Leveraging Spatial Data for Research and Policy Dialogue: The Case of Nature Conservation Evaluation in Madagascar

BETSAKA Project: Antananarivo University, IRD, AFD & KfW

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BETSAKA

An approach designed as an interface between research and operations

- **Scientific interests**
  - The environmental effectiveness of PAs is always open to debate, because it is approached too broadly: understanding the determinants
  - Poorly known socio-economic impact of PAs, often studied independently of environmental impact
  - Meso approach seems the right level to deliver results on governance, models and financing
  - Strengthening local research capacity

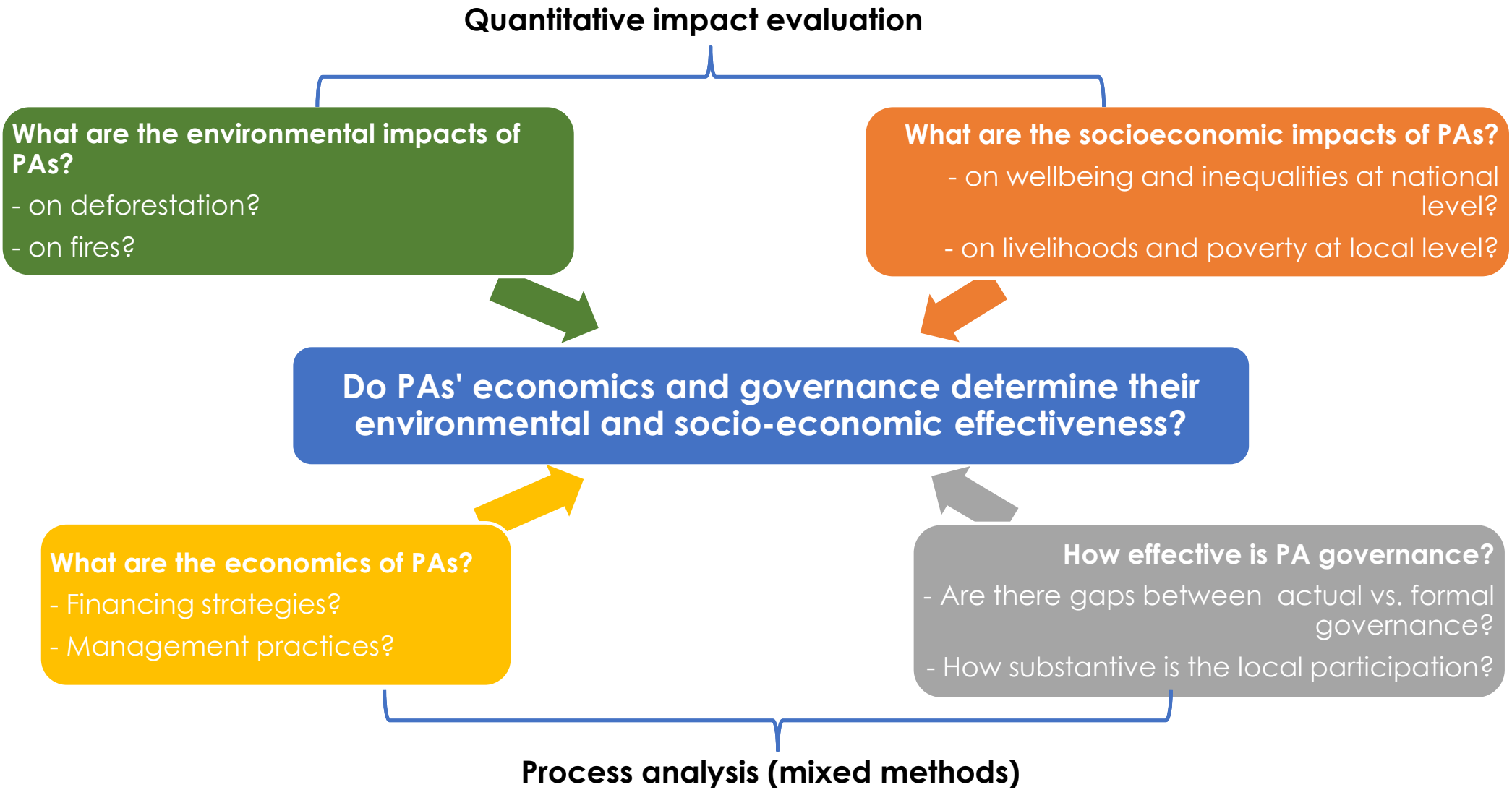
Operational interests

- Institutional strengthening: Univeristy of Antananarivo, IRD, Paris Saclay, AFD, KFW
- Strong relationship with national stakeholders
- Improving monitoring tools at the meso-macro scale (mapme)
- Producing useful insights for policy-makers and practitioners in Madascar and beyond

3 axes structuring the research approach

- **Capacity building**
  - Structured project to promote good doctoral conditions
  - Annual training on spatial impact assessment methods
  - Household surveys designed to promote applied training
  - Articulation with a Master's project in evaluation
- **Articulation between Research, Decision & Operations**
  - Main conservation stakeholders in the reference group
  - Organization of annual conferences
  - Collaboration on "intermediates“ output useful for operations and research
- **Open science: Pre-analysis plans, open data, data papers, open source**

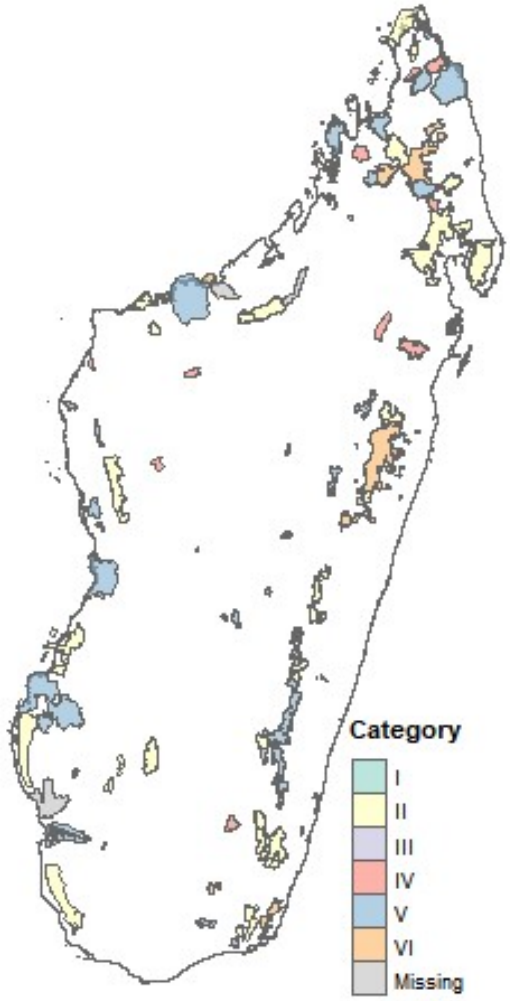
RESEARCH QUESTIONS



"BETSAKA" means "PLENTY"

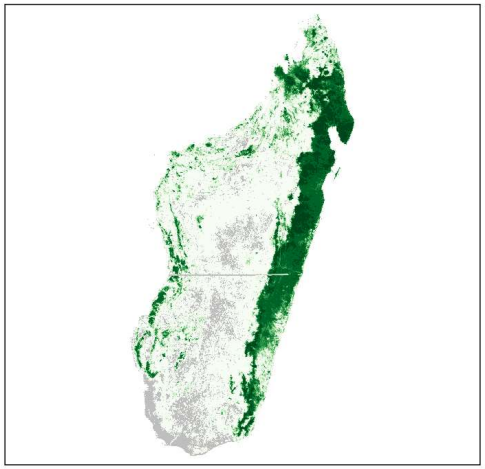
- **Plenty of objectives and stakeholders**
  - Long term and large-scale evaluation
  - Both on environmental and socioeconomic
  - For policy dialogue, operational learning and capacity building
- **Plenty of data**
  - Geomorphology, climatic
  - Socioeconomic (primary & secondary data)
  - Operational

➢ **Need for adapted tools and platforms**

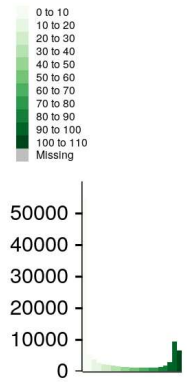


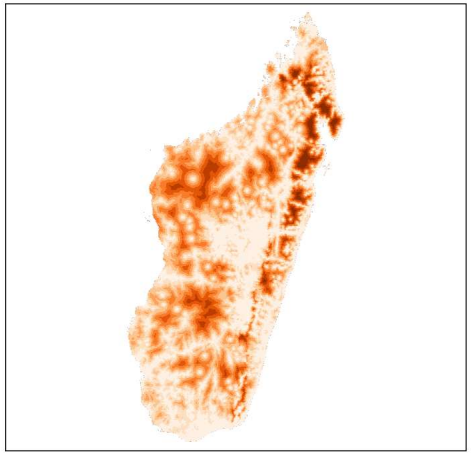
DATA FUSION

Using **mapme.biodiversity** to combine massive satellite data for assessing conservation impacts on forest cover and local population poverty

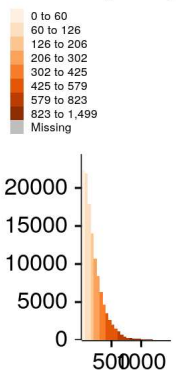


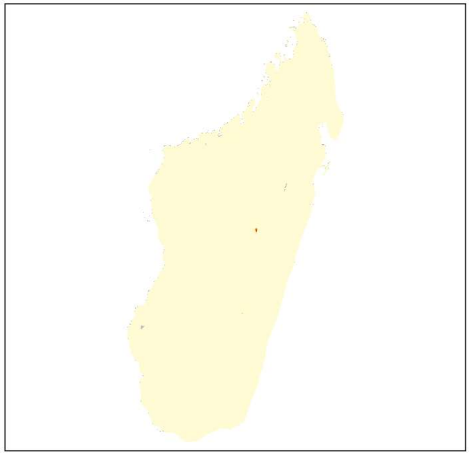
Forest in 2000



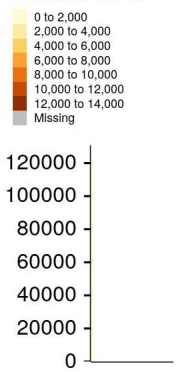


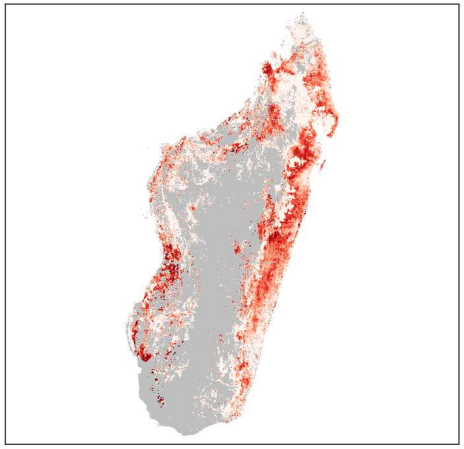
Accessibility



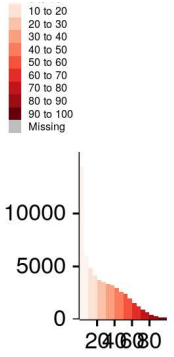


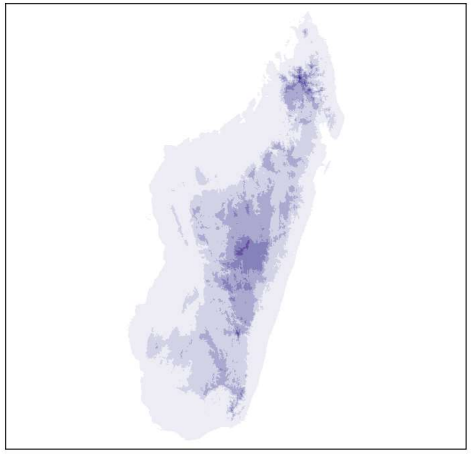
Population



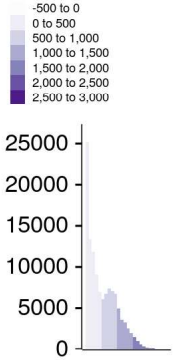


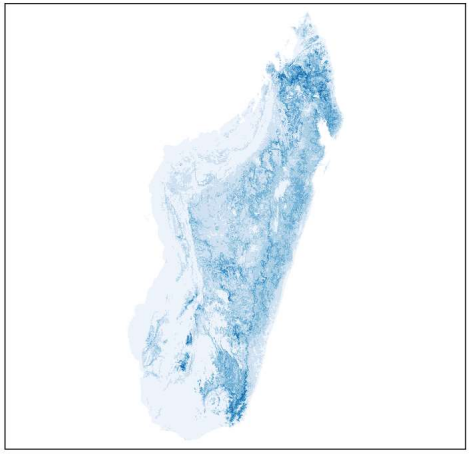
Forest loss 2001-23



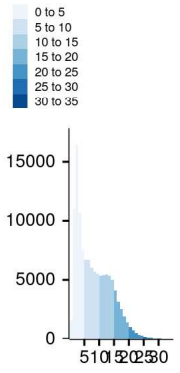


Elevation



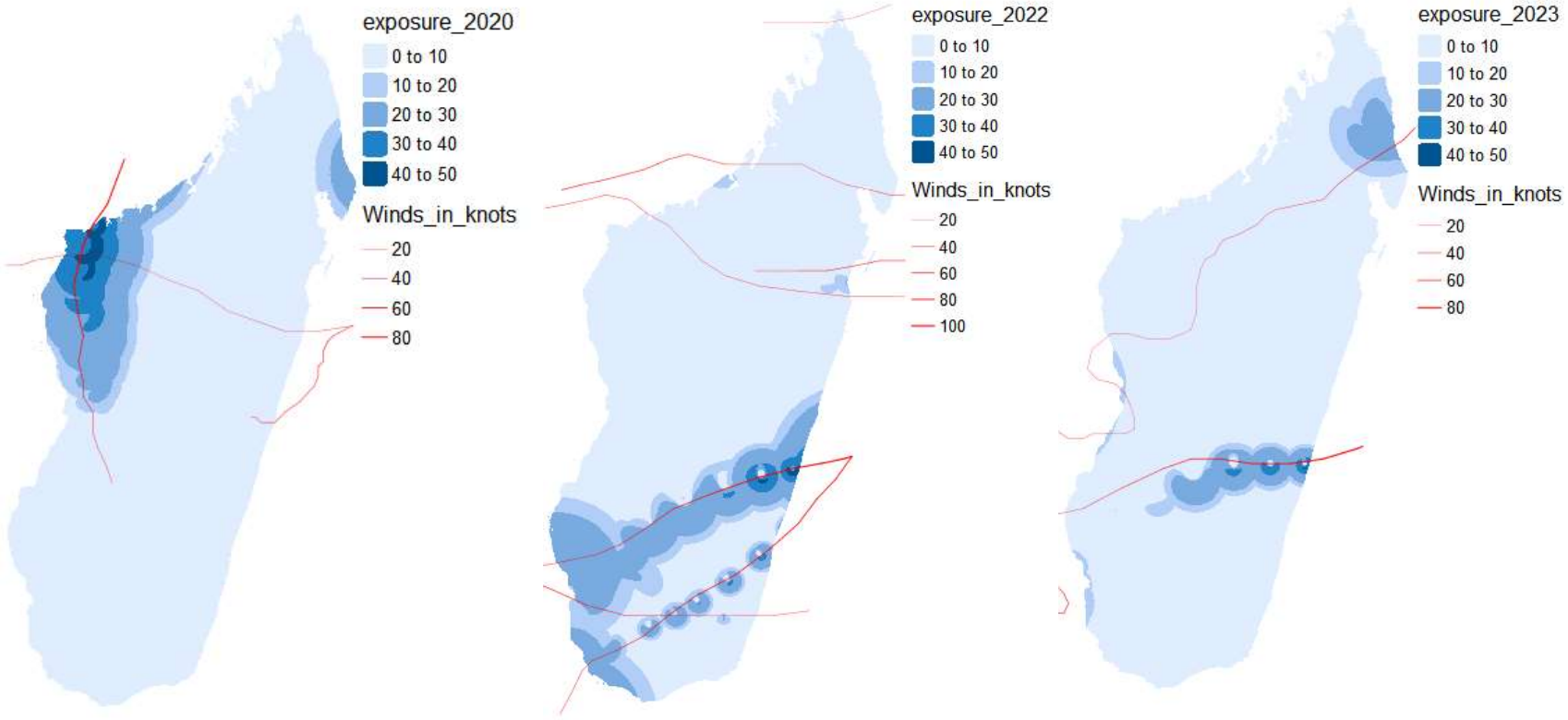


Slope



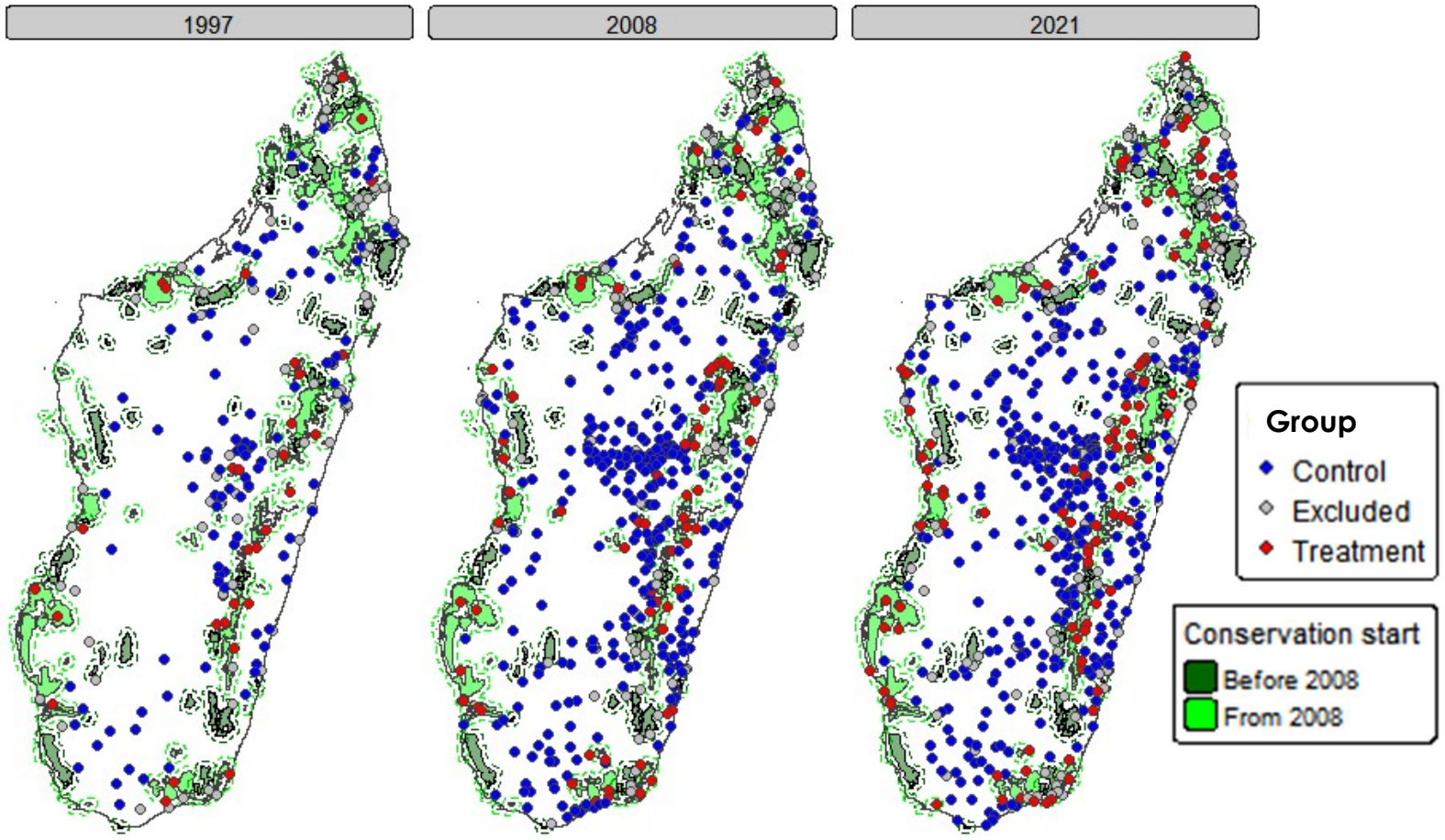
HAZARD MODELING

Assessing forest cover loss attributable to natural disaster to better differentiate from anthropic deforestation



SOCIOECONOMIC DATA

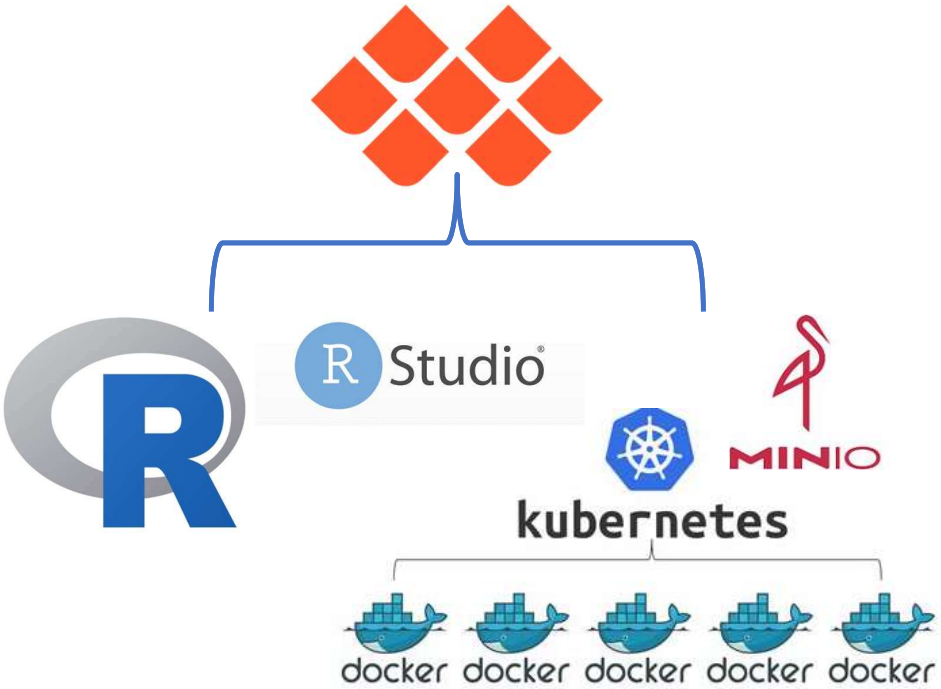
Overlaying household survey data on top of remote sensing data



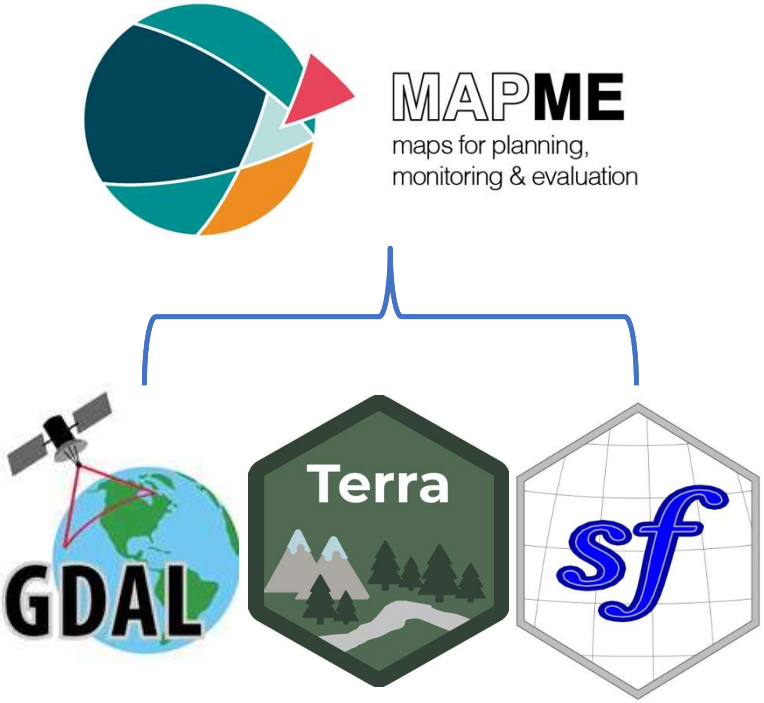
TECHNICAL PLATFORM

An innovative technical environment for big spatial data

Onyxia – SSPCloud Datalab by Insee



mapme.biodiversity by KFW & community



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AFD

KFW
Bank aus Verantwortung

Thank you for your attention