Commentary

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Toxic Agents in Aquatic Pollution

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Water pollution creates difficulties for surviving of organisms and vegetation in water, including amphibians. The major sources of aquatic pollution [1] include industrial waste, mining activities, sewage and waste water, marine dumping, burning of fossil fuels, accidental oil leakage, global warming, atmospheric deposition, industrialization etc.

This pollution on freshwater species is the reason of loss of some registered species, with maybe some profits for some of them. This only decreases the diversity but not necessarily number of individual species, and change in the balance of processes such as predation, competition and materials cycling etc. Due to the complexity of pollution, the effects of take-up in the aquatic life are also depended on the pollutants characteristic feature. If more than one poison is present together in an effluent they may exert a combined effect to an organism, which can be additive, antagonistic or synergistic. Such as zinc and cadmium for fish. For measuring of this toxicity we have to done some toxicity tests.

These chemicals are released in the water surface through industrial and municipal discharges, use of agricultural chemicals, and runoff/leachate from waste dumps. The harmful concentration of most toxic compounds in drinking water [2] can be greatly reduced through carbon filtration, aeration, and other treatment methods; however, the need to chlorinate drinking water produces numerous toxic compounds as by-products of the process. Many of these toxins are known or suspected carcinogenic in nature. In many places, water may be contaminated by the natural toxins exist on the surface of earth, such as arsenic and fluoride (a natural toxins that also create brown spots on teeth and severe bone weakness). As the groundwater is used by living beings, the risk of natural toxics intake grows because they are concentrated in the water that is left.

Major toxic agents in aquatic environment

Lead

It is known to have more toxic effects on humans and wildlife. The major effects of the lead on living organism are on nervous system, but also can damage the circulatory system and cause reproductive harm. Children exposed to lead are at risk of developmental disabilities. Toxicity reduction efforts for lead involve recognize alternatives to lead-containing products and ensuring that lead-containing wastes are managed safely.

Mercury

We all knew that mercury has toxic effects on humans and wildlife. Mercury is a PBT that affects our nervous system, kidneys, and other organs of living organism. Children who are exposed to mercury through their mothers' consumption of fish (contain mercury) are particularly at risk. The highest priority of any pollution prevention program [3] is to eliminate the use of mercury in the first place always.

Pesticides

Pesticides are agents used in agriculture fields to control unwanted insects, plants, rodents and various microorganisms. Pollution controls in regard to pesticides means accomplishing pest control with practices that eliminate or use the less amount and the least-toxic types of pesticides because these are eco-friendly.

Prevention

Instead of releasing sewage waste into water bodies, it is better to treat them before discharge. Because this can reduce the initial toxicity and the remaining substances can be degraded and rendered harmless by the water body itself.

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