

STUDENT-POSTER PRESENTATION

Topic/submission theme: Coastal and Marine Living Resources

Preferred presentation: Poster-STUDENT

Title: « Socio-economic assessment of the ecosystem services offered by the mangrove in the Bay of assassins, south-west of Madagascar »

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Generally, mangrove provides a goods and services for the local population. In the southern part of Locally Marine Managed Area (LMMA) of Velondriake, district of Morombe, Madagascar, the evolution of the surface loss of this ecosystem continues to increase over the years. This represents a loss of 13 ha from 1990 to 2000) and 339 ha from 2000 to 2005. This degradation is largely related to the high population growth and a lack of knowledge about the importance of this ecosystem. The purpose of this study is to assess the direct use value of mangrove in order to raise community awareness of their importance. Household socio-economic surveys were conducted from March to April 2015 in the villages of Befandefa, Vatoavo, Agnolignoly, Tampolove and Lamboara. The different types of good and services offered by mangroves have been identified. A total of 118 households were surveyed to estimate the quantity of their annual needs in the plant and the animal biomasses. Observable costs were used to estimate the local market value of mangrove products. 61% of the overall population uses mangrove. From which 67% are invertebrate fishermen and 52% use mangrove for the firewood, house building, and fencing. Each household earns 993.6±183.2 kg/year from fishery corresponding 0.375±0.09 \$/kg, resulting in a total of 372.6 \$/year/household. The quantity of the wood harvested is estimated at 3.77±1.41 m³/year following the unit price of 14.06±2.81 \$/m³ in total 53.01 \$/year. Thus, each household gain about 425.06 \$/year. Mangrove provides 44.5% of their annual needs. Fishing is the most profitable activity and covers 87.54% of the benefits offered than cutting 12.46%. Cutting is the main cause of the loss of mangrove area. Building alternative livelihood activities would be an important tool to persuade a local population to adopt more sustainable management of their resources.

Key words: Assassins Bay, ecosystem services, mangrove, direct use value, management