

# AN INTRODUCTION TO STRATEGIC ENVIRONMENTAL ASSESSMENT



# Course Learning Objectives

At the end of this course you should be able to:

- Describe the elements of strategic environmental assessment (SEA)
- Describe the potential application of SEA in guiding development of regional policies, plans and programs (PPP)
- Illustrate by examples the use of SEA to evaluate resource use policy in individual riparian MRB countries and in a transboundary context

# Lesson Learning Goals

At the end of this lesson you should be able to:

- Define SEA and describe its potential application in assessing PPP
- Identify shortcomings of conventional project-level EIA and CEA which can be addressed using SEA
- Describe key steps in the SEA planning and implementation process

# What is Strategic Environmental Assessment (SEA)?

“A formalized, systematic, and comprehensive process for evaluating the environmental effects of a policy, plan or programme (PPP) and its alternatives.”

(Therivel *et al.*, 1992)

# What is SEA? (Cont'd)

- The **strategic component** of a SEA refers to the set of objectives, principles and policies that give shape to the vision and development intentions incorporated in a policy, plan or program (PPP)
- SEAs deal with concepts and goals, not with particular activities
- SEAs aims to prevent unacceptable environmental damage

# What are Policies, Plans and Programs?

- Policy:** a general course of action or proposed overall direction that a government is, or will be implementing
- Plan:** a purposeful, forward-looking strategy or design that elaborates and implements policy
- Program:** a coherent, organized agency or schedule of commitments, proposals, instruments and/or activities that elaborates and implements policy

# Distinction between SEA and Project-Level EIA

- SEA is broader in scope and used for strategic planning
- Project-level EIA addresses specific issues and impacts at specific locations
- SEAs do not replace project-level EIAs
- Project-level EIAs are necessary to provide detailed analysis

# Need for SEA

## Promote sustainable development:

by enhancing the integration of environmental concerns in policy and planning processes

## Address the limitations of Project EIA:

even when cumulative effects are incorporated in project-level assessments some potential impacts will likely be overlooked



# Why Assessment at the Policy Level is Important

- Increases the level of scrutiny of environmental and social concerns (i.e., to a comparable level as economic, technological, and financial considerations)
- Provides an opportunity to proactively guide development in ways that are sustainable (e.g., incorporate sustainability considerations into upper levels of decision making, increases opportunities to affect projects)

# Why is Assessment at the Policy Level Important? (Cont'd)

- Provides an opportunity for genuine consideration of a broad range of alternatives which are often ignored or not feasible in project EIA (e.g., sites, technology, lifestyle choices, resource use)
- Improved analysis of cumulative, large-scale (i.e., regional, national and global), and non-project impacts (e.g., agricultural practices)

# Why is Assessment at the Policy Level Important? (Cont'd)

- Encourages consideration of environmental objectives within all government agencies (i.e., not just environmental departments)
- Facilitates and increases consultation between different government agencies
- Provides an opportunity to identify views of the public

# Why is Assessment at the Policy Level Important? (Cont'd)

- Strengthens project-level EIA (i.e., limitations are due primarily to the relative late stage in decision making at which EIA takes place when only limited consideration can be given to the need of the project and alternative possibilities, or to the cumulative effects of related actions)
- Enhances efficiency via **tiering** (i.e., makes project specific EIA more efficient)

# Tiering

Tiering enhances efficiency by ensuring that proposed projects are consistent with the type of development already considered in the strategic environmental assessment

# Comparative Features of Project-Level EIA and SEA

## EIA

Is reactive to a development proposal

Assesses the effect of a proposed development on the environment

## SEA

Is proactive and informs development proposals

Assesses the effect of the environment on development needs and opportunities

# Comparative Features of Project-Level EIA and SEA (Cont'd)

## EIA

Addresses a specific project

Has a well-defined beginning and end

## SEA

Addresses area, regions or sectors of development

Is a continuous process

# Comparative Features of Project-Level EIA and SEA (Cont'd)

## EIA

Assesses direct impacts and benefits

Focuses on the mitigation of impacts

## SEA

Assesses cumulative impacts and identifies implications for sustainable development

Focuses on maintaining a chosen level of environmental quality



# Comparative Features of Project-Level EIA and SEA (Cont'd)

## EIA

Narrow perspective and a high level of detail

Focus on project-specific impacts

## SEA

Wide perspective and low level of detail

Creates a vision and overall framework against which impacts and benefits can be measured

# General Differences

- SEA occurs prior to project-level decision making
- SEAs are more variable in form and scope than project EIA → wide range of strategic decisions to which SEA is applied from broad policies to specific plans
- SEA incorporates a greater scale of analysis (e.g., geographic area, environmental components considered, range of alternatives considered)

# General Differences (Cont'd)

- Technical content and specificity are of lesser detail in a SEA
- Impact prediction uncertainties are greater for a SEA
- SEA may relate to geographical regions, industrial sectors or social issues
- Time scale is more variable in SEA (i.e., ranging from the immediate to the very long term)

# Potential Uses of SEA

- Identify proactive strategies for pursuing sustainable development - identify options and opportunities
- Assist in evaluating the need and feasibility of government initiatives and proposals
- Evaluate environmental issues and impacts associated with policies, plans and programs
- Establishing an appropriate context for project EIA, including the early identification of issues and impacts that warrant detailed examination

# Application of SEA

SEA can be applied to:

- Sectors (e.g., energy, tourism)
- Geographic areas (e.g., land use or development plans at various scales - local, regional, national, international and global)
- Actions that do not give rise to projects but that may result in significant environmental impact (e.g., new technologies, privatization, agricultural practices)

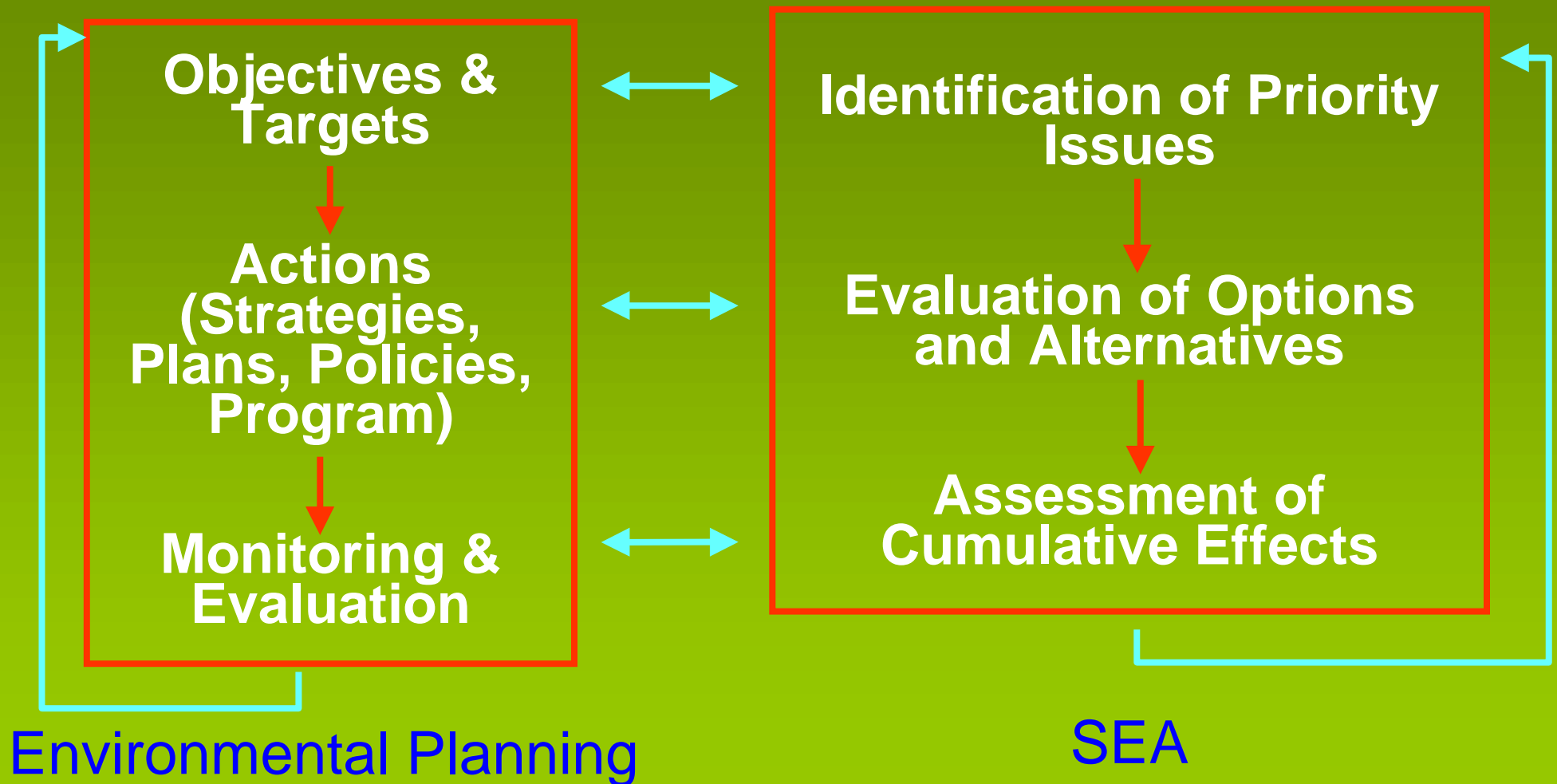
# Application of SEA (Cont'd)

- SEA occurs at all different scales from local → regional → global
- Different scales address different types of impacts (e.g., international-level SEAs focus on global issues while local SEAs address local issues)
- All SEAs address cumulative impacts
- Most common application of SEA has been the assessment of environmental impacts of land use plans at the municipal and regional level

# SEA as a Tool For Environmental Planning

- Define goals and criteria
- Examine land-use trends for problems and 'hot-spots'
- Develop future scenarios
- Predict likely effects
- Evaluate impacts and value of alternatives
- Modify alternative goals with new constraints

# Linkage Between Environmental Planning and SEA





# Limited Use of SEA

Potential advantages of SEA are well known, however, the use of SEA still remains relatively low

# Barriers to Implementing SEA

- Lack of clear definition, established methodology and mechanisms for implementation
- Political resistance
- Difficulty defining when and how SEA should be applied (i.e., policies, plans and programs are generally nebulous, non-linear, complex and iterative making it difficult to know exactly what and when a policy should be assessed)

# Barriers to Implementing SEA (Cont'd)

- Inherent complexity in analyzing policy impacts (e.g., high uncertainty, lack of knowledge, many and unclear cause and effect relationships)
- Tendency to apply assessment after policy has been developed
- Institutional difficulties in pursuing integrated policy and planning practices (e.g., difficulty in adopting holistic and broad scale thinking, inter-agency coordination, development of mutual policy)

# Barriers to Implementing SEA (Cont'd)

- Uncertainty and technical limitations
  - » since SEAs generally cover large areas, collecting and analyzing data is very complex
  - » subject to greater levels of uncertainty
  - » limited information available, specially when collecting data from different countries (e.g., determining ecological and socio-economic carrying capacities)

# Barriers to Implementing SEA (Cont'd)

- Accepting short-term pain for long-term gain
- Lack of resources (e.g., information, expertise, financial)
- Lack of strategies for effectively involving the public

# Requirements for Effective SEA Systems

- Political commitment and organizational support
- Clear provisions and requirements
- Use of appropriate methods
- Mechanisms for overview and monitoring, compliance and performance
- Follow-up and feedback capability

# Concluding Thoughts

Important points to remember are:

- Project-level EIA and CEA do not provide enough information to make environmental decisions on a regional, national or larger scale
- SEA offers a systematic process for evaluating the environmental consequences of PPP at an early stage of decision making
- Tiering of project-level EIA, CEA and SEA helps ensure that proposed projects are consistent with PPP