An aerial photograph of a tropical coastline. The image shows a wide, white sandy beach curving along the edge of a vibrant turquoise ocean. The water transitions from a light, foamy white near the shore to deeper shades of blue and green further out. To the right of the beach, there is a strip of land with sparse green vegetation and some small structures. The sky is a clear, pale blue. The overall scene is bright and scenic, suggesting a coastal environment.

TOWARDS A GREEN ECONOMY IN MOZAMBIQUE

March 25, 2015

Xavier Chavana, Marcos Sapateiro, Jose Rafael, Joao Fernando, Christine Tam
Katie Arkema, Jessica Silver, Nasser Olwero

MOZAMBIQUE

LOCATION



MOZAMBIQUE:

RICH IN NATURAL CAPITAL



MULTIPLE USES AND THREATS

natural
capital
PROJECT



Tourism/Recreation

Conservation

Fishing

Mining

Coastal Development

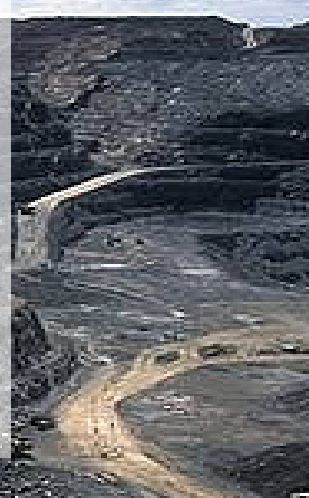
Aquaculture

Agriculture

Transportation

Oil & gas exploration

Cultural & Historical Areas



GREEN ECONOMY VISION AND TRANSITION

- ◆ **Green Economy Roadmap** presented by Mozambique at Rio+20 in 2012
- ◆ **Green Economy Action Plan** approved by Cabinet in October 2013
- ◆ **Five Year Government Plan 2015-2019** approved by Cabinet in February 2015



GREEN ECONOMY ACTION PLAN

- Approved in October 2013 by Council of Ministers
- Jointly coordinated by:
 - ❖ The former Ministry for the Coordination of Environmental Affairs (MICOA)- now Ministry of Land, Environment and Rural Development (MITADER)
 - ❖ The former Ministry of Planning and Development (MPD) - now Ministry of Economy and Finance (MEF);
- Main objective is to **guide and integrate sustainable environmental policies, practices, and actions to the planning mechanisms** to allow Mozambique to become ***'an inclusive, middle-income nation, based on the protection, restoration and rational use of natural capital and ecosystem services, to guarantee inclusive and efficient sustainable development, within planetary limits'***

3 PILLARS OF THE GREEN ECONOMY ACTION PLAN

- **Pillar 1: Sustainable Infrastructure:** Energy; Transportation; Water, Irrigation, Supply and Sanitation; Cities and Human Settlements
- **Pillar 2: Efficient and Sustainable Use of Natural Resources:** Land; Agriculture; Forests; Tourism and Conservation Areas; Fisheries; Mineral Resources
- **Pillar 3: Strengthening Resilience and Adaptability:** Reducing Disaster Risks; Education; Employment; Health and Population; Gender Equality and Women Empowerment.

KEY AREAS OF INTERVENTION OF GREEN ECONOMY ACTION PLAN

- Mapping, Valuing and Integrating Natural Capital to Planning Processes
- Analysis of Policy Options for a Green Economy
- Public Awareness
- Education and Employment for Green Industries
- Integrating Private Sector and Businesses as Determinant Factors for a Green Industry
- Greener Financial Flows
- Green Economy Investment Fund
- Online Green Economy Knowledge Platform
- Strategic Environmental and Social Assessment

GREEN ECONOMY SUPPORTING LEGAL FRAMEWORK

- Legislation
- Constitution of the Republic of Mozambique adopted in 2004: Article No. 117 provides that *"the State shall promote efforts to guarantee the ecological balance and the conservation and preservation of the environment in order to improve the quality of life of citizens"*
- Environmental Law, Forestry and Wildlife Law, Land Law, Spatial Planning Law, Mining Law, Disaster Management Law, etc
- Environmental Regulations on Environmental Impact Assessment, Strategic Environmental Assessment, Spatial planning, Human Resettlements, etc
- Policies, strategies and plans: Water, Agriculture, Energy (renewables), Environment, Human settlements, climate change, Science and Technology

WHAT NEXT?

NATIONAL LEVEL GREEN ECONOMY

- ▶ Effective implementation of the recently-approved (Feb. 2015) Five-Year Government Plan (2015-2019) led by the Ministry of Economy and Finance;
 - **PRIORITY** = sustainable & transparent management of natural resources and environment
 - **KEY** = ensure the integration of Blue-Green Economy and Green Growth agenda in national development priorities, ensuring conservation of ecosystems, biodiversity and the sustainable use natural resources.

PRIMEIRAS & SEGUNDAS

Integrating Natural Capital in Management Planning for a Multiuse Protected Area

MOZAMBIQUE

PRIMEIRAS & SEGUNDAS ENVIRONMENTAL PROTECTION AREA



Mozambique

Primeiras & Segundas Environmental Protection Area

0 5,000 10,000 Kilometers

P&S MANAGEMENT PLAN OBJECTIVES

- Protect, conserve and restore the productivity of ecosystems , species and genetic diversity of all marine and coastal resources of APAIPS , ensuring continuum between the different key ecosystems
- Encourage and facilitate sustainable development based on the sustainable exploitation of resources in the area APAIPS in the provinces of Nampula and Zambezia
- Reconcile the economic interests of different stakeholders in APAIPS
- Ensure the sustainability of APAIPS own through adoption of appropriate mechanisms fundraising , operating systems and efficient management and development of partnerships with other stakeholders and relevant research institutions .

Protecção
contra erosão y
tempestades



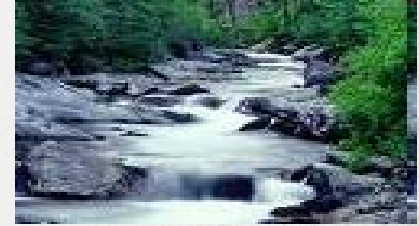
Recreação &
Turismo



Sedimento
retenção



Rendimento
Água



Watershed and marine ecosystems
provide important benefits to coastal communities



Pescaria



Habitat Risk



Produtos Florestais

INVEST MODELS

MODEL OVERVIEW

- **Risk Assessment**

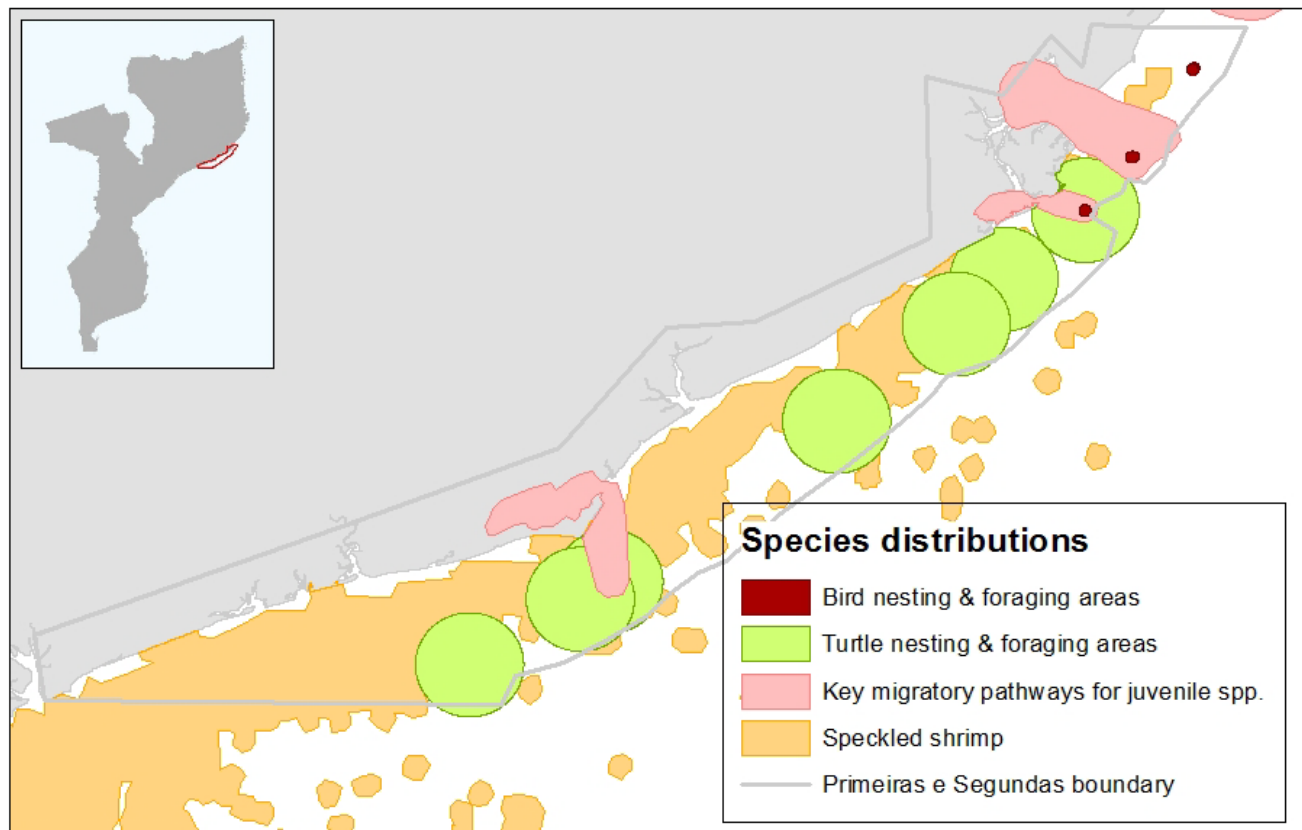
- Where are coastal and marine ecosystems and species most at risk of degradation from human activities?

- **Coastal Vulnerability**

- Where are mining operations and infrastructure most at risk from coastal hazards. How could locating infrastructure and operations strategically both reduce impacts to ecosystem and reduce risk to investments?

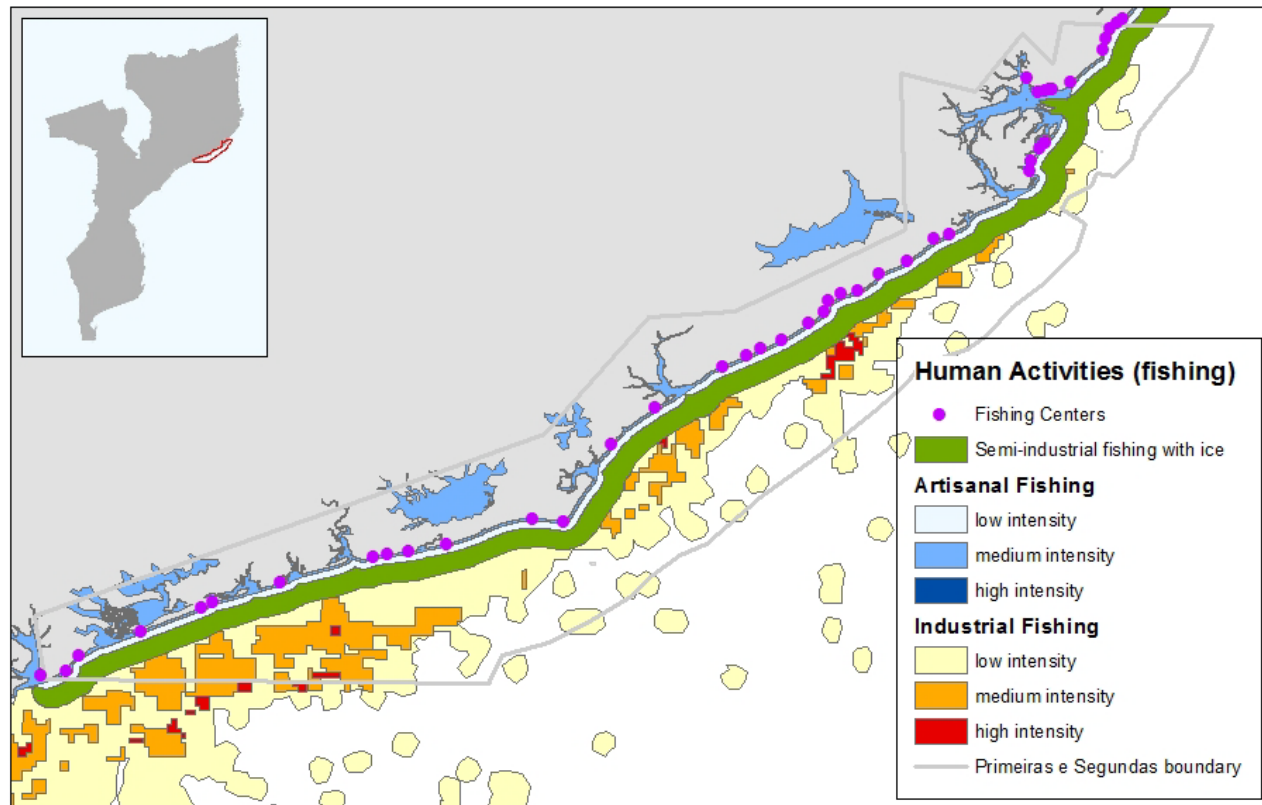
RISK ASSESSMENT

Extensive marine and coastal habitats and a wide diversity of animals...



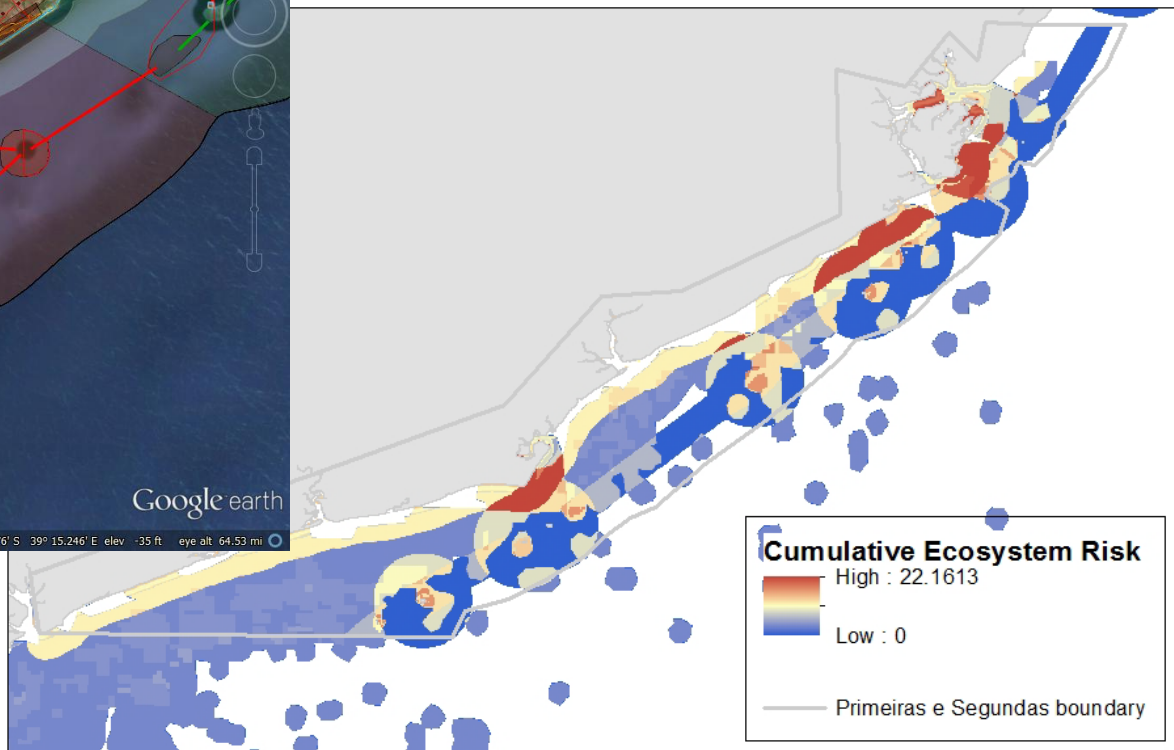
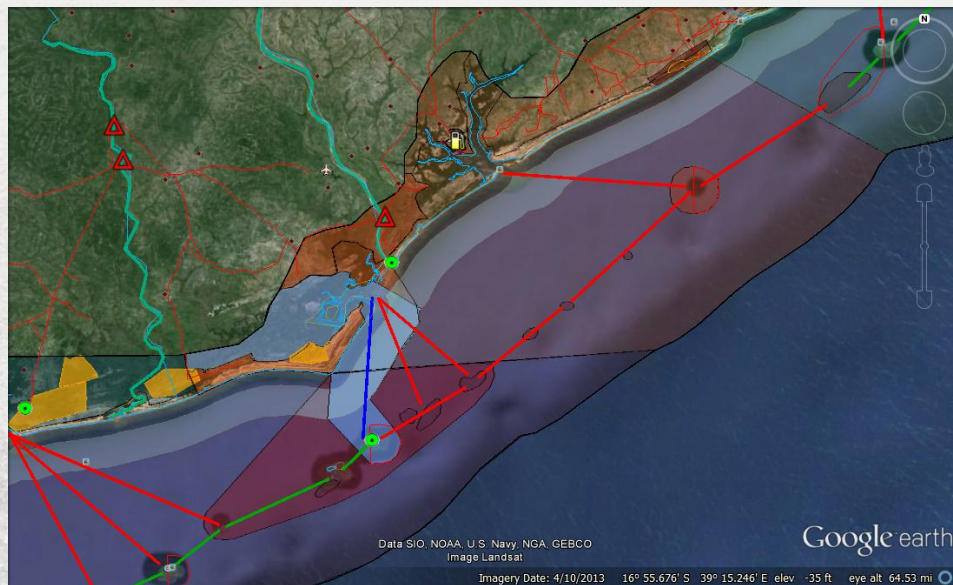
RISK ASSESSMENT

...And many human uses

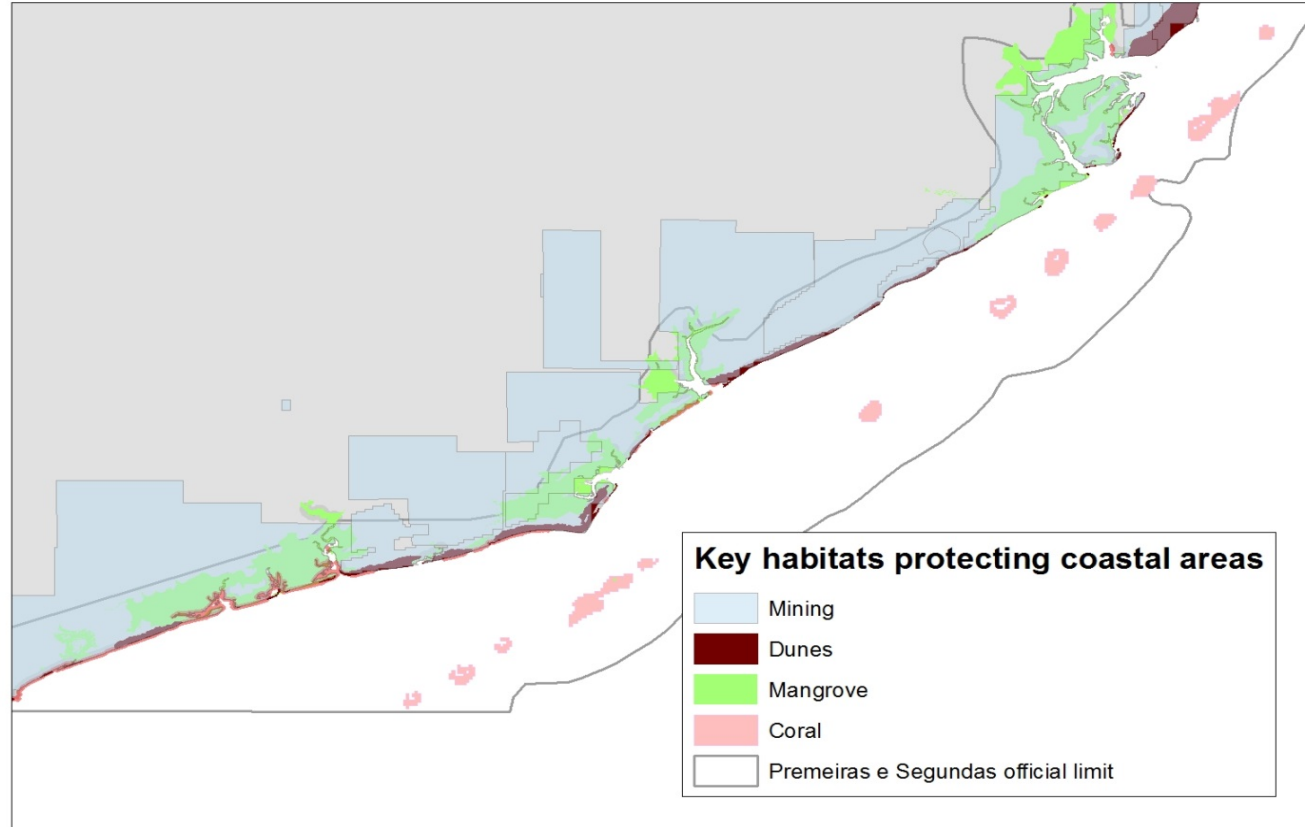


MODEL RESULTS

ECOSYSTEM RISK



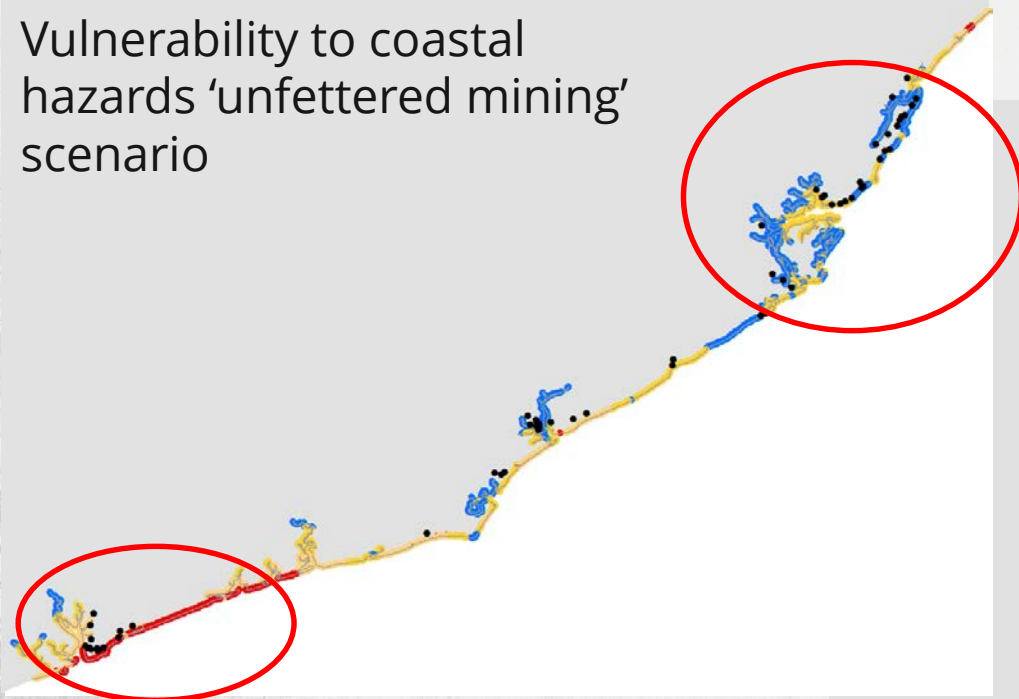
COASTAL VULNERABILITY



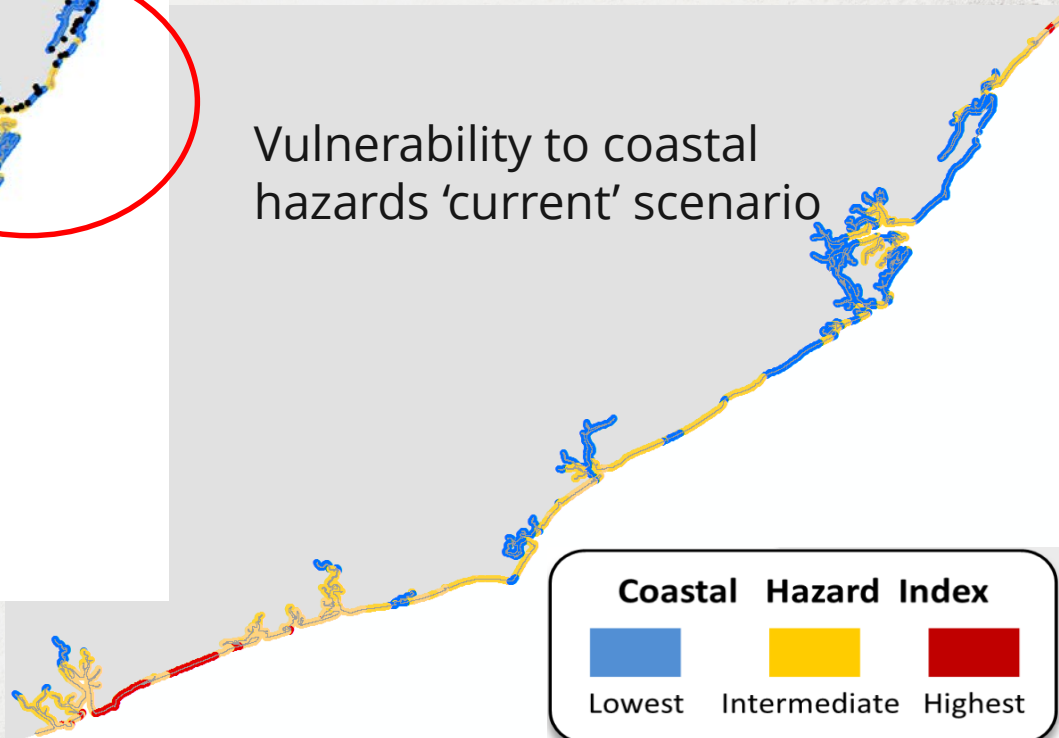
MODEL RESULTS

COASTAL VULNERABILITY: 'UNFETTERED MINING' SCENARIO

Vulnerability to coastal hazards 'unfettered mining' scenario



Vulnerability to coastal hazards 'current' scenario



Coastal Hazard Index



Lowest



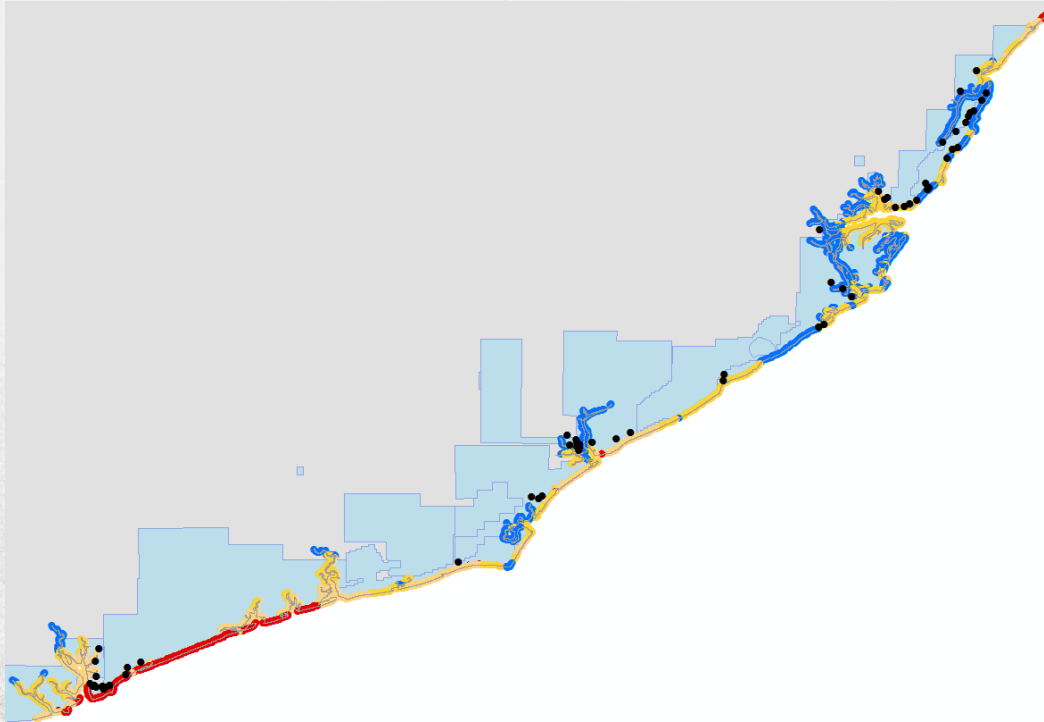
Intermediate



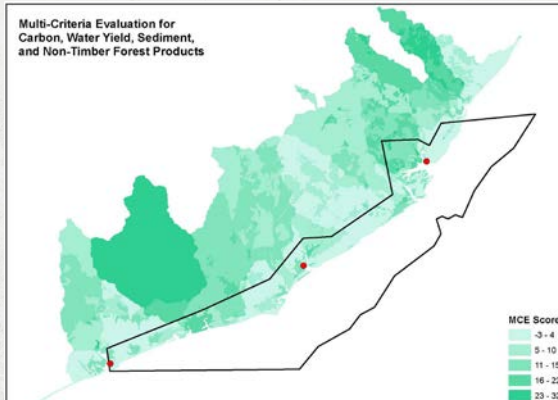
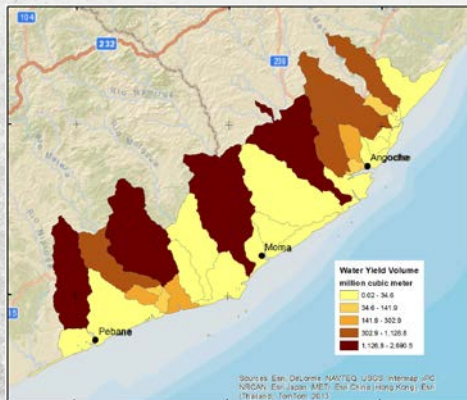
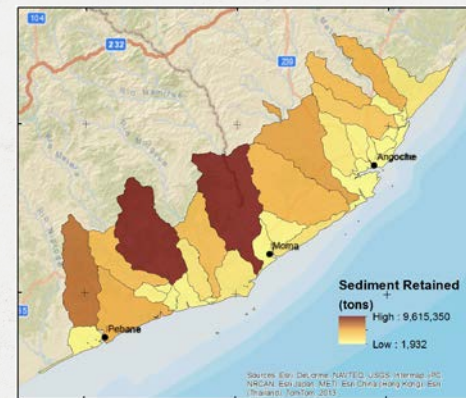
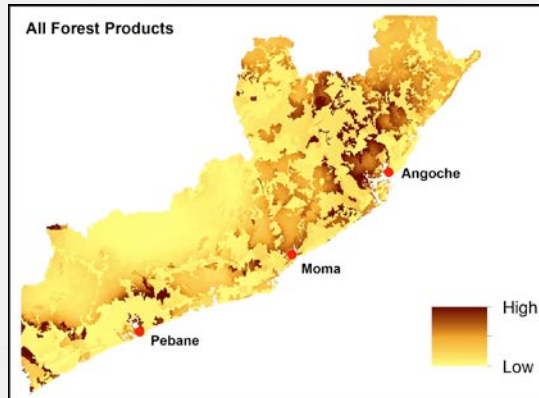
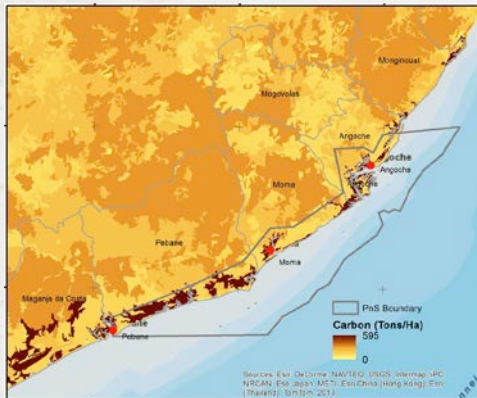
Highest

COASTAL VULNERABILITY MODEL

Could mining setbacks in high vulnerable areas reduce risk to ecosystems, people AND mining infrastructure?

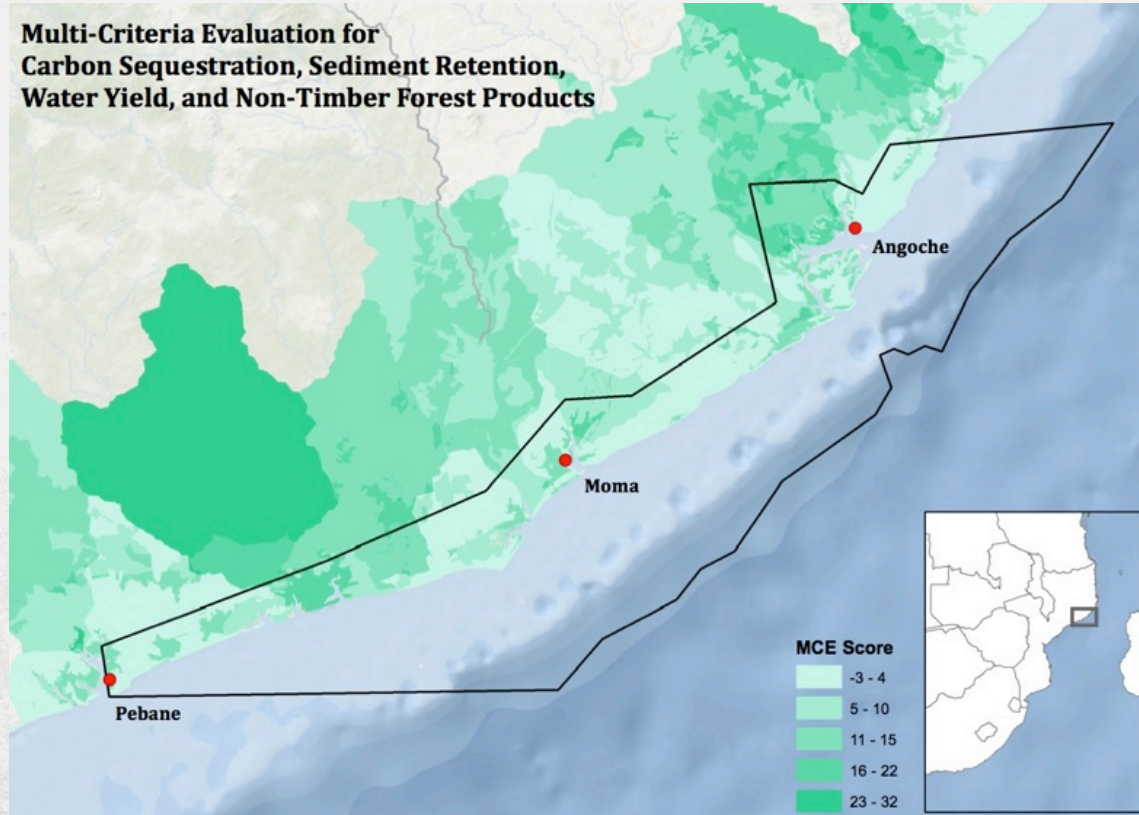


TERRESTRIAL ECOSYSTEM SERVICES



TERRESTRIAL ECOSYSTEM SERVICES

OVERLAPPING SERVICES



KEY MESSAGES AND LESSONS

- Ecosystem service information can inform basic natural capital analyses for “green economy” decision-making.
- The risk maps helped articulate the importance of connectivity between mangrove habitats and corals both for ecological and fisheries sustainability.
- Mapping the distribution of activities supported zoning – identifying critical blue highways & other corridors at risk (including southern highway that had before been rejected)
- The utility of the HRA model highlights the importance of meeting our partners at the stage they are in.

KEY MESSAGES AND LESSONS

- The HRA provided a framework for collecting key ecological and human use data and can be the basis for future analyses that assess services under alternative management scenarios.
- Local capacity is critical
- Key challenges: Multi-sectoral processes/outputs, data availability, data access
- Model selection must be based on context, needs

WHAT NEXT?

PRIMEIRAS & SEGUNDAS MANAGEMENT PLAN

- Management Plan is being revised; more ways of integration of natural capital are being explored, will get feedback from stakeholders. Final government approval will be by Council of Ministers
- Develop case study of P&S as proof of concept to support National Green Economy effort
- Build on experience and work with broader group on other priority analyses, such as National Scale Assessment
- Build local capacity (UEM) with local knowledge, data, contacts



THANK YOU
obrigado

END