

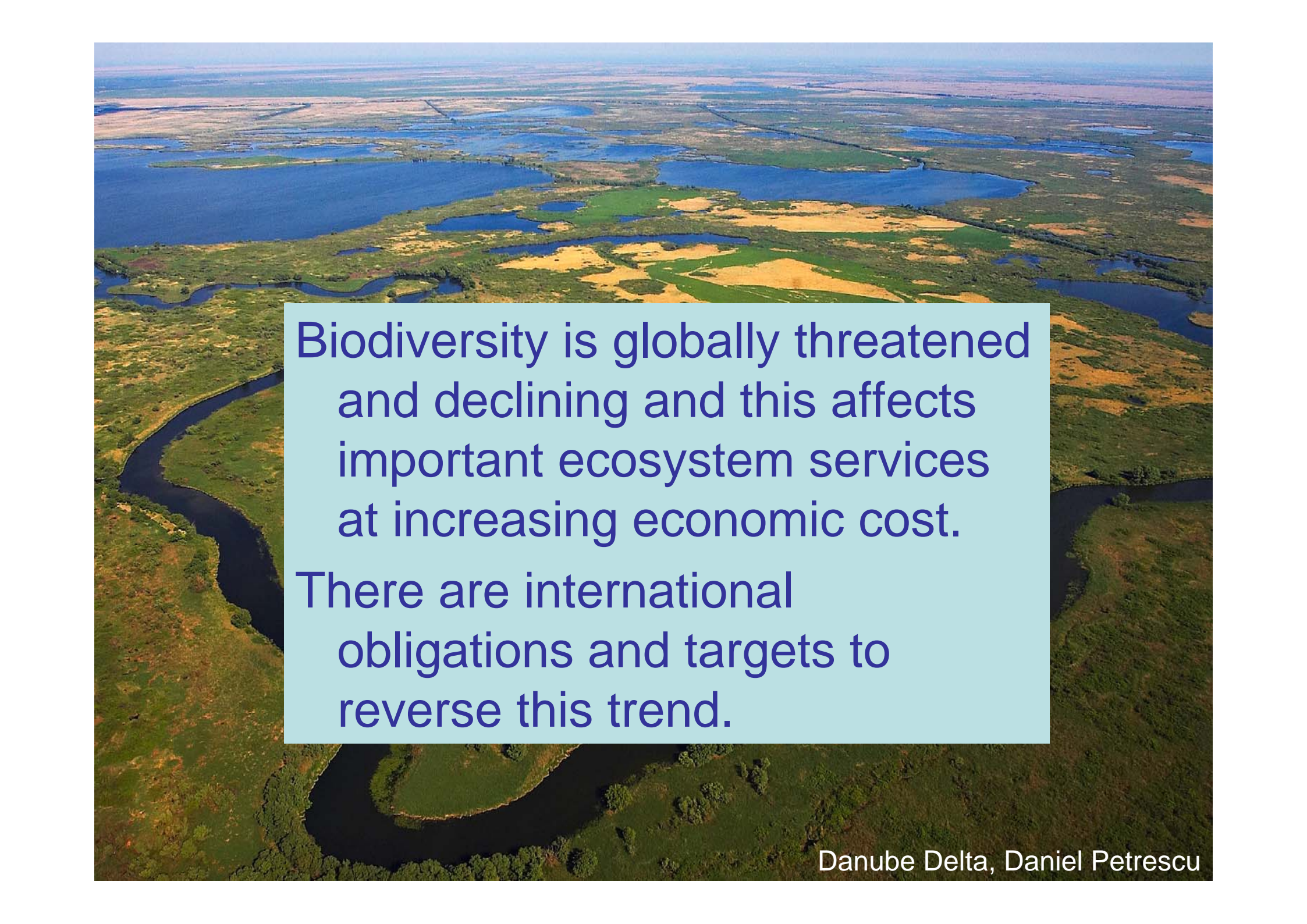


Biodiversity and EIA in a transboundary context

Jo Treweek

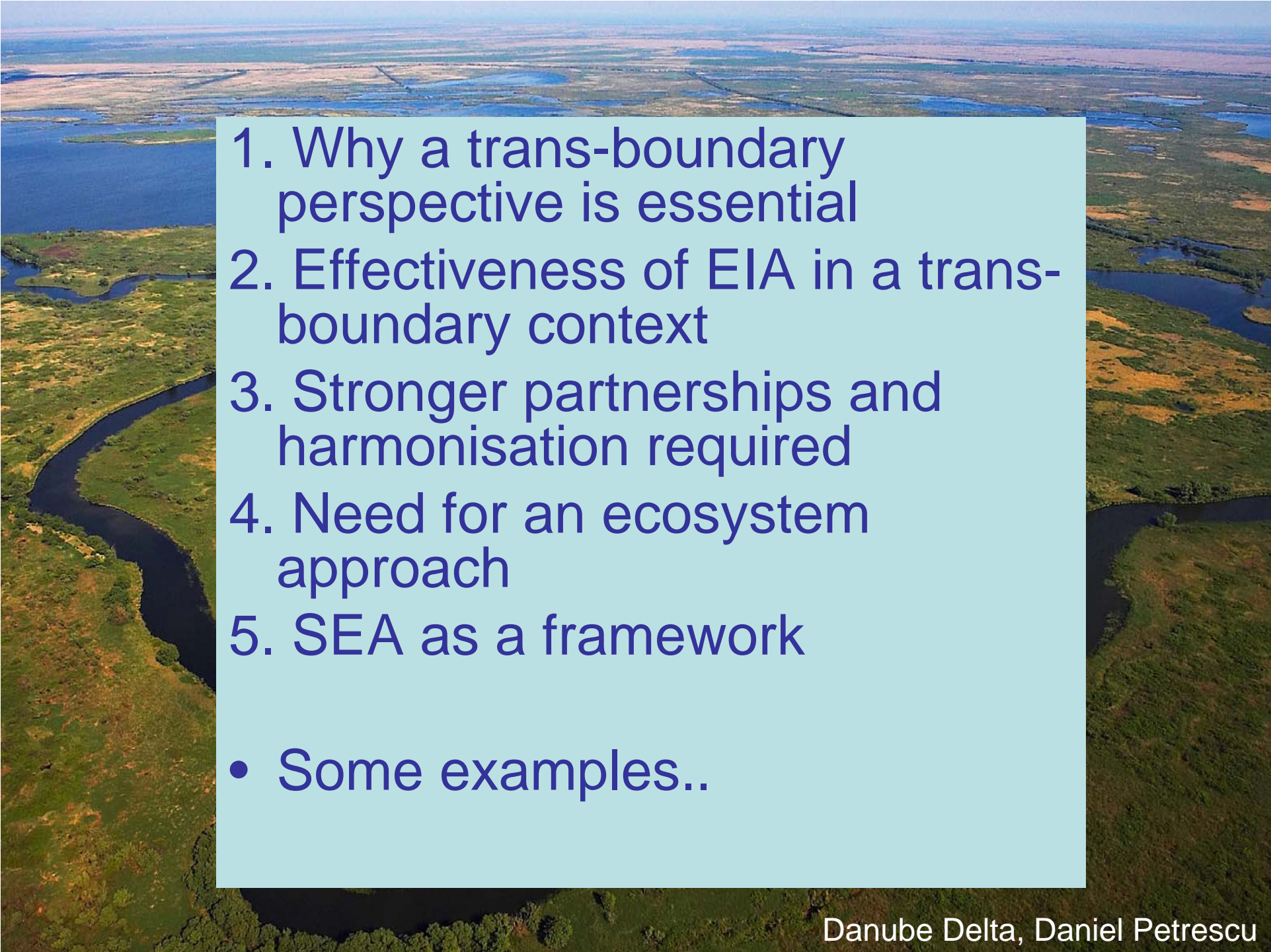
20.05.08 Bucharest



An aerial photograph of the Danube Delta, showing a vast, intricate network of waterways, marshes, and islands. The landscape is a mix of green vegetation, brownish-yellow soil, and deep blue water. The waterways are winding and interconnected, creating a complex pattern across the delta. The islands are small and scattered throughout the waterways. The overall scene is a rich, diverse ecosystem.

Biodiversity is globally threatened and declining and this affects important ecosystem services at increasing economic cost.

There are international obligations and targets to reverse this trend.

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1. Why a trans-boundary perspective is essential
 2. Effectiveness of EIA in a trans-boundary context
 3. Stronger partnerships and harmonisation required
 4. Need for an ecosystem approach
 5. SEA as a framework
- Some examples..



1. Why a transboundary perspective is essential:

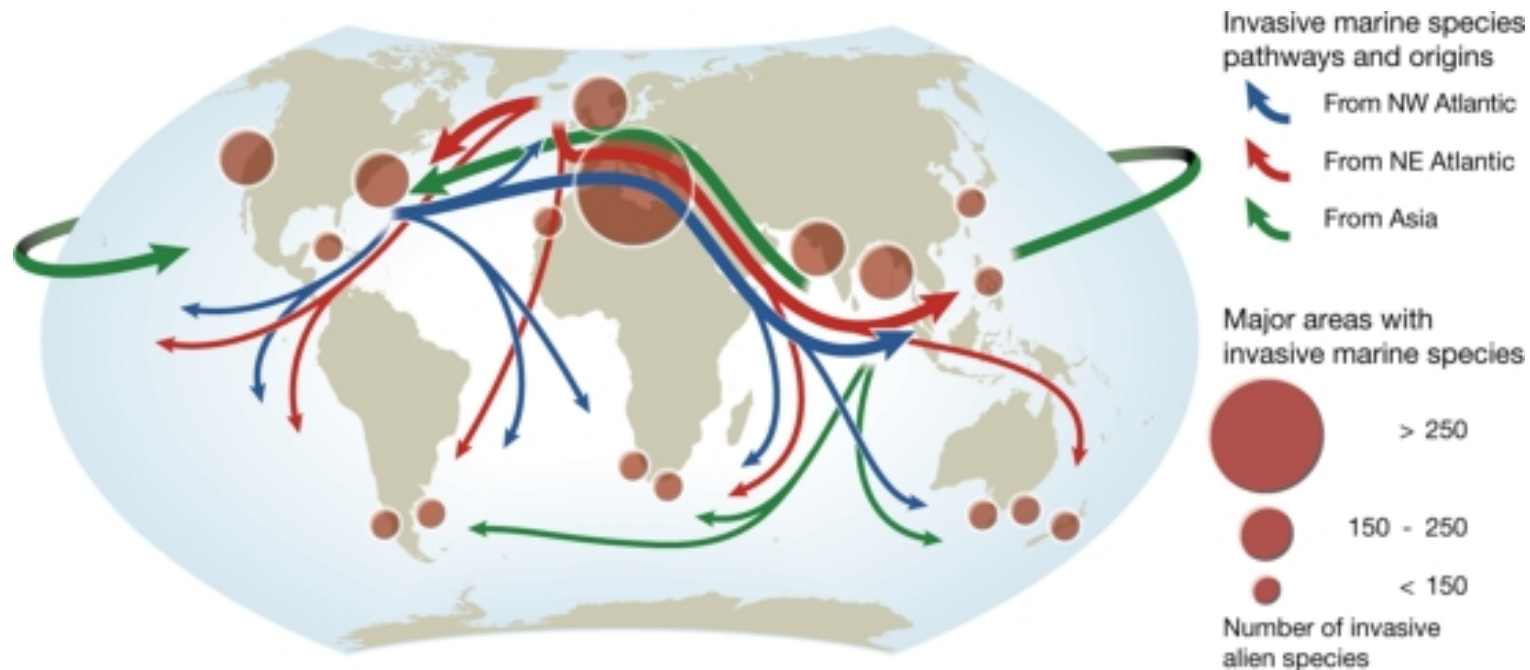
Ecosystem boundaries do not coincide with national boundaries: important biodiversity areas and ecosystem services are shared.

Developments in several countries can have major cumulative effects on individual sites of biodiversity importance and the services they provide.

Impacts on biodiversity extend beyond national boundaries and are increasingly global in nature.

Developments in one country threaten biodiversity in several other countries and these may not be immediate neighbours. Costs and liabilities are increasing.

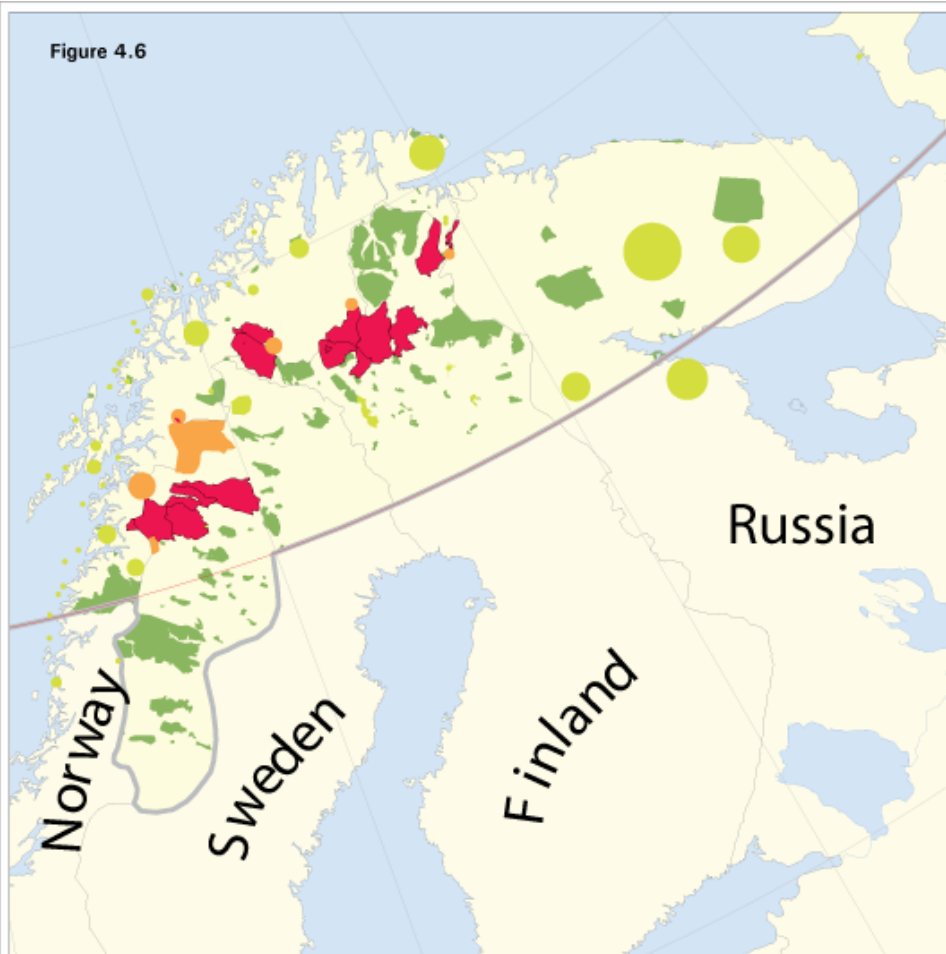
Main drivers of global change in biodiversity distribution and abundance are not easily addressed at project-level or through EIA for individual development proposals



e.g. Economic globalisation creates unprecedented opportunity for alien invasive species to establish in new habitats.

Spread in newly discovered infectious diseases of free-living wild animals (climate change).

Figure 4.6



Biodiversity Across Borders

Regional and sub-regional initiatives for managing and conserving biodiversity are strengthening,

but..

harmonisation of EIA and SEA laws and approaches often a neglected component in the management of trans-frontier areas which are important for biodiversity.

Transboundary Protected Areas in North Scandinavia and Northwest Russia

- Existing and Proposed

- Transboundary Protected Areas
- Proposed Transboundary Protected Areas
- Protected Areas
- Proposed Protected Areas



CAFF Conservation of Arctic Flora and Fauna
Habitat Conservation Report No. 2
Proposed Protected Areas in the Circumpolar Arctic 1996

Source data supplied by CAFF member countries:



Compilation and map production by:



Petroleum exploration and development in the Arctic Refuge



Photo: Captain Budd Christman,
NOAA Corps [NOAA Photo Library](#)

Cross border scientific cooperation is good, due to the species and ecosystem-based perspective.

Development proposals and their assessment are less well co-ordinated. Several systems and procedures are in place, not all aligned.

The Arctic Refuge Coastal Plain

Birth Place & Nursery Grounds of the Porcupine Caribou Herd



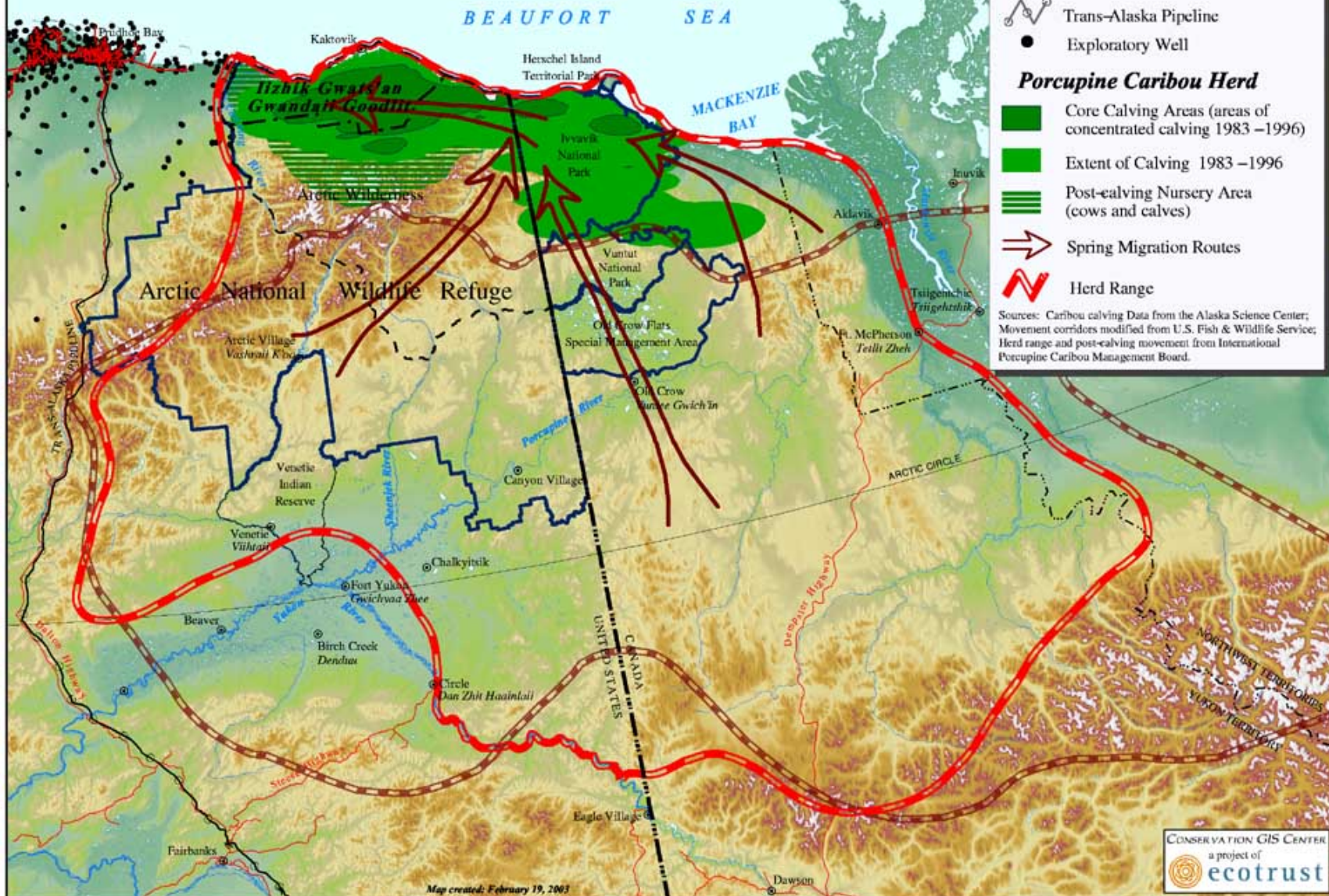
Key to Symbols:

- Arctic National Wildlife Refuge
- Northern Yukon Parks
- 1002 Area
- Gwich'in Nation
- Oil Field Infrastructure
- Trans-Alaska Pipeline
- Exploratory Well

Porcupine Caribou Herd

- Core Calving Areas (areas of concentrated calving 1983-1996)
- Extent of Calving 1983-1996
- Post-calving Nursery Area (cows and calves)
- Spring Migration Routes
- Herd Range

Sources: Caribou calving Data from the Alaska Science Center; Movement corridors modified from U.S. Fish & Wildlife Service; Herd range and post-calving movement from International Porcupine Caribou Management Board.



Map created: February 19, 2003



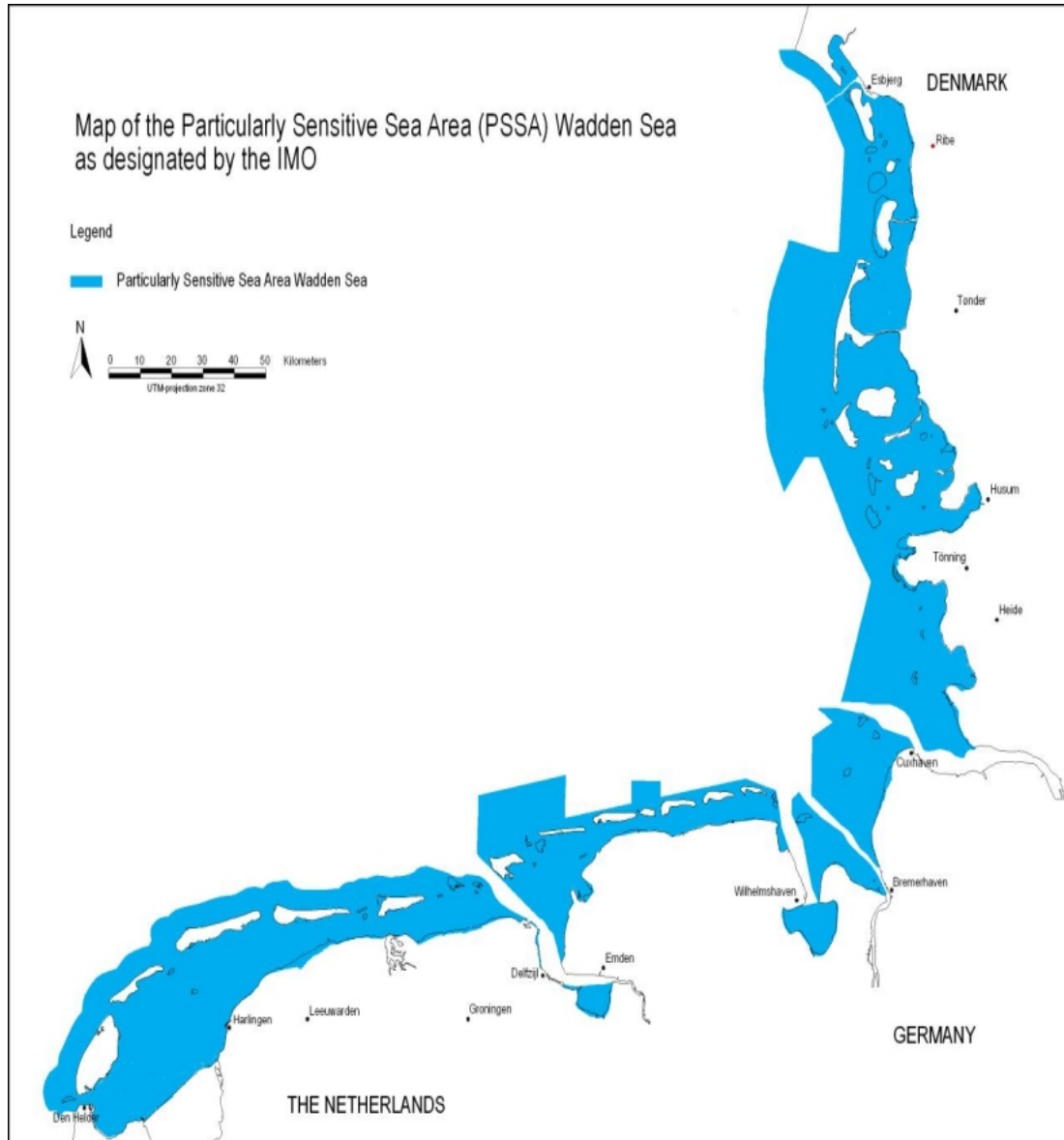
2. Align Impact Assessment Laws and Procedures

EU Review of projects/EIAs affecting transboundary biodiversity suggests:

- Consideration of biodiversity in EIA is weak.
- Biodiversity only considered if project is within a protected area
- Ecosystem services are not valued
- EIA not applied consistently
- Separate assessments usually carried out, including appropriate assessments under the EU Habitats Directive
- Cumulative threats and impacts not addressed
- Approaches to EIA do not support an ecosystem approach



Wadden Sea



Particularly Sensitive Sea Area (IMO PSSA) due to ecological uniqueness, critical habitat, productivity, spawning and breeding grounds and ecological vulnerability.

Also economic benefit, human dependency, recreation, research and education.

Trilateral Wadden Sea Plan

- The ‘guiding principle’ : the Wadden Sea should be considered as a single ecosystem and managed **‘to achieve, as far as possible, a natural and sustainable ecosystem in which natural processes proceed in an undisturbed way’**.
- Explicit recognition that designated areas can be adversely affected by development activities outside them and that their management must be seen within the context of the social and economic interests of the wider Wadden Sea region (WSP, Paras. 7 and 12).
- In light of guiding EU policy and the spirit of the trilateral co-operation, EIA seen as a major tool in achieving the aims of the Wadden Sea Plan.

BUT..Operation of the EIA Directive in the Wadden Sea region varies widely:



- Consideration of biodiversity in EIA is weak.
- EIA screening thresholds vary
- No mechanisms in place to prevent 'salami slicing' (design of individual projects so they fall just below the thresholds for EIA)
- No mechanism for screening cumulative impacts

An aerial photograph of the Danube Delta, showing a complex network of waterways and wetlands. The water is a deep blue, and the surrounding land is a mix of green and brown, indicating different types of vegetation and soil. The text is overlaid on a light blue rectangular background in the center of the image.

3. Stronger partnerships and mechanisms to harmonise EIA required

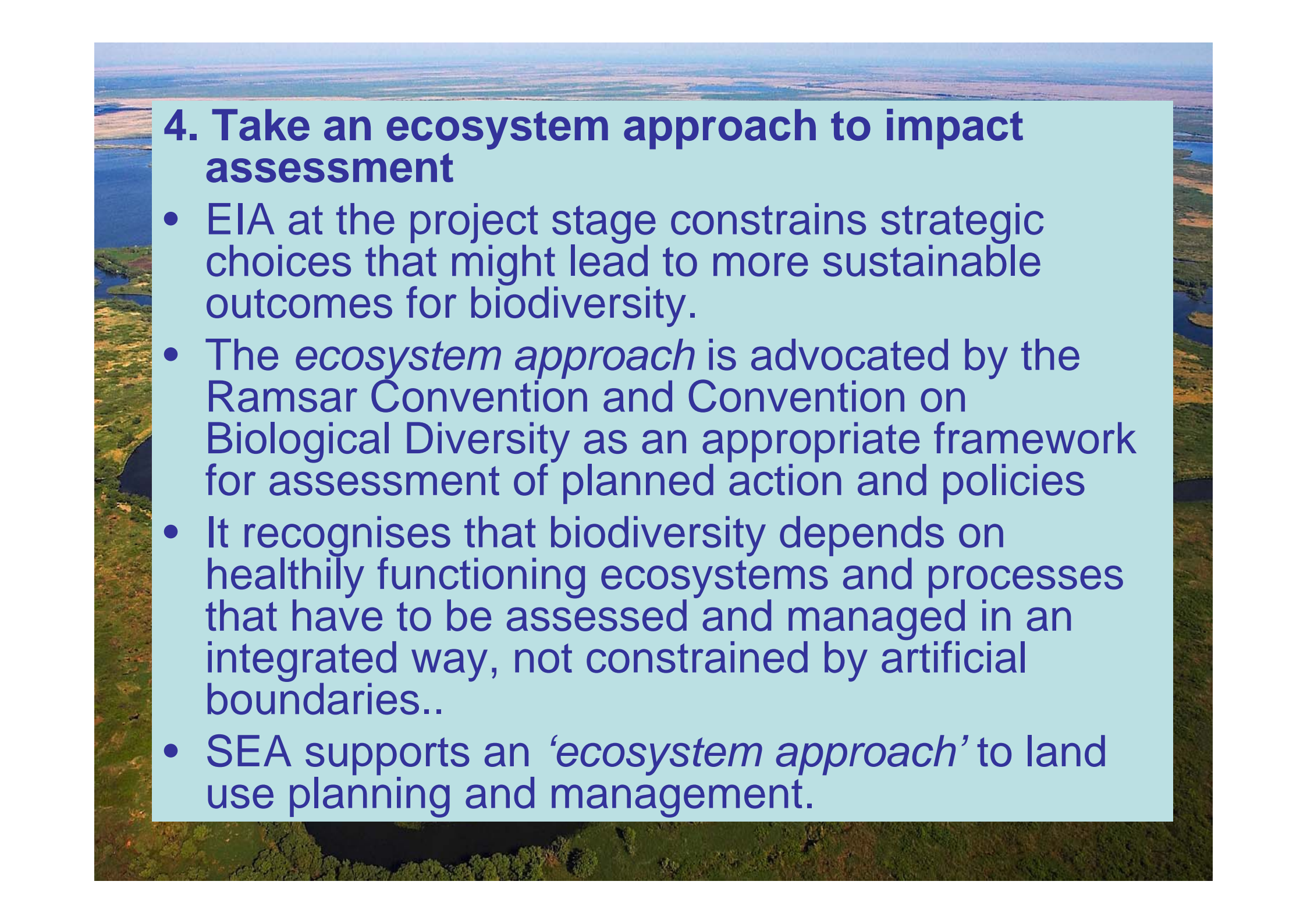
- for important trans-boundary biodiversity conservation areas
- for shared ecosystem services
- for habitats used/ required by globally threatened species
- to tackle multiple-source threats and pressures
- to tackle increasing diffuse or global threats e.g. climate change

e.g. UNECE Water Convention: “Our waters: joining hands across borders”



Photos of Hawizeh Marsh by Ekram Kaissm, World Wetlands Day 2006]

- Framework for 56 countries in the UNECE region for equitable use of waters in transboundary basins, which cover about 40% of the region
- Collaboration with Ramsar.

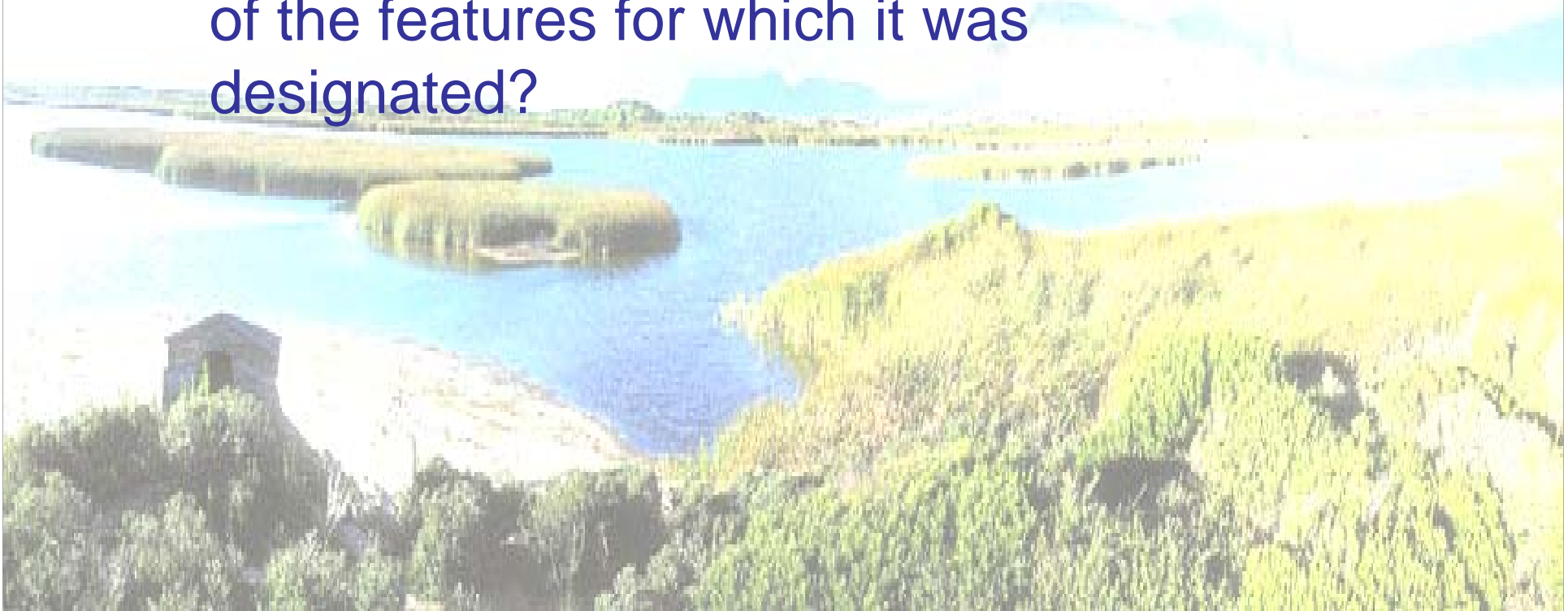


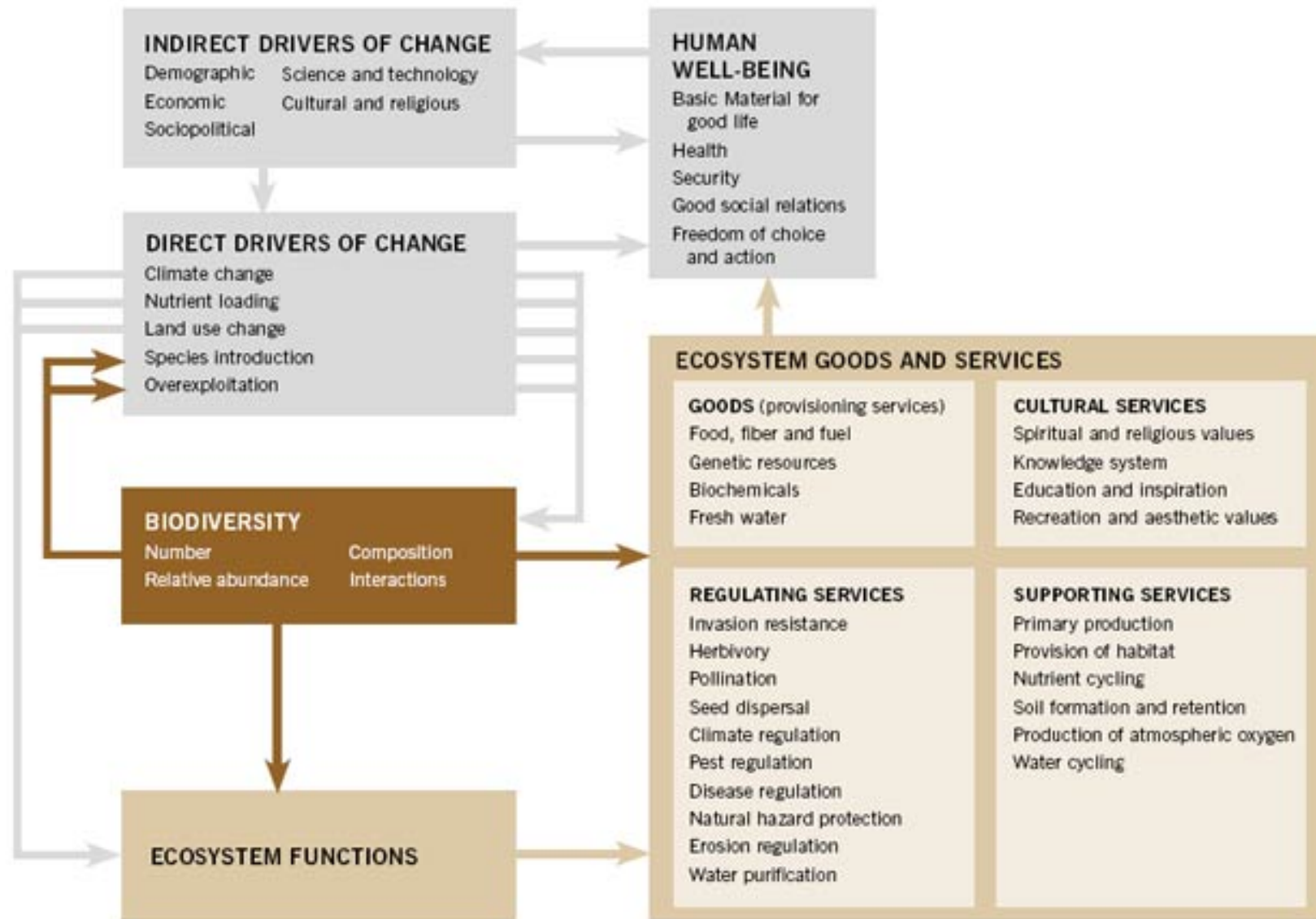
4. Take an ecosystem approach to impact assessment

- EIA at the project stage constrains strategic choices that might lead to more sustainable outcomes for biodiversity.
- The *ecosystem approach* is advocated by the Ramsar Convention and Convention on Biological Diversity as an appropriate framework for assessment of planned action and policies
- It recognises that biodiversity depends on healthily functioning ecosystems and processes that have to be assessed and managed in an integrated way, not constrained by artificial boundaries..
- SEA supports an '*ecosystem approach*' to land use planning and management.

Integrity of Ecosystems:

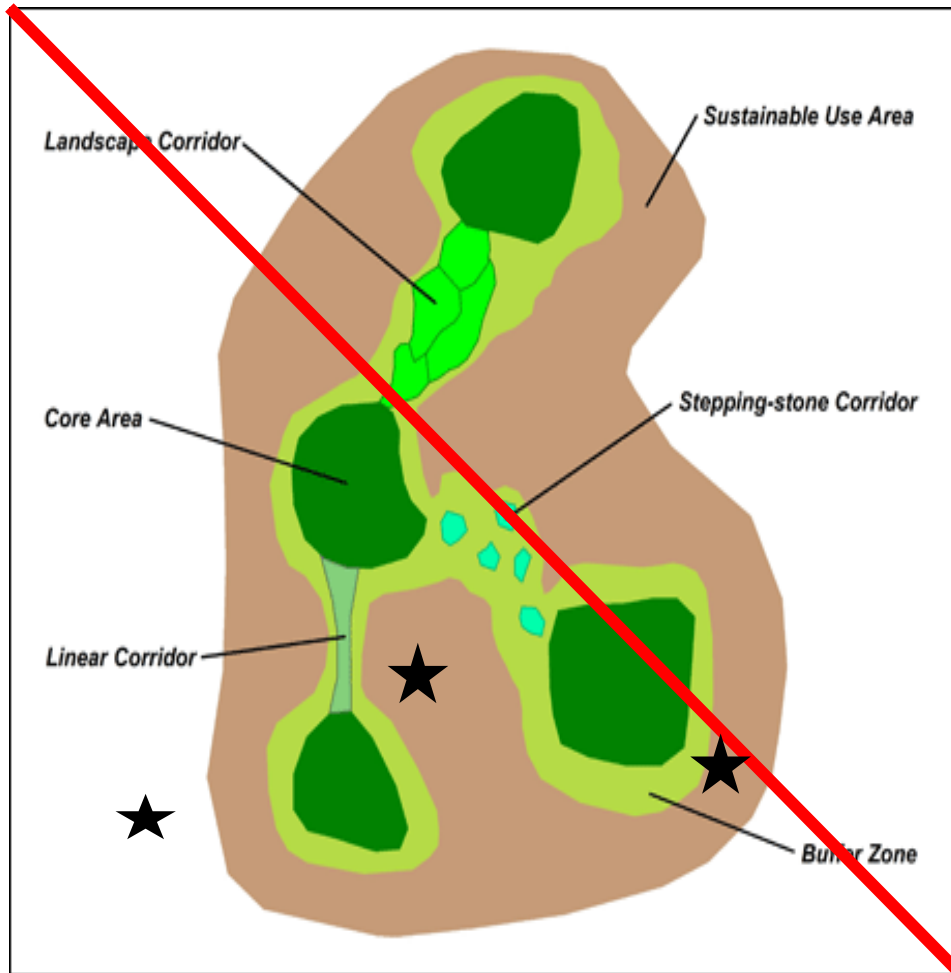
Does the intended activity cause an imbalance in any biological, physical or chemical components, or in their interactions, affecting the viability and functioning of the ecosystem or the status of the features for which it was designated?





Biodiversity is affected by drivers of change and also is a factor modifying ecosystem function. It contributes directly and indirectly to the provision of ecosystem goods and services. These are divided into four main categories by the Millennium Ecosystem Assessment: goods (provisioning services) are the products obtained from ecosystems; and cultural services represent non-material benefits delivered by ecosystems. Both of these are directly related to human well-being. Regulating services are the benefits obtained from regulating ecosystem processes. Supporting services are those necessary for the production of all other ecosystem services.

5. Develop approaches to transboundary SEA for biodiversity



- E.g. to preserve integrity of the Natura 2000 network.
- Recognise constraints, reduce conflict and risk.
- Identify opportunities to enhance resilience not just in Protected Areas.
- Where a regional approach to mitigation will be more effective, e.g. to create corridors/ manage trans-boundary pollution.

Protected areas



- Border of ecoregion
- Priority conservation areas
- Wildlife corridor
- Tusheti National parks
- Strict nature reserve

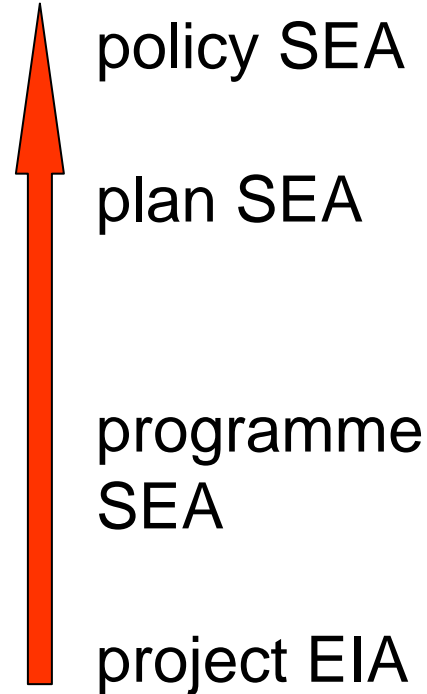
Sources: WWF-Caucasus, 2006



Cartographic design: Manana Kurtubadze

Many drivers affecting biodiversity operate at this scale

Focus on damage-limitation



-Recognise biodiversity as the basis for essential ecosystem services.

-Share information and consultation

-Review alternatives and options, to ensure **integrity.**

-Plan for mitigation in advance of impacts. Put suitable monitoring in place.

-Narrower range of options and alternatives.

-More detailed analysis of specific impacts.

-Less opportunity for avoidance or off-site mitigation.

-Too late to start new monitoring



Looking Ahead: Continuing Loss of Biodiversity

- Project to ecosystem perspective
- SEA as framework for collaborative trans-boundary assessments with an emphasis on integrity and ecosystem functioning
- Applying principles of appropriate assessment more widely
- Common frameworks for assessment and monitoring
- Compensation and offsets on a region-wide/ international basis to meet global targets for no net loss/ net positive gain not just in PAs



Final Conclusions:

- **Biodiversity targets will not be met. Ecosystem services continue to be lost at increasing economic cost**
- **Consideration of biodiversity in EIA is weak.**
- **Only considered for proposals affecting protected areas**
- **EIA not applied consistently**
- **Cumulative threats and impacts not addressed**
- **Approaches to EIA often do not support an ecosystem approach: SEA is required**

An aerial photograph of the Danube Delta, showing a vast network of waterways and wetlands. The landscape is a mix of green vegetation, yellowish-brown soil, and blue water. A prominent winding river flows through the foreground, surrounded by dense green trees and shrubs. The background shows a wide expanse of water and land, with a clear horizon line under a bright sky.

www.iaia.org and follow links to
CBBIA (Capacity Building for
Biodiversity in Impact
Assessment)

Danube Delta, Daniel Petrescu