

## ANNUAL REPORT ON GEOTRACES ACTIVITIES IN INDIA

April 1st, 2018 to March 31st, 2019

India is actively continuing the GEOTRACES activities. This year new sampling has not been done. However, samples collected earlier are being analysed for various trace metals. Suite of trace metals (Fe, Mn, Zn, Cu, Co, Ni) are being analysed using HR-ICPMS and SeaFast. Several profiles in Indian Ocean are completed for these elements.

### *New scientific results*

- Dissolved Al measurement in the Indian Ocean

Dissolved aluminum concentrations have been determined in a total of 34 full vertical water column profiles along the two separate GEOTRACES–India transects (GI–01 and GI–10). The impact of huge supply of suspended lithogenic sediments to the BoB waters from the Ganga–Brahmaputra river system, Indian peninsular rivers and resuspended terrigenous sediments from the continental shelf and slope on dAl distribution is seen. Sediment resuspension induced by hydrothermal activity enrich the dAl in the deep water hydrothermal plume observed near Central Indian Ridge.

### *Publications*

- Chinni V., Singh S. K., Bhushan R., Rengarajan R., Sarma V. V. S.S., Spatial variability in dissolved iron concentrations in the marginal and open waters of the Indian Ocean, *Marine Chemistry* 208, 11-28, 2019.
- Samanta S., Dalai T. K., Massive production of heavy metals in the Ganga (Hooghly) River estuary, India: Global importance of solute-particle interaction and enhanced metal fluxes to the oceans, *Geochimica et Cosmochimica Acta*, 228 () 243–258, 2018.
- Shah C., Sudheer A. K., Bhushan R., Distribution of dissolved organic carbon in the Bay of Bengal: Influence of sediment discharge, fresh water flux, and productivity, *Marine Chemistry*, 203, 91-101, 2018.

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