

THE IMPACT OF WATER POLLUTION ON LIVING BEINGS: A REVIEW

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ABSTRACT

Foreign materials either from the natural and other sources are contaminated with water supplies and may be harmful to their toxicity, reduction of normal oxygen level of water, aesthetically unsuitable effects and spread of epidemics. In the presence of pollutants, chemical and biological changes in the normal composition of water, these changes are called by the water pollution.

Key words:-*Pesticides, Pharmaceuticals, Nutrient, Turbidity, Microbial pollution, Heavy metals, Runoff, Surface Water, Pollution, Water Quality, Physicochemical Parameter, Review, Sustainable Water Management.*

INTRODUCTION:-

Water is the base of all living beings to live. Life cannot be imagined without water. Water is used for drinking, sanitation and farming. The problem of water pollution has increased due to industries and urbanization.

CAUSES OF WATER POLLUTION:-

When any unlike dissolved substance mix with water in its normal composition, the pH value of water is changed due to which water is suitable neither for drinking nor for farming. These are many reasons of water pollution:

1.) **Petroleum Pollution:-**

Many petroleum products such as oil and gases, leakage in pipe lines, industrial rubbish, due to these, sea animals die. Stores of oil catch fire due to this pollution.

2.) **Sewage and domestic waste materials:-**

Today, in the race of urbanization and industrialization, the water emitted from houses, industries such as soap and detergent, vegetable block the sewage lines and resultantly these waste and rubbish reach to the rivers. Canals from which various types of bacteria and worms are born in the drinking water. Due to this, all living beings are affected.

3.) **From agricultural fertilizer and chemicals:-**

In modern age, various types of fertilizers and pesticides such DDT are used to increase the fertility of the land. Other chemicals as sulphate and potassium is used in ground water to increase the quantity of sulphate from which pH of water is less than 7 and acidic characteristic in water increase. Thus, water bears various diseases in living beings.

TYPES OF WATER POLLUTION:-

1.) **Surface Water Pollution:-**

Such types of pollution is the water found on the surface of the earth such as rivers, lakes, seas, various hazardous substances coming in contact of surface water pollute it

- 2.) Ground Water Pollution:-**When various types of pesticides, chemicals, industrial wastes go beneath the surface of the earth through rain water pollutes the underground waters of water

EFFECTS OF WATER POLLUTION:-

Water pollution affects every living being and every non-living being on the earth. There are following effects of water pollution:-

1.) Death of aquatic animals:-

Aquatic animals such as fish, dolphin, and birds are mostly affected and they die due to lack of oxygen.

2.) Disruption of food chain:-

Natural food chain is broken due to pollution when small aquatic animals eat cadmium and lead (Pb) thereafter they are eaten by bigger organism and man cause health problems.

3.) Disease :-

We invite various type of disease drinking polluted water such as cholera, blue-baby-syndrome due to plenty of nitrogen in water, bone disease are borne due to fluoride in drinking water and due to plenty of chlorine in water causes black foot. Skin diseases bear due to plenty of arsenic in H₂O.

CONCLUSION:-

We know that there is 65-70% water in the whole world. But the quantity of drinking water is very less. Today, in the universe, population is increasing rapidly but not the water sources. So the nature and creature and not equally balanced to each other. The water which is suitable for drinking is polluted by human factors which are a serious problem. To control it, following methods are given below:

1. Drinking water should be used wisely.
2. Less water should be used for washing clothes.
3. There should be ban on washing the animals in rivers and ponds.
4. We should bring a shortage in the use of chemical fertilizer.
5. We should take out weeds and unnecessary dirty things from the ponds.
6. First of all industrial polluted water and waste should be removed from the rivers and ponds thereafter water should be flown.
7. We should focus on the use of natural manuals.
8. We should make CWPC (Central Water Pollution Central Board) which looks after the pollutant factors in the states.
9. We should increase such aquatic (as fish) which destroy the pollutions in the water.
10. We all should be aware to keep the ponds clean. This is not the responsibility of a special group but also this is the responsibility of all.

REFERNCES:-

- 1.) Arnold, J. G., Allen, P. M., & Bernhardt, G. A. (1993). Comprehensive surface-ground-water flow model. *Journal of Hydrology*, 142, 47–69.
- 2.) Beltman, B., Meuleman, A. F. M., & Scheffer, R. A. (2004). Water pollution control by aquatic vegetation of treatment wetlands. *Wetlands Ecology and Management*, 12, 459–471.
- 3.) Berglund, M., & Bjöjesson, P. (2006). Assessment of energy performance in the life-cycle of biogas production. *Biomass and Bioenergy*, 30, 254–266.
- 4.) Bhattarai, R., Kalita, P. K., & Patel, M. K. (2009). Nutrient transport through a vegetative filter strip with subsurface drainage. *Journal of Environmental Management*, 90, 1868–1876.

- 5.) Blanco-Canqui, H., Gantzer, C. J., Anderson, S. H., Alberts, E. E., & Thompson, A. L. (2004). Grass barrier and vegetative filter strip effectiveness in reducing runoff, sediment, nitrogen, and phosphorus loss. *Soil Science Society of America Journal*, 68, 1670–1678.
- 6.) Bouldin, J. L., Farris, J. L., Moore, M. T., & Cooper, C. M. (2004). Vegetative and structural characteristics of agricultural drainages in the Mississippi delta landscapes. *Environmental Pollution*, 132, 403–411.
- 7.) Chen, H. S., Wang, G. H., Song, F. G., & Li, J. Q. (2010a). Retention and removal effects of ecological ditch on agricultural non-point source pollutants. *Acta Agriculturae Jiangxi*, 22, 121–124 (in Chinese).
- 8.) Chen, Y., Yang, G., Sweeney, S., & Feng, Y. (2010b). Household biogas use in rural China: a study of opportunities and constraints. *Renewable and Sustainable Energy Reviews*, 14, 545–553.
- 9.) Díaz, F. J., Ó Geen, A. T., & Dahlgren, R. A. (2012). Agricultural pollutant removal by constructed wetlands: implications for water management and design. *Agricultural Water Management*, 104, 171–183.
- 10.) Ding, W. G., Niu, H. W., Chen, J. S., Du, J., & Wu, Y. (2012). Influence of household biogas digester use on household energy consumption in a semi-arid rural region of northwest China. *Applied Energy*, 97, 16–23.
- 11.) Dowd, B. M., Press, D., & Los Huertos, M. (2008). Agricultural non-point source water pollution policy: the case of California's central coast. *Agriculture, Ecosystems and Environment*, 128, 151–161.
- 12.) Duchemin, M., & Hogue, R. (2009). Reduction in agricultural non-point source pollution in the first year following establishment of an integrated grass/tree filter strip system in southern Quebec (Canada). *Agriculture, Ecosystems and Environment*, 131, 85–97.
- 13.) Duchemin, M., Lafrance, P., & Bernard, C. (2002). Les bandes enherbées: une pratique de conservation efficace pour réduire la pollution diffuse. Fiche technique #FT040905Fb. IRDA, 2p. http://www.irda.qc.ca/_documents/_Results/53.pdf. Accessed 1 October 2012.
- 14.) Fraser, L. H., Carty, S. M., & Steer, D. (2004). A test of four plant species to reduce total nitrogen and total phosphorus from soil leachate in subsurface wetland microcosms. *Bioresource Technology*, 94, 185–192.
- 15.) Gburek, W. J., & Sharply, A. N. (1999). Hydrologic controls on phosphorus loss from upland agriculture watersheds. *Journal of Environmental Quality*, 27, 267–277.
- 16.) Gburek, W. J., Sharply, A. N., Heathwaite, L., & Folmar, G. J. (2000). Phosphorus management at the watershed scale: a modification of the phosphorus index. *Journal of Environmental Quality*, 29, 130–144.
- 17.) Guo, L. G., & Li, Z. J. (2003). Effects of nitrogen and phosphorus from fish cage-culture on the communities of a shallow lake in middle Changjiang River basin of China. *Aquaculture*, 226, 201–212.
- 18.) Hargreaves, J. A. (1998). Nitrogen biogeochemistry of aquaculture ponds. *Aquaculture*, 166, 181–212.
- 19.) Hassen, M., Fekadu, Y., & Gate, Z. (2004). Validation of agricultural non-point source (AGNPS) pollution model in Kori watershed, South Wollo, Ethiopia. *International Journal of Applied Earth Observation and Geoinformation*, 6, 97–109.
- 20.) He, P. J. (2010). Anaerobic digestion: an intriguing long history in China. *Waste Management*, 30, 549–550 (in Chinese).