Koninklijke Academie voor Overzeese Wetenschappen

Académie Royale des Sciences d'Outre-Mer

Systems Ecology and Resource Management (SERM)
Global Mangrove Research

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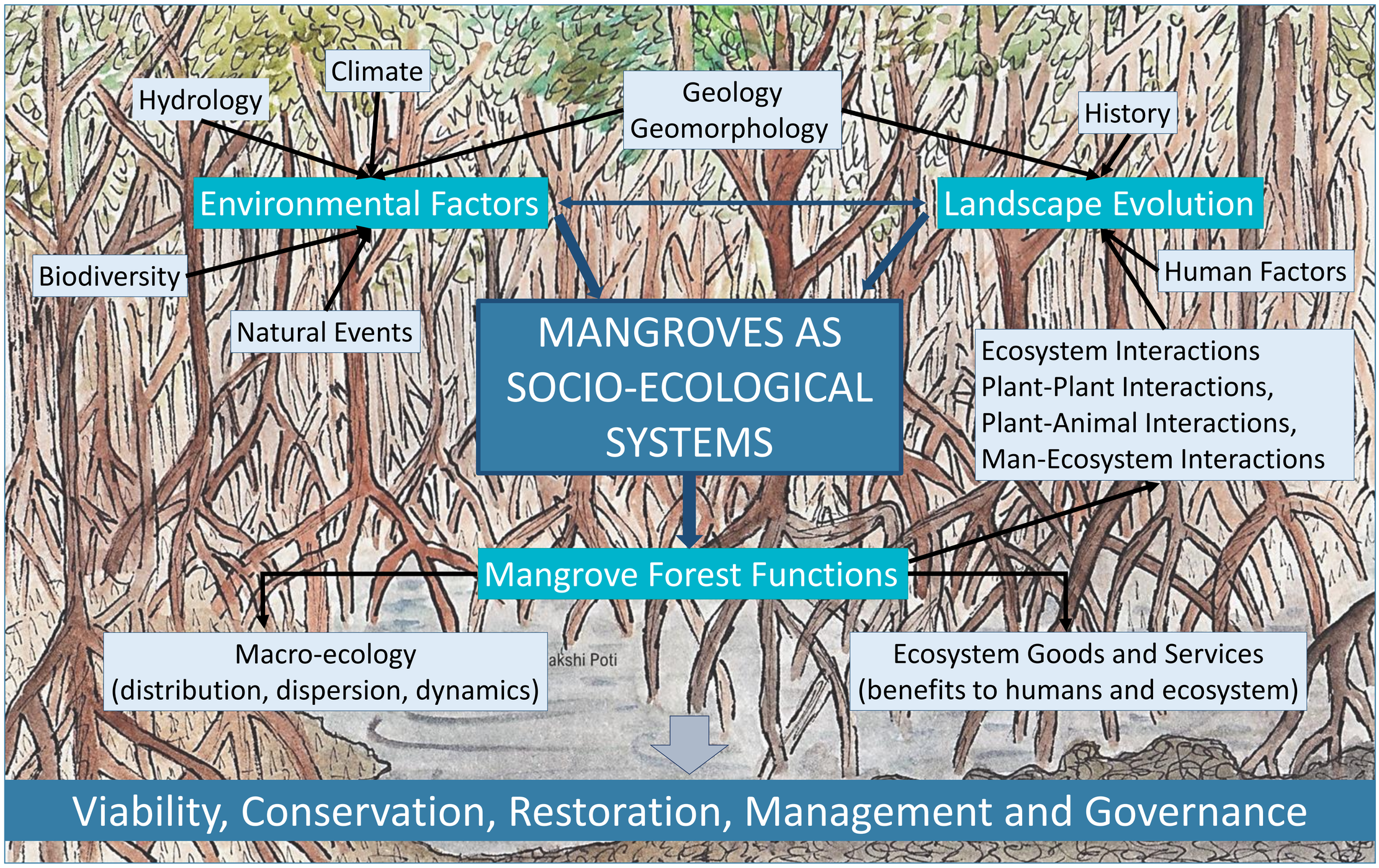
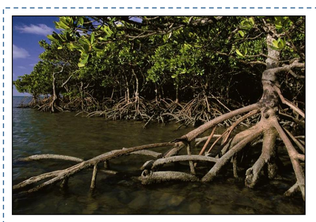


Mangroves as Socio-Ecological Systems (SES). Local communities along the coastlines of more than 100 countries benefit directly from a large variety of ecosystem services provided by mangrove forests. Mangrove fauna and flora are often evolutionary unique. The planet as a whole benefits from mangroves as they are linked to global fisheries. At SERM we aim to understand these intricate interactions between humans, mangrove ecosystems and the organisms within.

Research Questions



ECOLOGY
- Which continuous and stochastic events shape a mangrove forest?
- How stable is a dynamic (mangrove) ecosystem?
- How fast does a mangrove forest develop or rehabilitate?

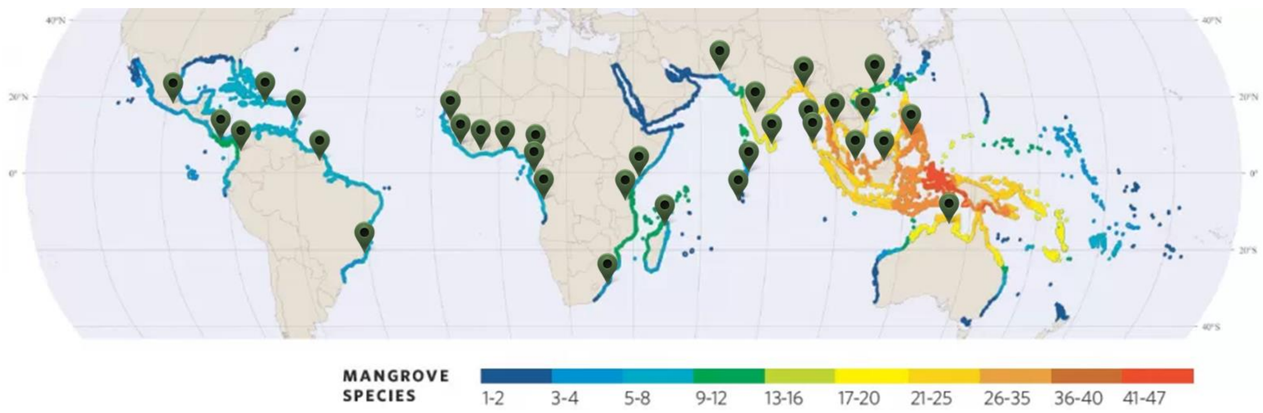
BIODIVERSITY
- Which floral, faunal and environmental factors and processes characterise a functional mangrove forest?
- Does mangrove biodiversity undergo spatio-temporal shifts?

PEOPLE
- How do people perceive and use mangroves?
- What ecosystem services are key?
- How do perspectives on mangroves evolve?

MANAGEMENT / GOVERNANCE
- Which governance structure and stewardship is needed to increase the socio-ecological resilience of mangrove forests?

PLANET
- How does the global community feel about mangroves?
- What do people say when they talk about mangroves on social media?

Study Areas



Countries with study sites (Deltares, 2014)

Research Methods

- Remote Sensing
- Ground Truthing
- Spatial Analysis
- Vegetation Structure
- Historic Archives
- Social Network Analysis
- Environmental Monitoring
- Behavioural Ecology
- Discourse Analysis
- Delphi Method
- Q Methodology

English: SERM Lab seeks to understand the biophysical and social aspects of mangrove socio-ecological systems for its sustainable management
Dutch: SERM Lab probeert de biofysische en sociale aspecten van mangrove sociaal-ecologische systemen te begrijpen voor een duurzaam beheer ervan
French: SERM Lab cherche à comprendre les aspects biophysiques et sociaux des systèmes socio-écologiques de la mangrove pour sa gestion durable

*Onder supervisie van/Sous la supervision de Farid Dahdouh-Guebas, lid van de KAOW, Klasse 2/membre de l'ARSOM, Classe 2
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Systems Ecology and Resource Management

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