

Distribution of tributyltin compounds in the mandovi estuary

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Organotins are used for several industrial applications. For example, they are used as stabilizers for polyvinyl chloride, plastic additives, insecticides, fungicides, bactericides, wood preservatives and as constituents in antifouling paints. Their use as components of antifouling paints has increased several folds for the last few decades. The ship hulls coated with organotin such as tributyltin (TBT) reduce the attachment of marine organisms onto the ship hulls. Although organotins serve as effective antifouling agents, when released into marine environments, they are highly toxic to non-target organisms. Extensive use of these chemicals has resulted in the contamination of marine waters resulting in extensive damage in the form of imposex in gastropods, loss of oyster and shell fisheries. Because of these environmental concerns, many countries banned and/or restricted the use of organotins. In India organotins are used as antifouling agents. However, to the best of our knowledge, not much is known about the levels of organotins in Indian waters, sediments, and animals. Mandovi estuary is one of the few marine areas of the country where some information on TBT levels is available. I have made an attempt to summarise what is known about TBT in this estuary.