ANNUAL REPORT ON GEOTRACES ACTIVITIES IN CHILE

May 1st, 2022 to April 30th, 2023

New GEOTRACES or GEOTRACES relevant scientific results

A first assessment of the role of dissolved iron on coastal productivity of southern Chile: The nitrate and phosphate drawdown in low salinity (29) coastal waters of Patagonia can be enhanced by a 5 nM dissolved iron enrichment (by 13% and 28%, respectively) during the developing phase of a diatom bloom. The simultaneous enrichment in iron (5 nM) and silicic acid (5 µM) in these estuarine waters resulted in a similar macronutrient uptake enhancement, a 119% increment of the production of biogenic silica and a 2-fold rise in the abundance of *Pseudo-nitzschia spp* (a diatom capable to produce the neurotoxin domoic acid). Torres et al. (2023).

New GEOTRACES or GEOTRACES-relevant publications (published or in press)

- Torres, R., Reid, B., Pizarro, G., Frangópulos, M., Alarcón, E., Márquez, M., Díaz-Rosas, F., Menschel, E., González, H.E., Moreno-Meynard, P., Montero, P., Pacheco, H., Pinto-Torres, M., Alarcón, C., Ibañez, R., Hawkings, J., 2023. Iron and silicic acid addition effects on early spring macronutrient drawdown and biogenic silica production of Patagonia estuarine waters. Progress In Oceanography, 214, 102982.

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