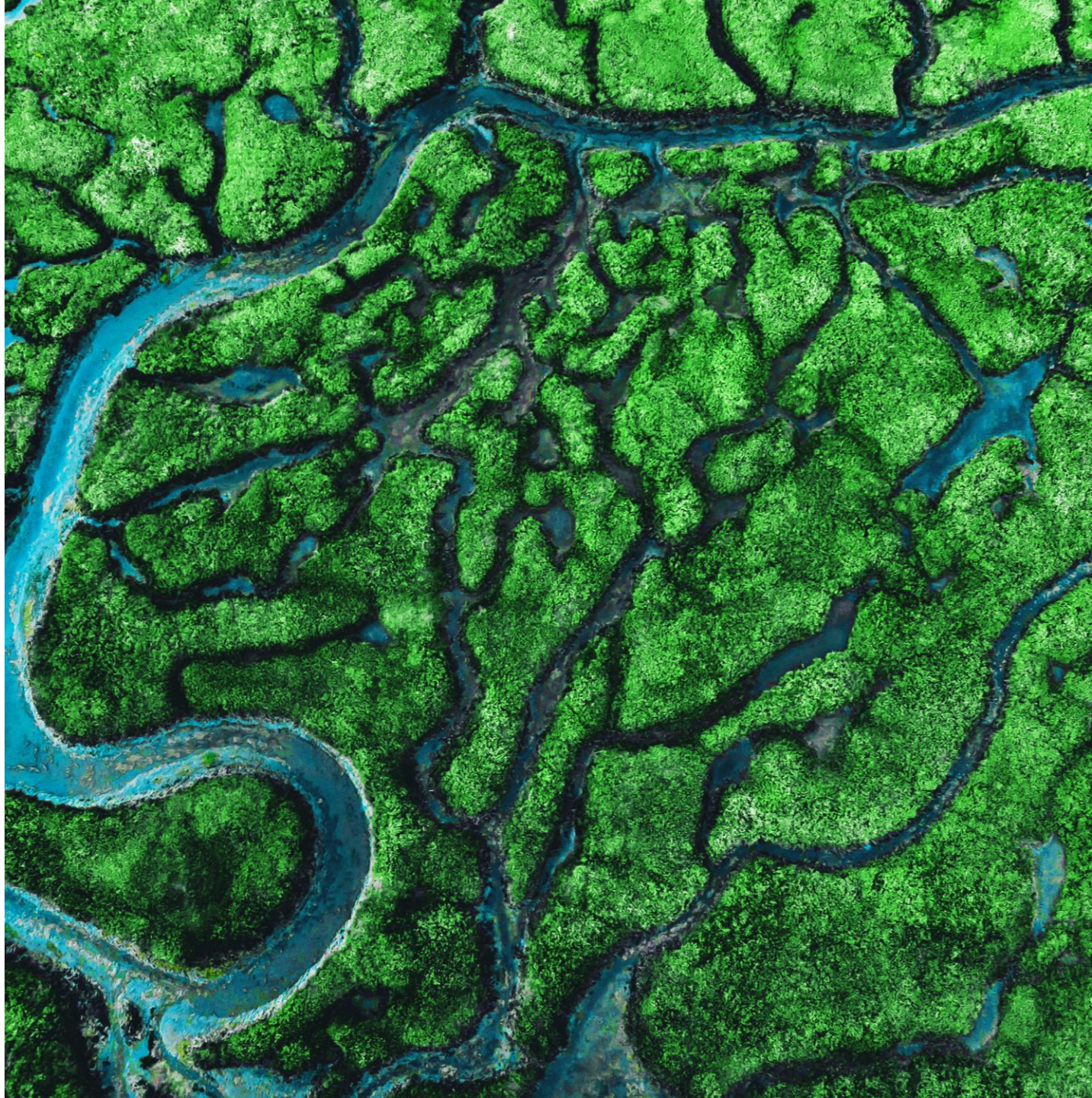
Netherlands Commission for
Environmental Assessment

SE(S)A and IWRM basin planning

Ethiopia

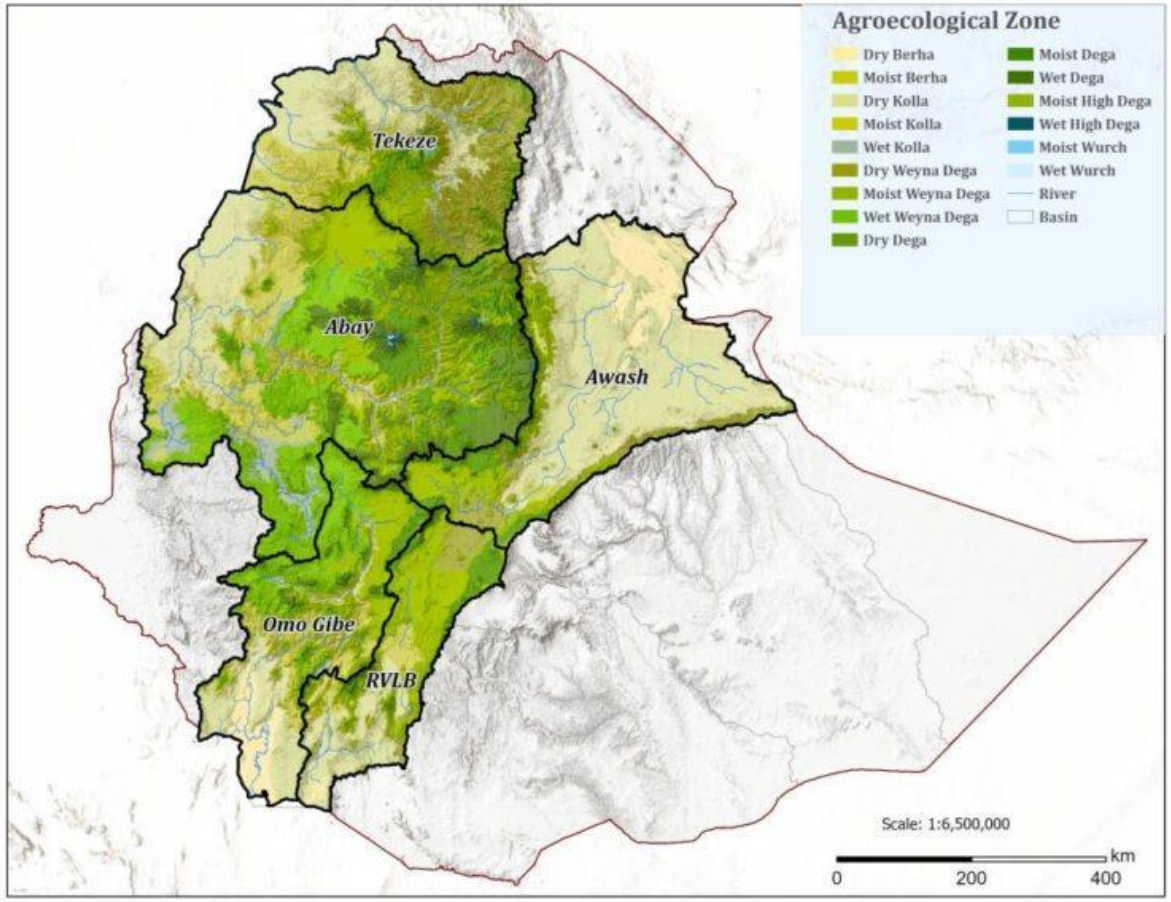
Anna Chadarevian, NCEA

November 10, 2025



Agenda

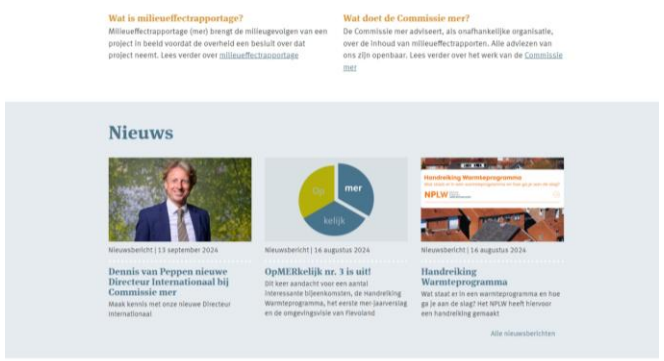
- About NCEA
- Introduction to SEA
- SEA and IWRM
- Case studies
- Exercise
- SEA vs ESIA (additional time)



NCEA in the Netherlands

- IA in The Netherlands organised through the **Commissie voor de milieueffectrapportage**, *aka* "Commissie mer" or "CieMER"
- Funded in **1987** as independent foundation
- Established by law
- Works on request of NL competent authorities
- Provides independent advice on EIA and SEA (procedure; information detail; report contents)

- Since 2023 **Ecological Authority** part of CieMER



Https://commissiemer.nl

NCEA International

- Since 1993
- **Independent non-governmental advisory body** on ESIA and SEA
- 20+ Staff
- Independence, expertise and transparency
- Cooperation with Dutch Min of FA (2023-2032)
- Working on request of NL Embassy and competent authorities
- Activities
  - Independent advice
  - Coaching
  - Capacity Development
  - System analysis

NCEA – how we operate

The NCEA:

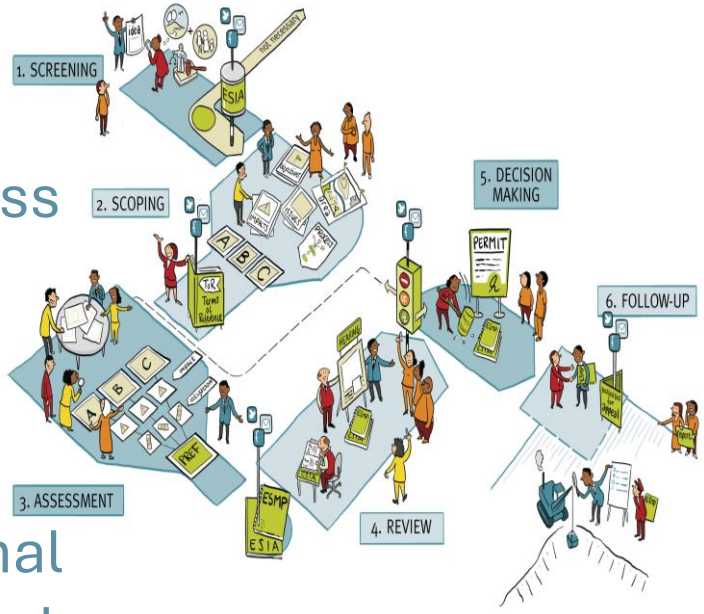
- Provides ESIA/SEA assistance free of charge in eligible countries.
- Has access to **a large pool of qualified experts** in all relevant environmental and social areas
- Always operates in a **transparent manner** (our advice is publicly available)

The NCEA does NOT:

- Provide funding
- Prepare ESIA and SEA reports
- Do consultancy work (our work is at the strategic level)
- Comment on the acceptability of a project or a programme

What we do

- Give independent **advice on the scope** of ESIA and SEA early in the decision-making process
- Conduct **independent quality review** of ESIA/SEA process and content later in the decision-making process
- **Coach** ESIA / SEA processes
- **Screen** legal ESIA requirements for subsidised Dutch investments in developing countries
- **Give advice** and **develop capacity** to strengthen national ESIA / SEA systems, including institutions, processes and legislation
- Provide an **on-line knowledge centre** on ESIA / SEA-country portfolios.



Activities 2008-2013

- MoU with EPA (2008-2013)
- ESIA and SEA regional and national training (4) with ENTRO, focus water related infrastructure (2009-2012)
- Visit to NCEA by delegation from Gambella Land Administration, Utilization and Environmental Protection Bureau, to discuss NCEA support for SEA for Integrated Land Use and Development Plan (2013)

Environmental Protection Authority

Commissie voor de milieueffectrapportage

MEMORANDUM OF CO-OPERATION

The Environmental Protection Authority (EPA) represented by its Director General, Dr. Tewolde Brhan Gebre Egizabher, and the Netherlands Commission for Environmental Assessment (NCEA), represented by its Deputy Director, Mr. Rob Verheem, further referred to as "the parties", have agreed on the present Memorandum of Co-operation which has the following clauses:

Article 1
Objective and scope

The Memorandum of Co-operation covers technical co-operation in the following fields[1]:

1. Enhancement of capacity for environmental assessment (both EIA and SEA);
2. Developing and implementing a more effective technical and regulatory system for environmental assessment;

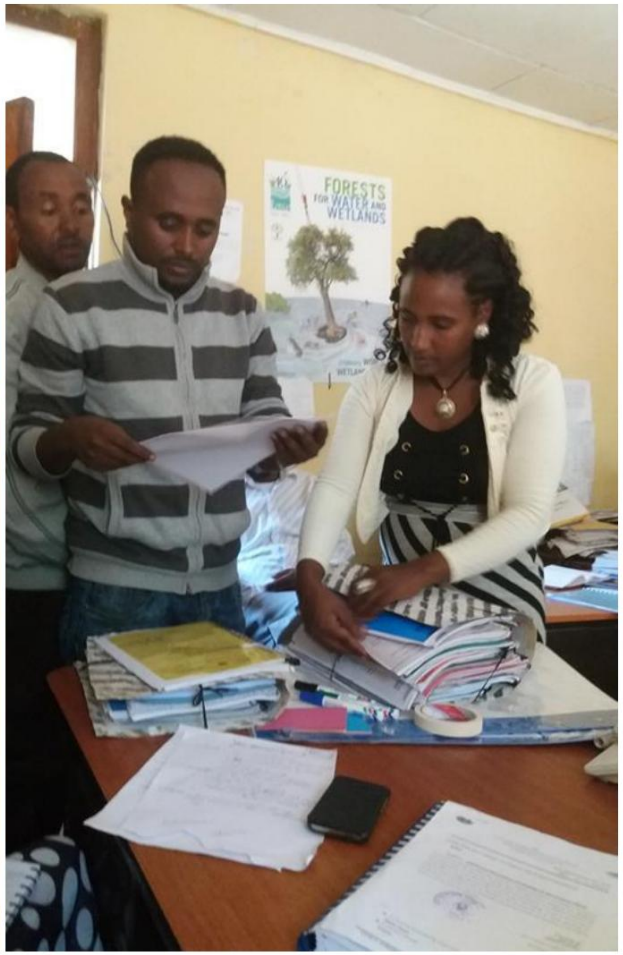
2017: Min. of Water, Irrigation & Electricity

The Environment and Climate Change Directorate planned to integrate SEA in the new water policy

SEA seminar for water policy makers, with NCEA facilitation, to raise awareness on importance of SEA for water planning.

2018-2020: MoU Amhara State

Focus on scoping /review capacity for ESIA at Environmental Protection Bureau (region/zone/woreda)



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MEMORANDUM OF UNDERSTANDING

between the

ENVIRONMENT, FOREST and WILDLIFE PROTECTION & DEVELOPMENT AUTHORITY of the Amhara National Regional State, Ethiopia

and the

NETHERLANDS COMMISSION FOR ENVIRONMENTAL ASSESSMENT

The Environment, Forestry, Wildlife Protection and Development Authority of the Amhara National Regional State, Ethiopia (EFoWPDA), represented by its Director General Dr Belayneh Ayele Anteneh, and the Netherlands Commission for Environmental Assessment (NCEA), represented by its Director International, Mr Rob Verheem, further referred to as "the parties", have established this memorandum of cooperation, which has the following clauses:

Article 1 – Scope of the cooperation

The scope of this memorandum of understanding covers: capacity strengthening for Environmental and Social Impact Assessment (ESIA) and Strategic Environmental Assessment (SEA) in Amhara Regional State, Ethiopia.

Article 2 – Objectives

The present memorandum of cooperation has the following objectives:

1. Phase 1: provide capacity strengthening support on ESIA to environmental experts within the EFoWPDA so that they are enabled to fulfil their administrative tasks in applying ESIA in Amhara. Also targeted will be environmental experts within the Amhara regional design authority, water bureau, and urban development bureau, as well as in the 10 Amhara Zones, who have similar tasks related to ESIA and SEA (in total 25 people);

Independent advice/coaching

- Through Netherlands Enterprise Agency: infra, water projects
- Through Netherlands Embassy: agri-business development, horticulture, Dutch flower farm (Gunsila)

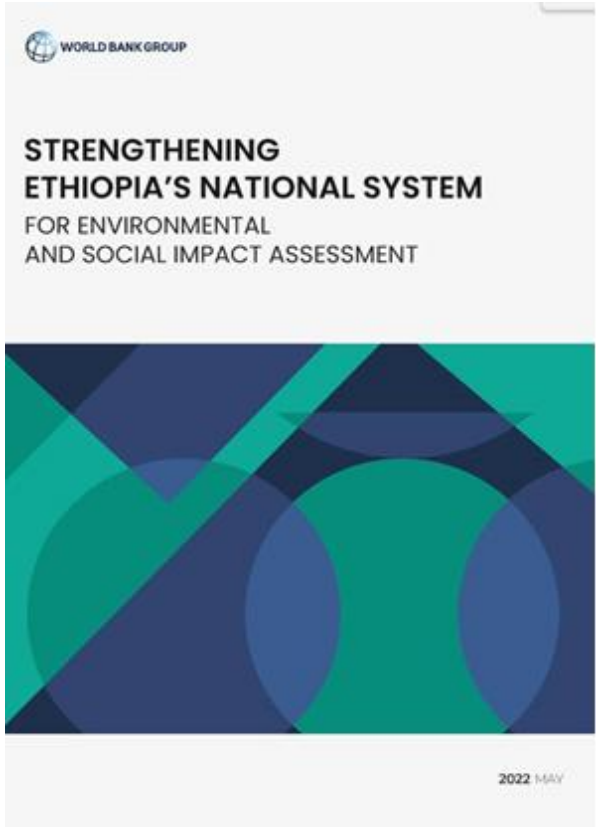
- *As these projects needed to comply with the IFC performance standards, the NCEA facilitated a training session on these IFC PS for in Amhara State

Activities 2021 (during corona)

- Participation in 2 workshops - facilitated by Intergovernmental Forum of Mining to support government officials to identify gaps in the legal framework for
- ESIAs for mining projects, and discuss possible actions, e.g., more in-depth support for ESIA and SEA

NCEA visits 2022/2023

- Re-establish contacts with Oromia and Amhara regional environmental bureaus, Amhara interested in continued cooperation
- Discussions with World Bank on NCEA role in their Programme to Strengthen National Systems for ESIA
- Meeting EPA
- Meeting WLRC



SEA workshop Hawassa March 2024

- In response to a request from Wondo Genet College of Natural Resources and Forestry, Hawassa University, the NCEA organised a three-day workshop on SEA.
- To enhance awareness and expertise in SEA, drawing enthusiastic participation from university staff and regional EPA representatives.

News

19-09-2024 | Ethiopia | Water management

Training SEA and basin management

In September 2024, the NCEA visited Ethiopia for a workshop on SEA and basin management.

09-04-2024 | Ethiopia | Regulatory Framework

Hawassa University hosts successful SEA workshop

The NCEA was asked by Hawassa University to facilitate a three-day workshop on Strategic Environmental Assessment.

27-07-2023 | Ethiopia | Water management

ESIA and SEA orientation workshops

The NCEA facilitated two workshops to assess needs for SEA and ESIA in Ethiopia and within the Blue Deal programme.

https://www.eia.nl/en/countries/ethiopia/

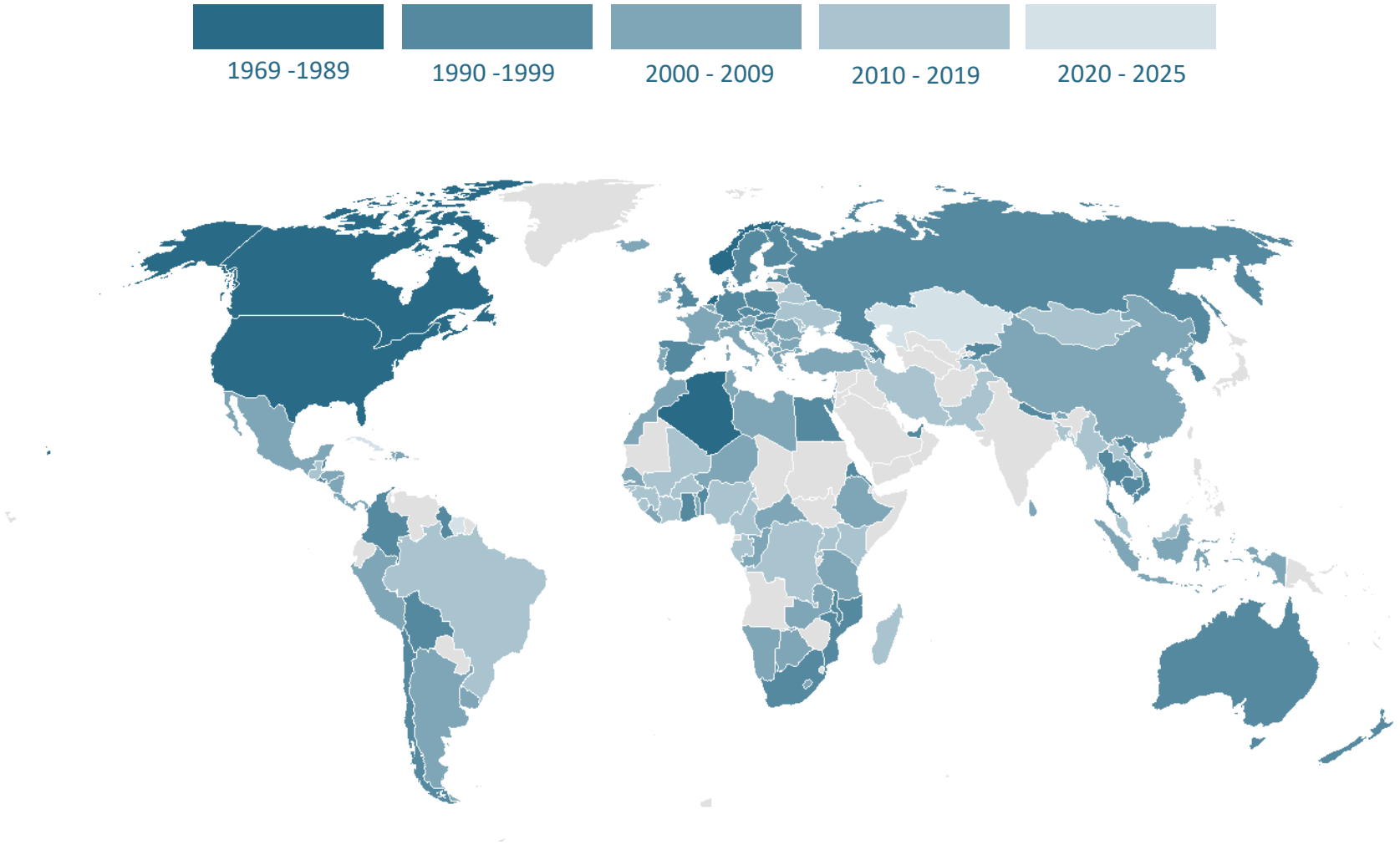
Ever heard of SEA or SESA?

What is SESA?

Strategic Environmental and Social Assessment

‘A tool that aims to integrate environmental considerations into policies, plans and programs (PPPs) and evaluate their interlinkages with economic and social considerations’

Overview introduction SEA in regulatory framework



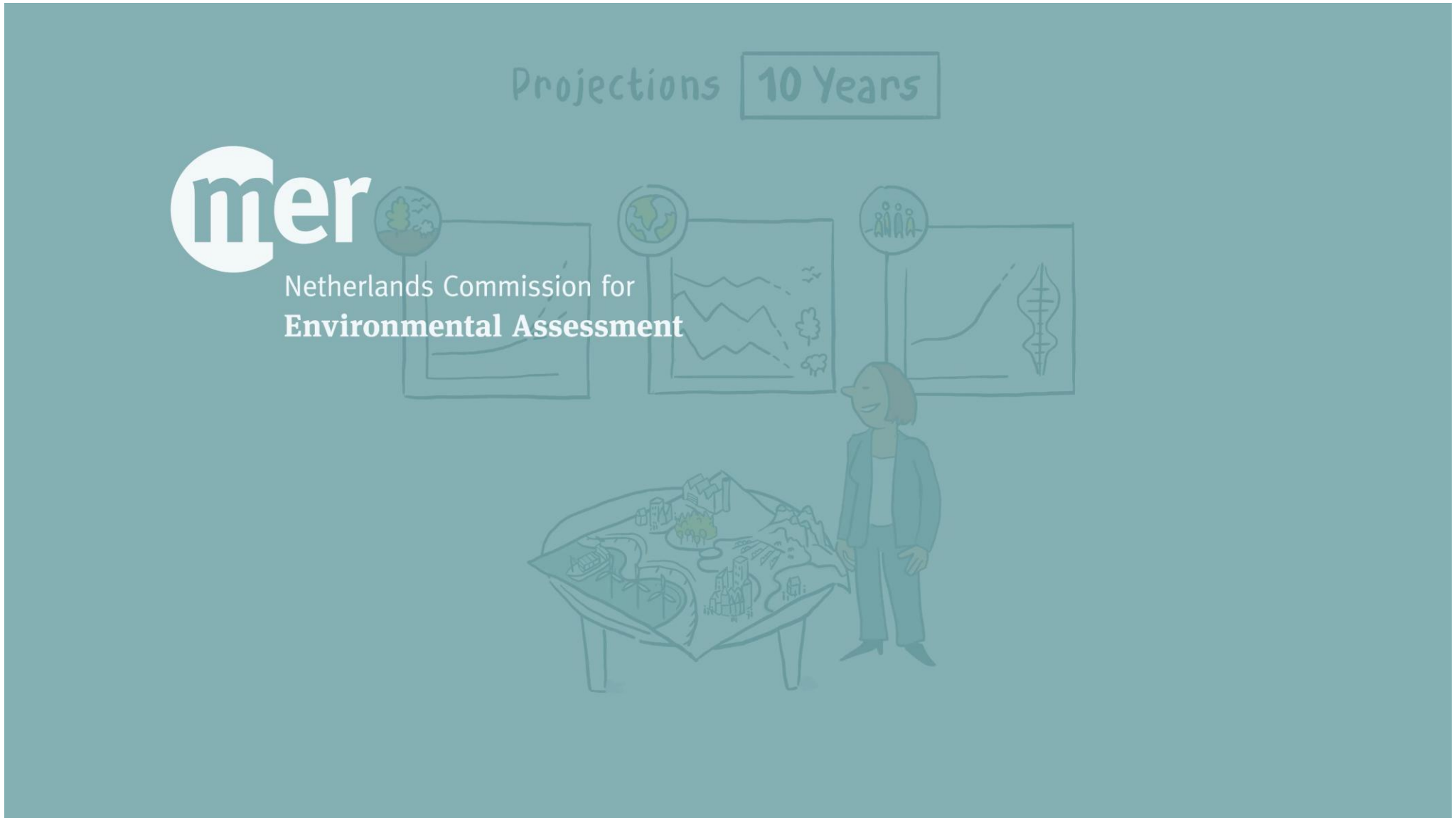
What is SEA?

A tool to improve planning and decision making (not a separate process!!)

Brings in steps that otherwise would be forgotten

PPP definitions can vary a lot in different countries, depending on the political & institutional context.

PPPs can have a national, regional, sectoral y/o spatial character and can also have a transboundary dimension.



https://www.eia.nl/en/ncea-publications/

	Sector	Multi-sector	All sectors
National	- Energy plan - Agricultural development plan - Oil & gas development plan	- Economic corridors - Hydropower plan - Marine plan - Water strategy	- National 5 yr development plan - Climate change action plan
Regional	- Road development plan	- Water development plan	- Regional spatial plan - River delta plan
Local	- Waste management plan	- Drinking water plan - Port / industrial development plan	- Urban development plan

SEA helps to identify risks & avoid mistakes

- Why build houses in a flood prone area?
- Why build a road through a protected area when another route can reach the same purpose with less impacts?
- Why build hydro-dams in a water stressed area, if there is potential for other renewable energies?
- How to avoid resettlement of people, or if this is really required, how to ensure that adequate and fair compensation takes place?

What is the best way to develop?

Small-scale conventional farming?

Large-scale farming?

Or a mix?

+

How best can we use natural resources?

Energy or Irrigation?

Tourism or Mining?

What, where, how fast?

Why is SEA used?

SEA is a response to shortcomings in practice

Key components of SEA

Influence

Information

Dialogue

Netherlands Commission for
Environmental Assessment

Netherlands Commission for
Environmental Assessment

Why SEA + IWRM

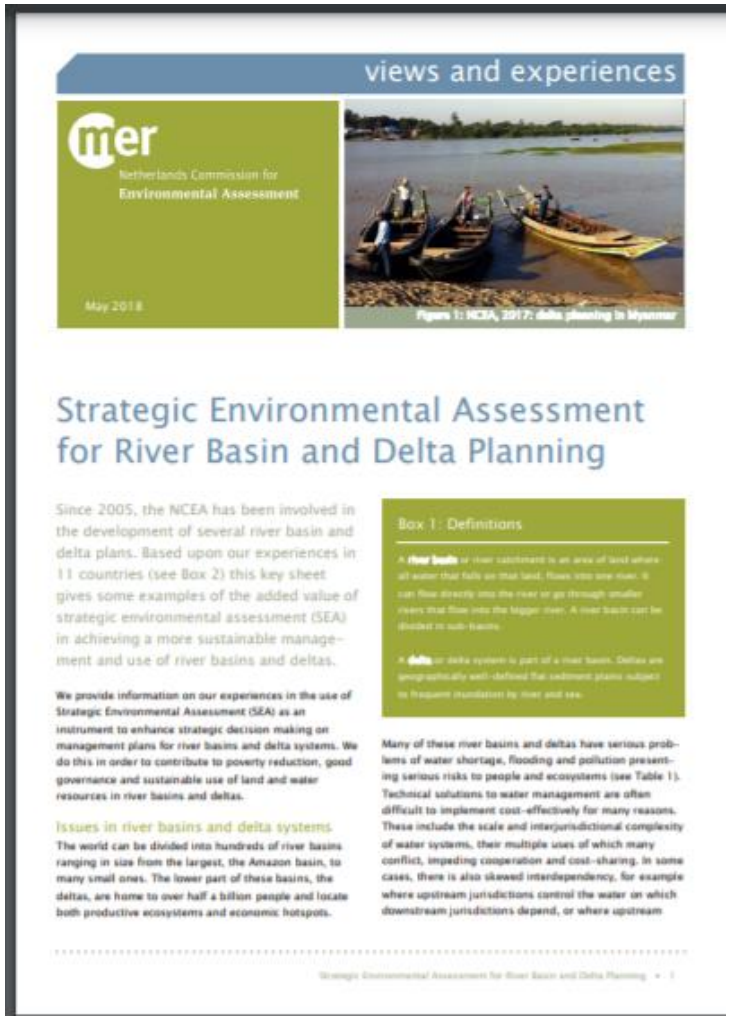
Anna Chadarevian
Netherlands Commission for Environmental Assessment

SEA & IWRM – ‘Water plans’

2009

2011

5th World Water Forum Istanbul


views and experiences

mer
Netherlands Commission for Environmental Assessment

May 2018

Strategic Environmental Assessment for River Basin and Delta Planning

Since 2005, the NCEA has been involved in the development of several river basin and delta plans. Based upon our experiences in 11 countries (see Box 2) this key sheet gives some examples of the added value of strategic environmental assessment (SEA) in achieving a more sustainable management and use of river basins and deltas.

We provide information on our experiences in the use of Strategic Environmental Assessment (SEA) as an instrument to enhance strategic decision making on management plans for river basins and delta systems. We do this in order to contribute to poverty reduction, good governance and sustainable use of land and water resources in river basins and deltas.

Issues in river basins and delta systems

The world can be divided into hundreds of river basins ranging in size from the largest, the Amazon basin, to many small ones. The lower part of these basins, the deltas, are home to over half a billion people and locate both productive ecosystems and economic hotspots.

Box 1: Definitions

Many of these river basins and deltas have serious problems of water shortage, flooding and pollution presenting serious risks to people and ecosystems (see Table 1). Technical solutions to water management are often difficult to implement cost-effectively for many reasons. These include the scale and interjurisdictional complexity of water systems, their multiple uses of which many conflict, impeding cooperation and cost-sharing. In some cases, there is also skewed interdependency, for example where upstream jurisdictions control the water on which downstream jurisdictions depend, or where upstream

2018

SEA

Strategic Environmental Assessment (SEA)

"a tool to support and improve strategic planning and decision-making"

while

"integrating environmental issues, evaluate their inter-linkages with economic and social issues and facilitate a public and governmental dialogue"

SEA – Objectives in River Basin Planning

General: integrate environment in government plans

- Assess the quality of a river basin plan on its contribution to sustainable and inclusive development
- Assess consequences of planning for environment and society
- Facilitate stakeholder participation
- Integrate plans in transboundary and regional development planning

IWRM for Basin Planning

Often used for management plan and is a great initial tool

However,

Many experiences:

- environment plays a little role in decisions (water allocation, water quality management, protection of water dependent ecosystems)
  - Ecosystem services!!
- not embedded in any legal procedures

Comparison IWRM – SEA for Basin Planning

Differences:

- IWRM
  - usually does not have a legal basis
  - strongly water focused

- SEA
  - can add value to the sustainability of the planning process
  - applied to all sectors and takes a broader scope
    (when other sectors are leading a plan process and water issues are involved, SEA can insert IWRM principles)

Comparison IWRM – SEA for Basin Planning

Complimentary:

- SEA is well-equipped for the practical implementation of shared IWRM principles (e.g. **stakeholder participation** and informed, **transparent decision-making**)
- SEA can enhance credibility of outcome of planning process

Integrated catchment planning - IWRM & SEA	
1. Start plan process	**•Identify stakeholders** •Agree on roles, responsibilities and process structure
2. Situation analysis	•Characterization of land & water system (technical, social, economic, gender and sustainability aspects)
3. Stakeholder priorities	•Identify stakeholder concerns (participatory)
4. Vision development	•Develop catchment vision and plan objectives (address both problems & opportunities) •Define alternative ways to reach objectives
5. Consistency analysis	**•What other policies have consequences for the catchment?**
6. Terms of Reference	•Set ToR for detailed planning and assessment, including assessment criteria
7. Planning and assessment	•Detailed studies for catchment planning **•Assessment of social and environmental impacts; compare alternatives on positive negative impacts** •Iteration: design alternative with maximum benefits •Mitigation/compensation measures for remaining negative impacts •Provide plan in accessible language with technical annexes
8. Review	**•Quality assurance of documentation (preferably involving stakeholders).**
9. Formal decision making	**•Discuss with all stakeholders the alternative to prefer** **•Motivate the (political) decision in writing**
10. Sector and agency planning	•Assign tasks to implementing district administrations or sector agencies
11. Coordinated implementation	•Implementation within boundaries set by catchment plan
12. Joint monitoring	•By stakeholders in catchment and regular monitoring organisations

Overall assessment

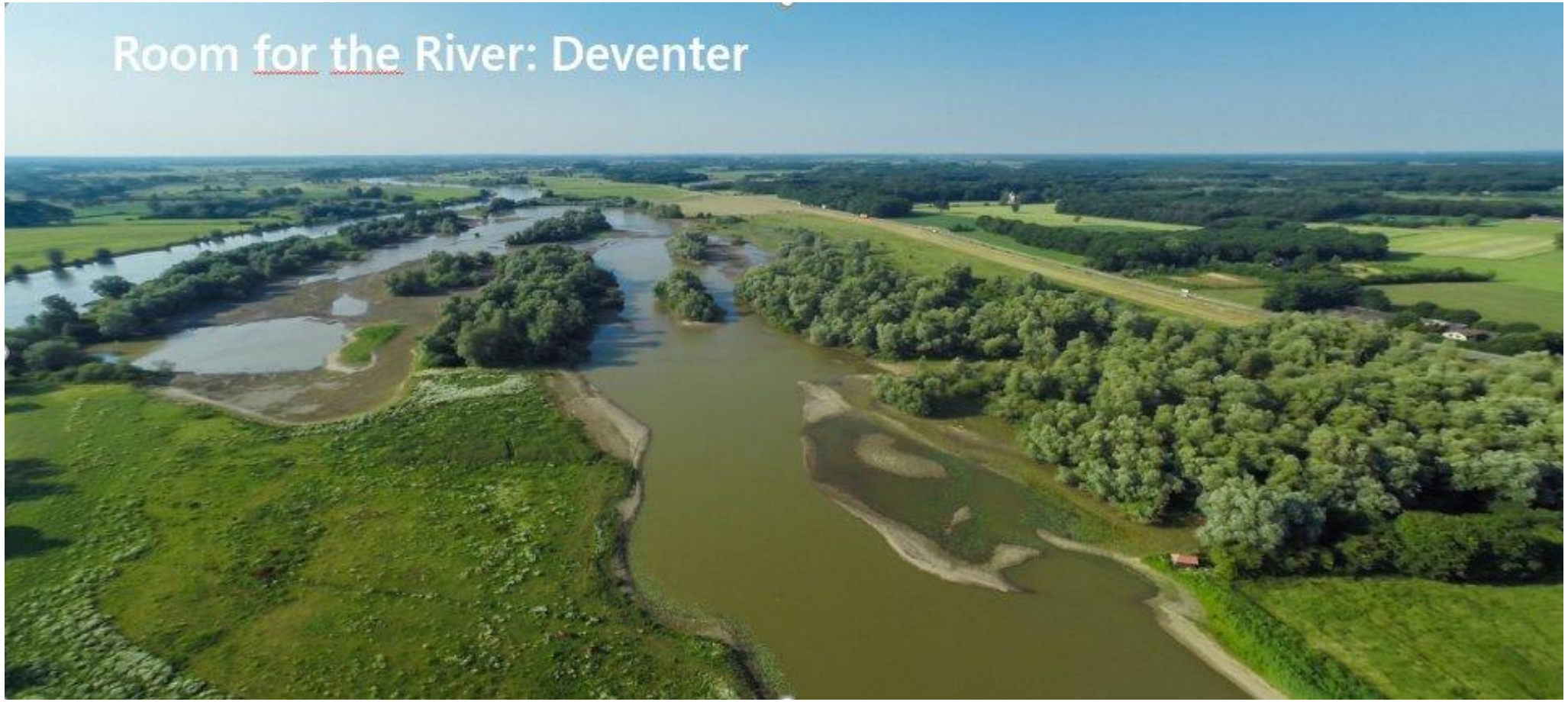
- IWRM and SEA share the same principles, but both instruments have a complementary scope of work

- Where IWRM provides in-depth sector knowledge and a comprehensive framework to develop relevant knowledge, SEA is best equipped to facilitate a process to influence decision-making

- The legal backing of SEA provides the necessary entry footholds in a plan process to get the IWRM message across

To raise commitment

Room for the River: Netherlands

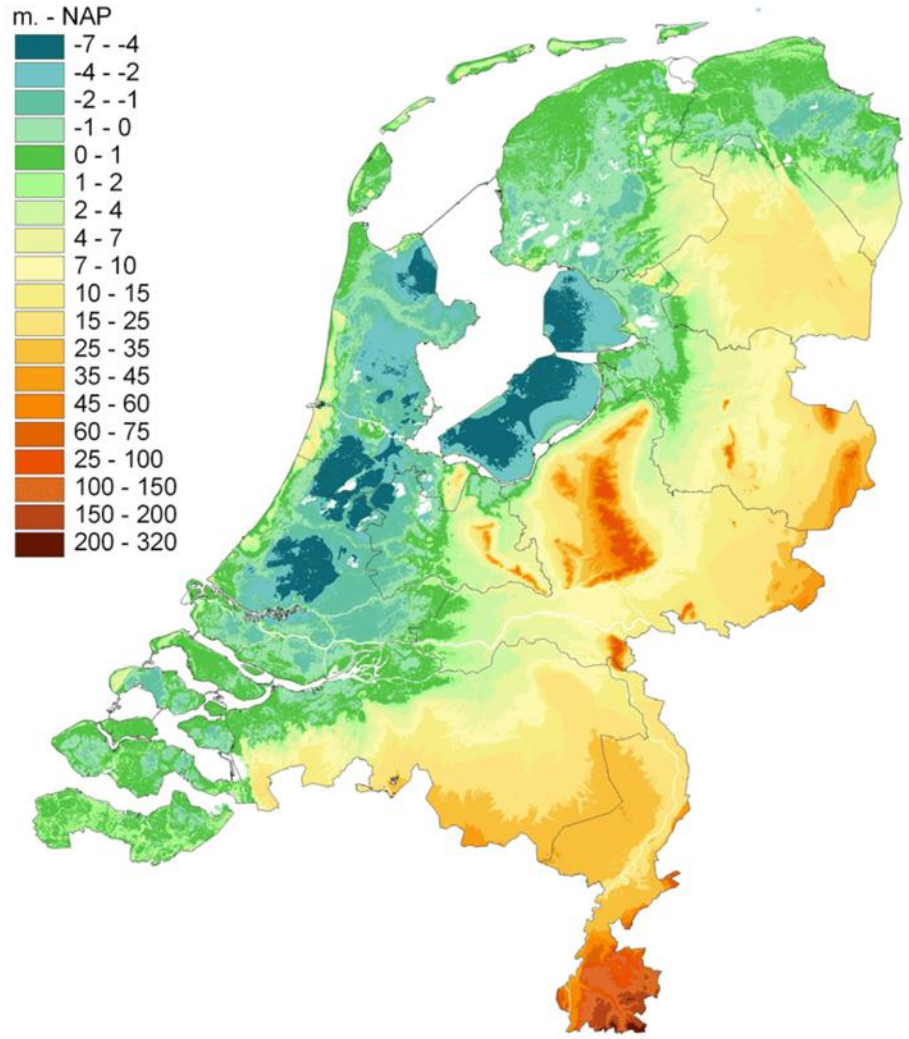


Water management in the Netherlands – why it matters

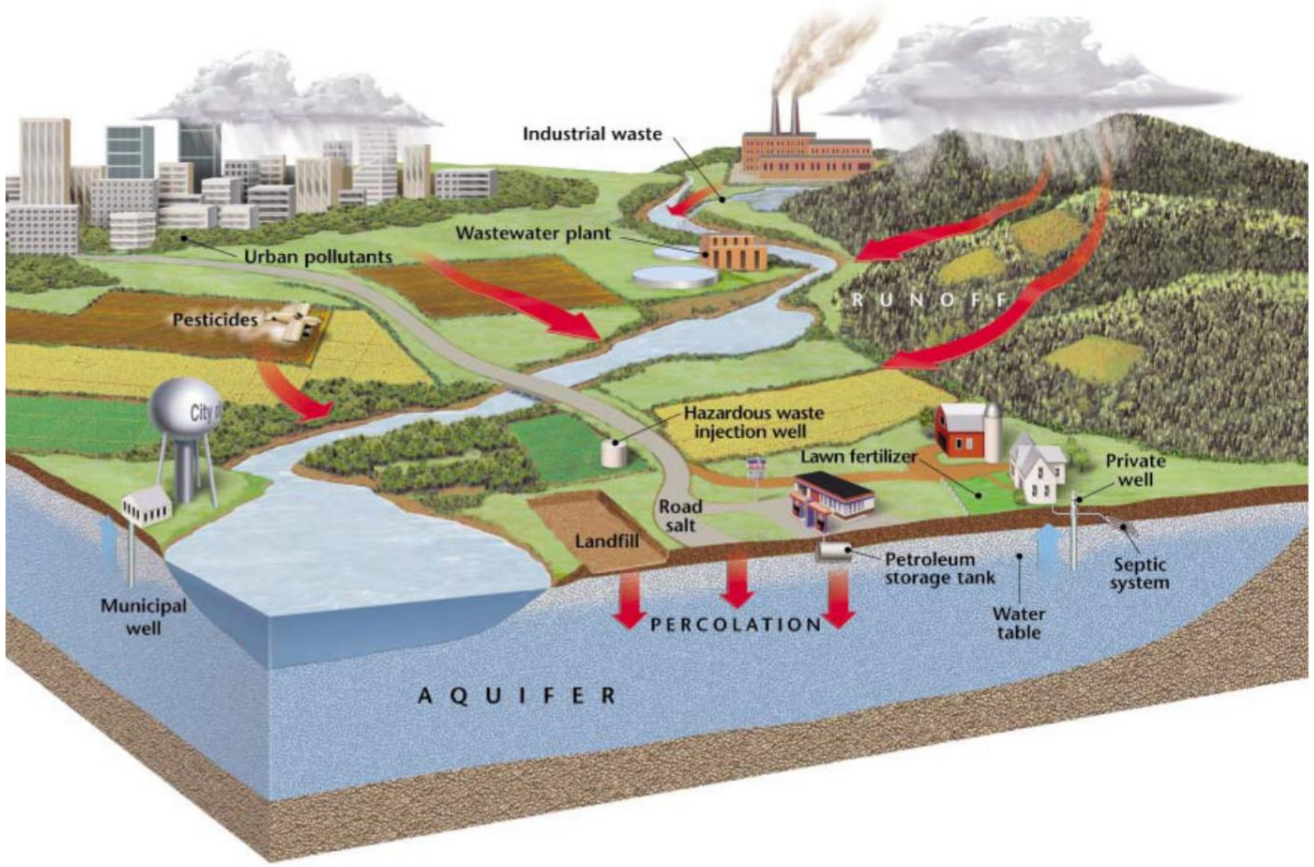
Low lying, vulnerable delta:

- Flood risk
- Drought risk
- Water quality challenges
- Sea level rise

Managing water is a matter of national survival



Water management: an integrated approach is essential



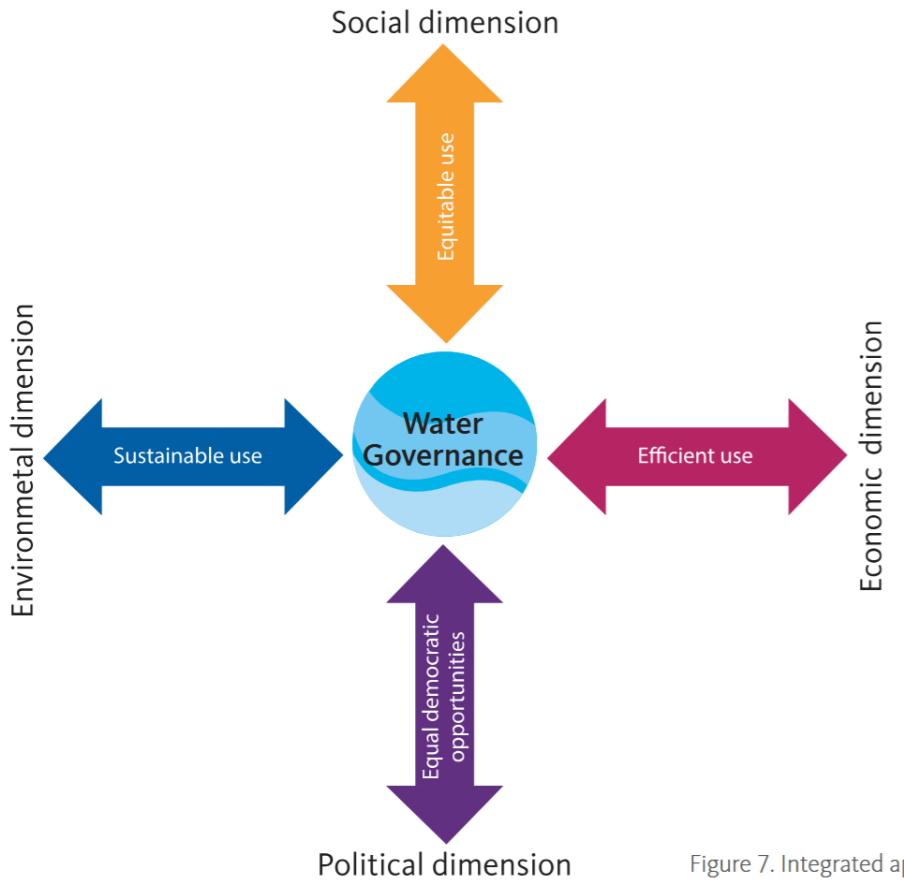


Figure 7. Integrated app

Room for the River

Goal :

Protect the Netherlands from Rhine river flooding **now and in the future**.

Plan Focus:
Measures for **IJssel**, **Nederrijn/Lek**, and **Waal** branches:

- **Dike improvement/heightening** (traditional)
- **Create space for water** (new approach):
  - Remove obstacles
  - Deepen riverbed
  - Retention ponds
  - Relocate dikes

Role of Strategic Environmental Assessment (SEA) was:

- to enable planners and decision makers to find the optimal compromise of safety, environmental benefits and costs

- take an integral view of the entire river system, since the three branches are interconnected and upstream and downstream affect each other.

Approach and methods used in the SEA

Collection of information:

- To improve the integration of plan and SEA a dedicated project agency was set up, responsible for both.
- Data collection from existing information an additional data collection for the alternative with new models.

Development of alternatives:

- The river bench was split to several homogenous sections and identify alternatives for each section.
- An alternative for a whole river branch was then created by a logical combination of building block

Map 1: Forty 'Room for Rivers' projects

Number of preconditions were set for each of the alternatives. The most important were:

- Each alternative should fulfil legal requirements, both safety requirements and others;
- The current distribution of water between the three branches should not change;
- There should be no effect on the current maritime functions of the river.

In addition to the preconditions, a number of starting points were defined, such as:

- Sufficient support by local government and other stakeholders;
- Congruence with current government policy;
- Congruence with international agreements on flood prevention;
- Congruence with existing or already planned projects in the river basins;

Alternatives Developed

1. **Reference alternative**: creating safety solely through dike strengthening and improvement;

2. **Alternative 1**: creating safety, without trying to combine this with better spatial and environmental quality. This includes measures such as removal of obstacles in the river foreland, deepening of the river bed,and dike improvement.

3. **Alternative 2**: creating safety, as much as possible combined with achieving spatial and environmental quality. This includes measures such as broadening river forelands by relocating dikes, creation of extra river beds, creation of retention ponds, and deepening of river forelands.

4. On the basis of a first assessment of alternatives 1 and 2, a so-called **'preferred alternative'** was constructed by selecting the best scoring elements of both alternatives.

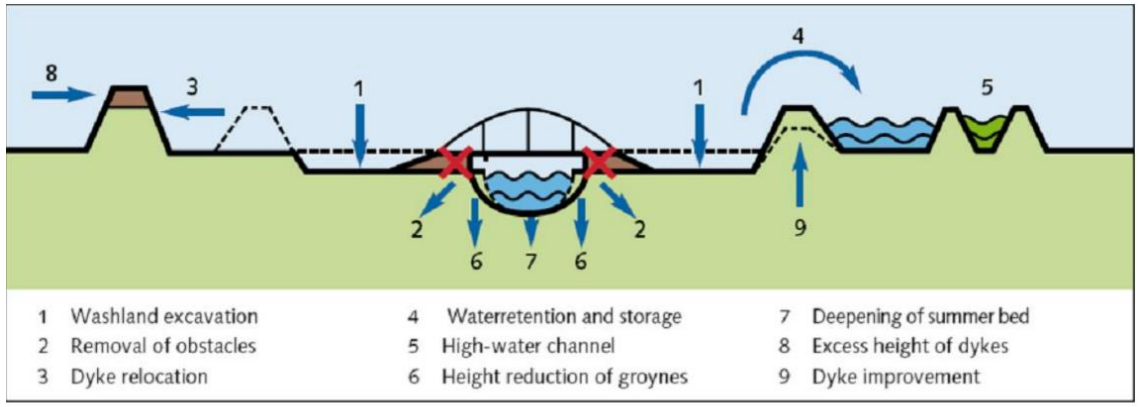


Figure 1: Different options for river flood protection

Public participation

- The early stage of planning focused on the information the SEA should contain, e.g. what alternatives to examine and what impacts to assess.
- A later stage focused on the quality of the SEA and the proposals in the draft plan.

Most of the involved (local) governments, agencies and organized NGOs (e.g. agriculture, environment) were continuously consulted during alternatives development.

Final decision: ‘preferred alternative’

- Preferred alternative was results of comparison of alternatives 1 and 2, the cost-benefit analysis and the comments of regional and local stakeholders,
- A formal decision was taken to implement almost 100% of this alternative.
- This decision was accepted by all parties, without much controversy.

Project Lent – before the construction


Room for the River: Lent

Lessons for Good Practice SEA

Key Insights:

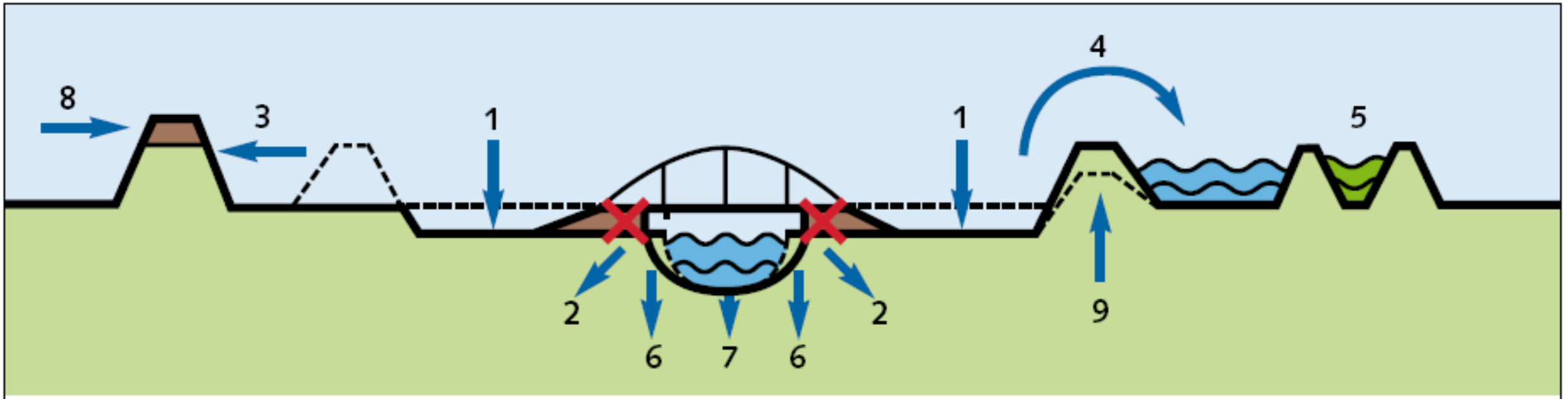
- **Open & Participative Process:** SEA can be integrated with planning in an inclusive way.
- **Effective for Controversial Issues:** Ensures environmental & social concerns are fully addressed.
- **Significant Influence:** SEA shaped the final plan substantially.

Success Factors:

- **Interactive Development:** SEA and plan evolved in parallel with stakeholder negotiations.
- **Joint Governance:** A dedicated *project directorate* united key ministries for SEA and plan development.

To find the best alternative

Corporate Clip Room for the River english



1	Washland excavation	4	Waterretention and storage	7	Deepening of summer bed
2	Removal of obstacles	5	High-water channel	8	Excess height of dykes
3	Dyke relocation	6	Height reduction of groynes	9	Dyke improvement

Netherlands Commission for
Environmental Assessment

SEA for integrated river basin planning, Rwanda

SEA-for-sustainable-hydropower-development-NCEA-.pdf

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Setting the context

- The National WRM programme divided the country in 9 level-1 catchments

- The Min. of Env. initiated the development of 6-year management plans for 4 priority catchments, which includes Upper Nyabarongo (nr. 3), renowned as Rwanda's 'water tower'.

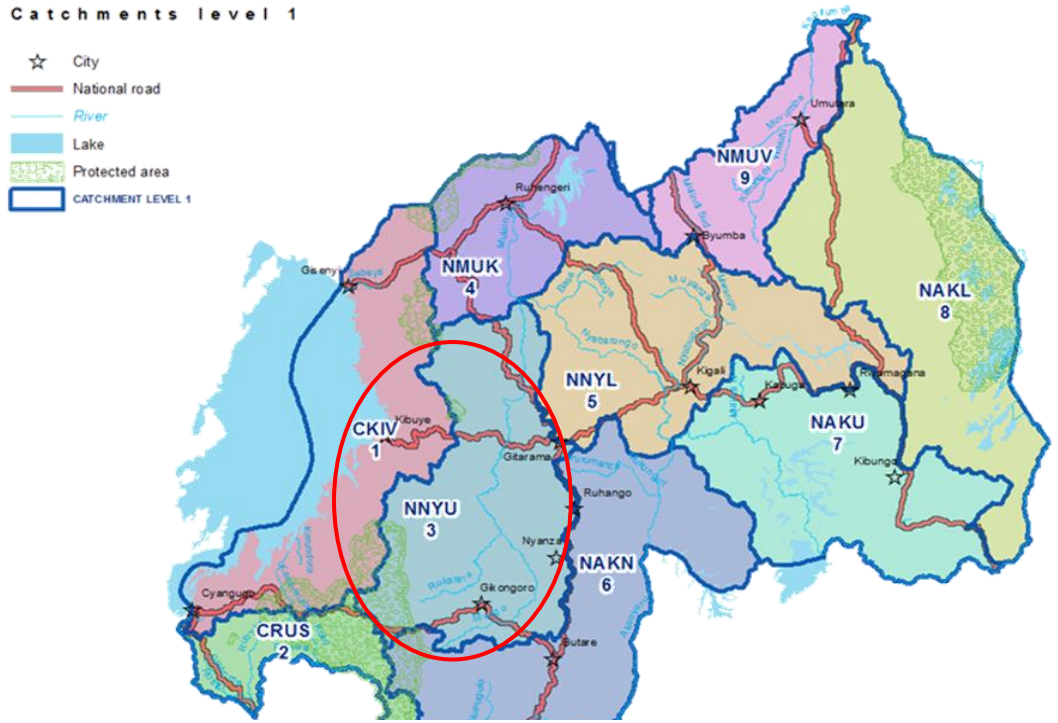


Figure1: Rwanda level one catchments *Explanation of the abbreviations of the nine level one catchments: CKIV- Congo Kivu Catchment,(ii) CRUS Congo Rusizi Catchment, (iii) NNYU Nile Nyabarongo Upper Catchment, (iv) NMUK Nile Mukungwa Catchment, (v) NNYL Nile Nyabarongo Lower Catchment, (vi) NAKN Nile Akanyaru Catchment, (vii) NAKU Nile Akagera Upper Catchment, (viii) NAKL Nile Akagera Lower Catchment, (ix) NMUV Nile Muvumba Catchment*

Characteristics

The Upper Nyabarongo basin:

- 13% of the surface of Rwanda
- part of the Nile Basin
- abundant water resources with an average annual rainfall above 1600 mm and
- elevation ranging between 1500-3000 m.

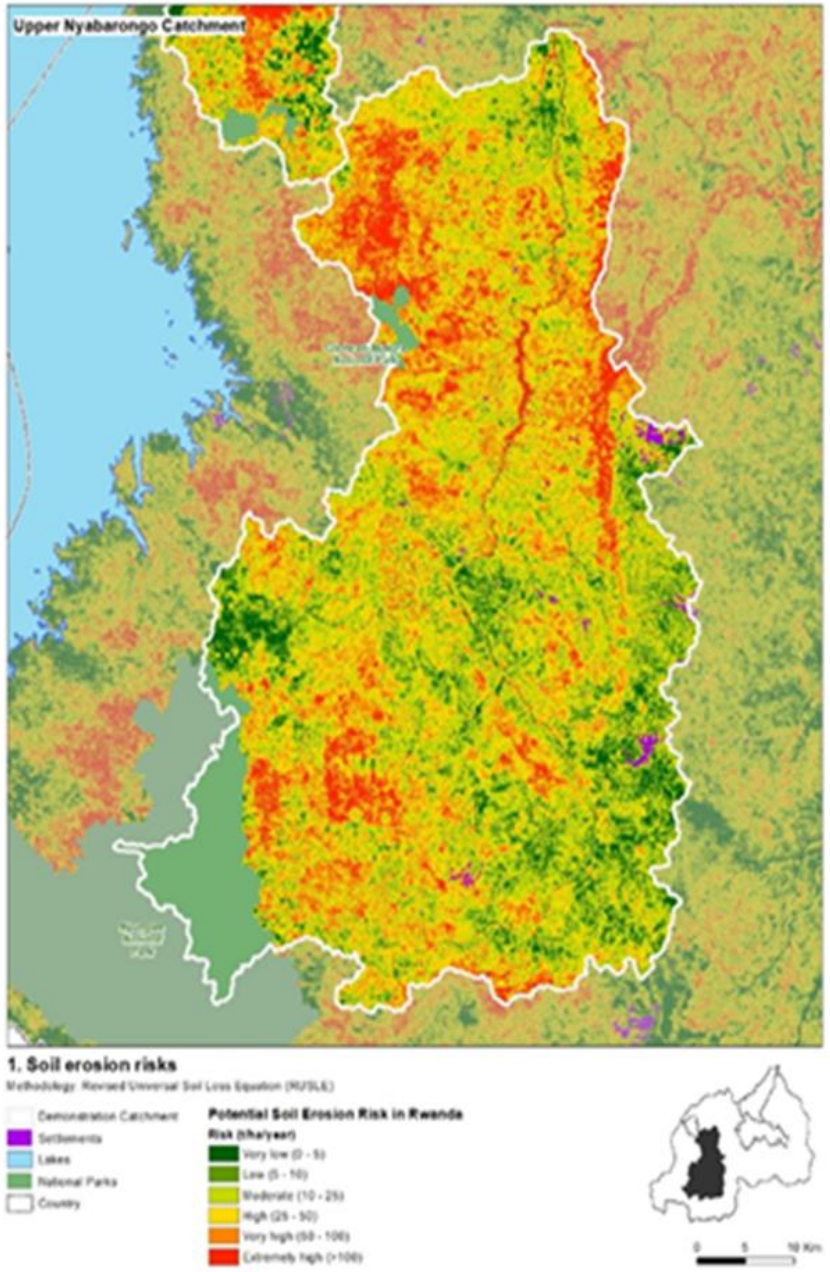
Characteristics

- steep slopes and high rainfall within this catchment make it highly potential for hydropower development.
- five hydropower plants are operational with a total capacity of 52 MW and a new 120 MW plant is planned.

Characteristics

- 1.2 million people live in this basin in high densities
- poverty rates are high
- the cause of poverty is linked to high population growth and declining soil fertility in a largely agrarian-based economy.
- the rivers have very high sediment loads due to soil erosion of hillside agriculture, deforestation and mining (see map).

Figure 3: Map showing soil erosion risk areas in the Upper Nyabarongo



Characteristics

- mining was also source of contamination with heavy metals posing a human health risk.

Problems because of high sediment load

- → high removal costs for drinking water intake, as well as turbines and related infrastructure for hydropower stations.
- → Both hydropower and drinking water intake often need to shut down during periods of extreme sediment load, while operations also suffer from regular interruptions due to required sediment removal from settling basins associated with the intake.
- → Affects the lifetime of the hydropower plants, with the high shutdown time of the hydropower facilities being an important reason for the relatively high electricity prices

Characteristics and problems summary

- Hydropower plants (5) operational
- Rainfed agriculture
- Livestock rearing
- Fish farming
- Agroforestry and forest plantations
- Mining and quarrying

- 1,2 million people

- Main problems for hydropower and drinking water supply:

- Pollution/contamination
- Erosion/sedimentation
- Land degradation

Goal catchment planning

"Effectively manage land, water, and related natural resources, to contribute to sustainable socio-economic development and improved livelihoods, taking into consideration environmental flow, downstream water demands and resilience to climate change, and minimise water related disasters".

One of the specific objectives → reduce the sedimentation of the rivers which is a serious threat for hydropower use and development.

GoR: Catchment Mgmt Planning + SEA

Improve water quality and quantity

Reduce pressure on natural resources by diversifying alternative livelihoods

Equitable allocation of water resources

Strengthen Water governance framework for effective implementation

SEA application and IWRM in Rwanda

- IWRM required by law for catchment planning & management
- SEA was also mandatory
- A tailor-made approach developed that advised on integration of plan development and SEA requirements

Table: Combining IWRM and SEA for catchment planning, Rwanda

General steps IWRM	General steps SEA
	Screening 1. Reach consensus on the need for SEA and its link to planning. 2. Find stakeholders and announce start of the plan process.
Situation analysis Analysis of the water system, including stakeholder priorities and perspectives. (Participatory; technical, economic, gender and sustainability issues).	**Scoping** 3. Develop a shared vision on problems & opportunities, define plan objectives and draft alternative ways to reach these objectives.
Vision development Creating a vision for the medium to longer term future.	
	Scoping (continued) 4. Do a consistency analysis for relevant (national) policies that have consequences for each catchment. 5. Set ToR for the technical assessment, based on scoping.
Integrated planning (Sub-) catchment plan considering competing water interests. When choices must be made between competing interests these are made explicit. The stakeholders participate in the process.	**Assessment** 6. Assess the impacts of alternatives and document this. 7. Review: organise (independent) quality assurance of documentation (preferably involving stakeholders).
	Formal decision making 8. Discuss with all stakeholders the alternative to prefer. 9. Motivate the (political) decision in writing.
Sector and agency planning Planned activities are assigned to implementing entities.	
Coordinated implementation Implementation of sector and agency plans.	
Joint monitoring Monitoring assured by stakeholders, together with monitoring procedures of the implementing organisations.	**Monitoring** 10. Monitor the implementation and discuss the results.

Integrated catchment planning - IWRM & SEA - in Rwanda
1. Start plan process • Identify stakeholders. • Agree on roles, responsibilities and process structure.
2. Situation analysis • Characterization of land & water system (technical, social, economic, gender and sustainability aspects).
3. Stakeholder priorities • Identify stakeholder concerns (participatory).
4. Vision development • Develop catchment vision and plan objectives (address both problems & opportunities). • Define alternative ways to reach objectives.
5. Consistency analysis • What other policies have consequences for the catchment?
6. Terms of Reference • Set ToR for detailed planning and assessment, including assessment criteria.
7. Planning and assessment • Detailed studies for catchment planning. • Assessment of social and environmental impacts; compare alternatives on positive negative impacts. • Iteration: design alternative with maximum benefits. • Mitigation/compensation measures for remaining negative impacts. • Provide plan in accessible language with technical annexes.
8. Review • Quality assurance of documentation (preferably involving stakeholders).
9. Formal decision making • Discuss with all stakeholders the alternative to prefer. • Motivate the (political) decision in writing
10. Sector and agency planning • Assign tasks to implementing district administrations or sector agencies.
11. Coordinated implementation • Implementation within boundaries set by catchment plan.
12. Joint monitoring • By stakeholders in catchment and regular monitoring organisations.

5. Consistency analysis

SEA and IWRM

- Agreement on roles, responsibilities and process
- A multi-sector institutional structure was developed to engage stakeholders and finally to approve the plan/ SEA by a steering body represented by five ministries.

Participation in sub-catchment plans

- Per sub-catchment a taskforce was created for representation of stakeholders to do micro-catchment action planning.

- lead agency: Water Resources Management Department (WRMD).

- Taskforce: From each district covered by the catchment:

1. the Vice Mayor in charge of Economic Affairs
2. officers in charge of environment
3. a representative of the women's council
4. a representative of the private sector
5. a representative of the youth council
6. a representative of CSOs

Micro catchment action planning

1) interventions or projects were identified to improve or enhance basin management.

2) based on these measures the following four alternatives were assessed and compared:

A. increased water storage;

B. increased water storage + sustainable land management;

C. increased water storage + sustainable land management + water use efficiency;

D. increased water storage + sustainable land management + water use efficiency + reduced irrigation.

Preferred alternative water allocation

Alternative C selected as the preferred alternative by balancing - - the need for energy security

- maximising the potential for hydropower development
- food security
- avoiding local water shortage.

This can be achieved by combining the development of water storage, sustainable land management of 55,000 ha, enhanced water use efficiency in all sectors (especially in irrigation), afforestation on very steep slopes, terracing on agriculture land, and protection of buffer zones of rivers.

Result of Catchment plan and SEA

A Programme of measures was developed for the Upper Nyabarongo Catchment Plan, for the implementation period 2018-2024, with 4 main components:

1. landscape restoration
2. water allocation
3. water governance and
4. knowledge management

Figure 7: Picture illustrating the rehabilitation works in the Secoko Sub-Catchment with terraces.

Influence of SEA and plan

- With a focus on hydropower, measures that will stop and prevent soil erosion are implemented, both important to (i) secure the utilisation of the existing hydropower capacity and (ii) find investors who are interested to develop new hydropower projects.

- Water allocation plans were made for all sub-catchments, per month, per water user and for the planning of 2024, 2030, and 2050, including environmental flow. These then formed the basis for water permits.

Results and lessons learnt

- First catchment plan developed in a fully participatory way
- Innovative was integration of SEA process steps in IWRM
- SEA brought in the development of inter-district collaboration around natural resources, based on catchment boundaries
- As a result of the planning process and SEA, a water allocation model was developed to ensure equitable water resources allocation and therefore preventing water use conflicts among competing uses: water utilities and hydropower developers.

Authorities	Ministry of Environment
Type of plan	River catchment plan of Upper Nyabarongo catchment
Scope of SEA	Integrated river basin approach including all types of land and water use
Key SEA issues	Integrated analysis of the causes and solutions of the main problem in this catchment identified, namely soil erosion. Soil erosion affects the present hydropower capacity of 51.5 MW and the opportunities for new hydropower projects.
Stakeholder engagement	Consultation of all relevant stakeholders, public sector and private sector
Duration and year	24 months; 2016 - 2018
Influence of SEA	The SEA presented four integrated alternatives. Implementation of the preferred alternative started in 2020 consisting amongst others of a series of measures to avoid or minimise soil erosion. A governance structure was legally established to secure the development of future catchment plans by making use of SEA.
Link to SEA report	https://waterportal.rwb.rw/sites/default/files/2019-04/Upper%20Nyabarongo%20Catchment%20Plan_0.pdf

https://waterportal.rwb.rw/sites/default/files/2019-04/Upper%20Nyabarongo%20Catchment%20Plan_0.pdf

https://www.eia.nl/en/projects/7015-05 and https://www.eia.nl/en/projects/7015-01

‹Projects

7015-05. Review SEA Coaching IWRM - Rwanda

This was in follow-up on our earlier role as coach for scoping for SEA for catchment planning in Rwanda (7015-01). By end 2018, the final version of the Catchment plans and SEA became available, and REMA, the Rwanda Environment Management Authority, was asked to formally review their quality. As this was the first time to review integrated catchment plans and SEA, REMA in turn asked the NCEA for technical support on how to approach the review.

Advisory reports and other documents

27 Nov 2018: Memorandum
Mission report Sebeya SEA review

Significant details

Rwanda has adopted Integrated Water Resources Management (IWRM) as its key policy approach to sustainably manage its water resources. The Netherlands financially and technically supported the implementation of IWRM through a four-year programme that was concluded in May 2019. The programme was executed by the Rwanda Natural Resources Authority (RNRA) and an International Support Unit (ISU). During the programme, four catchment plans have been developed for four Demonstration Catchments, with SEA integrated into the catchment planning process.

The first generation catchment plans became available early 2017. These plans were not

‹Projects

7015-01. SEA Coaching IWRM Rwanda

Rwanda has adopted Integrated Water Resources Management (IWRM) as its key policy approach to sustainably manage its water resources. The Netherlands financially and technically supported the implementation of IWRM through a four-year programme that started in May 2015. The programme was executed by the Rwanda Natural Resources Authority (RNRA) and an International Support Unit (ISU). During the programme, catchment plans were developed for four Demonstration Catchments. According to Rwanda's regulations, these plans needed to undergo Strategic Environmental Assessment.

Advisory reports and other documents

04 Aug 2015: Memorandum
NCEA Quick Scan (Review) NWRMP-Rwanda.pdf

Significant details

SEA is most effective when neatly integrated with the plan process it is linked to. Scoping for SEA for catchment plans will therefore need to be done in the same period in which the provisional catchment plans are to be developed. The NCEA received a request from the Embassy of the Kingdom of the Netherlands (EKN) in Kigali and the RNRA/ISU to help define the scope for the SEAs in four demonstration catchment areas, and strengthen capacity for SEA through learning by doing.

Activities started with a national SEA workshop in Musanze in October 2015, during which

Exercise

Each basin management is one group (i.e. 5 groups).

1. identify your main objective- basin level or sub-basin (2 min)
2. identify the ownership of the plan and the members of the taskforce (3 min)
3. consistency analysis: identify what existing or under preparation national or regional policies, plans, and regulations might be a potential conflict or a mutual strength to your basin plan (7 min)
4. present your findings (4 min)

Summary

SEA & IWRM look at bigger picture

- Basin-wide environmental & social risks
- Sectoral & spatial plans and policies
- Investigates alternatives for development

If you are focusing on IWRM

Assess whether SEA principles are fulfilled in the proposed IWRM approach that guides the development of a government water plan.

If gaps exist, complete or enrich the proposed IWRM approach with these SEA principles.

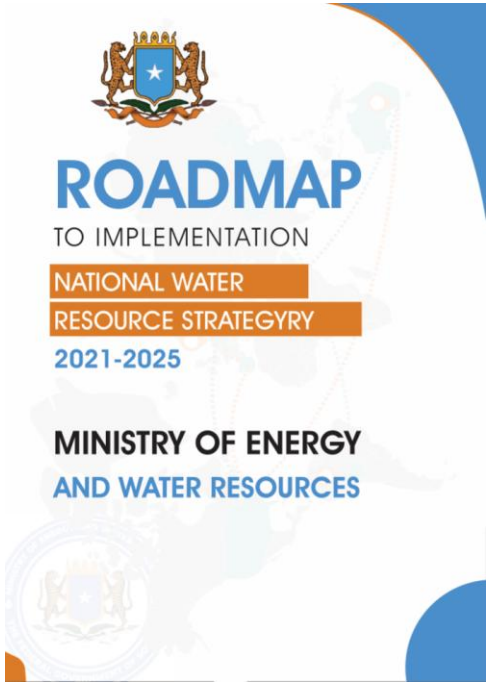
Netherlands Commission for
Environmental Assessment

Links and differences between SEA and ESIA

Anna Chadarevian
Netherlands Commission for Environmental Assessment

Characteristics and time scale

- SEA: applied to policies, plans and programmes with a broad and long-term strategic perspective



- ESIA: applied to specific and relatively short-term projects (immediate, operational)

What is being decided? Ex. energy

- SEA: focus on strategic decisions:

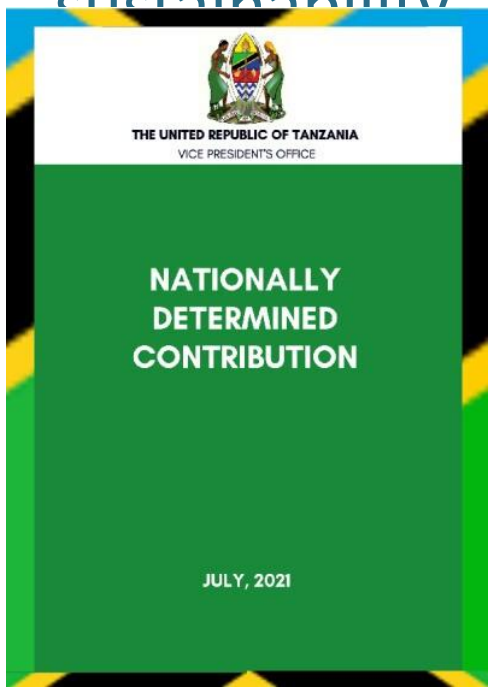
- Pacing and timing of oil and gas development to adequately manage revenues, and obtain maximum benefit from the oil and gas reserves
- Choice of source (% hydrocarbons, % renewable energy sources)
- National use or export
- Transboundary co-ordination of oil development
- Relation with fisheries, tourism, nature conservation

- ESIA: focus on project decisions:

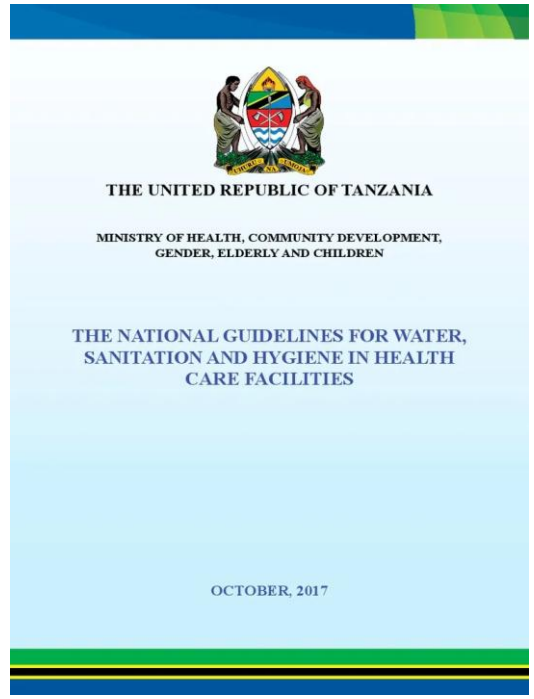
- Noise and vibration nuisance
- Opportunities for contracting / local content
- Water and soil contamination
- Third party agitation
- Wildlife habitat fragmentation etc.

Scope of decision making

- SEA: more political, meeting objectives, in relation to existing PPPs. Reference: sustainability

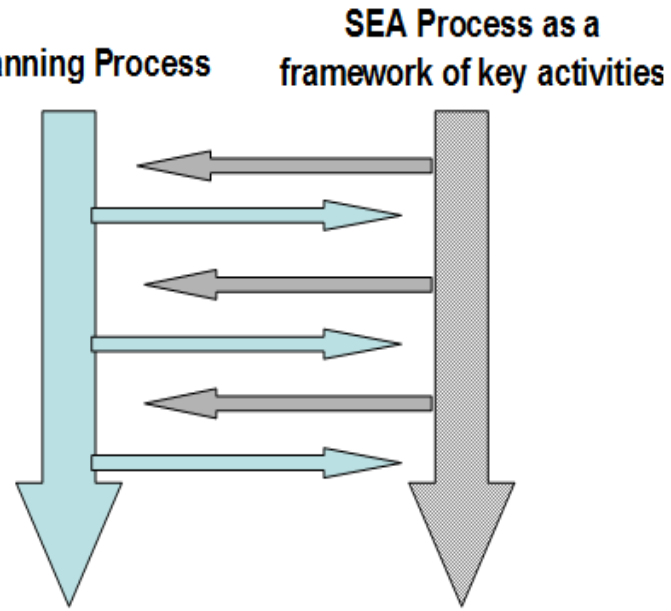


- ESIA: more technical, meeting norms and standards.
- Reference: legal restrictions, best practices

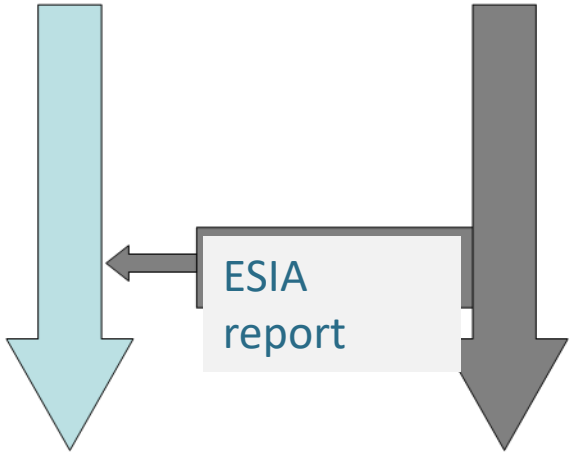


Process

- SEA: multi-stage, iterative process with feedback loops



- ESIA: well-defined, linear process with clear beginning and end (e.g. from feasibility to project approval)



Scale of impacts

- SEA: macro, cumulative, uncertain

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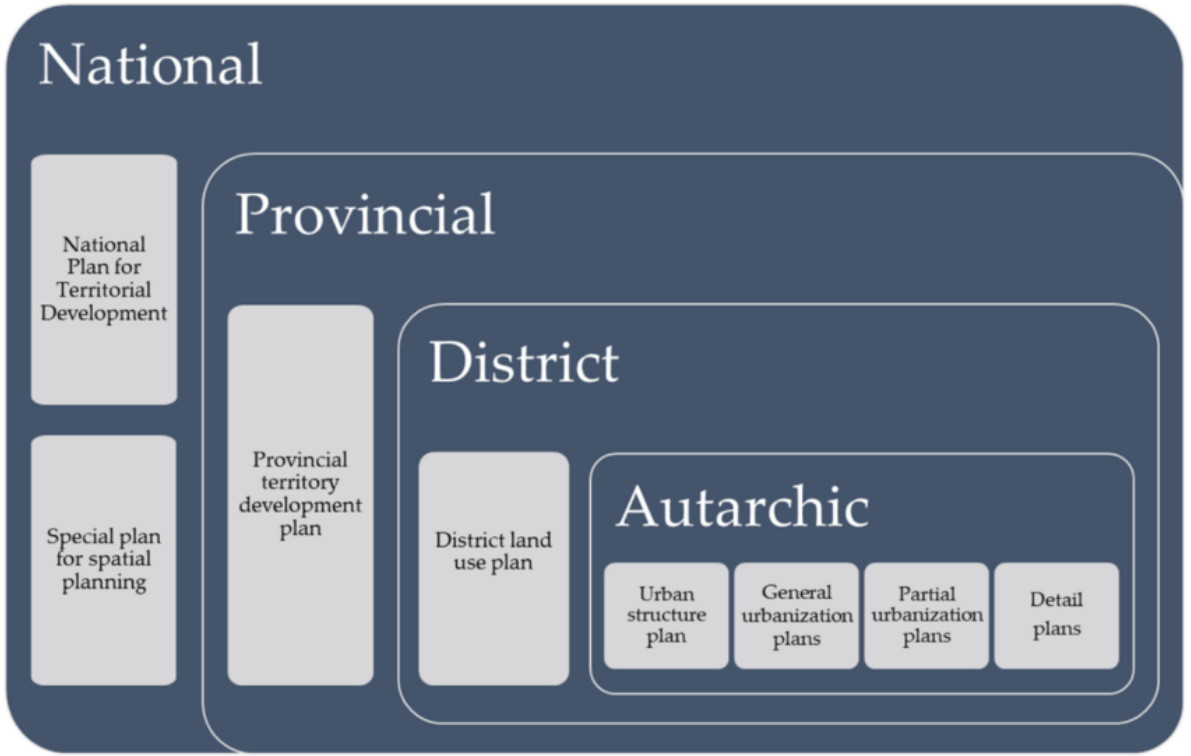
- ESIA: micro, localized.



Alternatives Ex. transport

- SEA: broad range of alternatives

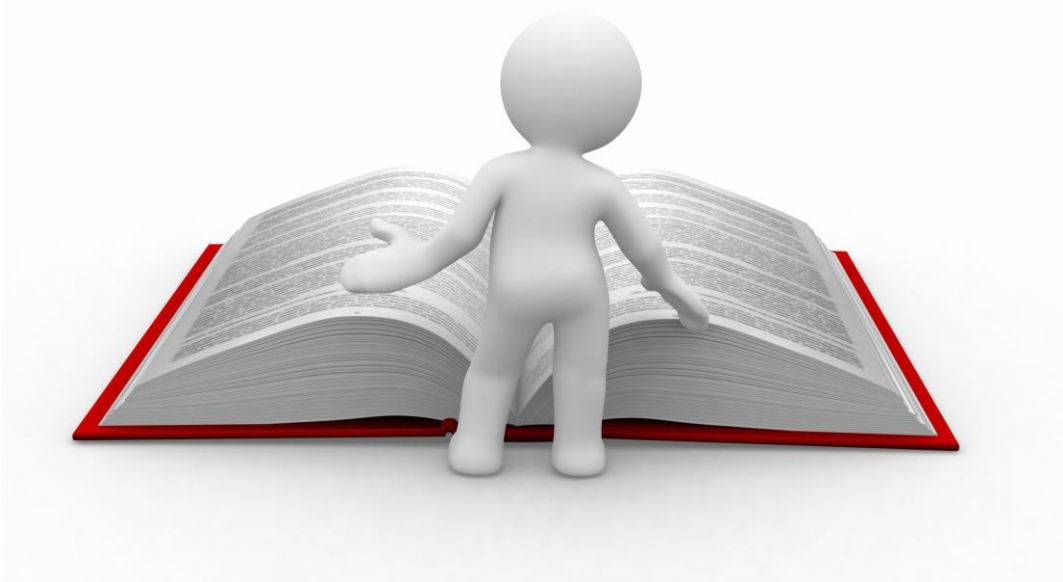
- prevent the need for transportation (related to housing sites and transportation nodes)
- different types of transportation (public, private, air, water, rail)
- cleaner technology for cars
- fiscal policy to make lead in gasoline more expensive
- route

- ESIA: limited range of project alternatives (construction, operation, design)

Role of specialist

- SEA: mediator/process manager
- Not only (environmental and social) knowledge, but also communication and dialogue skills and connections to planners/decision makers
- Network with planners is essential to find out what their information needs are and when they need it.

- ESIA: promoter of values, norms and standards, technical



Source and type of data

- SEA: strategies, visions, qualitative, analytic strength uncertain, expert judgment

- ESIA: field work, analysis, quantitative, analytic strength more certain

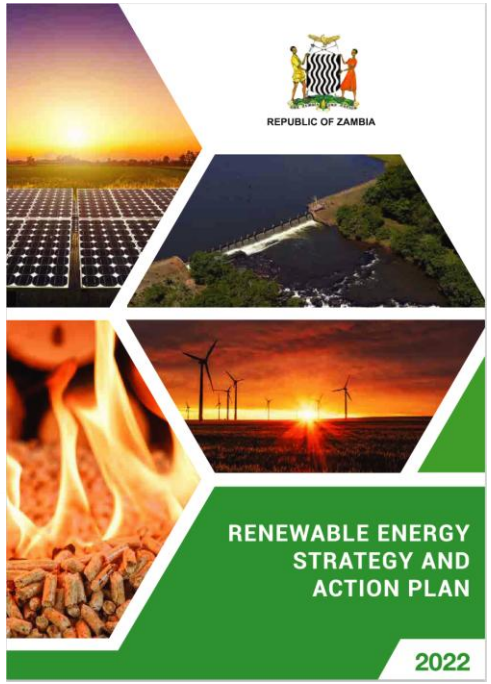
Ownership and budget

- SEA: conducted independently of any specific project proponent (budget: government)
- ESIA: usually prepared and/or funded by the project proponents (budget: proponent)

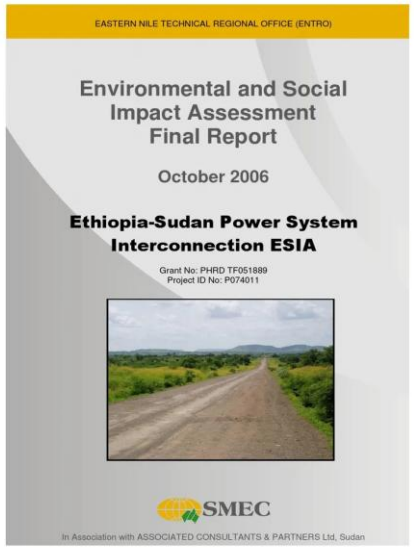
Products

- SEA: generic, may not be formally documented

Planning + SEA Processes indistinct

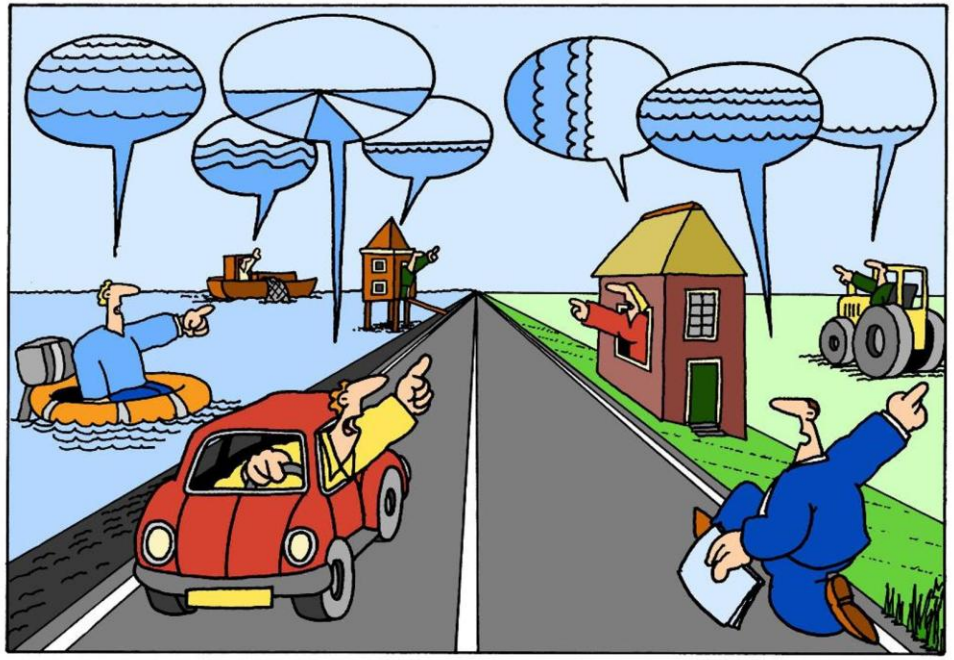


- ESIA: detailed, preparation of an ESIA document with prescribed format and contents is usually mandatory.



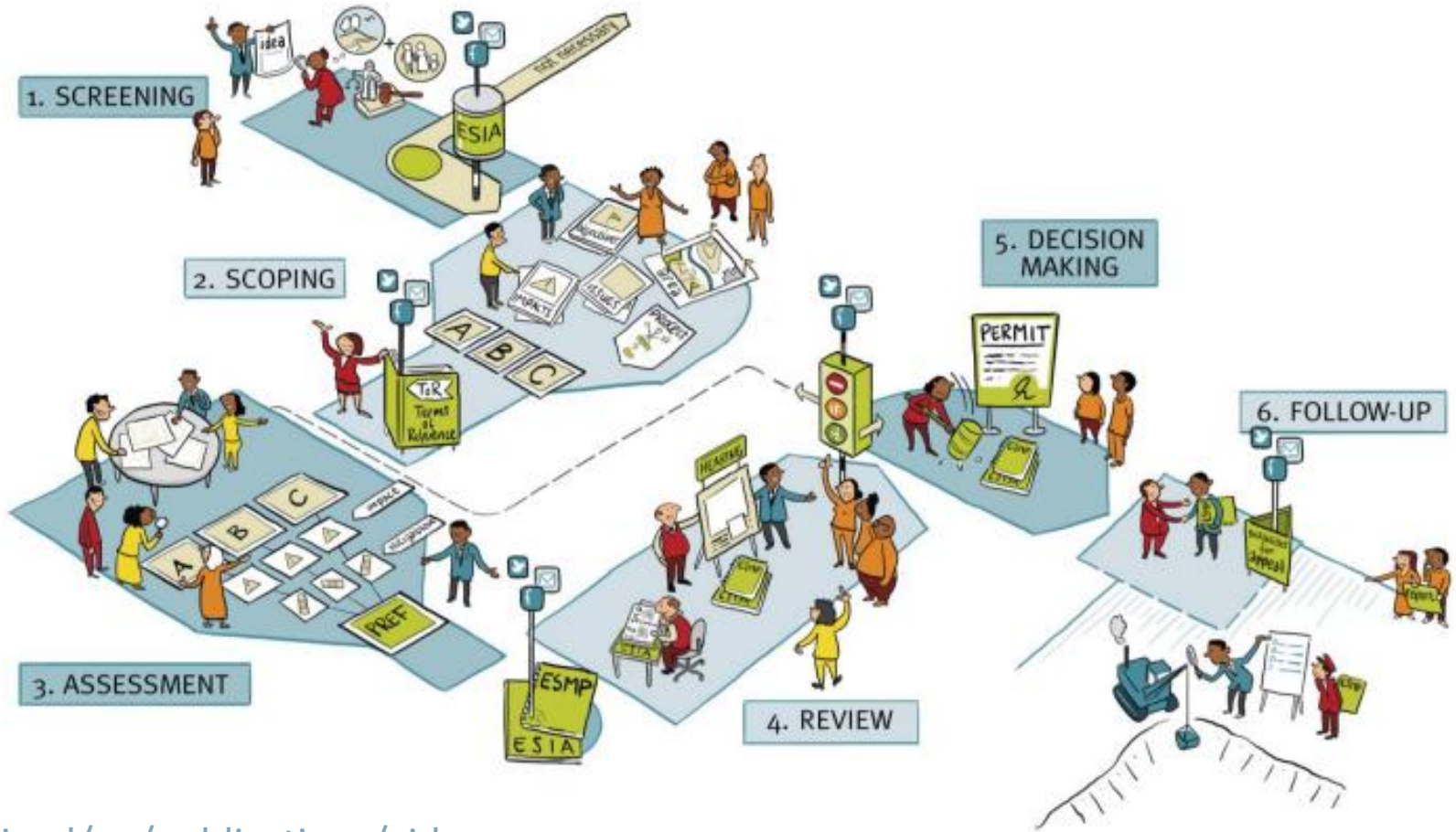
Public perception

- SEA: vague, distant, stakeholder participation at representatives level



- ESIA: more reactive, general public participation

The ESIA process in 6 steps



https://www.eia.nl/en/publications/videos

Summary

Proces	Linear (EIA)	Iterative (SEA)
Aim	Mitigation	Avoidance
Initiator	Private or public projects	Public plans
Scoping	Combination of local issues & technical checklists	Combination of political agenda, stakeholder discussion & expert judgement
Participation	Often include general public	Focus on inter-ministerial & representative bodies
Assessment	Focus on project options More quantitative & primary data gathering	Focus on strategic alternatives More qualitative & use of available data
Review	Focus on quality of information	Quality of information & stakeholder process
Decision-making	Comparison against standards	Comparison of alternatives against policy objectives
Monitoring	Focus on permit conditions	Focus on plan implementation

Thank you!

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