

Wastewater Management and Health!

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Abstract:

Balance is the basic law of nature. Therefore, what we take from nature and what we give back determines the condition of the environment. A representative example of this is the water and wastewater cycle. On the one hand, we used to get water in pure form from nature and return it to nature through sewers and drains after polluting it. After that, expect to get pure water again next year... Only humans can do such selfishness. When using water, many things are mixed with it and that water becomes impure. Sewage is from toilets, bathrooms, kitchens, washing dishes, factories etc. Produced by the use of water on site. Sewage needs to be properly disposed of; Once the waste water is managed, it can be reused and also improves the health of the citizens. Along with that, the rivers, streams and lakes in the area are protected, the nature there remains intact. Treatment of waste water is the responsibility of local bodies. Failure to do so endangers the health of citizens. This water also adversely affects the environment. Today, many places in the state discharge untreated sewage into local water bodies, thereby contaminating the water bodies.

Keywords: Drainage system, System of toilets, Septic tank, Infestation of germs, Sewerage construction;

Introduction:

Water consumption is essential for human life. The water that becomes impure after use and is not suitable for reuse is called wastewater. In today's era, wastewater is generated from human as well as industrial use. It can be classified into two parts urban sewage and industrial sewage. Municipal wastewater is mainly generated from municipal consumption. E.g.: Sewage generated from excrement, bath and kitchen, washing clothes and utensils. Disposal of such sewage is important from the point of view of public health. If this water is stored in a place, the organisms in the water will process and their number will increase. Its processes produce many polluting odorous gases and deteriorate public health. Also, if this water comes in contact with drinking water, the drinking water can become infected with germs and cause many life-threatening diseases. Just as sewage contains a large amount of nutrients for animals, so do plants and algae. These principles cause the growth of large quantities of plants in water and as a result we see aquatic plants. Although these plants make good food for aquatic life, they greatly reduce the oxygen level of the water at night. This threatens the survival of aquatic life. The main objective of waste water planning is to protect the environment which will benefit all urban areas.

Categories of waste water:

Gandhi has written in one place - If you want to take your village to an ideal state, water drains should be built on both sides of the road. As many villages do not have such drains, domestic waste water flows across the road to the cesspool. It gets stuck in the mud, there are mosquitoes, sickness spreads everywhere. If we think about the water that comes out from every household and hence from the village/city, it can be divided into three main categories.

1. Sewage i.e. water coming out of toilet

2. Other sewage and

3. Rain water falling on roofs / roads etc., all these run off. During drift, other substances, both soluble and insoluble, are carried along with them.

1. Sewage:

The water that comes out of the toilet serves to carry away the feces. In fact, this water is used for that. 100 to 150 litres of water is actually supplied per capita per day in big cities or small municipalities. 70 percent of that water is used for cleaning such toilets. About 25 percent of water is used for bathing, washing dishes, washing floors, washing cars, gardening etc. Ideal management is such that not a single drop of the water we use is allowed to run off. Environment conscious citizens call this state zero sewage state. This means that the amount of water that comes out of the toilet is absorbed into the space around your plate. Let us explain other methods about it.

A. Carrying sludge: Sandas used to be in the back corner of the house in earlier times. Bamboo planks are used for storage of sludge. Everyday Bhangi party comes and removes the dirt from it. On occasions this collected sludge is carried on the head. Even thinking about all this seems inhuman today. But this reality is past. After independence, the Indian government banned this method of transporting sludge. Gradually it was implemented. By the 1980s, almost all major cities and by the year 2000, villages had stopped using this method.

b. Drainage through closed pipes: Another ideal option is to drain this excreta water outside the village through closed pipes. There it is processed, separating into two parts, liquid and solid. Mechanical dryers are used to breakdown solids by chemical process; treat them to an odorless and color Free State, separate dissolved substances, filter and dry in sunlight, where there is no sunlight. How this whole system works is quite technical.

There are many bacteria in this water. Some bacteria work aerobically while some bacteria work anaerobically. These are used to remove biological impurities. On paper all these schemes are designed to work with 100 percent efficiency. But planning and designing and executing it takes so much time that the capacity of these processing plants starts running low on the first day itself. This reduces the capacity of pipes to carry sewage. Statistics available worldwide today state that only 50 percent of wastewater is treated worldwide. The remaining 50 percent is also discharged into rivers/seas etc. In India the rate (of non-procedure) is 55 to 58 percent. Due to this, the problem of pollution which has to be faced on a large scale these days has come to the fore. However good the method of transporting this water is, its scope is not very large. Still she could not even reach all the district locations. Reason -1. Lack of adequate water availability. 2. Non-availability of capital and lack of public awareness of the basic urgency to build sewage treatment plants is an important part.

Having a drainage system:

Even in the villages where this drainage system has been implemented, there are many civil matters where there are encroachments, unauthorized settlements. There are no toilet facilities, so faces are dumped on the side of the road, on the river bank/river bed, on railway tracks etc. Written by a foreign businessman who frequents India. "When the dirt starts to smell, it should be understood that the village has arrived". This is recognition that had to bow down in shame. But still this fact cannot be denied. Added to this in villages is animal excrement. Their smells too. Many villages as well as small Padas do not have toilets. Even if someone builds it because the government has made rules, there is no mentality to use it. Their public opinion is that one cannot defecate except in the open air. Therefore, the Gram Panchayat, Municipality, Zillah Parishad or an N.G. O. Even if builds it, the work is not done. A campaign has to be carried out to make the *hagandari* free and only the villages are seen clean on the day when the team will come to inspect the villages for the reward. This is also the case with villages which receive prizes. This is a terrible reality and this dire situation has to be overcome to create healthy villages.

Absence of drainage system:

But what if there is no drainage and sanitation system? Such a question arises. In this there are many methods in many stages. In this, many types of pits can be built like temporary fodder pits, cesspool pits, septic tank pits, biological pits that convert manure into manure by adding soil. *Sandas* can be constructed at very low cost. Some such methods have also been developed. How and to what extent they balance the environment is a questionable issue. But still it is very important to note it.

Additional water consumption:

Each person uses 100 liters of water for excretion everyday. Do we have the right to waste purified water like this after spending a lot of money? What if tomorrow this water shortage becomes more severe and water to carry miles starts falling? So, it's time to think seriously about how big a health risk it will be, research it and act accordingly. The idea of treating and reusing this waste water to meet this water shortage is becoming increasingly common in supposedly Western countries, and scientists' warnings that demand for water will exceed supply by 30 percent in 2030 alone are to be taken seriously today. This recycling is inevitable.

Shaping People's Mindsets:

It is very important to create the mindset of the people for that. For this, people, leaders, saints and scientists will have to do a great job. A move towards extreme progress will begin, I think, not to overstate the wisdom. The treatment and disposal of sewage and its solids is going to be a big issue in the future. Sun rays or heat, wind and flowing current of water all three natural things help to destroy pollution and this purification. But our waste water is so big that the ability of all three becomes very critical. It was from that that the reconsideration of the subject of a single central processing centre for the city began. Instead of such a centre, the idea of setting up small processing centres at a very short distance from the living population in a decentralized manner was more convenient. The idea of collecting the methane gas released from this sludge and processing it (filtering) and using it as fuel in the house also started. Researches started, researchers also came up with their own fancy models.

If the seriousness of this question is to be reduced-

1. Sufficient water or available water to carry away faces;
2. Conveyance systems or quality pipelines that will last for years in a leak-free condition;
3. Mechanical and man-made structures to permanently operate the water and solids in the prescribed proportions after complete processing;
4. Strict regulation and strict implementation to maintain the quality of water reuse;
5. Encroachment Free Villages- Padas- City Slums and Encroached Settlements. There too, provision of toilets and sanitation systems in the required quantity and creating a system and mindset that compels them to use;
6. Where there is no such drainage system, from one to each house to each ward, division, to see that public systems will work in that area.
7. It is equally important to make and implement the regulations that the river water, and the drainage vessels, the banks on both sides of the road will be clean.

8. That is why the issue of effective use of all other alternative means comes to the fore, it has to be taken into account and it is mandatory to act accordingly.

2. Sewage:

Apart from sewage, the used water that comes out from houses, shops, commercial complexes, public places is known as sewage. Used toothpaste, soap suds, detergents, dish soap, powder, house dust, garbage that comes out while mopping the floor etc. and goes out with the waste water - as well as raw food all breakdown in this waste water and flow with it. That is why in cities, sewers are built on both sides of the road to carry this water. In most places they are open. So all the garbage, dust and soil falling on the road gets mixed with that water and goes into the main drains. Every year in big cities crores of rupees have to be spent to clean these drains and remove their silt. This dirt accumulates in such a huge amount.

We release all this waste water into the river without filtering it anywhere.

So two things happen -

1. The river water is heavily polluted and the villages below the city have to use this polluted water.
2. At present (since about 1980) rivers do not flow for twelve months. 5 or 6 months at most. What one sees in the river basin is the sewage flowing through the sewers. A further minor problem is the contamination of the land in the river bed and subsequently the water that comes in contact with the land. What if this waste water does not go outside the house but is used in the garden?

Two things will be achieved.

1. Wastewater itself will be reduced, thus reducing its risk.
2. It will reduce the urgency of purification. That means helping to protect the environment and saving money. At the same time, a good garden means fresh air, fruits and flowers at home.

Industrial Effluent:

Government of India and Government of Maharashtra have made many laws to control and stop this water pollution not only water but also air, land and noise pollution. But it is not implemented properly. That is why it is said all over the world - "India is the best policy maker but bad implementor" should be erased. There are rules and guidelines that require industries to fully treat the water that comes out of their factories and reuse at least 60 percent of it back into the factory, when they come into force.

3. Rainwater:

It is a law of nature that it rains everywhere and that water flows into the stream/river. We don't think about this flowing water. 500 mm of rain on 1 hectare area means 5000 gm. water. The area of a village (even including small villages) is 1000 hectares. Its urban area is at least 100 hectares. Rain colony, palace, multi-storied

building, complex and water falling on the roofs, if you try to collect it without letting it run off.... a lot of water accumulates, it can be an effective solution to overcome water scarcity. The conclusion from all this is only one - If we sit and wait for the government to do all this, we will not get anything. For that we have to consider ourselves as the government. Have to work. Home, family, close friends, colony have to understand the seriousness and importance of this subject. Questions arise, become serious, but resolve. Scientific, ideological, technical and financial support has to be built behind it. Decided to do this to the extent that you can only push yourself here. If zero or even zero water is lost from your house, if you intercept all the rain water (Storm Water) to the maximum extent, you will be freed from a very big problem.

Conclusion:

Wastewater is impure, used water. Sewage comes out from houses, industries and this water is unfit for drinking. Sewage that accumulates around houses, on roads and in drains is hazardous to health. It also smells dirty, makes the road slippery with that water and gives mosquitoes a place to lay their eggs. The bites of these mosquitoes give people diseases like malaria. For disposal of such waste water, a garden pit or absorption pit can be made in the ground to digest the waste water. Also, this waste water can be safely collected, treated and disposed of after storage. For that, it is the responsibility of the government, the representatives and all of us to treat the waste water or carry out the campaign of 'Paani Aadwa Paani Jirwa.'

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