

# Water Pollution in Balochistan Province of Pakistan

Safoora Kanwa, Muhammad Kamran Taj, Shagufta saddozai, Imran Taj, Ferhat Abbas,  
Zafar Ahmed, Abdul Samad, Irfan Shahzad Sheikh, Muhammad Zahid Mustafa,  
Zohra Samreen, Taj Muhammad Hassani

**Abstract**—Water pollution is one of the main environmental issues in Balochistan. This serious environment issue leads to many deaths in Balochistan. In most of the places of Balochistan clean and safe water is now totally converted to polluted water. Drinking water sources, both surface and groundwater are contaminated with coliforms, toxic metals and pesticides throughout the Balochistan. Various drinking water quality parameters set by WHO are frequently violated. Human activities like improper disposal of municipal and industrial effluents and indiscriminate applications of agrochemicals in agriculture are the main factors contributing to the deterioration of water quality. Microbial and chemical pollutants are the main factors responsible exclusively or in combination for various public health problems. People of these areas are drinking polluted water due to unavailability of clean water. Drinking of polluted water can causes major health disease. Major diseases connected with polluted drinking water in Balochistan are diarrhea, gastroenteritis, typhoid, cryptosporidium infections, giardiasis intestinal worms, some strains of hepatitis and infant deaths are caused by waterborne diarrhea in Balochistan.

**Index Terms**— Water, Pollution, Balochistan, Pakistan.

## I. INTRODUCTION

All over the world 70% area of the earth is covered with water, 20% are potable and the leftover found in the environment s. Water is the one of a vital molecule which supports the life. Water is alkahest break up organic and inorganic molecule dissolves salts and gases which participate in a metabolic reaction, stabilize plasma membrane, sustain macromolecule framework, maintain homeostasis, transport nutrient and manage body weight [1]. Water is one of the major ingredients of the cell and indispensable for life on earth. Above 70% in human and 80% of the microorganism weight consist of water. Water participates in our body to performing multiple functions, act as a natural air conditioner, regulate body temperature. A normal human body contains 42 liters of water, releases 2.7 liters one can suffer from dehydration, weakness, and headaches [2].

### A. The effect of water on human being life style and on natural environment:

In the natural environment among all resources water is a critical one for living beings. Access to safe drinking water is

Safoora Kanwa, Shagufta saddozai, Sardar Bahadur Khan Women's University Balochistan Quetta.

Muhammad Kamran Taj, Imran Taj, Ferhat Abbas, Zafar Ahmed, Abdul Samad, Irfan Shahzad Sheikh, Muhammad Zahid Mustafa, Center for Advanced Studies in Vaccinology and Biotechnology University of Balochistan.

Zohra Samreen, Bolan Medical Hospital Quetta Balochistan.

Taj Muhammad Hassani, Tameer-e-Khalaf Foundation Balochistan.

a fundamental issue of growing. Sufficient water is a requirement for exploitation. Human get pressurized under the need of fresh water, canals, wells, reservoirs and detachment activates indicate the important fact bear on water cycle [3]. The environmental effects of these activities are noticeable. Due to these activities other life forms are disturbed like dams makes lack of land unbalanced cultural and biological resources, change in rivers bionomics, hydrology and effect on wild life is also involve [4].

### B. Water and sanitation problems in Pakistan:

Numerically the Pakistan is on 6<sup>th</sup> number in the world according to population. As the population increase water utilization must be increase in Pakistan. The value of water is unacceptable because of untreated insecticide, waste water and fertilizers. In Pakistan 38.5 million people have no access to safe potable water and 50.7 million have not approach to sanitation [5].

### C. Source of water contamination in Pakistan:

Pakistan ruler as well as urban areas bacteriological contamination in the potable water is one of the key issue [6]. Contamination may be due to sewerage pollution, pipes leakage, irregular water supply, human activities and biofilm formation distribution system [7]. Extreme monsoon rains, crude municipal water, floods, fungicides, herbicides, costal water pollution because of leak of oil spills are very dangerous. To secure the health must be develop the water qualities which are chemically and medically secure and balanced.

### D. Quality criteria for polluted water in Balochistan:

Population in Balochistan utilizes imbalanced quality of water like salty, rotten smell, poor taste, cloudy and colored water is concluded that it is not able to drinking purpose. Agencies must be responsible for check the water quality and perform interrupted checks to water according to recommended standards [8].

### E. Waterborne diseases in Balochistan:

Typhoid, gastroenteritis, cryptosporidium infection, intestinal worms, giardiasis, some strains of hepatitis, intestinal worms and diarrhea are the major diseases which is caused by polluted potable water in Balochistan. In some areas chlorination and filtration are used to disinfect the water but it is not enough and restricted only to urban areas and only 15% people do this process for cleaning water. Those areas which have more population have a high risk of pollution in the result the potable water quality is poor [9].

### F. Sources of Water in Balochistan:

Balochistan is land rich area but water-starved. In this province the mismanagement of water resources lead to reject the groundwater. Besides streams, other sources are at the risk of over exploitation. Source of water in Balochistan are as follows.

**Surface Water:** Storage reservoirs and lakes are the source of water in Balochistan.

**Rivers:** In Balochistan rivers are also the foundation of water supply, perennial rivers and non perennial rivers.

**Ponds or lakes:** ponds and lacks are also the source of water in Balochistan, during the rainy season the overflow water is collected in the depression, some time it should be naturally and some time it is synthetic.

**Storage reservoir:** Manmade lakes which designed by constructing dam transversely a river basin.

**Infiltration well:** For tapping water from sandy river beds.

**Ground water:** Hand pumps, tube wells and infiltration wells are the source of ground water.

**Springs:** Re-emerging to the underground water at the surface by infiltration or by the pressure.

**Wells:** A simulated hole made into the ground for tapping underground water.

**Hand pumps:** Hand pumps are also the source of water in Balochistan.

**Tube wells:** A Tube well as the name implies is basically a tube or pipe bored into the underground pool, fitted with a filter at the lower end and worked at the top.

### G. Uses of water in Balochistan:

In Balochistan water is utilized domestically, commercially, agricultural use, public supply, livestock consumption, thermoelectric power, mining and for industrial use [9].

### H. Sources of Water Pollution in Balochistan:

In Balochistan humans, animals, sewage, agricultural and surface over flow are the main sources which are responsible to pollute the water.

### I. Types of water pollution in Balochistan:

Ecologically prospective, contaminated water refers to poor water quality to a public health. Any physically, chemically and biologically substance in water is a pollutant which cause harmful effect to other living organisms. Radioactive isotopes, heavy metals, nitrogen, phosphorus, arsenic, fecal coliform bacteria, protozoan, virus, pathogenic microbes and sediments polluted water in Balochistan.

## II. CONCLUSION

People of Balochistan are facing many diseases due to pollution like hepatitis, lung diseases, throat diseases, gastro, diarrhea, skin diseases and many other types of health infections. Polluted water is also a major problem of the people in Balochistan. Residents of that areas said that the sanitation and drainage system is improper due to which they are suffering from many problems. Everybody is a stake holder as we are all inhabitants of this one and only mother earth. Everyone should therefore be personally responsible for the upkeep of the environment through cooperation and active participation in making the atmosphere pollution free.

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