



Conservation: What We Can Do

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

a) Which of these problems has been *most* nearly corrected in the United States?

- A marine debris
- B invasive species
- C release of greenhouse gases
- D direct dumping of pollutants into rivers

b) Which human activity helps fish reach their spawning grounds?

- A building dams
- B building fish ladders
- C protecting coral reefs
- D removing trees along streams

c) Which is true of aquatic dead zones?

- A Dead zones can be restored to life.
- B Most dead zones have disappeared.
- C Adding fertilizer to water can restore a dead zone.
- D Dead zones are caused by the release of greenhouse gases.

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

a) Coral reefs support deep water ecosystems.

TRUE **FALSE**

b) Fishing in the middle of the Atlantic Ocean is regulated by laws of the United States.

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 the fish are unsafe to eat.

TRUE **FALSE**

e) Global temperature will continue to rise for many years.

TRUE **FALSE**



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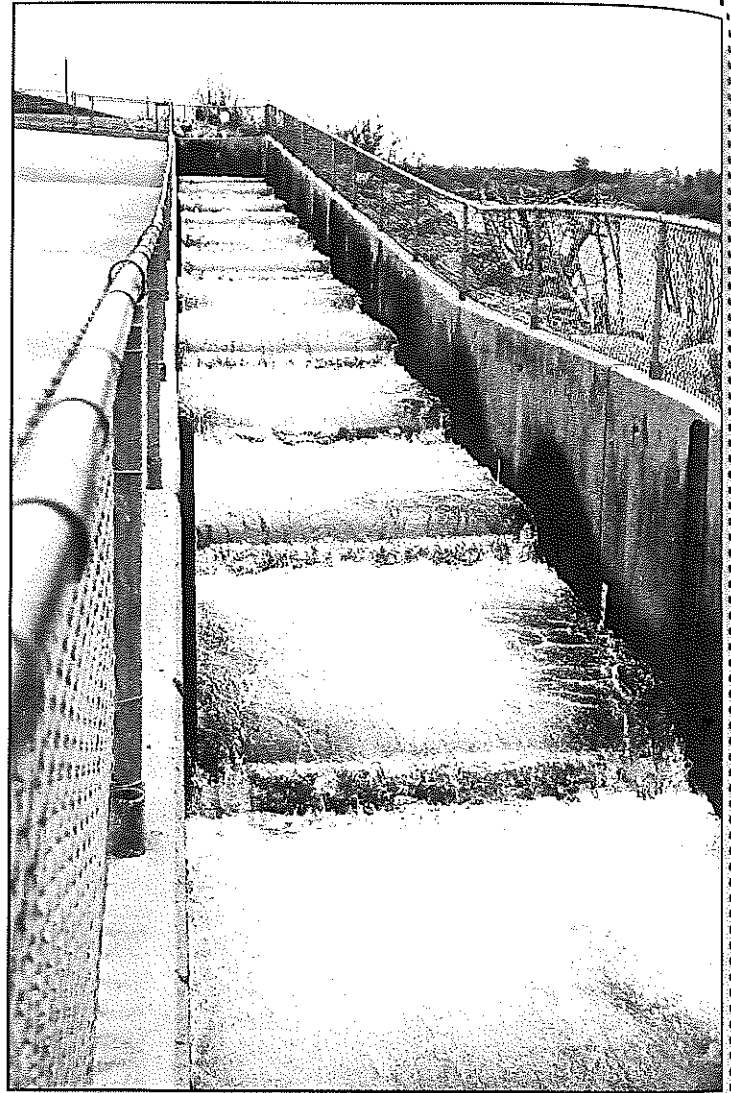
Both the United Nations and many national governments have made efforts to protect and restore aquatic environments. The United Nations has set guidelines for fishing in international waters. The purpose is to encourage sustainable catches of fish and prevent habitat destruction. The guidelines include some strict laws and some suggestions that are not enforced.

Part of the UN program is observing the number, size, and species of fish caught and whether any other species are harmed in the process. Information is gathered using satellites, airplanes, and observers on fishing boats. Sometimes there are arrests of people breaking the laws, but there are also many violations that go unpunished. The Marine Stewardship Council is a non-profit organization that also tries to protect ocean aquatic ecosystems.

In 1972, representatives of 78 countries met at a conference called the London Convention. They agreed to make it illegal to dump anything harmful into the oceans or rivers that flow to the oceans.

Many coral reefs have been protected by making them Marine Protected Areas (MPAs). An MPA is something like a national park or wildlife refuge. Any activities that could damage the reef are prohibited in the area. This approach has improved the health of some reefs, but in other areas there has been a lack of cooperation and poor enforcement of the rules. In some places, reefs have been restored by creating structures with a mineral coating on them on which coral animals tend to grow.

A few ocean dead zones have been partially or completely restored by preventing fertilizers and sewage from being dumped into the rivers that flow to the ocean. The dead zone in the Black Sea between Turkey and Russia has disappeared. Countries in



A Fish Ladder



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northern Europe are trying to reduce the dead zones in the North Sea and Baltic Sea by reducing the nutrients dumped into rivers.

The aquatic ecosystems in rivers have been greatly improved, especially in the United States and most other industrialized countries. The amount of industrial pollutants dumped directly into rivers has been reduced. (At least, rivers don't catch fire anymore.)



What became illegal because of the London Convention?

Protection of spawning grounds along streams are also better protected from damage by logging operations. **Fish ladders** are often constructed around dams to further help fish that are trying to swim upstream to spawn. A fish ladder looks something like a flight of stairs with water running down it.

Acid rain that damages freshwater ecosystems is caused by gases containing sulfur and nitrogen. Some coal-burning power plants now have "scrubbing" devices that remove sulfur compounds from the gases going up the smoke stack. Likewise, vehicle exhaust systems remove oxides of nitrogen from the gases produced when gasoline is burned in the engine.

Individuals can help protect aquatic ecosystems in several ways. You may have heard that you should always cut open the holes in the plastic collars that hold six soda cans together. This is to prevent seabirds from becoming entangled in them. This is good, but it is not the major cause of sea life entanglement. Nearly half the entanglements are caused by discarded fishing gear, and only about 7% by soda can holders.

In general, people can be careful not to let any of their trash or toxic materials enter an aquatic ecosystem. One of the best ways people can help local ecosystems is to volunteer for cleanup projects at local beaches, riverbanks, and lakeshores. Finally, it is important that everyone become better informed about the health of aquatic ecosystems, especially those near where they live.



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1. Fill in each blank with a word or group of words from the list. Use each word only once.

- | | | | |
|------------------------|-------------|------------------|------------------|
| ocean temperature | overfishing | greenhouse gases | United Nations |
| Marine Protected Areas | coral reefs | fish ladders | spawning grounds |

- a) _____ will continue to rise because of the continued release of _____.
- b) The _____ has tried to regulate fisheries to end _____.
- c) Some _____ have been saved by making them _____.
- d) _____ help fish get past dams as they head for their _____.

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

- a) Some marine animals die when they mistake plastic for food.
TRUE **FALSE**
- b) Discarded fishing line is seldom harmful to sea life.
TRUE **FALSE**
- c) The gases that cause acid rain can be removed from factory emissions.
TRUE **FALSE**
- d) Laws control what ships at sea can dump into the ocean.
TRUE **FALSE**
- e) Some people use dynamite instead of nets to catch fish because it does not harm coral reefs.
TRUE **FALSE**

NAME: _____



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3. Answer the questions in complete sentences.

a) Describe **two** ways that the United Nations gathers information on the practices of fishing boats.

b) Describe **one** action that can help restore aquatic dead zones.

Extensions & Applications

Describe **one** way in which government regulations can help protect or restore aquatic ecosystems.

Describe **one** way in which individuals can help protect or restore aquatic ecosystems.
