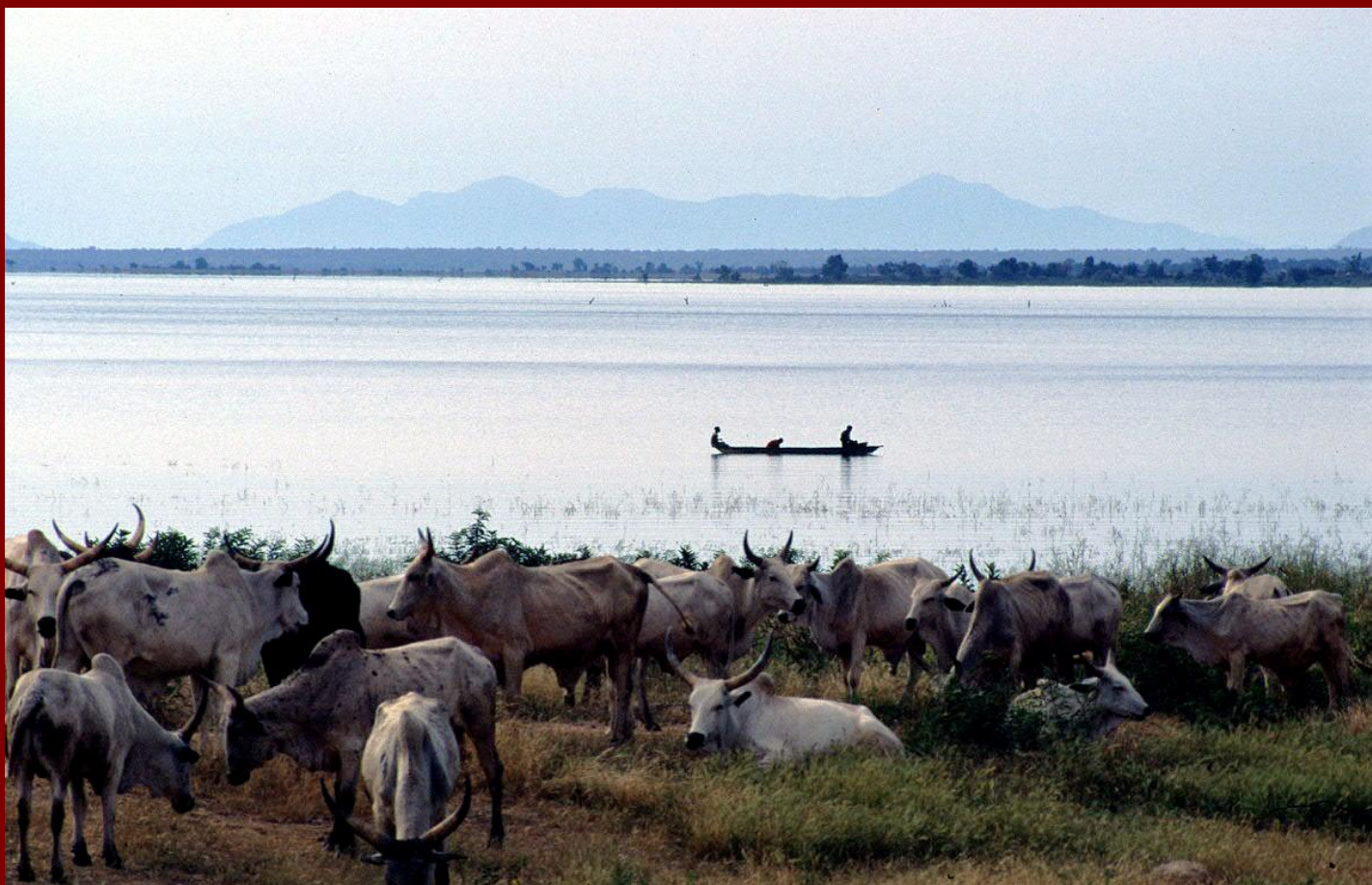


CBD Guidelines on biodiversity in SEA



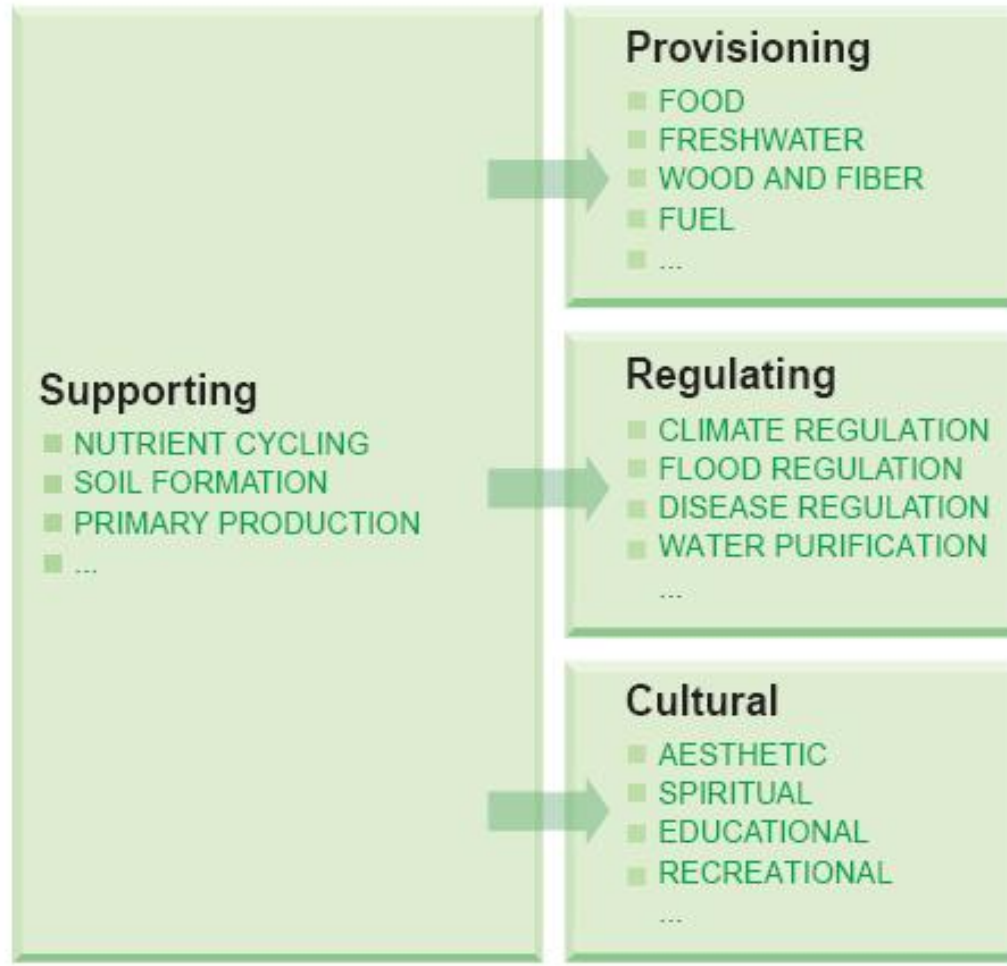
Arend Kolhoff - NCEIA, Roel Slootweg - SevS,
Rob Verheem - NCEIA, Robert Höft - secretariat CBD

Objectives

- Compile lessons learned from existing experiences with SEA
- Prepare guidelines on incorporating biodiversity considerations in SEA

What is biodiversity?

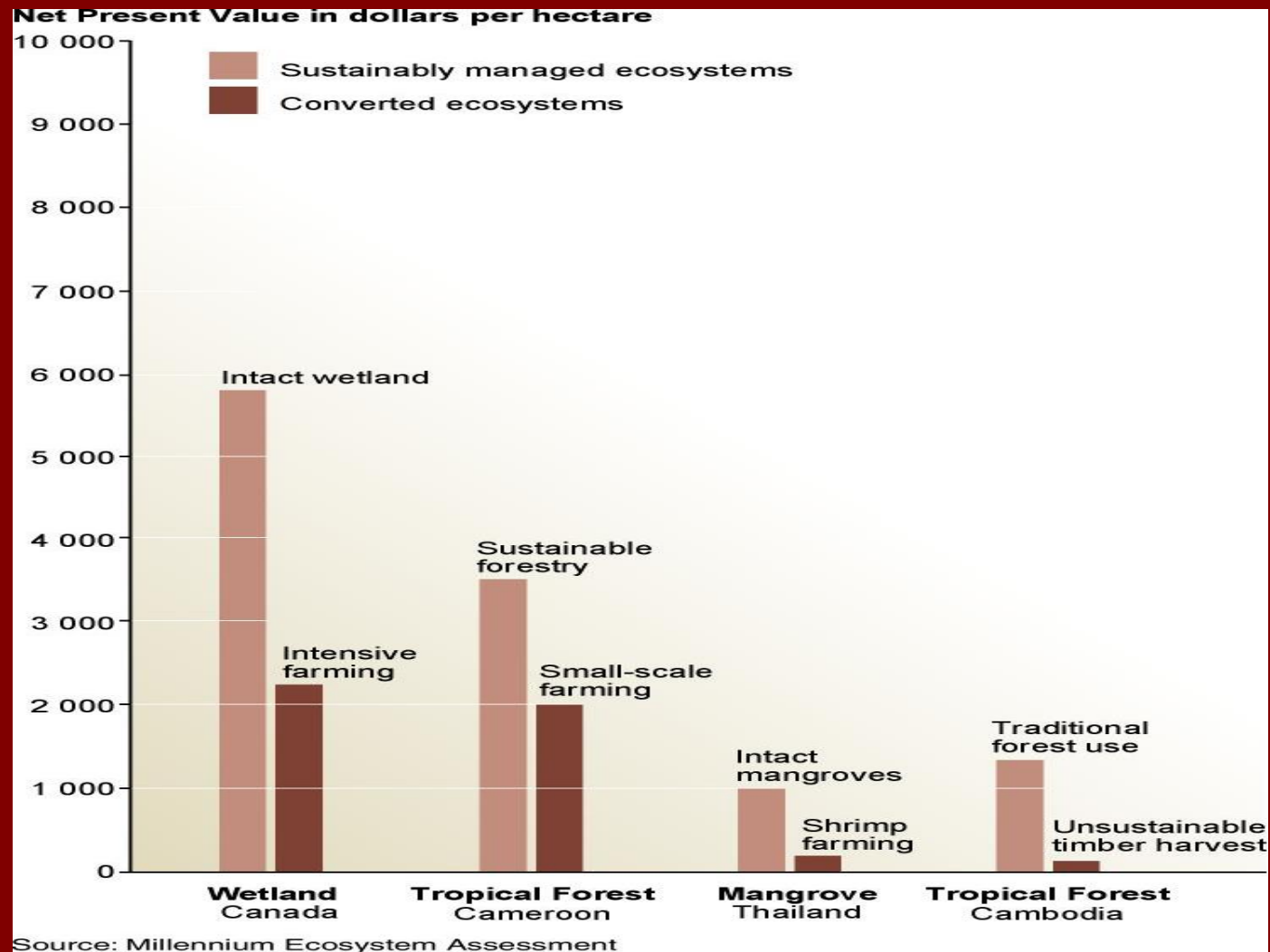
ECOSYSTEM SERVICES



WHY special attention to biodiversity?

- Legal and international obligations: protected species / areas, protected ecosystem services, indigenous areas, treaties, etc.
- Safeguarding livelihoods: people depending on biodiversity
- Sound economic decision making: ecosystems services translate in money

Degradation of ecosystem services causes harm to human well-being & economy



Case studies on biodiversity & SEA

Nepal

- SEA for forestry plan
- Focus was on effect of selective logging on species composition
- Result: recommendations for species conservation in forestry practices

Case studies on biodiversity & SEA

India

- SEA for dam & irrigation scheme
- Focus was on effect of fragmentation on foodweb structure for tiger and other mammals
- Result: redesign of new reservoir avoided fragmentation

Case studies on biodiversity & SEA

UK

- SEA for flood management in coastal wetlands
- Focus was on effects on flooding as key process for maintenance of wetlands

Case studies on biodiversity & SEA

Netherlands

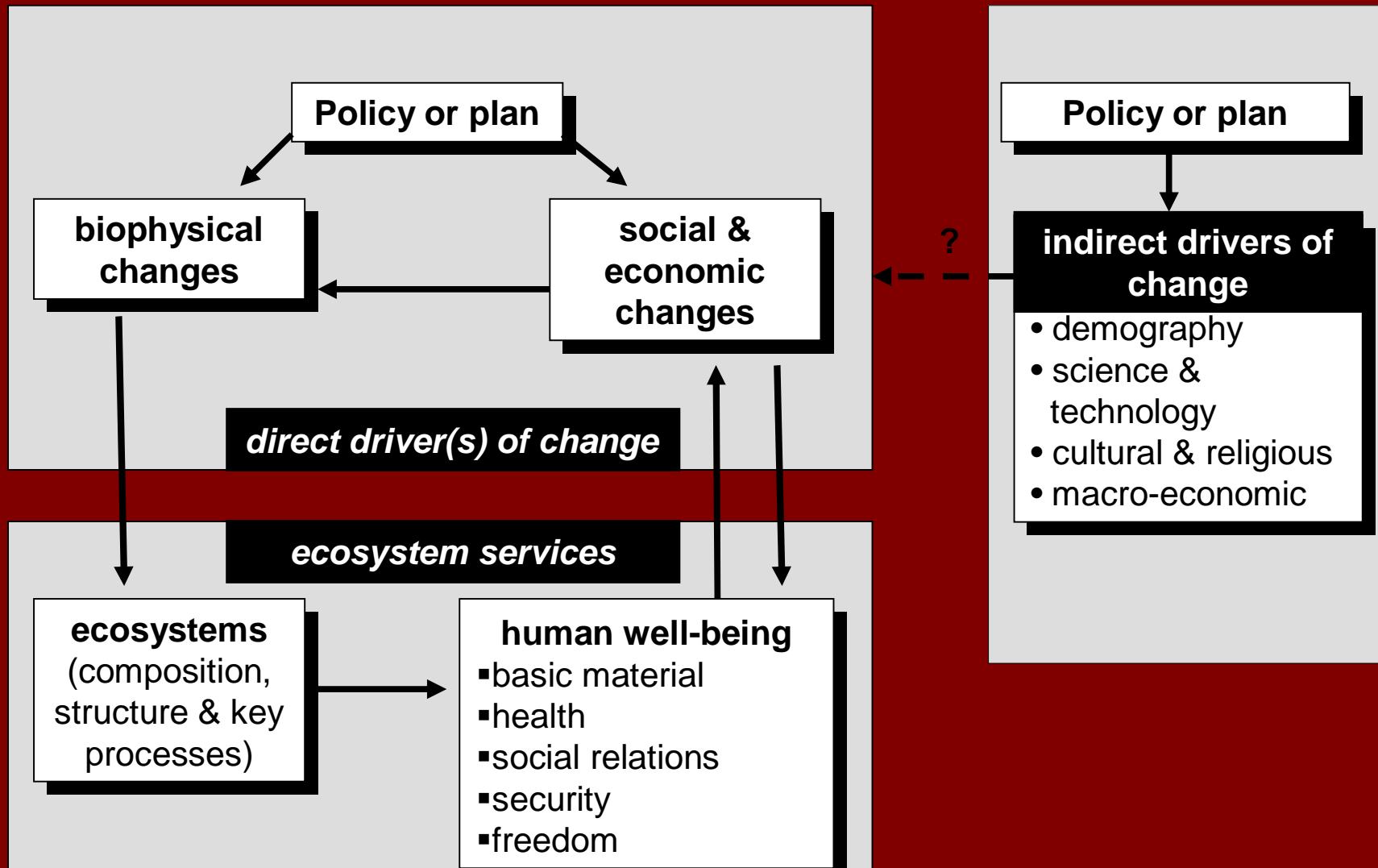
- SEA for shell mining in coastal wetland
- Focus was on effect on bottom morphology and sediment transport as key processes for biodiversity of this wetland

Conclusion from the case studies

Ecosystem services are effected through impact on:

- species composition
- food web structure
- key processes

How to address biodiversity in SEA?



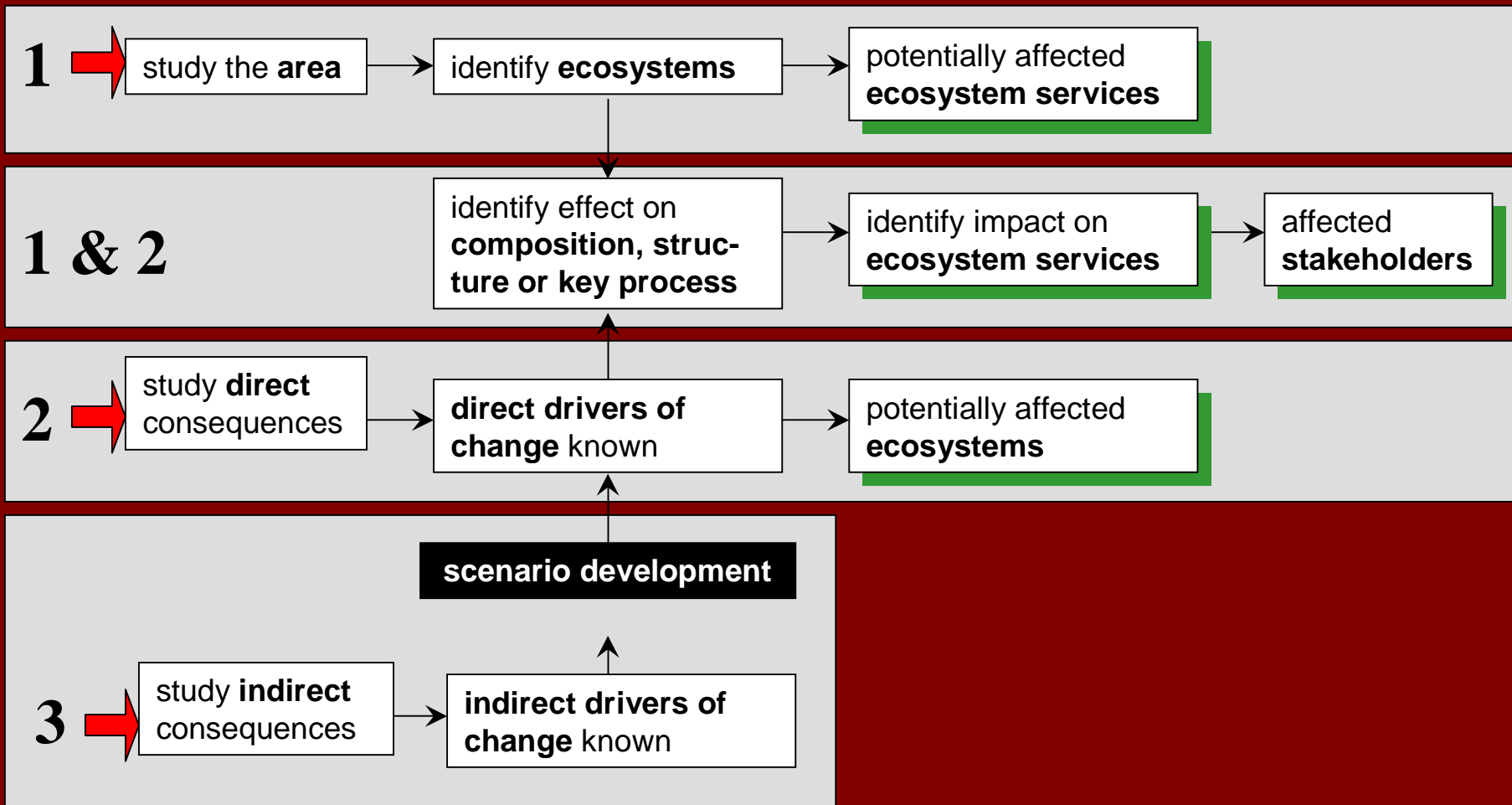
Examples of direct drivers of change

- Changes in land use
- Species introduction or removal
- Technology adaptation and use
- External inputs (e.g., irrigation)
- Resource consumption
- Climate change
- Natural physical and biological drivers (e.g., volcanoes)

Examples of indirect drivers of change

- Demographic development
- Economic development (globalization, trade, market and policy framework)
- Sociopolitical development (governance and institutional framework)
- Development in Science and Technology
- Cultural and Religious developments

How to address biodiversity in SEA



What to do if knowledge is lacking?

Plan area is known but resulting projects are not

- Example: SEA for river catchment land use planning in South Africa
- SEA identifies potentially affected ecosystem services
- Defines limits of acceptable change
- Useful to set boundaries for human activities

What to do if knowledge is lacking?

Resulting projects are known but locations are not

- Example: SEA for road planning (600 km) in Bolivia (Pantanal)
- SEA identified key impacts: new employment, immigration & resettlement, land occupation
- SEA identified sensitive ecosystems and key processes
- Result: hierarchy of protection levels and stronger support to national parks

What to do if knowledge is lacking?

Plan area and resulting projects are unknown

- Example: EU trade agreements in forestry and agriculture
- SEA identifies impact on:
 - consumption of products derived from living organisms
 - products depending on ecosystem services for their production
 - occupation of land and water area
 - exploitation of natural resources and ecosystem services

SEA for trade agreements

Available tools:

- modelling
- empirical evidence
- case studies
- causal chain analysis

But more research is needed

But let's get going

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