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# Prioritising areas for biodiversity conservation to inform the Mahavavy-Kinkony Wetland Complex management plan, Madagascar

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Biodiversity in Madagascar is under immense human pressure. In response, there is a government initiated program to increase the protected area coverage by three-fold within 5 years. As part of this process, one potential new protected area is the Mahavavy-Kinkony wetland complex, which contains many habitats for several globally threatened and congregational species. Prioritising potential areas important for threatened species habitat is necessary in order to design the management plan of this protected area. As part of the development of the management planning process, we developed a decision support system using GIS and Marxan. We identified several species of conservation concern including five taxa; birds, primates, fishes, bats and reptiles. We modelled the distribution of these species using predictive models based on expert knowledge and classified land cover in the region. We set targets for the coverage of species inside the conservation zones and explored a range of scenarios. We presented the results of this prioritisation to a range of stakeholders, which included local traditional and administrative authorities, associations and non-governmental organizations, representatives of the local communities, government officials and private sectors representatives. Through a workshop, the conservation zones were agreed with some adjustments. This is the first time in Madagascar a decision support tool such as Marxan has been applied for planning management zones within a protected area along with participation from local communities.

#### **Biography**

Rado H Andriamasimanana has completed his PhD from University of Antananarivo, Madagascar. He is the GIS expert of ASITY Madagascar, an association working on biodiversity conservation in Madagascar. He has published more than 5 potential papers in reputed journals.

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