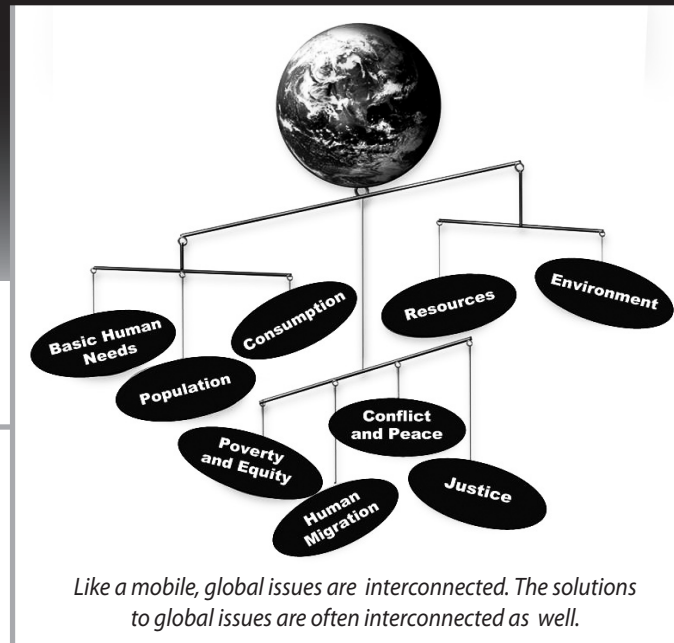


Global Issues and Sustainable Solutions

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Join us on Wednesdays and Fridays for Skills for Everyday Living, a series that goes beyond the classroom to prepare students for the many challenges of the real world. Our current topic is **Global Issues and Sustainable Solutions**, developed by *Facing the Future*. Series ends June 13.



The Ocean Planet

Living in Washington, we are surrounded by water — Puget Sound, Hood Canal, the Columbia River, the Pacific Ocean. It also falls from the sky on a regular basis. With water all around, it can be easy to take it for granted and not think about how human actions can impact the waters that are so much a part of this state and our lives.

Nearly 95 percent of all space available for life on the planet is within the world's oceans. Oceans dominate world weather systems. They function somewhat like the human circulatory system, absorbing and redistributing heat around the globe and watering Earth's surfaces. Humans depend on the ocean for much of their oxygen, and also as a habitat for fish that are the main source of protein for 1 billion people.¹

Human Impacts on Ocean Health

The oceans are so big that it would seem like humans couldn't significantly impact their health. Unfortunately, the facts tell a different story. Many human activities cause damage to ocean ecosystems. The good news is that you have the power to make positive contributions to ocean health. Read on for ways you can help!

Marine Pollution and Solutions

You may have seen a storm drain on the street with a fish stencil painted near it and the words "Dump No Waste: Drains to Stream." That stencil is there to remind us that much of the rain that falls on the ground ends up in the nearest body of water. That runoff takes with it whatever chemicals may be on the ground it washes over — oil that leaks from a car, or agricultural or lawn chemicals. These substances are a type of pollution called "nonpoint source pollution," which is pollution that doesn't come from one specific place or source. Nonpoint source pollution includes industrial chemicals and agricultural pesticides, as well as nutrients such as fertilizers and animal waste.

Trash that enters the ocean is a different kind of marine pollution. Any long-lasting man-made material (like plastic

that enters the marine environment is known as "marine debris." Some examples of trash found in the ocean include tires, fishing nets and plastic shopping bags. This debris can harm many kinds of animals, including whales, fish, seals, turtles, sea birds and corals. Animals can get tangled in marine debris or they may try to eat marine debris, mistaking it for food.

You can prevent nonpoint source pollution and marine debris from entering ocean environments by disposing of trash properly and not putting any waste in storm drains. You could even label storm drains so that other people will know not to put garbage in them. If you have a pet, cleaning up your pet's waste will also help keep our waters clean.

Fishing for the Future

Marine biodiversity (the variety of ocean life forms) is important for healthy ocean ecosystems. Maintaining high ocean biodiversity supports marine food webs. Unfortunately, numerous species of fish are suffering from overconsumption by humans. Between 1950 and 1994, ocean fishers increased their catch 400 percent by doubling the number of boats and using more effective fishing gear. In 1989, the world's catch leveled off at just over 82 million metric tons of fish per year. That was almost 20 years ago, and we're not catching any more fish than that today because the oceans can't produce more than that.²

Sustain fish and shellfish populations by eating only sustainably harvested seafood. Find out which types of seafood are best to eat by visiting Monterey Bay Aquarium's Seafood Watch Web site: www.montereybayaquarium.org/cr/seafoodwatch.asp where you can download a seafood guide to carry with you.

Exotic Species: Local Pests

Another threat to marine biodiversity is nonnative, or exotic, species. Eighty-four percent of the world's coastal waters are affected by nonnative species.³ These species can be introduced to a new marine area when they are accidentally transported in ships' ballast water and

discharged into environments where these species did not previously live. (Ballast tanks are large tanks of water that stabilize ships.) A local example of an exotic species is the European green crab, which has been found in Grays Harbor and Willapa Bay on the Washington coast. The commercial Dungeness crab fishery is important to the economy of Washington state. According to the Washington Department of Fish and Wildlife, European green crabs may beat out native Dungeness crabs for food and habitat, which could harm the Dungeness crab fishery.

You can help to prevent nonnative species from entering Washington state ecosystems and reducing local biodiversity. Never release nonnative plants or animals into the wild.

Small Actions Can Make Big Waves

The immense size of the oceans and the time lag between a damaging human action and its final impact on oceans may allow people to remain unaware of their impact on the world's oceans. But the reality is that many of our actions can have a large effect on marine environments. It is important that we work to protect our "blue planet." Can you think of other ways that we can protect the world's oceans?

- 1 *Shunji Sugiyama, et al., FAO Regional Office for Asia and the Pacific, "Status and Potential of Fisheries and Aquaculture in Asia and the Pacific," 2004. <http://www.fao.org/docrep/007/ad514e/ad514e00.htm>*
- 2 *Monterey Bay Aquarium, "What's Troubling Our Waters," February 25, 2008. http://www.mbayaq.org/cr/seafoodwatch/sfw_of.asp.*
- 3 *Andrew C. Revkin, "Human Shadows on the Seas," New York Times, Feb. 26, 2008.*

Activity

- ❖ Visit the Surfrider Foundation's Web site to learn more about nonpoint pollution and ways you can help reduce it: www.surfrider.org/20_ways.pdf. Based on the Surfrider Foundation's suggestions, what are two ways that YOU can promote ocean health?

Take Action!

- ❖ Download a Seafood Watch card from Monterey Bay Aquarium: www.mbayaq.org/cr/seafoodwatch.asp. Carry this card with you and use it to determine which seafood is a good choice for maintaining healthy oceans.