


<b>MDG 11: Coral Reef Health in NW Madagascar</b>	
<b>Keywords:</b> Coral reefs, climate change impacts, sea level, wind and wave climate, coral bleaching, coral health	
<b>Primary actors</b>	
<b>Madagascar:</b> CNRO (Gisele) <b>UK:</b> NOC (Val Byfield), SatOC (David Cotton)	
<b>Stakeholders / End Users</b>	
CNRO, IH.SM, DGM Marine ecologists; MPA managers, Madagascar National Parks	
<b>Introduction / Statement of the Problem</b>	
Coral Reef health is impacted by human activities and a number of environmental factors, including: sea temperature, which can cause coral bleaching; wave action, which can cause physical damage; and nutrients (leading to algal blooms and macro-algae growth) which can smother corals or reduce coral photosynthesis. This study will investigate relative impact on the different parameters on coral health.	
<b>Case study description</b>	
<b>The case study will involve the following activities:</b> <ul style="list-style-type: none"> <li>• Analysis of coral reef health data from CNRO monitoring campaigns.</li> <li>• Benthic habitat classification and status using high-resolution optical satellite data.</li> <li>• Multivariate analysis of satellite data on waves, sea level, currents, SST and chlorophyll (in collaboration with other case studies (MDG3, MDG4, MDG8) to investigate correlations between seasonal / inter-annual variability in these parameters and coral health.</li> </ul>	
<b>Expected Impacts</b>	
<p><i>Long Term Primary Impact:</i> After end of Project (&gt; 2020) Marine scientists, MPA managers and MPN will gain better understanding of the susceptibility of NW Madagascar's coral reefs to impacts of climate extremes, high temperatures and changes in marine primary productivity, resulting in better management of this important marine ecosystem</p> <p><i>Secondary Impact:</i> CRISE Case study report March 2019, CNRO research activity in this area will continue into subsequent years. CNRO will benefit from increased capacity to carry out research into impacts on coral health arising from environmental variability and change.</p>	
<b>SDG 14.2, 14.A</b>	