

Cleaning Up the Ocean

This text is provided courtesy of the National Fish and Wildlife Foundation.



Fishing nets

Lost or discarded fishing gear is a major threat to marine wildlife, because it never stops fishing. Adrift in the current or on the sea floor, abandoned nets and traps take a deadly toll.

Consider the case of a single gill net pulled from the Puget Sound in 2009. Lost underwater for just six months, it trapped more than 450 salmon, 1,300 sharks, 1,800 birds, 16,900 crabs and 11 seals.

Estimates say that 10 to 30 percent of all commercial fishing gear is lost or discarded each year. Countless untethered nets, lobster and crab pots and other equipment continue to "ghost fish," with lethal consequences.

But a major effort to keep derelict fishing gear out of coastal waters is making headway. The Fishing for Energy program, a partnership among Covanta Energy Corporation, the National Fish and Wildlife Foundation, the National Oceanic and Atmospheric Administration and Schnitzer Steel Industries, Inc., has hauled nearly four million pounds of lost or discarded gear from the sea since 2008.

Derelict nets and traps are difficult to recover and even harder to dispose of. Once the gear is located, it must be dragged up and carried to shore. Fishing for Energy eases the disposal process by providing collection sites at ports in nine states. It furnishes free bins to dump the discarded gear, coordinates removal logistics, offers incentives to fishermen for at-sea removal of debris, and actively promotes the program through events, signage and outreach.

Once the gear has been collected, it's recycled to generate a renewable source of electricity for local communities. Recovered metals are removed, and the remaining material is transformed into steam

energy at Covanta Energy facilities.

As Fishing for Energy has grown, so has the demand. The first 2008 disposal site in New Bedford, Massachusetts has been joined by 55 others in twelve states. Participating fishermen are devising strategies to expand their gear recovery efforts, and local groups are funding workshops to generate new solutions.

The program is also supporting new methods to render traps inactive after a certain length of time, as required by current regulations. And Fishing for Energy outreach efforts at the Smithsonian National Zoo and Mystic Aquarium have created displays highlighting the dangers of debris to marine wildlife.

With nearly four million pounds of derelict gear removed and many more to come, the Fishing for Energy program is leading the way in solving one of the ocean's most challenging problems.

discard

dis · card

Definition

verb

1. to throw out or away.

We discarded some old newspapers.

Advanced Definition

transitive verb

1. to throw out or away; cast off.

We discarded some old clothing.

2. in card games, to throw out (a card) from one's hand, or play (a card in a different suit from the one led, and not a trump).

intransitive verb

1. to throw out cards from one's hand in a card game.

noun

1. the act of throwing something out or away, or of casting off, as a card in a card game.
2. a person or thing cast off.

Spanish cognate

descartar. The Spanish word *descartar* means discard.

These are some examples of how the word or forms of the word are used:

1. If using fresh tomatoes, dice them into small pieces; if using canned tomatoes, drain them (and **discard** the liquid, or save it for another use).
2. The carbon atoms are used by the plant to make sugar, a form of carbohydrate. (Carbohydrates are compounds made of carbon, hydrogen, and oxygen.) The plant then **discards** any oxygen it does not use as a waste product. This is much like how human beings breathe out carbon dioxide as a waste product of our own bodily system.
3. Over two-thirds of America's wastepaper exports and more than 40% of its **discarded**-plastic exports ended up in China last year. Paper and plastic scrap exports to mainland China topped \$2.2 billion.

disposal

dis · pos · al

Advanced Definition

noun

1. a giving away or a getting rid of something.

disposal of an estate

disposal of garbage.

The manufacturer violated regulations on waste disposal.

2. authority to control or direct someone or something.

We are at your disposal.

3. an arrangement or placement; disposition.

4. a device for grinding and flushing cooking wastes.

a garbage disposal.

These are some examples of how the word or forms of the word are used:

1. We must consider various things: potential energy sources, waste **disposal**, materials of the new building, and water sources.
2. The new legislation requires e-waste to be dumped at hazardous, or dangerous, waste **disposal** sites rather than in landfills.
3. The problem is further exacerbated in Bangladesh and in other poor urban areas dealing with contaminated water by overcrowding, poor housing, and unsafe trash **disposal**.
4. They scoured the auto repair shop for a smaller engine, and found one in a small lawnmower that had been taken for **disposal** into the garage.
5. Even with warplanes, satellite-guided bombs, and other sophisticated weapons at their **disposal**, military leaders credit thermal imaging goggles as the best tool they have on the battlefield.

generate

gen · er · ate

Advanced Definition

transitive verb

1. to cause to be brought into being.

The human body generates heat.

The farm uses a windmill to generate its own electricity.

The news generated a great deal of excitement.

Establishment of the factory will generate more jobs in the area.

The lottery generates significant revenue for the state.

2. to beget (offspring).

Laboratory mice exposed to the chemicals were no longer capable of generating offspring.

Spanish cognate

generar: The Spanish word *generar* means generate.

These are some examples of how the word or forms of the word are used:

1. The fishing industry **generates** \$80 billion a year.
2. Solar power is energy from the sun that can be used to **generate** electricity.
3. A parachute, which slows the skydivers fall by creating air resistance, is required to reduce the kinetic energy the skydiver **generates** as he falls.
4. Water power, or hydropower, is one of the oldest sources of energy. Hydropower often comes from dams or waterfalls. Of all renewable energy sources, it is most often used to **generate** electricity.
5. In order to **generate** enough force to propel the shuttle from the earth's surface all the way into outer space, the shuttle's fuel tanks had to send an enormous amount of opposite pressure against the ground.
6. Similarly, a tsunami could be **generated** by a giant meteor splashing into the ocean from outer space. Or a volcanic eruption in an underwater volcano. And yet the most common causes of tsunamis remain underwater earthquakes.
7. Amongst other things, hormones affect moods and many behaviors. In this case, the brain will likely produce a hormone that **generates** the feeling of fear. It may also produce a hormone called adrenaline, which causes your body to gain energy and alertness.