Экология/1. Состояние биосферы и его влияние на здоровье человека

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Water Pollution Facts and Statistics

Water pollution is a global problem that affects people, animals, and plants. All living forms need water to survive. The causes are contributed greatly by the human population. Recently, laws have been passed aimed to protect the drinking waters. Although these laws are in effect, most of them are ignored. Major corporations still "legally" dump harmful wastes near water supplies. There are several factors that causes water pollution. One of the reasons that the problem of water pollution is so severe is that it is not actually illegal to dump pollutants into water bodies. Sewage, sludge, garbage, and even toxic pollutants are all dumped into the water. Governments either do not care or simply look the other way. About half of all sewage is dumped into water bodies in its original form. No efforts are made to disinfect the sewage or to remove especially harmful pollutants. Even if sewage is treated, the problems still arise. Treated sewage forms sludge, which is sent out into the sea and dumped. Many countries dump sewage out at sea. They place it not far from their own coastline, often killing all the sea wildlife in the dumping area. In addition to sewage, chemicals dumped by industries and governments are another major source of water pollution.

The problem of sewage water pollution is often associated with developing countries where sanitation amenities are inadequate. For example, according to the 2006 report "Caribbean Sea / Colombia and Venezuela, Central America and Mexico GIWA (Global International Waters Assessment) Regional Assessment 3b, 3c", about 472,653 m3 of untreated sewage was being discharged on a daily basis into the sea along the coast of the Colombian Caribbean. The eutrophication that took place as a result of sewage pollution had lead to mass fish mortality in areas such as the Cartagena Bay, as well as the destruction of coral reefs in areas like the Islas del Rosario, Colombia [1].

Moreover, not only developing countries are guilty of polluting the water bodies with untreated sewage. Water pollution facts show that developed countries are also struggling with the same issues. For example, in a 2011 article "Pressure to Improve Water Quality in Chicago River", the New York Times reported on the pressures that the federal government and environmental groups were placing on the waste water treatment firm in Chicago to stop the discharge of untreated sewage into the Chicago River during storms, and to disinfect treated sewage water before the water was allowed to flow into the river [2].

In fact, the problem of water pollution by untreated sewage and waste water remains significant today. According to water pollution facts and statistics from the National Resource Defense Council in 2011, as much as 850 billion gallons of sewage that has yet to be treated is being spilt into 770 cities yearly [3].

The dumping of radioactive waste into the seas and oceans was a common occurrence in the later parts of the 20th century, although it was often performed under the control of national authorities.

According to water pollution facts from the U.S. Geological Survey, about 47,800 drums (each about 55 gallons or 208 litres) of LLW were thrown into the Pacific Ocean west of San Francisco between 1946 to 1970. Today, these drums are found lying in a 1400 km2 area on the seabed, within a region known as the Gulf of the Farallones National Marine Sanctuary.

Nuclear accidents like the Fukushima nuclear plant meltdown also discharges large quantities of water polluted with radioactive materials into the nearby seas and oceans. According to water pollution facts and statistics by the BBC News on 4 April 2011, at least 11,500 tonnes of low-level radioactive water was discharged into the sea, to make way for the storage of more highly radioactive water leaking in the premises.

Heavy metal pollution of water is serious. Consumption or use of contaminated with heavy metal can cause serious permanent health problems, or even death. The threat posed by heavy metal pollution endangers the wellbeing and lives of both animals and humans dependent on the polluted water.

The study by Dr. Boyd Haley, professor and chairperson of the Chemistry Department at the University of Kentucky, showed the impact of heavy metal poisoning on rodents. In the study, it was found that small doses of mercury or aluminum killed 1 in 100 rats being studied, whereas all the rats that were exposed to small doses of both mercury and aluminum died.

In the UK, the accidental dumping of 20 tonnes of aluminum sulphate into the drinking water supply for Camelford, a town in Cornwall (England), led to the Camelford aluminum poisoning incident in July 1988. According to water pollution facts from Wikipedia, almost immediately, hundreds of people started to report alarming symptoms like hair turning blue or green, diarrhea or vommitting, and skin peeling.

Studies done on the long-term effects of the poisoning incident found that many of the victims suffered from premature aging, permanent impairment of brain functions like memory and balance. Death did not occur immediately for most of the victims, but a post-mortem inquery for one of the victims (Carol Cross) found excessively high levels of aluminium in her brain. It was believed that she died from the early onset of beta amyloid angiopathy, a cerebro-vascular disorder linked to Alzheimers, which is in turn associated with high levels of aluminium in the brain.

These facts give us just a glimpse into the devastating effects of water pollution. Ecosystems can be severely changed or destroyed by water pollution. Many areas are now being affected by careless human pollution, and this pollution is coming back to hurt humans. Water is a vital element of our life. The pollution of water greatly affects humans and animals. Water pollution harms individuals, degrades the environment, and shows the ignorance of polluters. Water pollution is a senseless act that people can help stop. Investing in safe drinking water and sanitation is not only good for personal health and the environment, it contributes to economic growth.

References:

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