

Water management in delta planning

Dr. Monirul Alam

Bangladesh has prepared a 100-year Delta Plan-2100. There are 9 reservoirs in this plan. 25 Biodiversity Conservation Areas have been declared in the OTIG that divides Bangladesh geographically.

If we want to take Bangladesh to the ranks of developed countries, we need to protect rivers and wetlands by prioritizing delta planning. Advanced technology should be used to protect rivers. In cases where rivers and water bodies are being filled and cannot be freed from encroachment, all levels must come together and the government must take swift action. Technology-based river information systems are not developed in Bangladesh, such as how many rivers there are in the border, past and present status of the rivers. If it is possible to improve the information system of the river, it is possible to bring people, water body and nature together. Every six months or a year, an app or a database containing the information of the river should be created through satellite images, from which the past and present condition of the river can be known and the general public can participate. Can and easily identify problems. Then the government can easily take steps to protect rivers and aquifers and the delta plan can be successfully implemented and economic development will be possible. Waterlands and rivers are a major source of fresh water. Water for daily use of the city, water for agriculture and industrial production is taken from aquifers and rivers. Water bodies and rivers are being polluted through various human activities. Water security and sustainable development goals are threatened by water pollution. Various water borne diseases spread through water pollution. Contaminated water contains various harmful substances, chemicals, heavy metals (arsenic, lead, mercury, etc.). Because of this, using contaminated water can cause serious diseases including cancer. Vulnerable groups, especially pregnant mothers, newborns, children under five years are at higher risk. This increases healthcare costs for the poor and marginalized, reduces their working hours, and increases poverty. Excessive uses of pesticides during cultivation, industrial effluents are constantly mixing with water and polluting the soil and water. It reduces soil fertility, disrupts crop production and industrial production due to use of polluted water, which affects economic development. Polluted water infested with pesticides damages women's physical characteristics and hormone-sensitive tissues. It also increases the risk of breast cancer. People working in factories and people living in or around industrial areas are at high risk due to excess carbon emissions in industrial areas. Due to excess carbon emissions, the temperature of the environment is increasing. Because of this, if the sea level rises, coastal marginal communities, sailors, fishermen, farmers are affected. Pesticides are spread with rain, increasing water pollution by spreading pollutants through excess storms and rain. Water pollution threatens the life of aquatic species. Pollution is spreading from reservoirs to canals, rivers, and seas through flow. It is becoming impossible for the animals there to survive. If water pollution is not prevented, aquatic species will disappear.

Water pollution of wetlands and rivers is a challenge today. Water pollution is not only a threat to human health and the environment, but also to economic prosperity and social progress. Sustainable development goals cannot be achieved unless water pollution is prevented. To prevent water pollution, the source and cause of pollution must be identified first. Excessive use of pesticides on land should be prevented, toxic and harmful chemicals should be disposed of in specific places and proper measures should be taken for industrial waste. Water pollution can be prevented by setting up treatment plants in every factory, providing safe sanitation, systematic urban planning, above all by taking appropriate measures. People's active participation should be

ensured in combating water pollution, all public and private institutions should work together. Only then will it be possible to realize the Sustainable Development Goals.

Three-quarters of the world's drinking water is in poor condition due to increasing levels of water pollution. The way water is being polluted due to various reasons, even if it is possible to turn water from polluted state to pure state, many considerations and questions remain. The amount of water we are polluting, can we purify that amount of water? Even if the water can be purified, the cost of doing so, can everyone afford it? How much will we buy water in the future?

From the point of responsibility and reality of water pollution, various steps have been taken to depollute the water, but some errors still remain. One of the shortcomings is non-treatment of industrial effluents and water, inefficiency of a large part of those involved in the treatment work and lack of knowledge about the proper quality of water ingredients and components. Human household waste, industrial waste, various chemicals, solid materials, pesticides, fertilizers are polluting the water of reservoirs, rivers, canals, rivers. Again, people are using the reservoir and river water in different ways. Reservoir and river water is purified and made suitable for use at various stages. Chlorine, a disinfectant chemical, is added to water to preserve water for consumption by removing potential pathogens or microorganisms such as viruses, bacteria including *Escherichia coli*, *Campylobacter*, *Shigella* etc. Water is made suitable for consumption by purification, maintaining a standard standard of water constituents in the world and in Bangladesh. In the case of waste water, the World Health Organization has specified the standards for water parameters, the Department of Environment, Government of Bangladesh has set standard standards for some water components in many cases.

Bangladesh is not able to progress in the way that global environment is being given importance. Still many parameters levels are not compatible with international standards. For example, the level of nitrogen after wastewater treatment is set at 30 ppm internationally, while the standard level in Bangladesh is 150 ppm. Treatment plant should be made mandatory in every industrial plant. Before releasing the waste water into the wetlands, the parameters should be checked and treated properly. The authorities have to ensure on-site supervision from time to time. If water pollution can be prevented, it will be possible to protect rivers, wetlands and biodiversity.

#

PID Feature