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Eutrophication and oxygenation of coastal Algerian water (Algiers bay and Bou-Ismail Bay).

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The Mediterranean Sea is an ocean model very sensitive to climate change and anthropogenic activities. Acidification, eutrophication status, sea water warming and change in biodiversity are topics which interest scientist working on the viability of the Mediterranean Sea for the next hundred years. The coastal areas characterized by high biodiversity are very sensitive to human activities. Every year tens of millions of cubic meters of untreated wastewater pour into the bay of Algiers. This bay is also influenced by the fresh water input from 2 rivers. The second bay (Bou Ismail) is situated at 30km west Algiers. This one presents an evolution in the anthropogenic activities since the last 10 years. We propose to present results on the evolution in nutrient content and dissolved oxygen of the coastal waters from 2002 to 2012 for the Bou Ismail Bay and from 1989 to 2012 for the Algerian Bay. This work is integrated to the international “MerMex” program which aim to study the viability of the Mediterranean Sea for the next century.
The data show a decrease in N/P ratio indicating enrichment in phosphorus. The ammonium distribution show high concentration in 2003 in the Bou-Ismail Bay (mean 17 μmol/kg) showing enrichment in organic matter. The dissolved O_2 decrease from 8 mg/l (2002) to 6 mg/l (2012) in the Bou-Ismail Bay. The results show an important impact of river input and human activities on the nutrient and dissolved oxygen distribution in the coastal waters.