EBM Knowledge Management:
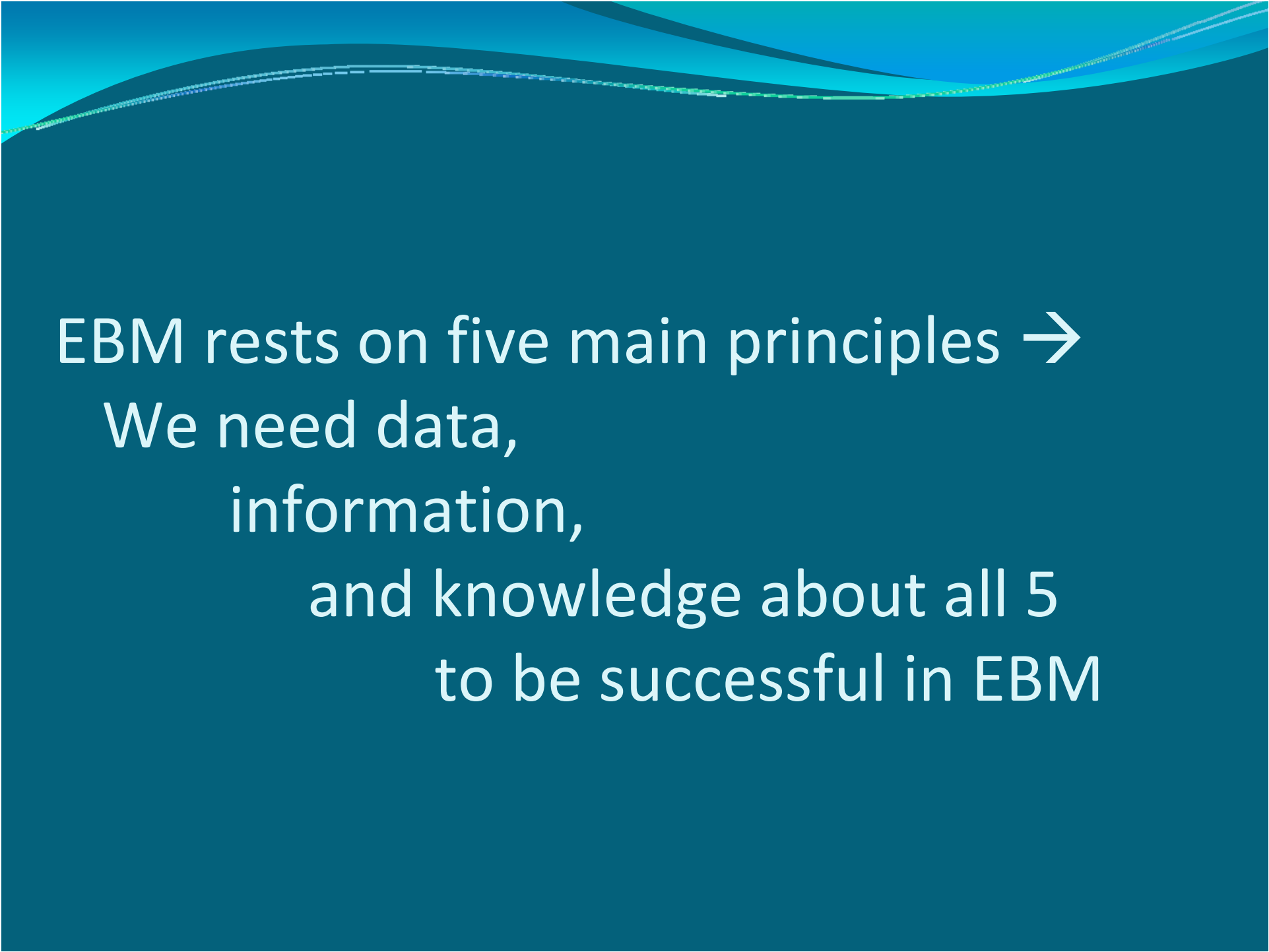# What Do We Need to Know to Manage?

Tundi Agardy, Ph.D.

Sound Seas / Forest Trends

Types of knowledge needed for management:

- People's needs and aspirations

- The spatial dimension of ecosystem values, uses, existing management

- The problem that management needs to solve (what is preventing people from having their needs met and aspirations reached?)

- The health and functioning of the ecosystems, expected future resilience

- Governance and feasibility of integrated, effective management

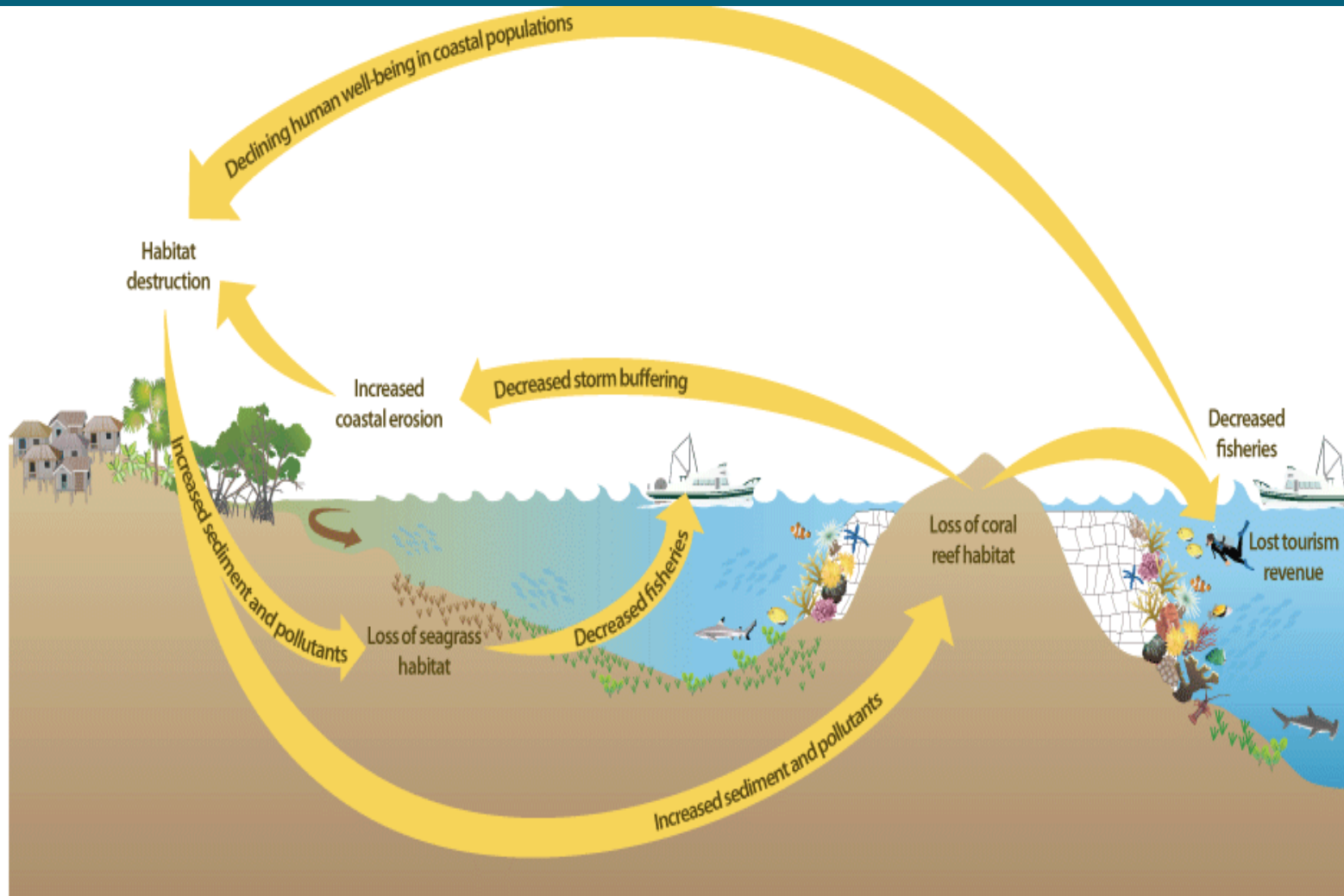- Choice of indicators for monitoring management effectiveness

The nature of marine management:
Information is needed not only on how oceans are impacted from what we do in the sea, but also by what we do on land
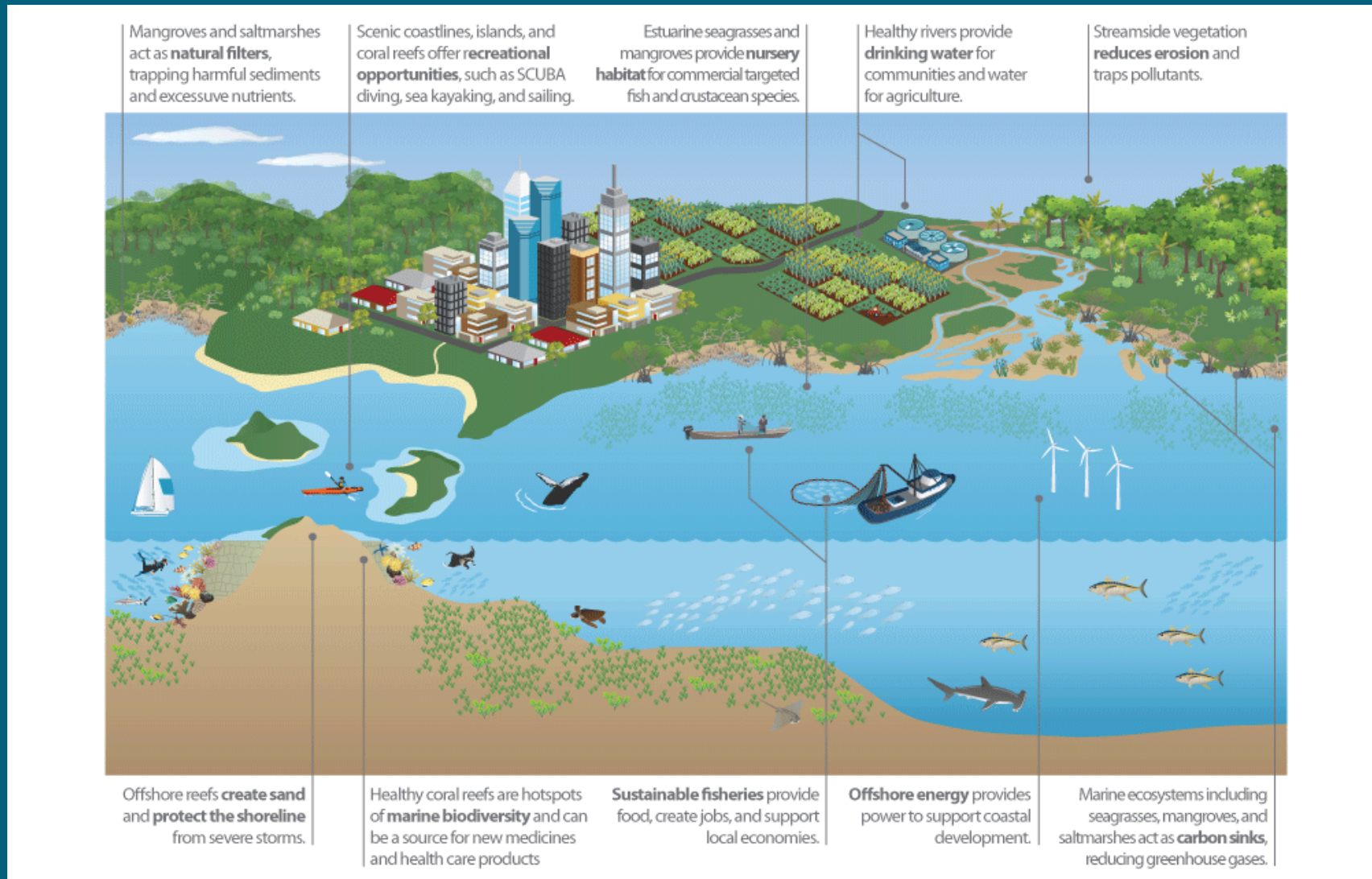
EBM rests on five main principles →
    We need data,
        information,
            and knowledge about all 5
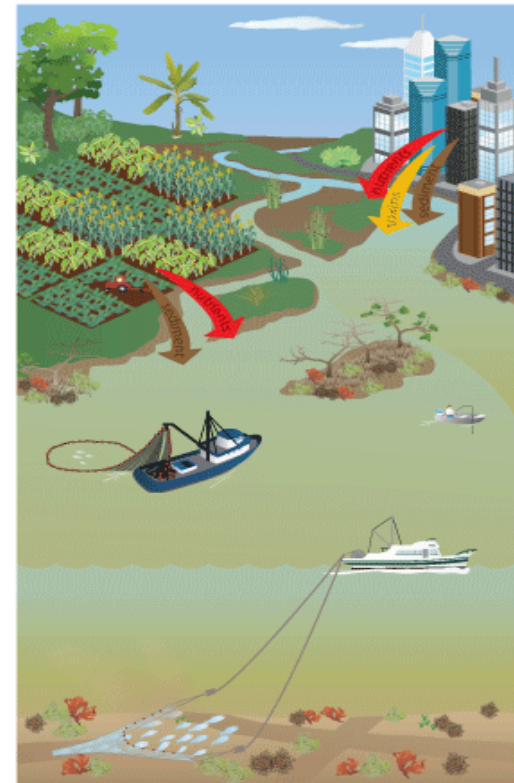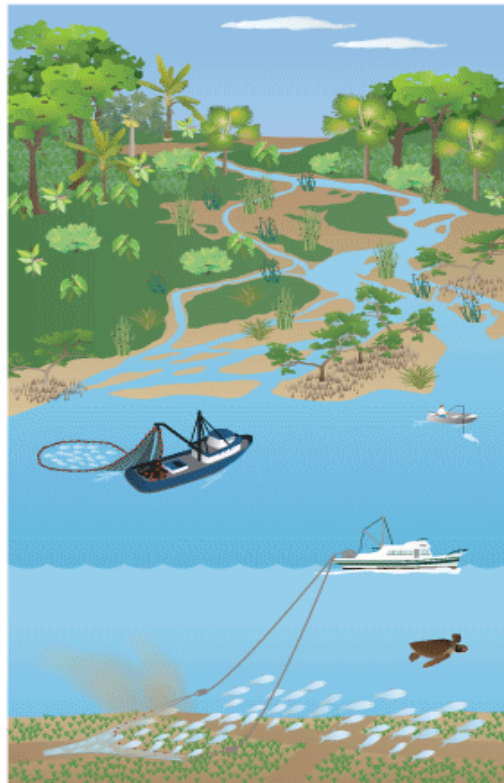   to be successful in EBM

Recognizing Connections

Taking an Ecosystem Services Approach

Mangroves and saltmarshes act as **natural filters**, trapping harmful sediments and excessuve nutrients.

Scenic coastlines, islands, and coral reefs offer **recreational opportunities**, such as SCUBA diving, sea kayaking, and sailing.

Estuarine seagrasses and mangroves provide **nursery habitat** for commercial targeted fish and crustacean species.

Healthy rivers provide **drinking water** for communities and water for agriculture.

Streamside vegetation **reduces erosion** and traps pollutants.

Offshore reefs **create sand** and **protect the shoreline** from severe storms.

Healthy coral reefs are hotspots of **marine biodiversity** and can be a source for new medicines and health care products

Sustainable fisheries provide food, create jobs, and support local economies.

Offshore energy provides power to support coastal development.

Marine ecosystems including seagrasses, mangroves, and saltmarshes act as **carbon sinks**, reducing greenhouse gases.

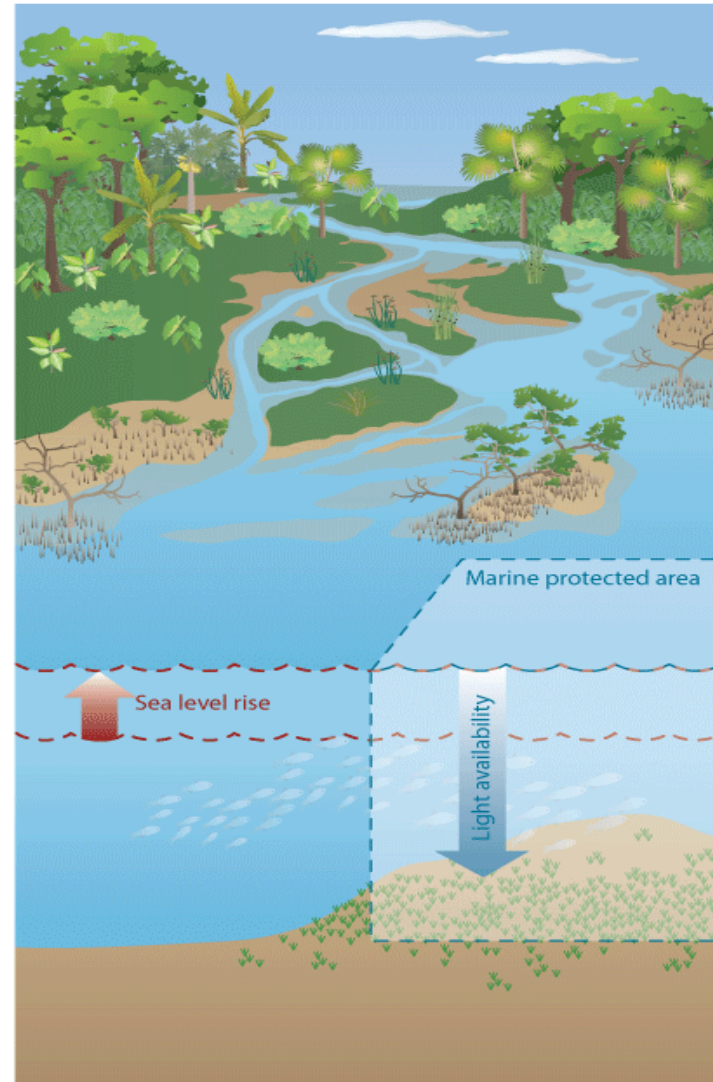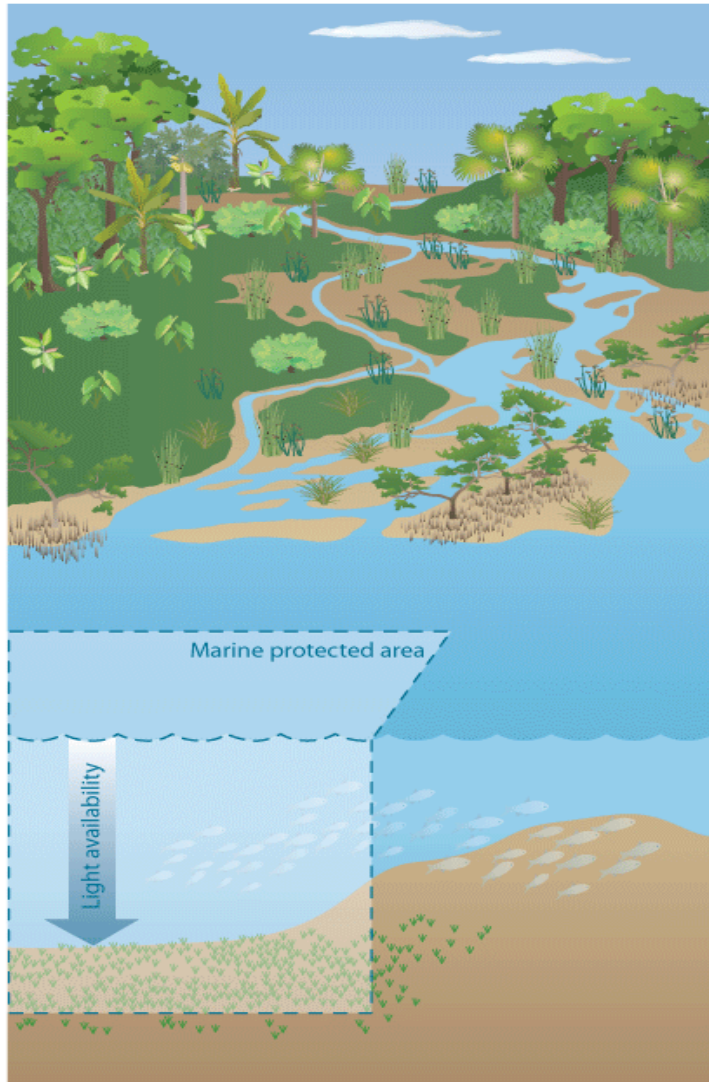# Addressing Cumulative Impacts

Managing for Multiple Uses

Conflicting uses

Accomodating uses and reducing conflict

Embracing Change, Learning, Adapting

Knowledge Management for EBM must focus on ecosystems AND humans

What distinguishes sustainable use from pillaging is how well knowledge is used and shared to achieve effective management…

Scientific knowledge (ecology and social science in equal dimensions) must find its way into planning processes and policies so that unlocking the potential of the blue economy doesn't lead to pillaging of the marine environment.

Knowledge management can allow conservation to serve as the foundation for improved human well-being.

Knowledge can steer management toward effectiveness; while lack of knowledge (access or uptake) prevents EBM

Thank you!