

DO, BOD, eutrophication  
spread of diseases

Underdeveloped countries - no proper treatment

## Impact of Sewage Effluents

The water used for domestic, industrial and other purposes gets converted into waste water. It is termed as sewage water. In ideal conditions, sewage water is channeled or piped out of cities so that it can be recycled. Sewage contains organic wastes as well as chemicals. The pollution of water occurring from sewage is mainly observed in developing countries. In these countries, sewage water is not disposed in a proper manner. In developed nations, a network of sewage pipes is used to take sewage away from cities. Treatment of waste minimizes pollution resulting from it. However, even in developed countries, the older cities may have sewage systems that are leaky. Pollution caused by sewage water is one of the major problems in cities the world over. Sewage water is drained off into rivers without treatment. Careless disposal of sewage water leads to creation of a chain of problems like spreading of diseases, eutrophication, increase in Biological Oxygen Demand (BOD), etc.

### Main Causes of Sewage Water Pollution

Improper handling of waste water is the main reason behind water getting polluted. Sewage is drained off in large quantities to rivers. It slows down the process of dilution of constituents of water; this in turn stagnates the river. It may also result into spread of diseases like diarrhea, typhoid, etc.

Draining off water without treatment is one of the major causes of pollution. Effluents present in sewage water contain innumerable pathogens and harmful chemicals. Detergents released in water contain phosphates and they allow the growth of algae and water hyacinths.

Sewage pollution is not always man-made or the result of human negligence. There are times when sewage systems receive flows greater than their capacity. It takes place in times of heavy rains. The excess flow of water results into overflowing of sewage systems; this in turn leads to sewage pollution.

### Effects of Sewage Pollution

The different ways in which sewage pollution affects our life can be found below. These details should offer insights on how to control the menace of water pollution caused by haphazard disposal of sewage into freshwater bodies and oceans.

#### Effects on Health

Pathogens present in sewage water are responsible for spreading different kind's diseases. Stagnant water fosters the growth of mosquitoes, which in turn causes diseases like malaria.



Another disease which originates from contaminated water is typhoid. Sewage water may also contain protozoans like *Cryptosporium* and *Giardia*. These pathogens pose a great risk to human health. Therefore, polluted water acts as a host to several pathogenic microbes.

### **Eutrophication**

The process of excessive deposition of chemical nutrients in water bodies is termed as eutrophication. It is one of the many problems which have their origin in sewage water pollution.

Degradation of the quality of water, reduction in number of fish and increase in biological oxygen demand (BOD) are major effects or consequences of eutrophication. Increase in the concentration of phosphates, nitrates and other chemicals including organic wastes in water bodies causes excessive growth of algae and bacteria. Growth of such organisms is responsible for increase in BOD and thereby, reduction in the number of aquatic creatures. The growth of native plants is also hampered by excessive algal growth.

### **Harmful Effects on Environment**

Toxins released in rivers through sewage water are consumed by fish and other aquatic organisms; thus, the possibility of toxins entering the food chain increases manifold. It is observed that coral reefs get affected by sewage pollution the world over. The sewage water dumped in oceans can affect the coral reefs to a great extent. The toxins present in polluted water inhibit the growth of corals.

### **Pollution of Drinking and Irrigation Water**

Water bodies in their natural form contain small amounts of chemical compounds like bicarbonates, nitrates, chlorides, sulfates, etc. Rise in the amount of such compounds may cause many problems. For example, water becomes unsuitable for drinking and irrigation. The Total Dissolved Solids (TDS) present in water should be less than 500 mg/gram for water to be considered potable. Saline water is not considered suitable for irrigation either. Use of such kind of water for agricultural purpose leads to salinization of soil, which in turn causes soil erosion.