

SCIENCE

RWATER POLLUTION AND ITS CAUSES

WATER POLLUTION

Water pollution is the addition of undesirable substances in water that has an adverse effect on organisms and the environment.

Sources of Water Pollution:

It could be due to natural or man-made activities.

(i) Natural sources of water pollution:

- (a) Soil erosion
- (b) Decaying of organic matter
- (c) Leaking of minerals from rocks

(ii) Man-made sources of water pollution:

- (a) Domestic sewage discharged into rivers from areas located on its banks. Sewage contains organic matter and several pathogens that can cause diseases in animals and humans.
- (b) Industrial effluents containing high concentration of heavy metals, toxic chemicals, acids, Oils, greese etc. All of these are harmful to aquatic life and also make the water unfit for drinking.
- (c) Fertilizers added to crop fields also lead to water pollution. A small part of fertilizers leach down to pollute ground water while large part of it passes down to water bodies through rain water. Fertilizers cause eutrophication of water bodies.
- (d) Pesticides sprayed over crops are passed into water bodies during rains. It has an adverse effect on aquatic organisms.
- (e) Oils from refineries, automobile workshops pollute water thereby killing aquatic life and affecting growth of phytoplankton.

(f) The passage of hot water from thermal plants changes the temperature of water source. As a result, the content of oxygen decreases. Reduced oxygen content kills the aquatic animals and reduces the decomposition rate of organic matter, which, therefore accumulates.

EFFECTS OF WATER POLLUTION

- (i) The toxic materials in water cause serious water-borne diseases like cholera, typhoid, jaundice and hepatitis in humans.
- (ii) The presence of acid and alkalies in water destroys micro-organisms, thereby disturbing the self-purification process in rivers.
- (iii) Polluted water causes spread of epidermis like cholera, tuberculosis, jaundice, typhoid in human beings.
- (iv) Usage of polluted water for irrigation of agricultural fields damages crops severely. This in turn reduces the agricultural productivity.
- (v) Heavily polluted water affects the fertility of soil, and kills soil micro-organism.
- (vi) Contamination of sea water due to oil spilling causes ecological disasters which result in the death of aquatic organisms including fishes.
- (vii) Water pollution affects the fish and other aquatic life.