



## Nutrient regeneration susceptibility under contrasting sedimentary conditions from the Rio de Janeiro coast, Brazil

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Auteur	Matos, Christiene RL [1], Mendoza, Ursula [2], Diaz, Rut [3], Moreira, Manuel [4], Belem, Andre L [5], Metzger, Édouard [6], Albuquerque, Ana Luiza S [7], Machado, Wilson [8]
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Résumé en anglais	Dissolved silicate (DSi), NH <sub>4</sub> <sup>+</sup> , NO <sub>3</sub> <sup>-</sup> and PO <sub>4</sub> <sup>3-</sup> – susceptibility to be exchanged between sediment pore waters and overlying waters was evaluated in Jurujuba Sound (JS station) and Coroa Grande Sound (CGS station), southeastern Brazil. Sedimentary elemental (C, N and P) and isotopic ( $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ ) compositions evidenced stronger anthropogenic fertilization in JS station. Net NO <sub>3</sub> <sup>-</sup> influxes from overlying waters occurred, which was two orders of magnitude higher under the more fertilized condition. This condition resulted in 6–13-times higher net effluxes of NH <sub>4</sub> <sup>+</sup> , DSi and PO <sub>4</sub> <sup>3-</sup> to overlying waters. Vertical alternation between production and consumption processes in pore waters contributed for a more limited regeneration in CGS station. This was associated with diagenetic responses to sedimentary grain size variability in deeper layers and biological disturbance in upper layers. Nearly continuous production of NH <sub>4</sub> <sup>+</sup> , DSi and PO <sub>4</sub> <sup>3-</sup> in pore waters implied in intensified susceptibility to remobilization under the eutrophic condition of JS station.
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua15542">http://okina.univ-angers.fr/publications/ua15542</a> [14]
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Titre abrégé	Mar. Pollut. Bull.

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## Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26017>
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