 representatives of nations met in Kyoto, Japan to regulate fishing.

TRUE **FALSE**

- c) Using energy-efficient appliances can help reduce greenhouse gas emissions.

TRUE **FALSE**

- d) No laws control what ships at sea can dump into the ocean.

TRUE **FALSE**

- e) The ocean is so large that pollution has little effect on it.

TRUE **FALSE**



Conservation: What We Can Do

3. Answer the questions in complete sentences.

a) What is the fastest way to increase the population of a fish species that has been greatly overfished?

b) What is the "Great Pacific Garbage Patch"?

Extensions & Applications

Use the graphic organizer to show how partial or complete solutions can be found to the problems caused by the three ocean changes listed. Describe one solution in each empty box.

Change in the Ocean	Describe Something Governments Could Do That Would Help.	Describe Something an Individual Could Do That Would Help.
Rising Sea Level		
Marine Pollution		
Declining Fish Populations		