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Spatial and Temporal Variation of Contaminants: Source Sink and Management

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Drinking of groundwater elevated in arsenic today remains the main source of exposure to arsenic for all villagers of India and similarly affected countries draining the Himalayas. With time, the concern for arsenic and other contaminants in soil and groundwater and its transfer to human through agriculture and other means has gained much concern. It has been learnt that the concentration and the uptake rate of toxic elements and components are increasing day by day in crops. As the 'green revolution' in India was achieved by "Boro" or winter season rice cultivation with the intensive use of irrigation and pesticides, lead to massive arsenic poisoning in Indo-gangetic plains and pesticide contamination in soil, water and food in all over India. The dangers of acute pesticide poisoning are also well known to Indian farmers, but the need is to highlight the chronic exposure that can cause many diseases. High frequency of occurrence of the pesticides was noted and is a matter of concern since pesticides are known to accumulate in living organisms and so even low levels of intakes may reach toxic levels. Our present research involves, source, effect and management of arsenic and pesticides in environment.

Biography

Sutapa Bose obtained her BSc (Zoology Hons.) in 1998 from Lady Brabourne College, University of Calcutta, Kolkata, MSc (Environmental Science) in 2000 at the University of Kalyani, Kalyani, West Bengal; M Phil and PhD (Environmental Sciences) in 2003 and 2005 respectively from School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India. After PhD Submission she joined Institute of Environment and Development Studies, Bundelkhand University, Jhansi, India as an Assistant Professor in 2005 and then moved to School of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India in 2007 with her own DST-Young Scientist FAST- Track grant. Further, in career advancement she went to USA to join the Lamont-Doherty Earth Observatory of Columbia University, New York, as Senior Researcher in 2009, further she joined New York University, New York as a Post Doctoral Researcher in 2010. She moved back to India at IISER Kolkata, Department of Earth Sciences as Ramanujan Fellow in December 2011. Recently, she is selected for "Rashtriya Gaurav Award" for her present research work from Indian International Friendship Society, New Delhi. She has published more than 25 research papers in reputed journals and has been serving as editorial board members of many committee and journals.

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