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Species diversity and Distribution pattern of Bivalves in Jaffna lagoon, Sri Lanka

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Several regions and areas including Island Sri Lanka have been categorized as being vulnerable to impact of climate change. Due to high vulnerability to the climate change, a need has arisen to identify the species diversity and their distribution patterns of bivalves in Sri Lanka including the Jaffna Lagoon. Therefore, a study on investigation of bivalves in Jaffna lagoon, Sri Lanka was carried out from June to September 2015. A total of 7 species of bivalves were identified in 20 different areas throughout the lagoon. Seven species of bivalves belonging to the four genera *Gafrarium*, *Meretrix*, *Saccostrea* and *Gari* including *Gafrarium tumidum*, *Gafrarium spp*, *Gafrarium pectinatum*, *Meretrix casta*, *Meretrix ovum*, *Saccostrea cucullata* and *Gari* spp were observed. The most common species in the lagoon were *Gafrarium tumidum* and *M. casta* while *Gafrarium tumidum* was the dominant species except in a very few locations. The highest bivalve richness was recorded in Koyila Kandy, whereas in Gurunagar, Paranthan, Ariyalai, Kachchai, Navathkuli and Siruppiddy the richness was zero. The highest bivalve diversity was observed in Koyila Kandy and the least diversity was recorded in Puvara santhivu area. Results revealed that the species distribution was significantly correlated to the chlorophyll availability and optimum sea surface temperature values of the lagoon. Since this was the first study on bivalve richness and diversity in Jaffna lagoon, results of this research can be used as the base line information for future bivalve management and conservation activities in Jaffna lagoon, in Sri Lanka as well in Indian Ocean.

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The Brazilian striped mullet project: The chronicle of a kiss of death and weak government administration

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The Mullet Project" started in 1979 at Patos Lagoon Estuary (~ 1,000 km²) and now covers the southern population (Argentina to São Paulo) of *Mugil liza* Valenciennes 1836. The species is distributed along the coast of South America, from the Caribbean Sea to Argentina, and has historical and cultural importance to the southern and southeastern region of Brazil (12% of the total range), were is more abundant. The project provides the genetic stock identification of the southern population, and also reveals that the species has a relatively low population growth rate ($k=0.17/\text{year}$), maximum observed longevity of approximately 10 years, late sexual maturation (5.5 years) and high fecundity and spawns in large aggregations. There are strong evidences that this population is overexploited and the stock seems to be on the edge of collapse especially due to fishing on the reproductive migration period (high value of the roe - Botarga). Since 2004 *M. liza* was ranked as overexploited. There is a huge concern about the sustainability of this stock forcing authorities to build fishing restrictions which shows to be appropriated, not effective, systematically transgressed and apparently not sufficient to ensure the maintenance of population abundance in southern Brazil. There is therefore a clear need for management, but the Brazilian State is either connived to the excesses as unable to control the fisheries.

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