

Heavy metals contamination in Indian subcontinent

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Water is essential for life, so heavy metals present in the aquatic system is the biggest threat to the mankind because of their poisonous nature. Water scarcity is a global problem, but developing countries are suffering most from this crisis. In such circumstances 'Safe' drinking water is becoming a rare commodity. Population explosion and overexploitation of water resources are main reasons for this situation.

In Indian subcontinent there are many reasons for water pollution including, dissolved solids, increased fluoride concentration, presence of organic and inorganic substances, insufficient sanitation practices etc. But presence of heavy metals including arsenic, cadmium, chromium, iron, nickel, lead and mercury is a 'Clear Danger' to life of the human being. Heavy metals are not biodegradable and tend to accumulate in water bodies and living organisms causing diseases and disorders. Increasing environmental pollution from industrial wastewater particularly in Indian Subcontinent is of major concern in this regard. Heavy metal contamination exists in aqueous waste streams of many industries, such as metal plating facilities, mining operations, tanneries, pulp and paper etc.; which pollute the surface water and underground water very badly.

For example- West Bengal (India) and Bangladesh are facing the worst situation due to Arsenic contamination in their aquatic system causing mass casualties in every age group. Increasing Skin Cancer patients is the proved evidence of existence of this silent killer-Arsenic. In present talk, I would try to discuss the problem of Heavy metals in Indian subcontinent, its causes and remedial steps.

Biography

Sanjay K. Sharma is a Ph.D. (1999) from University of Rajasthan, Jaipur, India. Presently he is working as Professor of Chemistry at Jaipur Engineering College & Research Centre, JECRC University, Jaipur (Rajasthan) India. He has also been appointed as Series Editor by Springer's London for their prestigious book Series 'Green Chemistry for Sustainability'. Sharma has 13 Books of Chemistry from National-International Publishers and over 50 research papers of National and International repute to his credit. His recently published books are 'Green Corrosion Chemistry and Engineering' (From Wiley), 'Handbook on Applications of Ultrasound: Sonochemistry and Sustainability', 'Green Chemistry for Environmental Sustainability' (both from CRC Taylor & Francis Group, LLC, Florida, Boca Raton, USA) and 'Handbook of Applied Biopolymer Technology: Synthesis, Degradation and Applications' (From Royal Society of Chemistry, UK).

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