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Water Pollution: A Major Threat to Living Forms

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Short Communication

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Water is a source of life and regarded as the most essential of natural resources. Approximately 98% of this water is seawater and is unusable for drinking because of the high concentration of salt. About 2% of the planet's water is fresh, but 1.6 % is locked up in polar ice caps and glaciers [1-4]. Another 0.36 %is found underground in aquifers and wells. Therefore, only about 0.036% of the planet's total water supply is present in lakes and rivers [2,5-12]. But due to pollution the water gets contaminated. Water pollution can come from a number of different sources. The main source is pollutants from both organic and industrial effluents which are introduced into the environment that has increased water and land pollution problems [13-15]. We have been confronting expanding issues because of the contamination of the surface and ground waters. Due to the mixing of untreated industrial effluents in water approximately 70% of the renewable water resources are unavailable for human use [16-20]. Shameful administration of wastewater era in the urban zones finds its own particular manner of getting into the surface water. Thus, the release effluence affects the surface water bodies [21-25]

CAUSES OF WATER POLLUTION

The causes for the pollution of water is releasing of industrial effluents in to fresh water, Excessive use of pesticides and fertilizers, mining etc [26-30] .If we take water produced in offshore oil platform. Amid the investigation of petroleum, water which is caught in underground brought to surface along with oil and gas that is referred to as produced water has constituents that make it risky to be released into nature without sufficient treatment [31]. In China there is a large production and consumption of oil in the world. Due to lack of awareness on protection of water and environment it effects the growth of marine ecosystem, reduces the coastline area value and also destructs the self-purification ability of oceans [32-39]. Many water pollutants remains to be addressed because of quick industrialization new synthetic mixes are consistently being produced and conveyed to the business sector and sooner on the other hand later they will develop into the sea-going frameworks [41-43]. Water pollution also leads to several disorders in humans for example The presence of Aluminum in drinking water has offered ascent to

dialogs on conceivable of dangers, due to its suspected association with Alzheimer's sicknesses or dialysis encephalopathy [44-49]. Pharmaceutical and personal care products are also treated as pollutants which contain bioactive materials such as therapeutic drugs, diagnostic agents, fragrances, cosmetics [50].

Among all water contaminations, substantial metal particles, such as $Pb^{2+,}$ $Cd^{2+,}$ $Zn^{2+,}$ Ni^{2+} and $Hg^{2+,}$ have high dangerous and nonbiodegradable properties, can result in serious wellbeing issues in creatures and individuals [51] Another major source of contamination is releasing of municipal waste in to the or fresh water bodies leads to the contamination of drinking water. This leads to severe water scarcity. Notwithstanding the overwhelming metals and polyaromatic hydrocarbons they contain, a percentage of the urban contaminants in city effluents display neuroendocrine disrupting action, for example, 17α-,17β-ethynylestradiol (dynamic fixing in conception prevention pills), nonylphenol (a breakdown result of alkylphenol polyethoxylate surfactants), bisphenol and the common estrogen 17β-estradiole [51,52-54]. In Iran environmental scientists found out nitrate content in drinking water. The drinking water got polluted due to the excessive use of pesticides and fertilizers in agriculture.

According to U.N World Water Development report there is a 60% increase in the population in between 2008 and 2100. By 2050 most of the developed and developing countries will face severe water stress [55]. To avoid this kind of situation there is a need of waste water treatment to overcome the scarcity of water up to some extent. Its difficult to remove micro pollutants like Cu, Pb, Hg, As, Cr and readionuclides from ground water. Some of the wate water treatment programs were carried out to decrease the pollution of water. For example In Kuwait waste water rescue program was implemented. The main aim of this plan is to use 100% of the reclaimed municipal wastewater mainly in restricted agricultural irrigation [56]. Paso Del Norte region U.S.-Mexico border is located with the Rio Grande river is another example of using the treated waste water used to cultivate 12250 ha agricultural area of irrigation district 04 Valle de Juarez in 2012. In Cairo scientists found Trihalomethane compounds in drinking water. The most common method to disinfect tap water is chlorination. But increase in concentration from the people's health aspect they are suspected to be carcinogenic.

Some facts regarding water quality and statistics by WHO

- Every day approximately 20 million tons of industrial waste and sewage water are released in to water (Oceans, Seas, Rivers, Fresh water ponds, Canals). Use of polluted water causes 3.1% of deaths worldwide.
- More than 80% of sewage in developing nations is released untreated, dirtying streams, lakes and seaside territories. [57]
- In most of the high and low income countries food sector plays a mojor role in releasing of organic pollutants in to water.

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