



# Environmental Health Hazards Due to Dumping of Toxic Chemicals in Water bodies: A Case Study of Waldhuni River, Ulhasnagar.

Kranti Ukey<sup>1</sup> and Kapildeo Undirwade<sup>2</sup>

<sup>1</sup>Lala Lajpat Rai College of Commerce and Economics, Mahalaxmi, Mumbai

<sup>2</sup>R. A. Podar College of Commerce and Economics, Matunga, Mumbai.

## Abstract:

Urbanization and industrialization in recent times has led to increasing and indiscriminate use of chemicals in industrial and commercial activities. Unplanned and unethical disposal of waste, illegal dumping, etc. today is creating problems for the citizens. Environmental toxicology and health hazards are primarily concerned with the movement and the impacts of the toxicants in the environment, in food chains and the biological systems. The biological systems include any living system like humans, plants and all other organisms. Illegal dumping of untreated toxic waste in nearby water bodies is becoming a common practice in many cities and towns. Episodes of health hazards related to gas leakages, chemical poisoning, exposure to toxic elements, etc are reported in different areas. The current paper focuses on the recent episode of chemical poisoning from Waldhuni river in Ulhasnagar city of Thane district in Maharashtra. Mumbai and its neighboring cities are very crowded, human population is very dense and hence such events leads to more casualties. A strict implementation of environmental laws, honest duties by the civic authorities, strong penalties and punishments for non-observance and community participation can certainly combat such episodes.

**Key Words:** Environmental health hazards, water bodies, toxic waste, chemical poisoning.

## Introduction:

Environmental health comprises of the various aspects of human health, including the quality of life, which is determined by the physical, biological, social and other factors of the environment. It also refers to the theory and practice of assessing, analyzing, correcting and preventing those factors in the environment that can potentially affect adversely the human health.

In modern times the cases of environmental health hazards are increasing because of indiscriminate use and improper management of toxic chemicals, heavy metals, pesticides, etc. Many of these health hazards are related to river water pollution. Today rivers are not only the source of water but also has become a channel, receiving and transporting waste from our towns and cities. The principal sources of river water pollution are industrial, commercial and domestic waste, solid garbage thrown directly in the river, pollution from agricultural run-off which contains harmful pesticides and fertilizers, animal carcasses and half burned or unburned human corpses thrown in the river, defecation by people on river banks, religious and ritualistic practices, etc.

In spite of the laws in place, more of industrial clusters are found close to river banks to get easy access to water. Toxic waste generated by these industries and factories should be treated first in Effluent Treatment Plants (ETP) and then only it should be disposed off safely. But many industries do not bother to follow it,





some even doesn't have ETPs to do so, and this untreated toxic waste is released in the water bodies. In some cases it is observed that the waste is handed over to 'third party' with a good amount of money, this third party then illegally dumps it in nearby water bodies. The owners of these industries feel that this method is convenient and cheap compared to operating and maintaining the ETPs. This illegal trade is flourishing in many areas.

### **Waldhuni River Incidence, Ulhasnagar- A Case Study**

The river Waldhuni flows through Ulhasnagar, Ambarnath, Kalyan and Shahad areas of Thane district of Maharashtra. This river has its origin in the hills of Ambarnath near Kakole village. All these above mentioned areas contributes heavy pollution to this river. In Ulhasnagar, it is passing along the railway station and is popularly known as WaldhuniNallah for the pollution it carries.

The incident was reported in November 2014, when the residents of Samrat Ashok Nagar, OT Section, Lassi Compound, etc of Ulhasnagar city living in the vicinity of Waldhuni river woke up with the complaints of respiratory problems, vomiting sensations, headache, burning sensation in eyes, giddiness and nausea. This was because some tankers had allegedly dumped toxic chemicals in the river early morning hours, neighboring of Ambarnath, which came in flowing towards Ulhasnagar and mixing with the water it produced a poisonous gas. Hundreds of people were exposed to this gas in a short span of time creating panic situation in the city. Ulhasnagar Municipal Corporation, Police department and the authorities from MPCB sprung into action to get details of the incident. Ambarnath police filed an FIR against unidentified person under IPC section 277 (fouling water of public spring or reservoir), 278 (making atmosphere noxious to health) and 336 (act endangering life or personal safety of others). According to the Ulhasnagar Municipal Corporation Commissioner, more than 600 residents were admitted to various hospitals in the city. Chemical tankers are usually cleaned at the spot from where the toxic waste is suspected to have entered the river and this has been confirmed by the residents.

It is evident to note that, the National Green Tribunal (NGT), Pune Bench had already directed Ulhasnagar Municipal Corporation to stop dumping untreated effluents into the Waldhuniriver but it seems that no attention was given to it. The Tribunal's warning was given after one NGO Vanashakti filed a petition to clean up the Ulhasriver. It should be noted that Waldhuni flows into the Ulhasriver and then the water flows through Ulhas creek into the sea. Also large tracts of agricultural fields where Waldhuni meets Ulhas, are being irrigated with the water contaminated with toxic effluents. This is another issue related to public health concern.

A first hand primary information shows that this is a regular practice that the untreated chemicals are dumped in Waldhuni and Ulhas rivers. Residents say that there is a gang of 'Chemical Dumping' mafias that operates in the area. These gangs bring the chemical waste from the factories around the city in tankers and throw it away in the rivers. They are paid a good amount by the factory owners who want to get rid of their waste without being noticed by the concerned authorities. It





is also suspected that the chemical waste is carried all the way from Vapi and surrounding area and dumped in the Ulhasriver.

### **Social Implications of the Case:**

This incidence is not new for the city, as this kind of incidences has happened in the past also. Illegal dumping, chemical leakages, gas poisoning, etc has been witnessed in the past. After Waldhuni event local residents and the people of affected areas of the city are still panic and horrified knowing that such events can happen in future also because chemical dumping is a regular practice in these rivers. To protest against the Waldhuni case, a silent dharna was organized by one citizen organization named 'UlhasNagriK Foundation' consisting of prominent politicians, professionals and businessmen.

Residents of the city feel that the authorities of Municipal Corporation and MPCB and also the Police department are acting deaf and dumb regarding such issues. People have formed the strong opinion that there is a nexus between these authorities and the dumping mafias.

### **Legal Framework:**

The water (Prevention and Control of Pollution) Act, 1974 seeks to prevent and control water pollution and maintain and restore the wholesomeness of water. It provides powers to water boards to set standards and regulations for the prevention and control of water pollution.

Due to constitutional scheme, water law is largely state based. Thus, states have the exclusive powers to regulate water supplies, irrigation and canals, drainage, etc whereas Union has some other powers. River Boards Act was enacted by Parliament which provides a framework for the setting up of river boards by the Central governments. These river boards can advice the state governments on a number of issues including conservation, control and optimum utilization of water resources. However, this act has very little or never been used in practice.

M. C. Mehta successfully used damages remedy in case of *M. C. MehtaVs Union of India* in a ShriOleum Gas Leak case, where Mehta argued for the principle of 'absolute liability' (Polluter's Pay Principle). Supreme Court ruled that when an industry is engaged in a hazardous or inherently dangerous activity like toxic gases escape, the enterprise is strictly liable to all those who are affected by accident without any exception as laid down in *RylandsVs Fletcher*.

### **River Regulation Zone (RRZ)**

River Regulation Zone (RRZ) policy was introduced in the year 2000 under section 5 of the Environment Protection Act (EPA), 1986 to regulate industrial activities near river banks. The policy states that the areas within two kilometers of the high flood lines (HFL) on either sides of the river basin are to be treated as no-development zones.

The recent news is that the RRZ is being scrapped by the Government of Maharashtra (GoM). This decision of the government is shocking news for the environmentalists and the nature lovers. The GoM feels that the RRZ policy was





erred and it created a deadlock in the growth and development of industries in Maharashtra. Government is of the view that due to prevention of growth of industries on the river banks, the problem of unauthorized construction is increasing at various places. The scrapping of such policies will definitely be a major setback to control pollution and protecting rivers.

### **Recommendations:**

As given in the constitution it is the duty of the State as well as the citizens to protect our own environment. Various strategies can be devised and adopted for the conservation of the environment. Collective efforts of the government, industrial sector, pollution control boards and also community participation can certainly solve the problem.

- i) Industries and factories should install effluent treatment plants (ETP) to remove the toxic material from their waste and it should be practiced regularly so that the pollution is controlled at source itself.
- ii) In case of small-scale industries and, it is found that the capital cost of an ETP is almost equal to the capital cost of their main plant. Therefore these industries prefer to go for Common Effluent Treatment Plant (CETP), which is possible only when these industries are located in the cluster of some industrial estate.
- iii) CETP is a viable solution and can be practiced amicably if there is contract between the factories to share capital and operating costs, the cost of treating the waste and the quality of effluent accepted by CETP.
- iv) Government and the industries should work together to implement new strategies like clean development mechanism (CDM) and green business to combat pollution.
- v) The provisions of Water Pollution Act, 1974 should be observed strictly and the policies like RRZ should be maintained so as to protect rivers.
- vi) Participation of people works wonders. Hence community participation in river cleaning should be promoted.
- vii) Local regulatory bodies should be formed which includes the local residents and the representatives from the affected community. These local regulatory bodies can prove more effective than the government regulatory bodies. This can act as a top- down approach.

### **Conclusion:**

In developing countries the maintenance of water quality and sanitation infrastructure is not increasing at same pace of population explosion and urbanization growth. In India, the rapid urbanization and the industrial development in last few decades has given rise to serious issues for the environment. Toxic chemical contamination in rivers is one of the major issues in some fast growing cities. The practice of discharging toxic chemical waste in rivers is increasing, which is causing adverse impacts on health and environment. The





episode discussed in this paper is one of such issues and need urgent attention because thousands of lives are at stake when it strikes. The paper also suggests some recommendations for such issues with further scope of research and studies. Rivers are not only the heritage but also the lifelines for any country, state or a region and it's our fundamental duty to conserve them.

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