The great pacific patch

Science, Physics

The Great Pacific Patch Grade The garbage dump in the sea is a collection of marine garbage that ends up in the sea and other large water bodies. It refers to a group of industrial wastes, medical wastes, and other human wastes dumped from water vessels at the sea. Many marine animals such as fish and birds die as a result of these wastes. The waste may not be easily visible, but when collected and put together by the ocean gyre its plastic component may be seen. Successive currents moving in a particular manner caused by the earth's rotation forms the gyre and trash components are stopped from escaping.

The western and the eastern garbage patches form the Great Pacific Garbage Patch. Larger proportion of the patch consists of the plastic that is not bio-degradable but instead, photodegradable releasing small plastic particles that are harmful to marine animals. The particles act like sponge that soak toxic chemicals in the sea and suspend on the sea water and seabed sediments. When fish and other marine animals feed on them, they may die and their predators may have less to feed on causing successive deaths (Curtin & Belcher, 2008).

Changes in the sea life for algae and other marine life also affect human life. For example, changes in water temperatures disturb the numbers of bacteria and fungi in the waters with negative consequences on marine animals and fish. Fish is essential for the growing human population and diseases arising from microorganisms affect food attainability. Wastes from factories cause harm to these organisms and can as well poison wildlife and humans. Wastes from industries also lead to declining of the sea grasses and reduced pathogenic potentials. Sea skaters also lay their eggs on flotsam objects

such as pumice and seashells. Increased number of plastic wastes in the seas and large water bodies has increased egg concentrations in the gyre area because the plastic garbage provides surface for laying of these eggs. The marine wastes can also disturb the food webs at the sea in the north pacific gyre. Planktons and algae on the basement of the sea use sunlight to make their own food. The trash that collects on the surface of water blocks the sunlight from reaching planktons and algae which are the most common autotrophs in the food web. The entire food web may change because fish and other small animals that feed on the planktons and algae will have less to feed on and as a result may die. The predators that feed on these fish will also be affected and the food web will be affected in whole (Bowler, Karl, & Colwell, 2009). The floating debris can absorb organic pollutants that are very harmful when ingested. They may cause hormone disruption in the endocrine systems of both animals and humans. The plastic particles that the small fish take in when they feed on the plastic remains may not be broken down through digestion. Predators that feed on these fish can, therefore, be affected by the toxic chemicals that exist in those plastic remains.

The garbage takes a very large area at the sea and cleaning it may require resources and commitments that may not be easily achieved. Awareness should, therefore, be raised on the importance of keeping the environment clean and world treaties should be enacted so as to come up with a general objective of the same. Companies that produce plastics for whatever reason should be encouraged to produce those that are bio-degradable so that they decompose when they are no longer in immediate usage (Kolber, 2007). The

wastes from the factories and human wastes should not be directed to flow into the oceans and other large water bodies because of the dangerous chemical components that are associated with such wastes and that are harmful when consumed by animals and birds.

References

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