

IMPACT OF A PRAWN FARM ON A COASTAL ECOSYSTEM, A CASE STUDY: THE SEAGRASS MEADOW OF THE CHAMBEYRON BAY, NEW CALEDONIA (POSTER)

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A prawn farm was built at Ouano peninsula, New Caledonia. The exploitation began in March 1995. It contains eight pools to grow the species *Penaeus stylirostris*. At the same time a study of the benthic ecosystem of the bay of Chambeyron began in order to evaluate the impact of the farm on the coastal environment. The first survey occurred in May 1995. The second that occurred in May 1997 permits a preliminary evaluation of the impact. Seagrass meadows grow on the soft bottom of the bay. The main species are *Halodule uninervis*, *Cymodocea serrulata*, *Cymodocea rotundata* and *Thalassia hemprichii*. The secondary ones are *Syringodium isoetifolium*, *Halophila ovalis* and *Halophila decipiens*. The specific composition has not changed between 1995 and 1997 but the relative importance of each species has been modified in terms of biomass. Concerning the whole bay the average of the above-ground biomasses, all species together, are not statistically different between 1995 and 1997 (1995 : 50.61 ± 18.76 g AFDW/m² ; 1997 : 60.12 ± 23.82 g AFDW/m²). The *Cymodocea* genera dominant in 1995 has been replaced by *Halodule* and *Thalassia*. The above-ground biomass of *Halodule uninervis* shows an increase that is statistically significant between the two surveys from 9.24 ± 4.86 g AFDW/m² in 1995 to 24.05 ± 11.22 g AFDW/m² in 1997. Aerial imagery was used to evaluate the total above-ground biomass of the bay. This method increases the accuracy of the computing by giving a weight to each station. The weighted biomass is slightly higher than the unweighted biomass : 106.4 to 102.6 t AFDW for the whole bay in 1995 to 135.0 t AFDW for the whole bay in 1997.

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