

16th Lme

Meeting with
Coastal Partners

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Approach to ecosystem services valuation in the Bay of Bengal

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Bay of Bengal Large Marine Ecosystem Project

Session: 2

Day of presentation: 9 July 2014



Bay of Bengal Large Marine Ecosystem Project



Some Facts

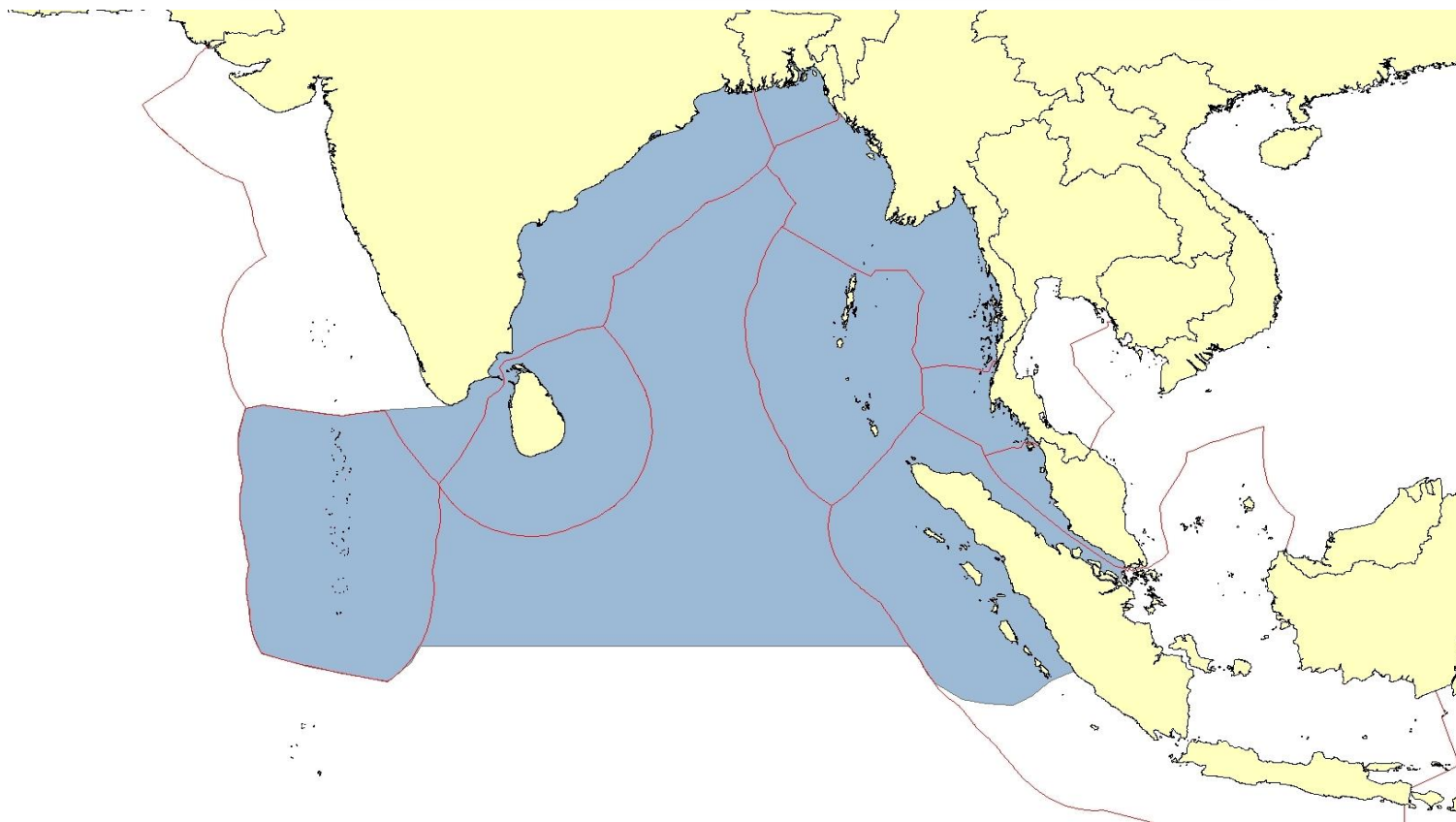
- 8 countries
- 6.2 million km²
- 450 million people affected

Transboundary issues

- over exploitation of fish stocks
- habitat degradation
- land based pollution



*Eight countries, connected by one ecosystem,
working together to secure its future.*



Norad



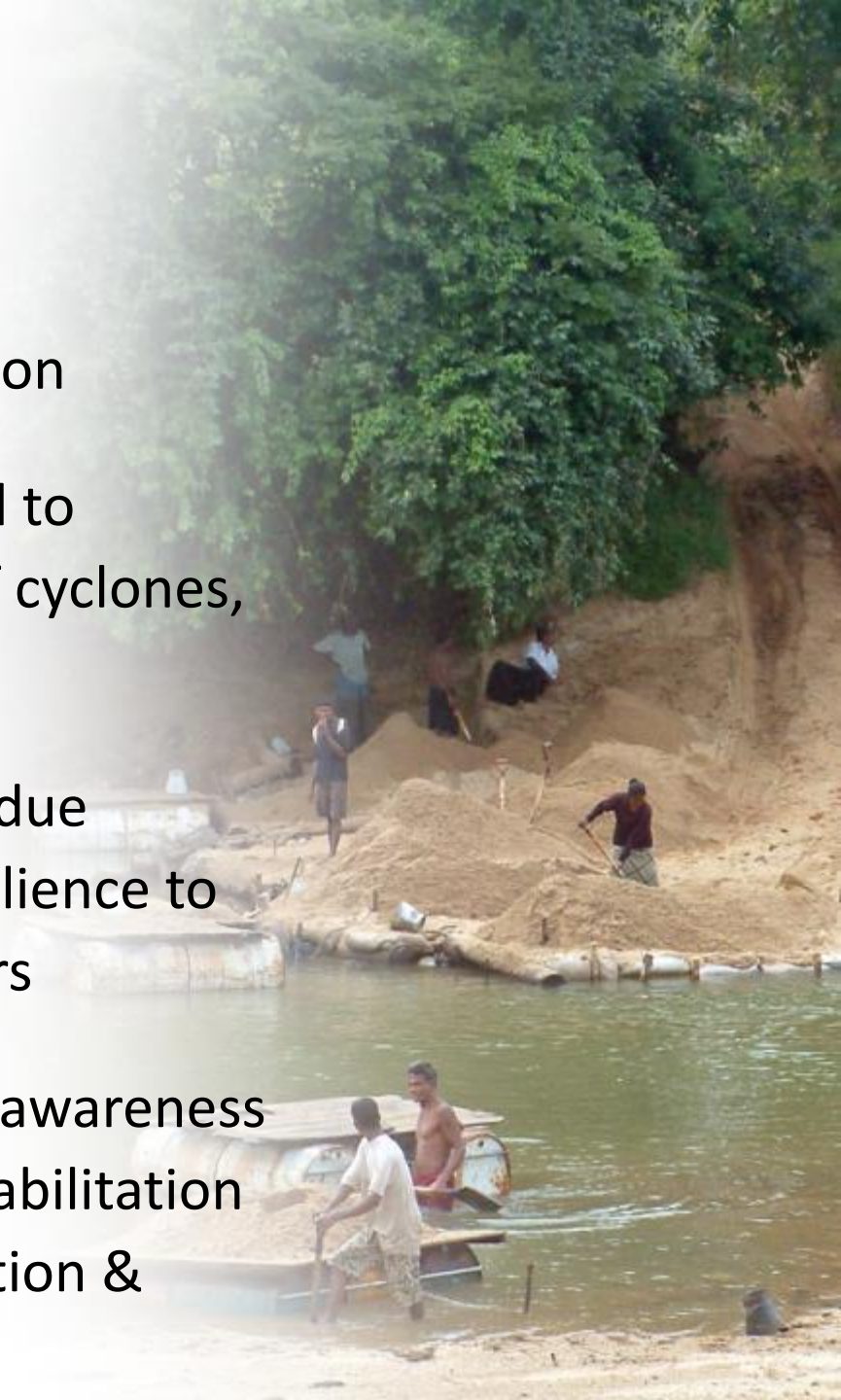
the problem of undervaluation

- traditionally, economists focused only on the value of extractive land/sea and resource uses
- ecosystem services values were not usually factored into calculations or reflected in the decisions they informed
- was seen to be little gain or value-added from conserving ecosystems, and few costs or losses from their degradation
- this resulted in missed economic and development opportunities, and incurring substantial costs and losses



Coastal erosion Sri Lanka

- human communities and physical infrastructure highly vulnerable to impacts of storms and coastal erosion
- climate change effects likely to lead to increased incidence and severity of cyclones, tidal surges, wave effects
- ecosystem degradation (especially due to sand mining) is undermining resilience to climate change and natural disasters
- how to mobilise public and private awareness and support for environmental rehabilitation as a strategy for disaster risk reduction & climate change adaptation?



Myanmar mangroves: US\$ 2.88 billion/year



forest-based fuels, medicines & foods

US\$ 19.8 million



fisheries breeding & nursery habitat

US\$ 1,130.4 million



protection against coastal erosion

US\$ 974.5 million



protection against extreme weather events

US\$ 639.8 million



climate change mitigation

US\$ 110.1 million



USE
VALUES

Direct
Values

Raw materials and physical products that are used for production, consumption and sale.

timber, minerals, fibre, fish, fuels, foods, building materials, medicines, fodder, recreation, etc.

Indirect
Values

Ecological functions which maintain and protect natural and human systems.

nutrient cycling, flood attenuation, climate regulation, protection against storms and other natural disasters, etc.

Option
Values

The premium placed on maintaining ecosystems for future possible uses, some of which may not be known now.

new industrial, agricultural, pharmaceutical applications, tourism developments, etc.

NON-USE
VALUES

Existence
Values

The intrinsic value of ecosystems regardless of current or future possibilities to use them.

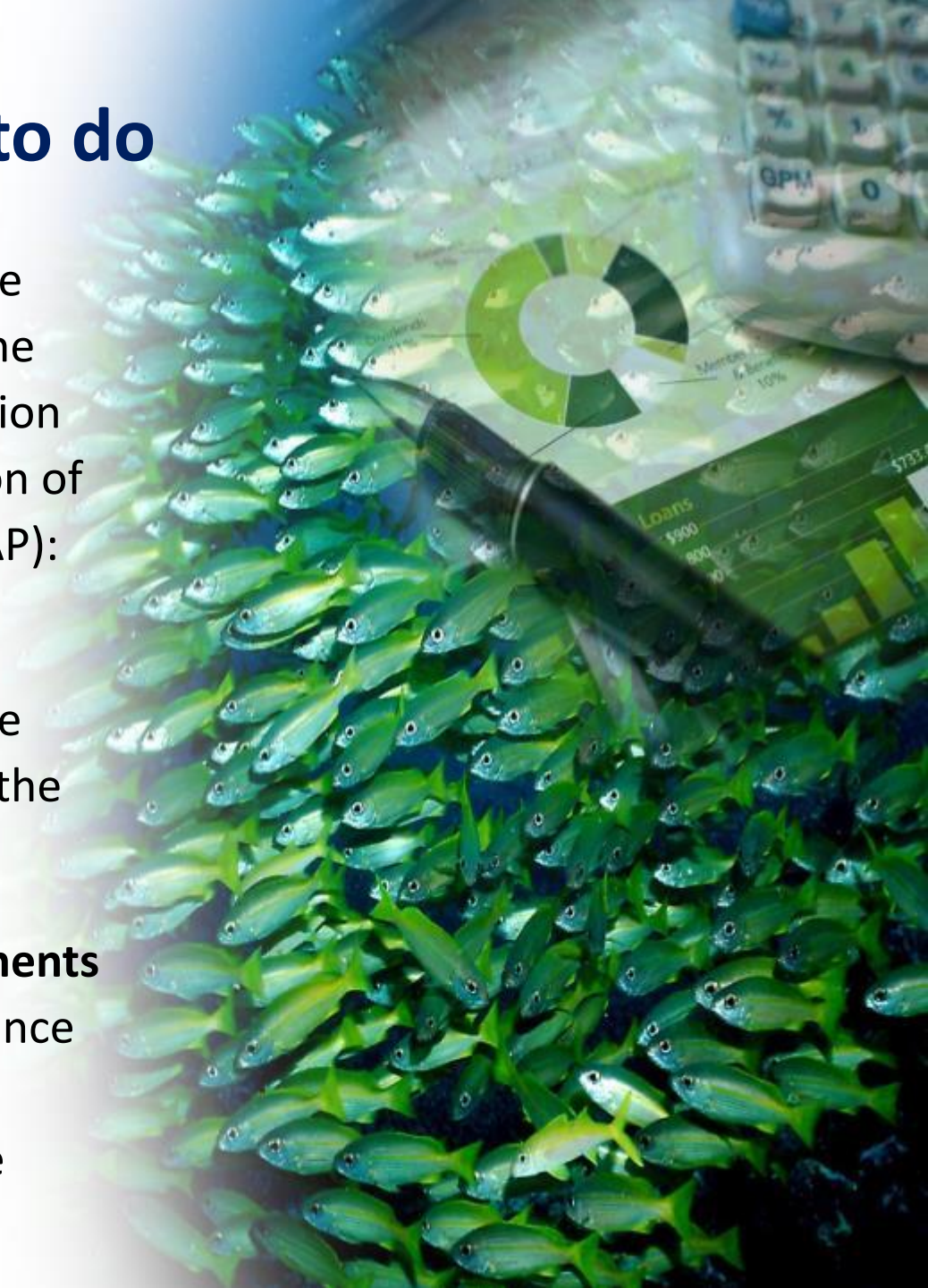
historical or cultural sites, spiritual places, beautiful landscapes, items of national heritage and bequest for future generations, etc.



what the study seeks to do

assess the economic value of marine and coastal ecosystem services in the Bay of Bengal, to generate information that will support the implementation of the Strategic Action Programme (SAP):

- **“make the economic case”** for investing in actions to address the threats to natural resources and the environment
- **identify economic policy instruments** that can be used to generate finance and incentives for ecosystem conservation and sustainable use



1. IDENTIFY and **ASSESS** the full range of ecosystem services and people affected

2. ESTIMATE and **DEMONSTRATE** the value of ecosystem services

3. CAPTURE the value of ecosystem services and seek **SOLUTIONS**



TEEB. 2008. The Economics of Ecosystems and Biodiversity: An interim report; TEEB .2010. The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB; Beaudoin, Y. and L. Pendleton. 2012. Why Value the Oceans? A Discussion Paper. TEEB Office, United Nations Environment Programme, Geneva.

1

Assessing economic linkages and stakeholders

how do marine and coastal ecosystems generate economic benefits and/or help to reduce or avoid economic costs and losses, and for which groups and sectors?

2

Estimating ecosystem values

what is the current monetary value of marine and coastal ecosystem services?

3

Demonstrating the economic consequences of ecosystem change

what are the economic gains associated with maintaining healthy ecosystems and what are the costs and losses arising from ecosystem degradation and loss?

4

Analysing the distribution of ecosystem benefits and costs

which sectors and groups stand to benefit from ecosystem conservation, which bear the costs, and to what extent do there remain uncaptured ecosystem values, uncompensated management costs and unrewarded conservation actions?

5

Identifying economic policy instruments for SAP implementation

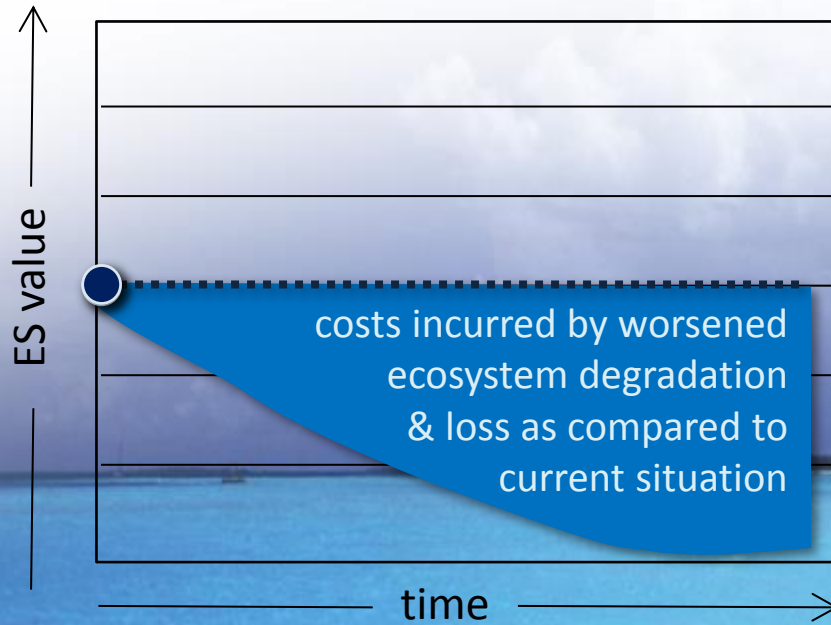
which mechanisms and instruments can be used to promote ecosystem conservation and sustainable management, provide incentives and mobilise funding

a problem of unequal distribution



- sustainable management measures aren't cost-free
- key question is: *who gains, and who bears the costs?*
- opportunity costs typically incurred to government environment agencies and local ecosystem managers (typically the least able to bear them)
- benefits accrue off-site, to other sectors and groups in the economy (typically received at low or zero cost)
- is not only inequitable but also inefficient, and usually unsustainable

Business as Usual (BAU)



Strategic Action Programme (SAP)

