

# Ecosystem services in EIA & SEA:

Putting biodiversity and  
stakeholders interests  
on the decision maker's agenda.



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# Environmental Impact Assessment (EIA)

## Reminder:

- Environmental Impact Assessment is the process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made.

## or in short:

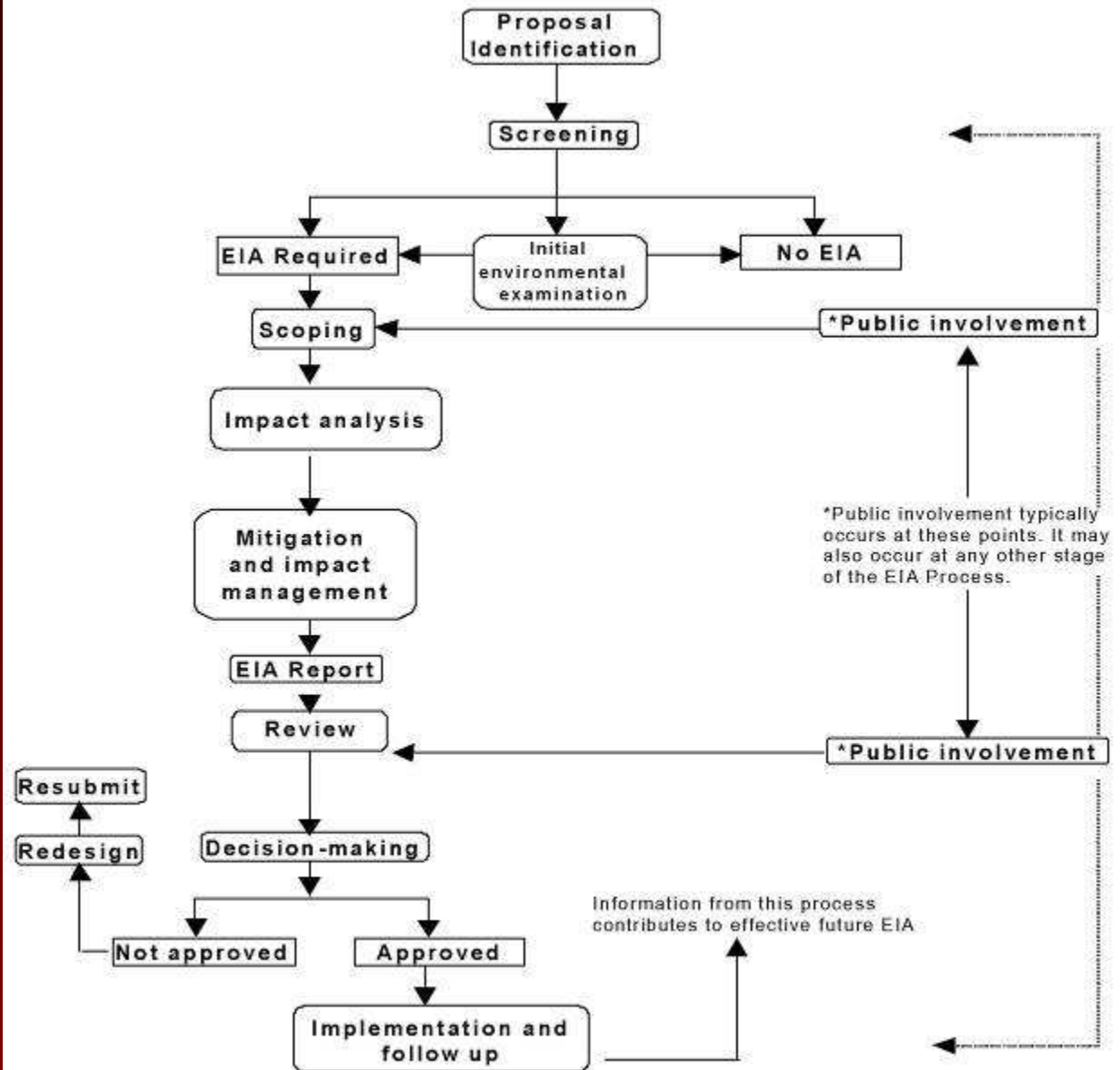
- Analysing, monitoring and managing the consequences of development

Source: IAEA principles ([www.iaia.org](http://www.iaia.org))

# What is good Environmental Assessment?

- Describes activities likely to cause impacts
- Documents and analyses the setting
- Identifies affected and/or interested peoples
- Facilitates the process of participation
- Describes possible impacts on identified groups
- Presents project alternatives (including a no development option)
- Recommends mitigation measures
- Implements environmental monitoring and management

# EIA: a legally embedded highly structured process



# Starting from EIA: why SEA?

- Proposed dam in Wadi Surdud, Yemen
- US \$ 150 million
- EIA review mission



# Wadi Surdud reservoir & dams site



Montreal, 13-15 May 2009

# Comments

1. Relevant boundaries of the study area?
2. Overarching reference policy/document?
3. Main expected impact from dam & reservoir?
4. Given the negative findings, how to proceed? (IA is not created to stop development !!)

Our recommendation: start SEA at river basin level, before creating major interventions, focussed on ongoing processes at basin level, and opportunities and constraints for development.

# DAC Policy statement on SEA

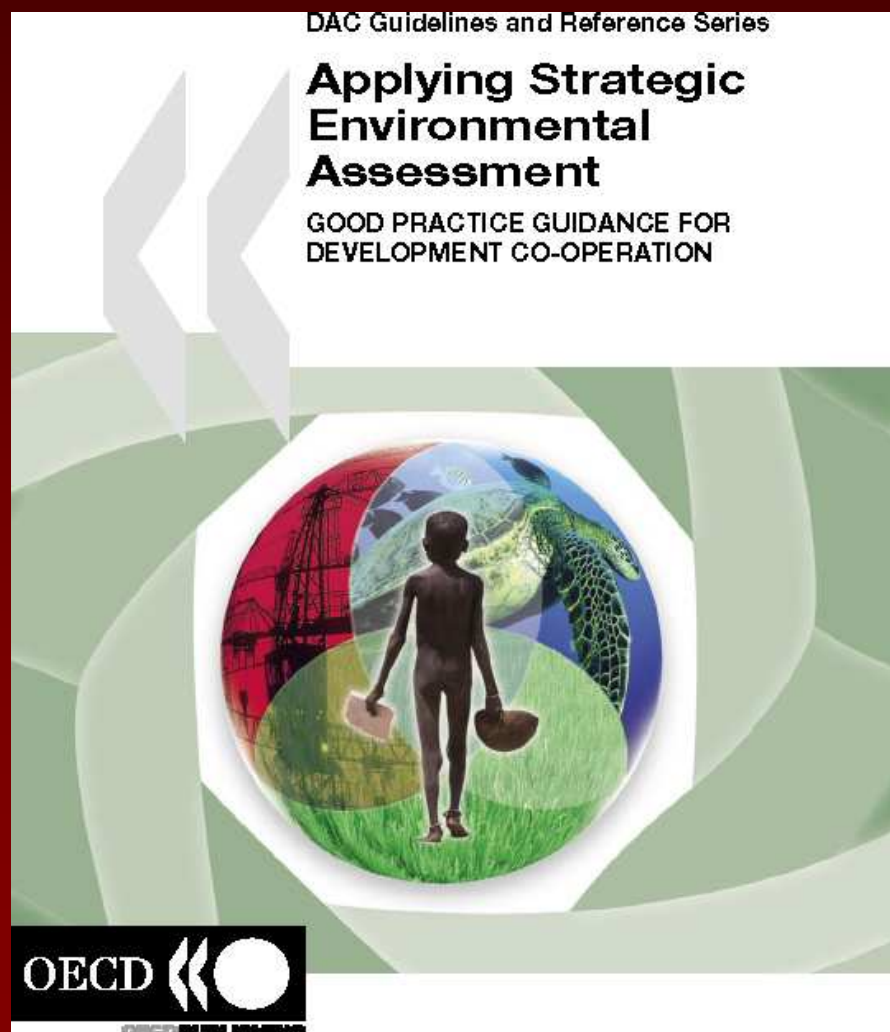
- Poor people suffer from bad planning
- Assistance increasingly at policy/programme level (not project)
- Paris Declaration on Aid Effectiveness (OECD, 2005):  
“... develop and apply common approaches for SEA at sector and national levels.”

## DAC Policy statement on SEA (cont'd)

SEA can:

- safeguard environmental assets for poverty reduction;
- build public engagement in decision making;
- prevent costly mistakes;
- simplify project-level EIA...
- ...thereby speeding up subsequent implementation;
- facilitate transboundary co-operation
- contribute to conflict prevention

# OECD-DAC SEA Guidelines



## Ten entry points for SEA:

- For countries
  - National policies
  - Sector policies
  - Investment plans
  - Spatial plans
- For development agencies
  - Assistance strategies
  - Partnership agreements
  - Sector policies
  - Public/private infra programmes
- Others
  - Review commissions
  - Private sector

# Other relevant international agreements

UN Economic Commission for Europe (UNECE):

- Convention on Environmental Impact Assessment in a Transboundary Context  
or: 'Espoo EIA Convention' (1991)
  - Kiev SEA Protocol (2003)
- Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters  
or 'Aarhus Convention' (1998)
- Convention on Biological Diversity:
  - SEA Guidelines (2006) – followed by Ramsar and CMS
  - (*background document handed out*)



# What is / does SEA?

SEA is a tool to:

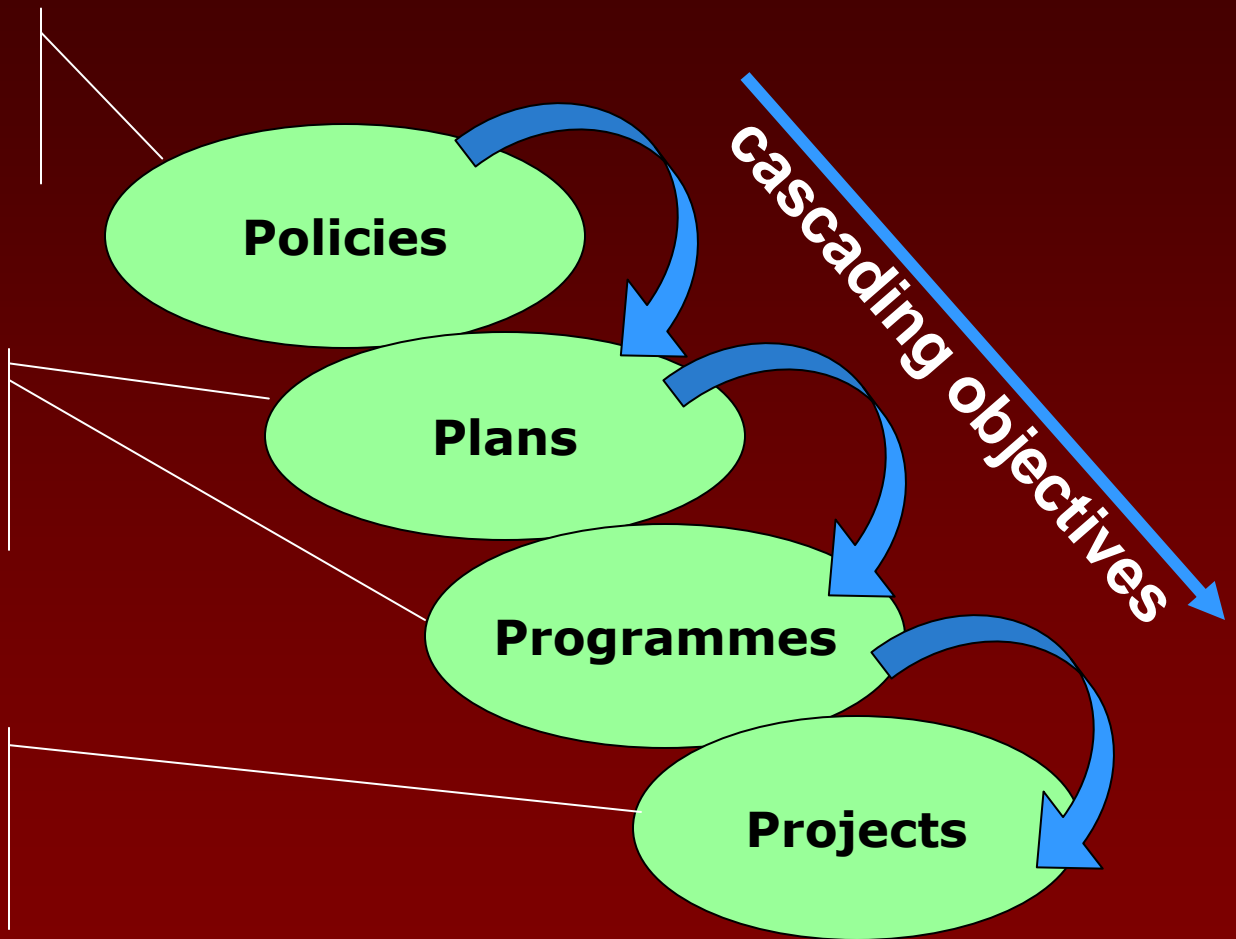
- Structure the public and government debate in the preparation of policies, plans & programmes;
- Feed this debate through a robust assessment of the environmental consequences and their interrelationships with social and economic aspects;
- Ensure that the results of assessment and debate are taken into account during decisions making and implementation.

# Tiering of SEA and EIA

Sustainability assessment, or integrated policy appraisal, or SEA

Strategic Environmental Assessment  
(EU SEA directive, 2004)

Environmental Impact Assessment  
(EU EIA directive 1999)



# How do SEA and EIA differ?

Early in decision cycle	At the end of the cycle
Pro-active – development of plans	Reactive to existing plans
Broad range of alternatives	Alternatives very limited
Can deal with cumulative effects	Limited view on cumulative impacts
Broad perspective, little detail, vision	Narrow perspective, high level of detail
No clear process – linked to planning cycle	Well-defined process
Focus on sustainability agenda	Focus on symptoms of environmental degradation

# Hierarchy of policies, plans and programmes: water quantity management in NL

**National policy** on water  
quantity management  
regional **rivers** coast

**Water management in the 21<sup>st</sup> century.** Three-step strategy: (i) retaining, (ii) storing and (iii) draining, to minimise the passing on of water-related problems.

**National plan** for upper  
and lower delta rivers  
Upper delta **Lower delta**

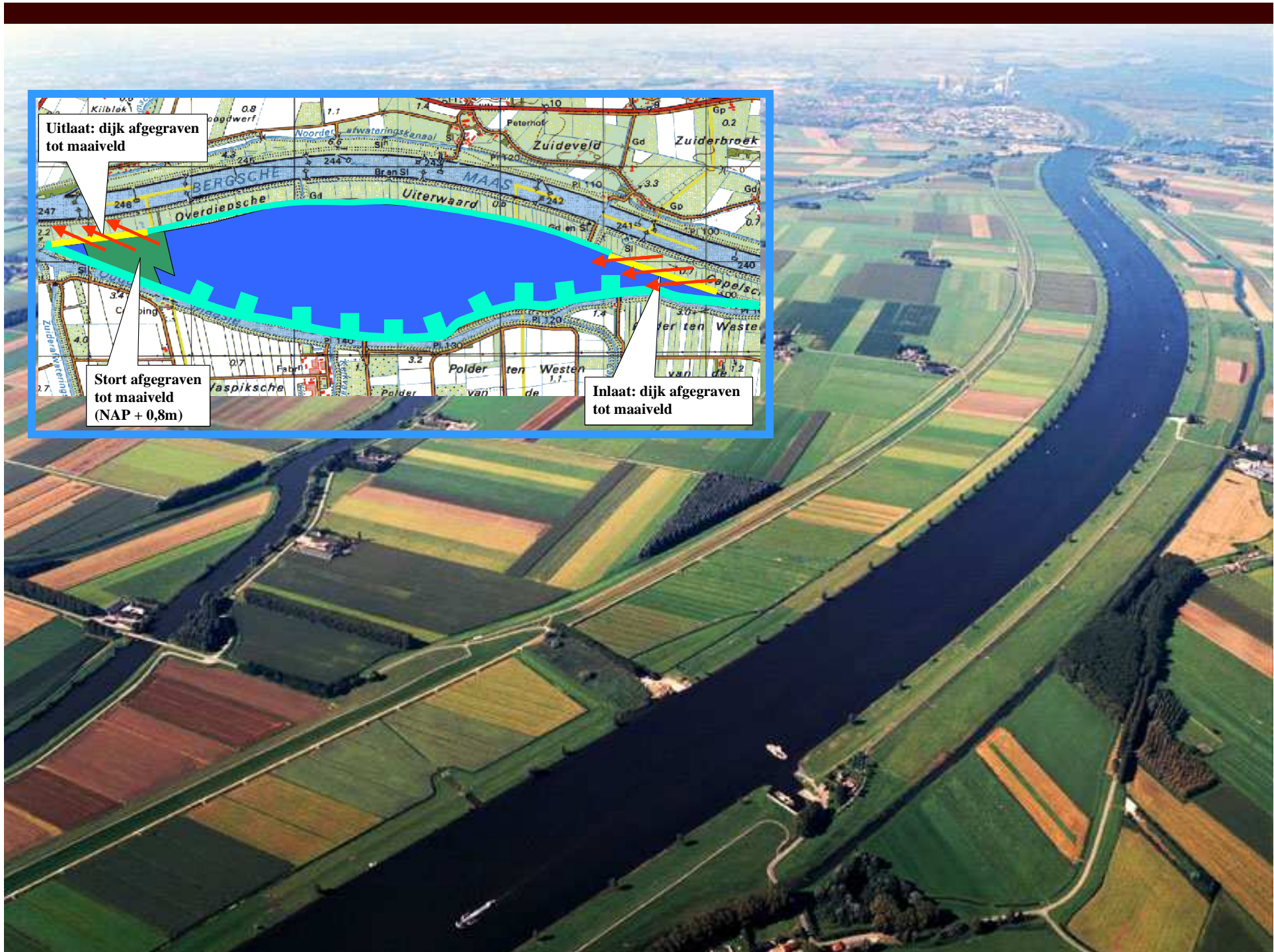
**Space for Rivers.** Guarantee inland safety under conditions of increased discharges through major rivers, through provision of space for rivers. **(SEA)**

**Regional programme**  
intervention packages for  
lower delta rivers  
**Meuse** Rhine Lek

**Space for lower delta rivers.** Design of (cost-)effective intervention packages in lower delta, following the three step strategy.

**Project** interventions along  
river Meuse  
Various alternatives  
ex: Overdiep polder

**Flood mitigation in polders.** Measures to allow emergency flooding of Meuse river in polder along the river, safeguarding spatial quality, agricultural functions and enhancing biodiversity. **(EIA)**

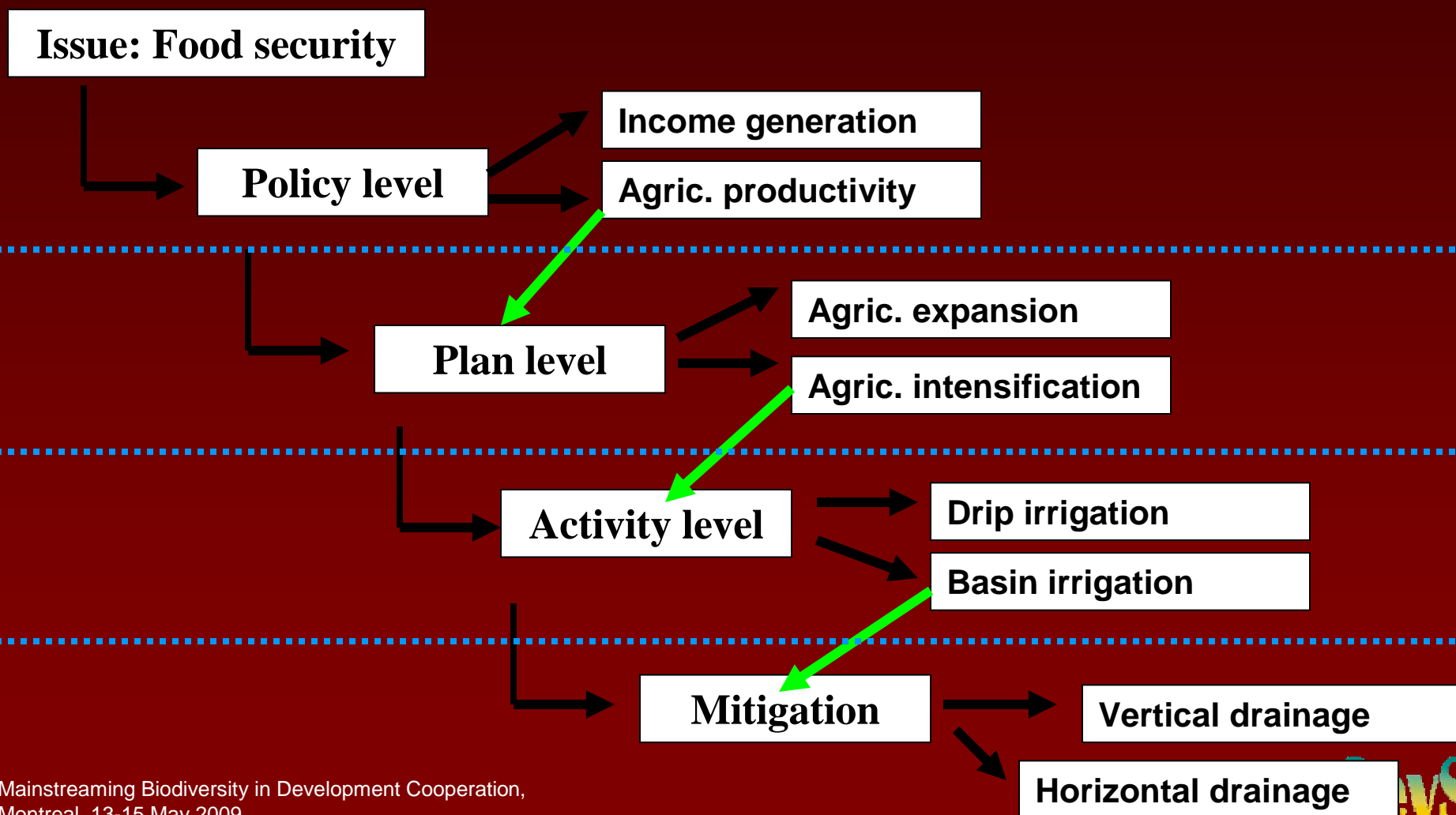


Uitlaat: dijk afgegraven tot maaiveld

Stort afgegraven tot maaiveld (NAP + 0,8m)

Inlaat: dijk afgegraven tot maaiveld

# Alternatives: decision making tiers



# Two dominant SEA approaches

## Technical assessment or Facilitator of decision-making

SEA derived from EIA methodology:

- Formalized methodology;
  - Assessment of impacts of specific proposals;
  - Structured opportunity for feedback to decision makers.
- “*Re-active*” approach; often forced by law (EU SEA directive) upon the “unwilling”.

Policy / planning approach:

- Timing and form of input depends on the planning process;
  - Interventions are made before proposals are finalized;
  - Tries to influence the overall process.
- “*Pro-active*” approach; considered as contribution to good planning by the “converted”.



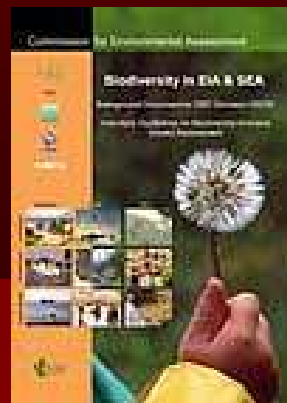
# WHY special attention to biodiversity?

- 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 make economic sense
- Identification of stakeholder
  - services represent people's interests
- Future opportunities for development:
  - unknown potential hidden in (genetic) diversity



# Convention on Biological Diversity(CBD) and impact assessment

- Article 14: Impact assessment and minimizing adverse impacts
- Memorandum of Cooperation with the International Association for Impact Assessment (IAIA)
- 2002 EIA Guidelines adopted
- 2006 Voluntary guidance on SEA adopted



# 3 levels of diversity 3 management objectives

ecosystems

species diversity

genetic diversity

conservation



sustainable  
use



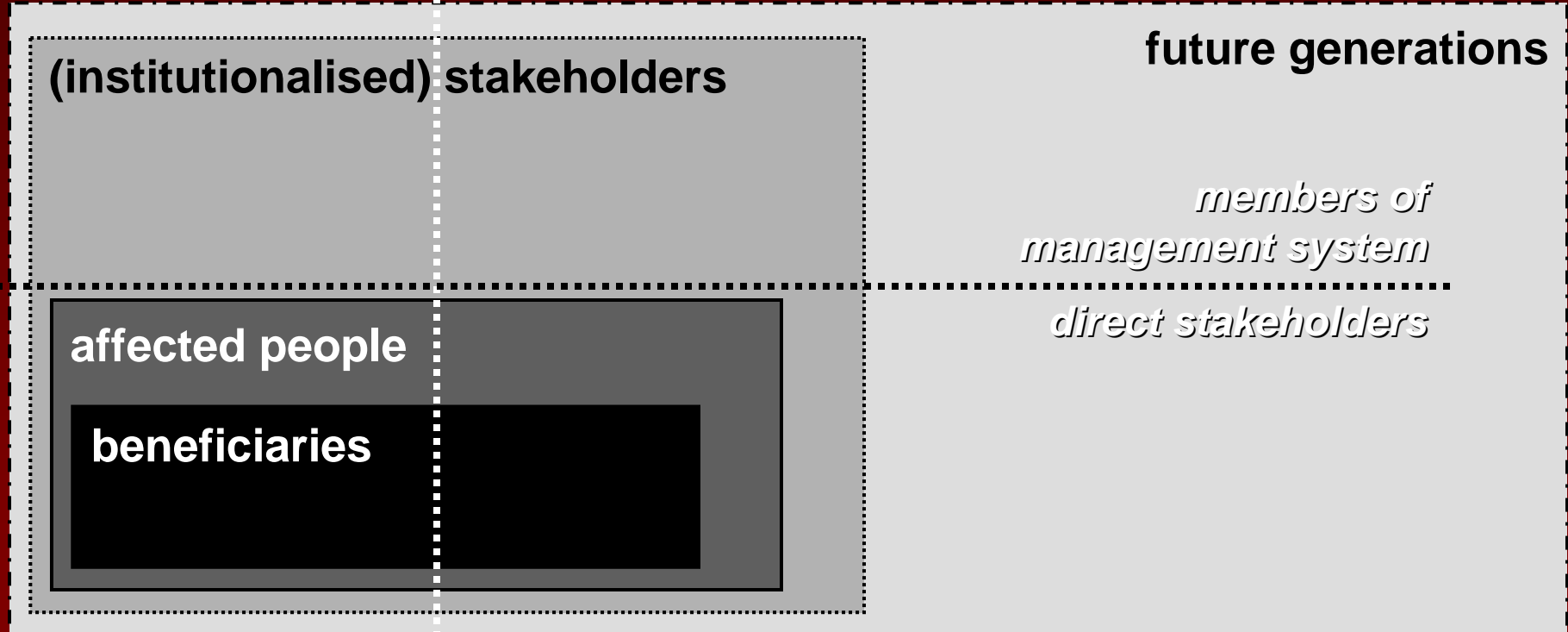
**BIODIVERSITY IS ABOUT PEOPLE !**

equitable  
sharing



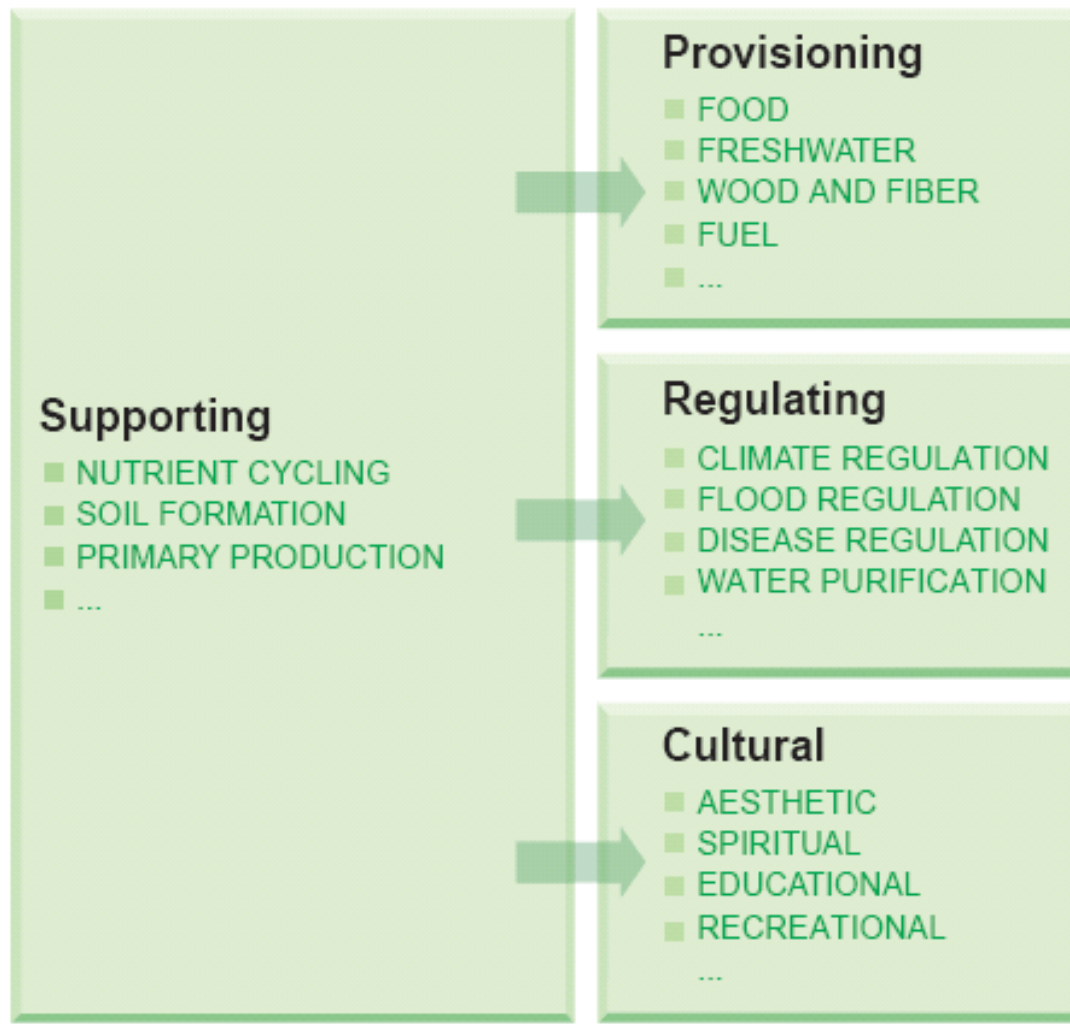
# Who are stakeholders?

*on site*     *distant (off site)*



# Translating biodiversity

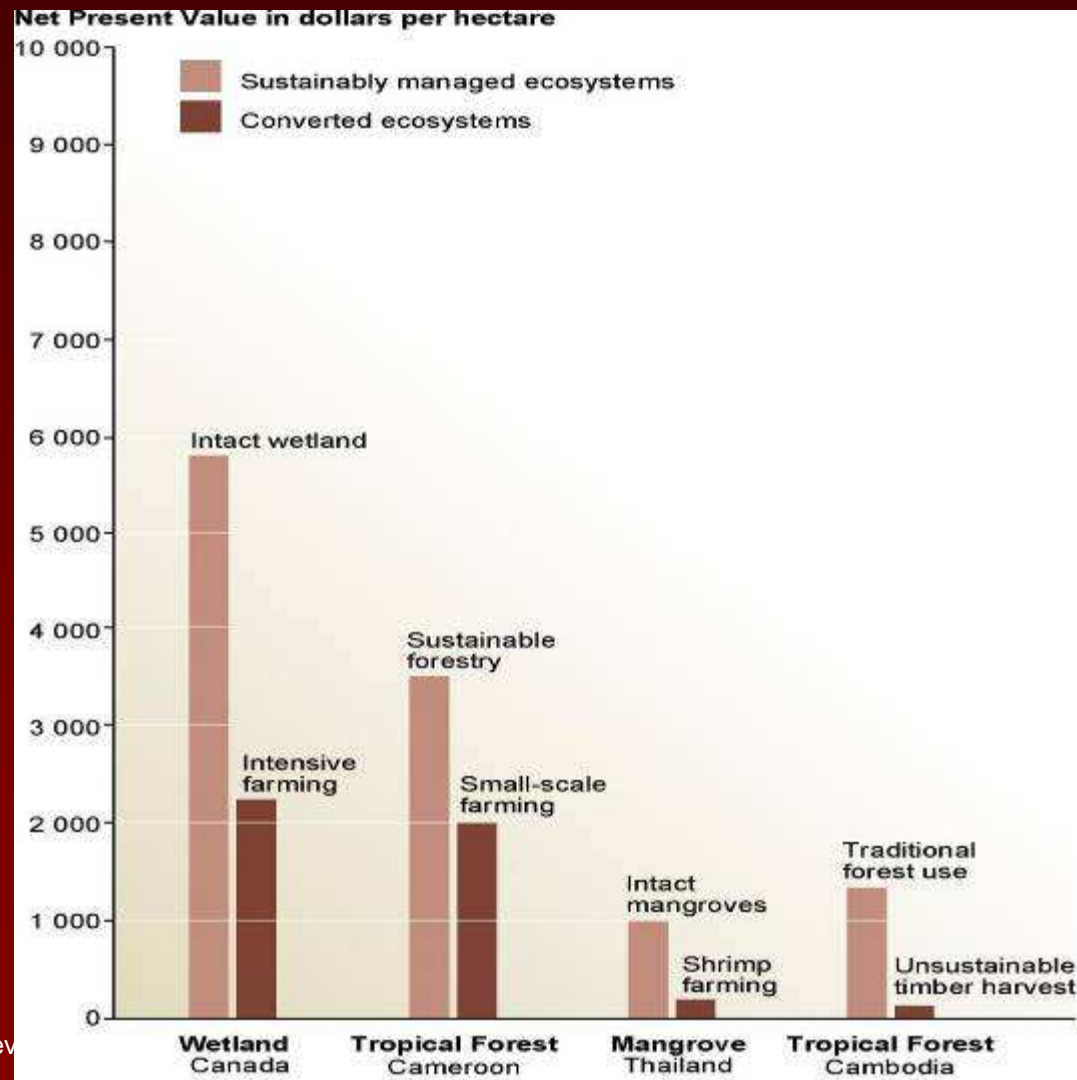
## ECOSYSTEM SERVICES



Source:

Millennium Ecosystem Assessment

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



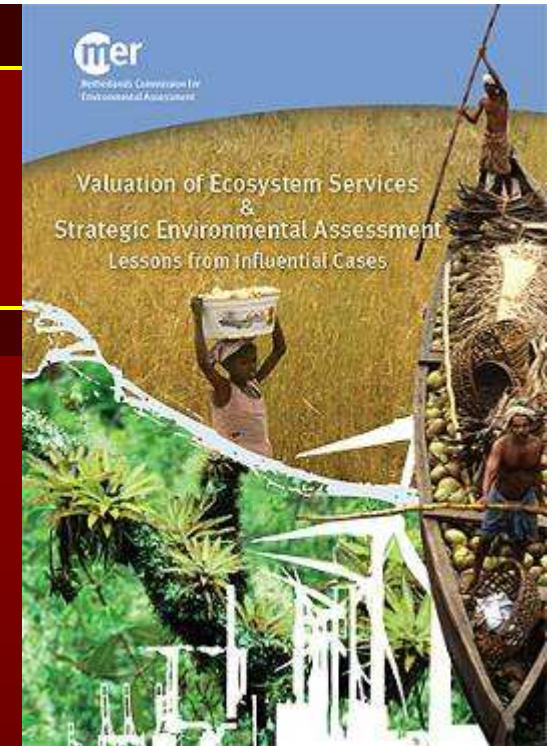
# Ecosystem services and poverty reduction

Pattern of winners and losers has not been taken into account in management decisions:

- Privatization of former common pool resources.
- Ecosystem services changes affect highly vulnerable groups.
- Women more vulnerable to changes in ecosystem services.
- The reliance of the rural poor on ecosystem services is rarely measured and thus overlooked in statistics and poverty assessments.

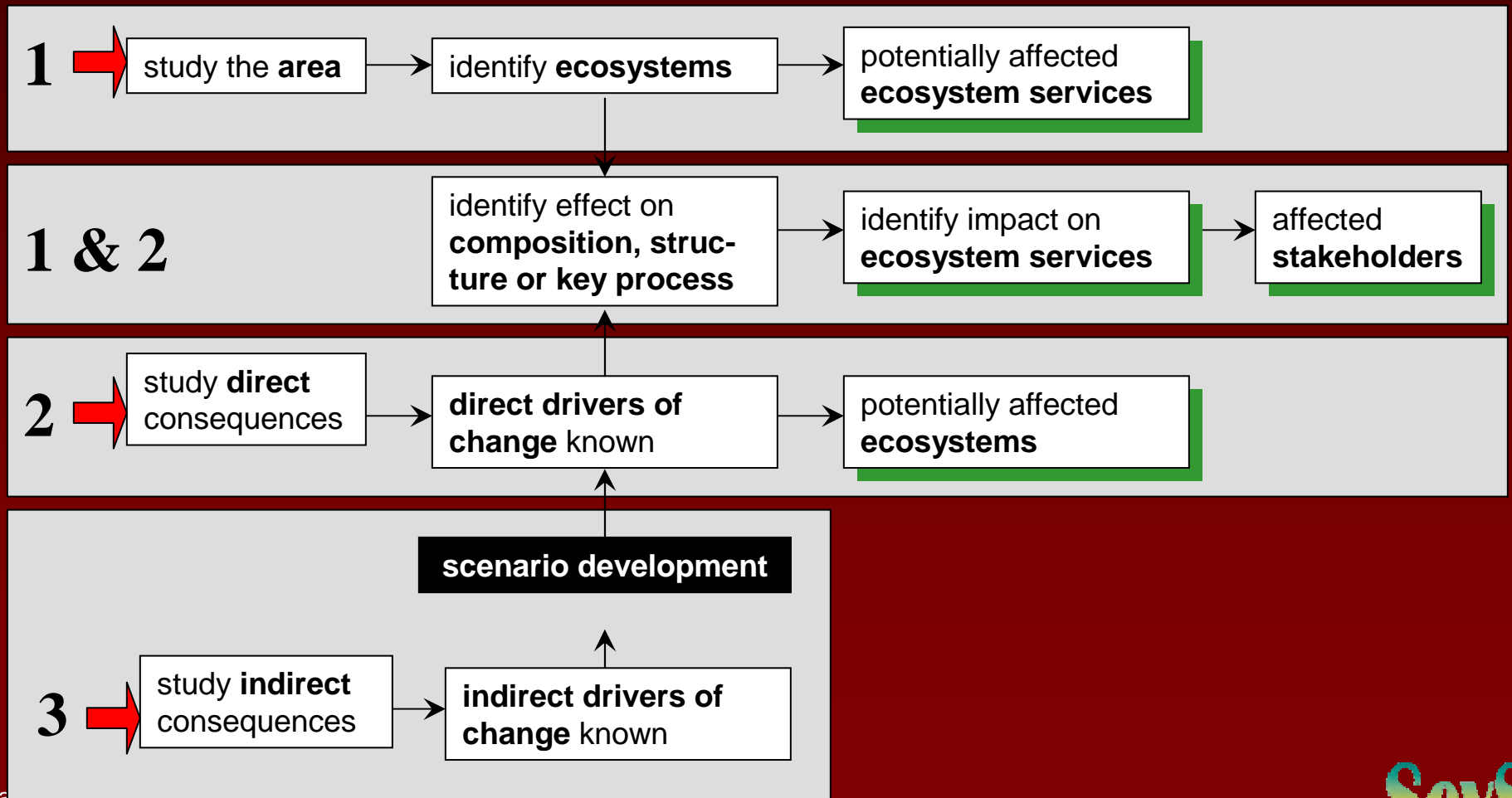
# Ecosystem services represent values for society

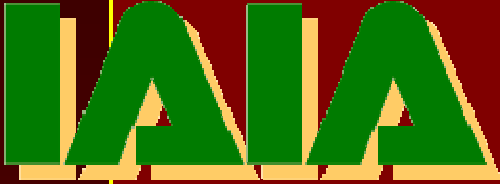
- Social
  - employment, safety, health, etc. (quality of life)
- Economic
  - direct monetary (selling of products)
  - inputs (raw materials for processing)
  - indirect (protection of infrastructure by mangroves)
- Ecological
  - future value (saving opportunities for our children)
  - spatial value (guarantee functioning of systems elsewhere)



# Biodiversity can be addressed in SEA!!

## Summary





## Biodiversity Section: 3<sup>rd</sup> action programme: donor support needed !

1. Case studies / follow-up studies :
  - *what works and what doesn't work in practice (CBD Decision VIII/28)*
2. Moving from conserving 'appreciated species' to maintaining essential ecosystem services:
  - *connect biodiversity and human wellbeing (MDG's).*
3. Payment for ecosystem services, and other market instruments:
  - reveal the true value of biodiversity
4. Getting biodiversity on the decision-makers' agenda
  - what messages are needed?