

Subsidiary
Part-II
Lecture No-22

Ecology
Group-C
Water Pollution

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Date
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Any change brought about in the physico-chemical property of water due to accumulation of pollutants is called water pollution.

The main sources of water pollution include domestic sewage surface run-off, industrial discharges, radio-active wastes, oil and chlorinated hydrocarbons like, D.D.T, dieldrin etc. released from pesticides, herbicides and fungicides. Every waste today finds its way in the pond, lake, river or the sea. D.D.T and its relatives are very poisonous, very persistent (non-degradable) and highly mobile pollutants which are carried to rivers from the fields along with rain water and finally into oceans. In the process however, they go on accumulating in the food chain in increasingly higher amount at each higher trophic level. The process is called biological amplification or biological magnification.

Effects of water pollution:

- (i) D.D.T reduces photosynthetic rates in marine phytoplankton, which ultimately reduces fisheries yields.

- (i) In man D.D.T. enters through consumption of fishes.
- (ii) D.D.T. causes softening of brain, cerebral haemorrhage, hypertension, cirrhosis of liver and cancer.
- (iii) Water pollution causes diseases like dysentery, cholera, typhoid and diarrhoea.
- (iv) It causes shortening of food chain and elimination of top carnivores.
- (v) It causes thick bloom of blue green algae which depletes O_2 content of aquatic bodies, thereby reducing the "biological oxygen demand" (B.O.D) of other communities.
- (vi) Oil pollution is a serious obstacle to photosynthesis, since they also prevent water-oxygenation.

