


MDG 9: Impact of Coastal Climate Change on Mangroves on Madagascar West Coast	
Keywords: Mangrove ecosystem status, climate change impacts, sea level, wind and wave climatology, integrated coastal zone management	
Primary actors	
Madagascar: WWF (Harisoa Rakotondrazafy) UK: NOC (Val Byfield), SatOC (David Cotton/Ellis Ash)	
Stakeholders / End Users	
WWF, CNRO, DGM, BNCCC, ICZM, local managers	
Introduction / Statement of the Problem	
Mangroves offer a variety of ecosystem services of local and national importance. Mapping their extent and habitat status and understanding the main causes of variability and change is important for managing and adapting to future climate change impacts.	
Case study description	
<p>The case study will involve the following activities:</p> <ul style="list-style-type: none"> • Analysis of sea level change and variability at West coast locations specified by WWF in collaboration with MDG3 and MDG6 (DGM). • Analysis of wind / wave climatology in collaboration with MDG4 and MDG5 (DGM) . • Mapping of mangrove ecosystem status using high-resolution optical data (Sentinel-2), with analysis of recent changes in relation to sea level, wind/wave climatology and impacts of local human activities. • Use IPCC sea level rise scenarios to assess future impact. 	
Expected Impacts	
<p><i>Long Term Primary Impact:</i> 2019 onwards Decision makers involved in Integrated Coastal Zone Management and Climate Change Adaptation will obtain information needed to identify sustainable options for coastal development and climate change adaptation measures.</p> <p><i>Secondary Impact:</i> To be reported on Case Study Completion at March 2019 WWF and CNRO will gain skills in habitat mapping using satellite data, in extracting relevant information from sea level and wind / wave climatologies as well as in statistical analysis to identify key causes of change.</p>	
SDG 14.2, 14.A	