

Nuclear pollution



**ASSIGN
BUSTER**

Any undesirable effect caused to the environment due to radioactive substances or radiations is called nuclear pollution. Major source is the Nuclear power plants. If traces of the radioactive substances are present in the water that is released from the plant, it will cause nuclear pollution. Emission of radiations can also cause this kind of pollution.

It affects almost all life forms in the surrounding environment. From planktons to Human beings nothing is spared. To be more specific, the radiations can cause mutations that lead to cancer, and the dose of radiation or the level of pollution determines lethality or how deadly it is.

However, nuclear pollution is extremely hazardous in nature. It occurs as a result of nuclear explosions that are performed while conducting nuclear tests. These nuclear tests are carried out to invent better nuclear weapons. The explosions cause release of 15 to 20% radioactive material into the stratosphere. On entering this layer, they start falling into the earth's atmosphere. This fall can take anywhere from 6 months to several years. 5% of these radioactive particles enter troposphere, which is the lowest layer of the atmosphere.

The smallest particles of the radioactive material are called fallout. The fallout settles on the leaves of plants and trees. These leaves are eaten by the grazing animals. Radioactive material now enters the ecosystem. Humans consume these particles through the process of food chain. Serious health problems now arise. Ingestion of radioactive material can lead to cancer and genetic mutation in humans. Fallouts that do not drop on leaves

accumulate over the sea. This can be harmful for the sea life, which ultimately affects the humans.

It isn't necessary that only nuclear power stations cause nuclear pollution. Even other industries, not related to nuclear power production, can also contribute to it. Coal has small amounts of radioactive material in the form of uranium and thorium. These do not burn completely and become part of fly ash. Even while producing oil and gas, radium and similar elements are released in to the air.

Radioactive contamination or nuclear pollution is the most dangerous for the environment since the wastes maintain their radioactive properties for thousands of years. There is no way to have them assimilated in the soil, the water or the air in the initial form. Reprocessing is the only solution we have to limit the extent of nuclear pollution and clean the planet from such increasingly harmful residues. The highest likelihood of radioactive elements reaching in open environment is by accident during the transportation to the reprocessing plants located in some parts of the globe. Reprocessing in itself causes other pollution problems adding other risks to an already fragile environment condition.

Presently, no country has efficiently solved the issue of nuclear pollution in terms of radioactive waste storage. Every state would like to send the residues to some other place and be rid of them, while no truly viable conclusion is reached. Storage facilities as such require highly intransigent security and safety rules, periodical checks and regular updates on the storage environment. A responsible management of the nuclear waste would

limit the risk of nuclear pollution on the long term, allowing us to live on a cleaner and safer planet, also preventing the temptation of dumping the waste in the oceans.

Nuclear pollution is not the only hazard that comes together with the use of radioactive energy: mass populations are jeopardized on a current basis if something happens to a reactor, as it was the case with the Russian Chernobyl for instance. There are other energy sources that are still highly effective without the huge risks of nuclear pollution or irradiation: geothermal sources, ocean currents, tidal waves, wind and waterfalls, all make alternative power solutions that should not be neglected. Environment-friendly electricity is one of the chances this planet has to survive.

Fish and ocean plants are highly contaminated due to nuclear pollution; Greenpeace has repeatedly signaled out the huge amount of plutonium effluents produced by the nuclear plant on the coasts of England, for instance. Lobsters in the area have been found to be contaminated, hence the effects not only on humans but on the entire ecosystem is devastating. Attempts have been by an American company to even built a radioactive storage facility on Marshall Islands, ignoring the even higher potential threats for nuclear pollution under the circumstances of a growing sea level. Such solutions may appear convenient from a certain perspective, but when considered from a wider point of view, irresponsibility is obvious.