



UICN
CONGRÈS
MONDIAL DES PARCS
SYDNEY 2014

*Des parcs, la planète et nous:
des solutions sources d'inspiration*

From Science to decision: applying cutting-edge tools for Madagascar

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CONSERVATION
INTERNATIONAL

Madagascar



Climate change is a reality in Madagascar

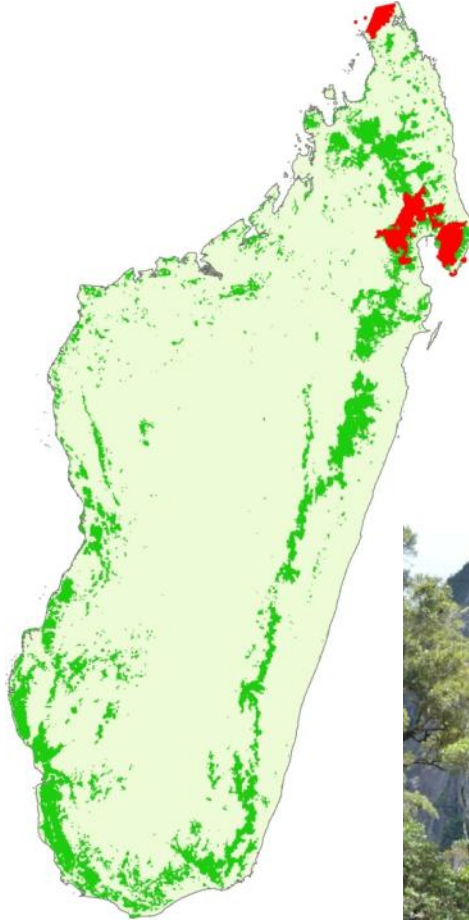
- From 1950 to 2000, temperature increases by 0.2°C in the South and decreases by 0.1°C in the North
- By 2055, the temperature will increase by 2.6°C in the South and by 1.1°C in the North
- Threats for ecosystem goods and services provided by protected areas (PAs)
- PAs played a vital role as an adaptation and mitigation strategy in a changing climate



Building resilient Protected Areas

Nosy Hara MPA:

- North-West of Madagascar
- Area of 125,471 ha
- Home to one of the most intact coral reefs in the country and in the Northern Mozambique Channel area



Makira & Masoala PA:



Assessing vulnerability and species range shifts in Madagascar

TOOLS:

- Environmental Niche Modeling with Maximum Entropy (MAXENT)
- Conservation Planning using future modeled species distributions with ZONATION

RESULT:

Priority zones of restoration in Madagascar

CHALLENGES:

- Development of action plan for maintaining and restoring forest connectivity in priority areas
- Cost of forest restoration



Makira & Masoala Protected Areas

TOOLS:

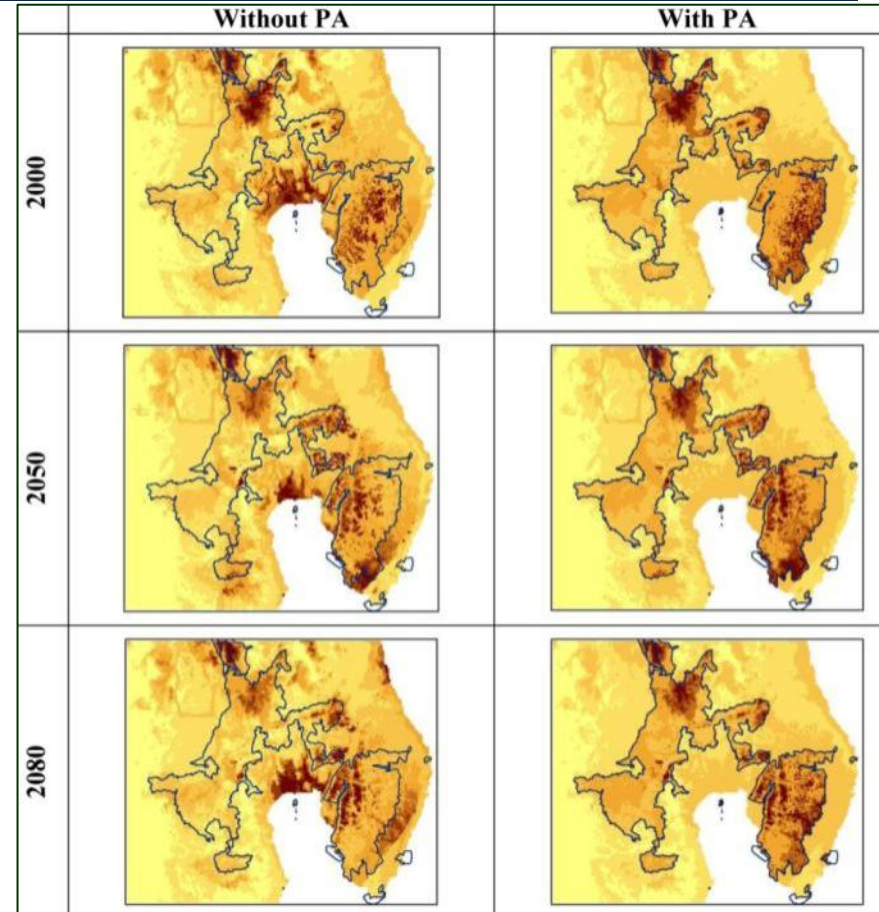
- Now and future Climate data from IPCC
- Species data from REBIOMA data portal (<http://data.rebioma.net>)
- Species Distribution Modeling with Maximum Entropy (MAXENT)
- Conservation Planning using actual and future modeled Species distributions with ZONATION

RESULT:

Over an 80-year time period the impact of Climate variability reduced through the service of the two PAs as a biodiversity refugium

CHALLENGES:

Data availability and considering socio-economic variable



Nosy Hara Marine Protected Area

TOOLS: Multi-target vulnerability assessment (VA) tools:

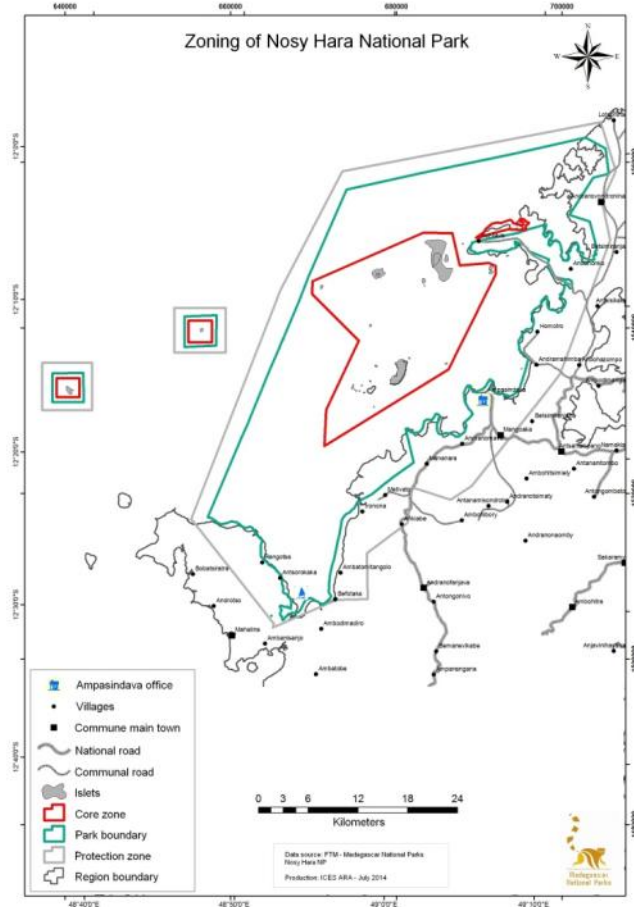
- Rapid assessment protocol for coral reefs
- CCVA and Adaptation planning for mangrove system
- A Framework for Categorizing the Relative Vulnerability of Threatened and Endangered Species to CC
- Methodology based on IPCC VA components (exposure, sensitivity and adaptive capacity)

RESULTS:

- Integration of climate change (CC) issues into Nosy Hara management tools
- Vulnerability level of MPA conservation targets and coastal communities and adjustment of ground action accordingly

CHALLENGES:

- Availability of long-term socio-economic and bio-ecological data and downscaled climate data
- Linking CC adaptation to business as usual work



Key success factors & challenges

KEY SUCCESS FACTORS:

- Availability of various VA tools
- Stakeholders involvement and broad partnership
- Holistic vision of protected areas

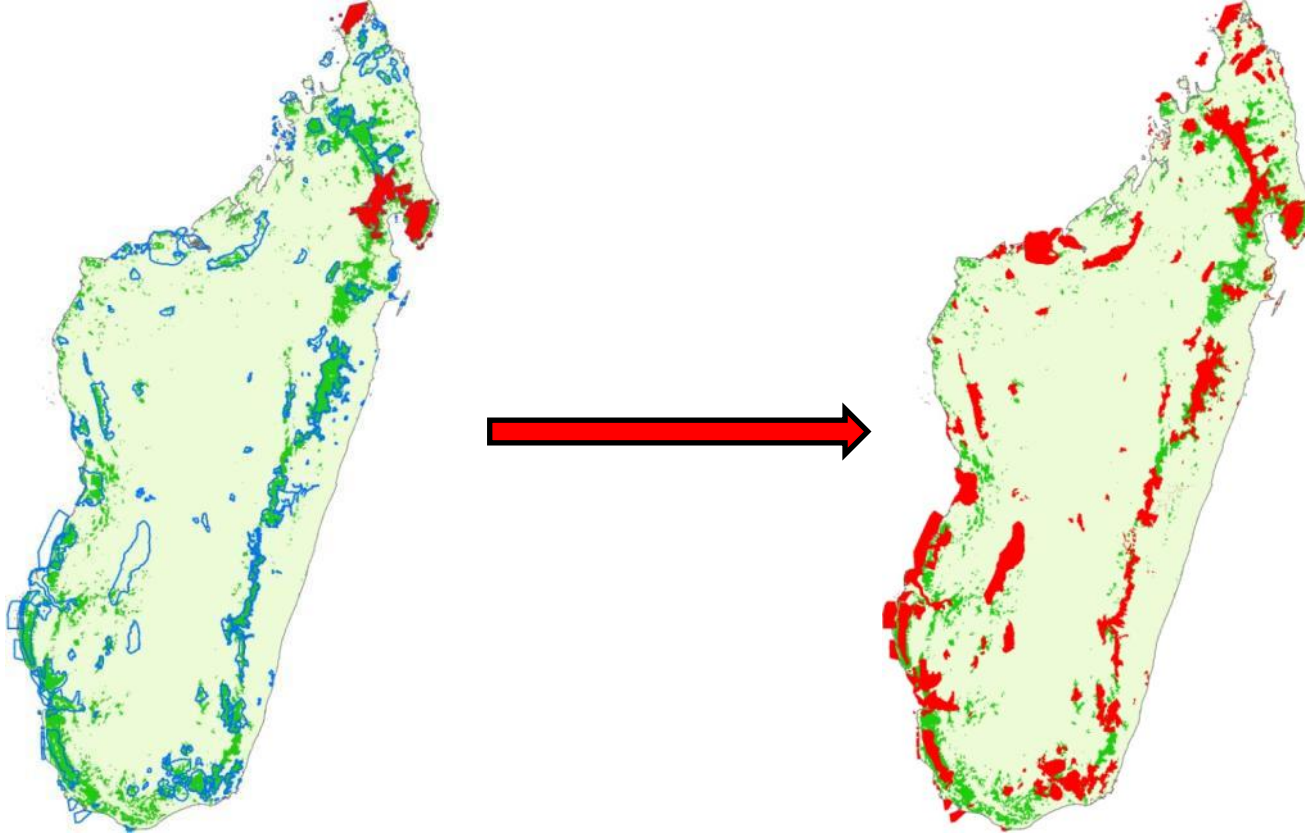


CHALLENGES:

- Scaling-up
- Financial resources
- Strong stakeholders capacity



Mainstreaming Climate Change into Madagascar Protected Areas Network





THANK YOU FOR YOU ATTENTION



Photos credit: ICPM, SAF-FJKM, BNGRC, Nature Alerte, Harisoa Rakotondrazafy/WWF MWIOPO, Louise Jasper, Viktor Nikiforov