

EMERGING CHALLENGES IN MAINTAINING THE DRINKING WATER STANDARDS AND NEED FOR UPDATING.

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Abstract

The chemical quality of water is one of the widely studied and chronicled topics world-over as life on the earth flourishes or perishes based on the availability of suitable water. Enormous industrialization and urbanization has become a challenge for supplying safe drinking water not only for developed countries but also for the third world countries. Surface water is more susceptible to contamination than sub-surface water; the surface water hosts many pathogens, organic compounds which cause the endemic diseases like cholera, jaundice, typhoid, gastroenteritis, diarrhoea, dysentery etc in a very short span of time. Groundwater is well known for inorganic contaminants and is responsible for plethora of ailments. The water resources are increasingly getting contaminated with NO_3 , Cl, Fe, As and radioactive elements like Sr-90, Cr-6 apart from pesticide residue. It is imperative to examine the chemical content of the water and drinking water specifications periodically to counter the onslaught of new diseases. The present Indian drinking water standards do not have the specifications for many of the vulnerable inorganic and organic compounds as compared with those of WHO, USA and EU. In the light of rapidly changing living standards of the people, rampant water contamination and advent of new health hazards it is necessary to revise the drinking water standards periodically to maintain the good public health. In an urge to reduce the undesirable chemical content of water people are resorting to over filtration or purification of water using membranes, resins or reverse osmosis techniques. Such methods will remove or dilute many essential mineral content of water depriving the people the much needed naturally occurring minerals often leading to vitamin deficiencies. To combat such problems there, it is essential to specify and notify to maintain the minimum mineral content in potable water. Controlling water contamination is pre-requisite to prevent rapid spread of not only the endemic diseases but also malignancy which is frequently reported among people living in industrial clusters. Strict enforcement is required to totally avoid dumping of all the unwanted material, domestic sewerage as well as industrial effluents into water bodies which is a very common practice in many parts of India. Such methods of improper disposal cause direct, rapid and immediate contamination of water resources. Water is worshiped but not protected, preserved or perused to maintain its natural chemical composition. There is an urgent need to sensitise the people and administrators on necessity of maintaining the water quality, refining the drinking water standards and prevention of water contamination.

Keywords: Drinking water standards, Water contamination, Pesticide residue, Water borne diseases, Radioactive elements.