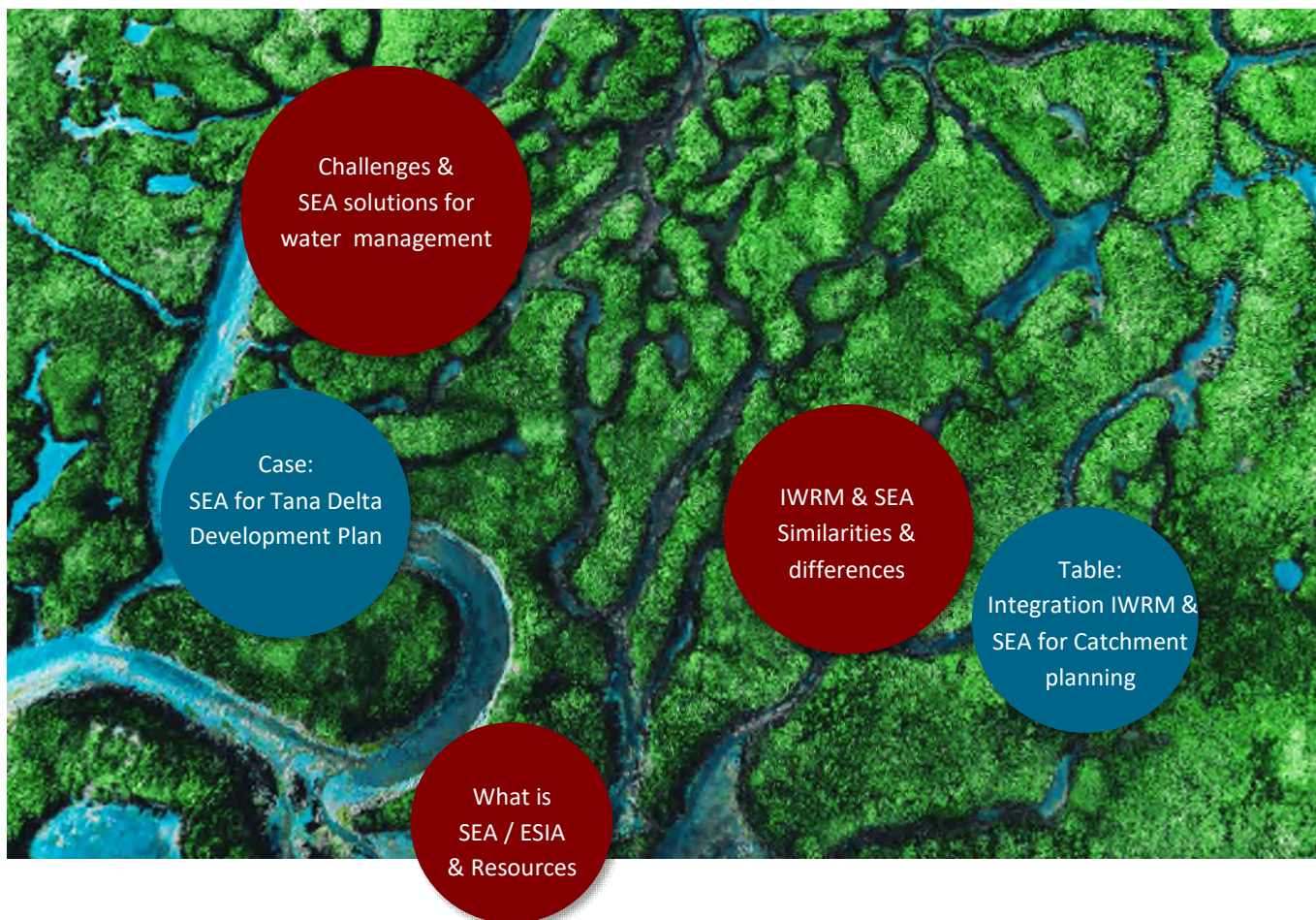


Challenges and solutions for River Basin & Delta planning

How SEA facilitates planning, collaboration and decision making



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. But many of these river basins and deltas face problems such as water shortage, flooding and pollution, presenting risks to people and ecosystems. Good water management is therefore essential.

Why SEA?

The objective of carrying out an strategic environmental assessment (SEA) is to assess the quality of a river basin and delta plan on its contribution to sustainable and inclusive development. It draws attention to negative consequences of the planning for the environment and (underprivileged) groups in society. It facilitates stakeholder participation and plays a proactive role in integrating the plan in the broader context of transboundary and regional development planning.

Planners, decision-makers and stakeholders encounter various challenges when they start making water management plans. For example:



Guinea

Water governance: How to cooperate with other regions and countries where upstream jurisdictions control the water on which lifedownstream depends?



Water allocation: How to ensure equal distribution among different uses and users, such as agriculture, hydropower, public water supply, maintenance of ecosystems and - services?



Technical solutions: What are the best solutions to deal with flood risks, climate change resilience, land and water productivity, salinisation, soil erosion, water quality etc.?



Conflicting policies & plans: In the case of competing policies and plans for the same area, how to ensure that plans do not contradict each other?



Addressing comments of the public: While public participation is organised in many planning processes, the question for the public is: How do we know that our concerns are properly addressed?



How does SEA tackle these challenges?

SEA ensures that right from the start there is a **joint vision** of the strategic issues to be considered and how the interests of **all stakeholders** – upstream and downstream - are addressed. **Decision makers** are identified and it will be agreed how to keep them informed during the process. In addition, decisions are made on how to arrange funding mechanisms, stakeholder engagement, quality review, and assuring publication and distribution of the plan/SEA results. Often a Steering Committee is composed to guide the subsequent process.

SEA facilitates water allocation decision-making by **identifying and comparing options for the various users and uses in a plan area**. Comparing alternatives provides insights into how different options best suit the plan objectives and create a win-win solution for all stakeholders. Specific attention is paid to reducing negative consequences for underprivileged groups and the environment, thus contributing to sustainable long-term development.

SEA ensures that **all technical solutions are brought into view**, even when these would be more costly, but preferred from an environmental and social perspective. The solutions – such as flood adaptation measures, site alternatives, types of restoration intervention, ways to reduce or avoid agrochemicals, etc. - are then compared, leading to preferred solution.

A so-called **consistency analysis** in SEA, depicts the potential for conflict or mutual strengthening between the existing policies, plans and regulations, and the basin or delta plan under preparation. This can include the broader context of transboundary or regional development planning. If conflicting interests are identified the planning process can address these, and SEA can help to identify ways to deal with these conflicts and enhance synergies.

Part of an SEA is a **formal review of the outcomes**. During review, the plan and SEA is opened to the public for comments; in many countries also a formalised review exists by panels of experts. It gives stakeholders the opportunity to decide whether their views and concerns have been adequately addressed in the document(s). This public review ensures that all information has been taken into consideration.

Home

Challenges
&
Solutions

Case:
SEA for
Tana Delta

IWRM
& SEA

Table:
IWRM
& SEA

More
info

Case: SEA for Tana Delta Land Use Plan, Kenya

Over the past decade, conflicts have been increasing in the Kenyan Deltas as a result of competition for land use among new projects, natural resource conservation, and community interests. These are intensified with the developments of the Lamu Port, damming upstream in the Tana river and global markets for food and bio-fuels. Climate change is likely to exacerbate these conflicts.

Recognising these problems, the Kenyan's Prime minister established in 2010 an Inter-Ministerial Technical Committee to oversee the development of Land Use Plans for the major deltas, to ensure sustainable development of the delta's including preservation, protection and restoration. It was decided to start with the Tana River Delta.

The Tana River is Kenya's longest river, flowing from the highlands near Mount Kenya to the Tana Delta near Lamu and Kipini on the east coast.

To support the formulation of the Land Use Plan, the county authorities and Inter Ministerial Committee decided to carry out a strategic environmental assessment (SEA). The SEA would outline the main measures for achieving sustainable development of the delta, by:

- describing the factors influencing land use;
- ensuring participation and integration of stakeholders' socio-economic and environmental perspectives;
- assessing the implications of the plan on the Delta's sustainable management; and,
- assessing alternative land use options..

The NCEA was extensively involved in the SEA and Land Use Plan processes, including a field visit by a multidisciplinary expert working group. The group worked closely with representatives from the SEA and Land Use Plan teams and the Inter-Ministerial Committee, especially on aligning the SEA and Land Use Plan process.



A 2016 evaluation mission concluded that the participatory approach in this combined process contributed greatly to the current involvement of the local population and support for the plan. This conclusion was confirmed at national and county levels and during meetings with communities. The process generated high-quality baseline data, established a preferred development scenario based on sound data analysis, and widely communicated the results to stakeholders.

Furthermore, combining the processes was very positively appreciated because it saved both time and resources. It allowed for example, largely the same baseline data to be used and combined interactions with target groups. Moreover, the use of the scenarios, led to shared conclusions on preferred strategies and investments, and contributed to the synchronisation of approval processes at the national and district levels.

In 2019, Tana County received a grant of nearly \$10 million for the implementation of the Tana Delta Land Use Plan. It is a great compliment to all who were involved, that this SEA- Land Use Plan process is considered a good practice example and that it has been applied in other counties.

Home

Challenges
&
Solutions

Case:
SEA for
Tana Delta

IWRM
& SEA

Table:
IWRM
& SEA

More
info

IWRM & SEA – Similarities and differences

Integrated Water Resources Management (IWRM) is about managing water, land and related resources in a river basin. It is managed in such a way as to maximise economic and social prosperity without compromising the sustainability of vital ecosystems.

IWRM and SEA have much in common: they both include the integration of environmental and social considerations into multi-sectoral decisions; both emphasise the importance of participatory and consultative approaches to decision-making; both incorporate monitoring and evaluation of outcomes; both seek to broaden the perspectives of planners beyond immediate sectoral issues; and both emphasise that the outcome is a product, such as a policy of plan, as well as a process.



Stakeholder consultation in Rwanda

But there are also differences. Applying SEA can then add value to the sustainability of the planning process. For example:

1. IWRM usually does not have a legal basis, even though some countries have developed IWRM-based policies.
 - SEA is legally adopted in an increasing number of countries for plans and programmes, including river basin and delta plans. Moreover, virtually all countries have ESIA requirements for projects resulting from such plans, such as dredging works, ground water extraction and coastal defence.
SEA is a legally established vehicle to convey the messages of IWRM.
2. IWRM is strongly rooted in the water sector and is therefore inherently water focused. This can be a weakness when issues need to be addressed beyond sectoral boundaries.
 - SEA is applied to all sectors and takes a broader scope. Vice versa, in situations when other sectors are leading a plan process and water issues are involved, **SEA, as a sector-neutral, broadly applied instrument, can insert IWRM principles.**

Furthermore, **SEA is well equipped for the practical implementation of the principles it shares with IWRM, such as stakeholder participation and informed, transparent decision-making.** Stakeholders want their interests to be taken into account in government decision-making. SEA aims at bringing forward these interests in the planning and decision-making cycle, at the right moments, providing the type of information that decision-makers need. This practice of impact assessment is sometimes complex, as stakeholders have different influence and powers. The experiences with SEA for the Tana Delta Land Use Plan in Kenya (see box on previous page) show that SEA has in-built guarantees that interests of all stakeholders are taken into account, that decision-making takes place in the most transparent manner, and that the provided information is scientifically valid. This enhanced credibility of the outcome of this planning process.

Home

Challenges
&
Solutions

Case:
SEA for
Tana Delta

IWRM
& SEA

Table:
IWRM
& SEA

More
info

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.

At their request, the NCEA has guided authorities in Rwanda in doing an SEA for a river basin planning process that was based upon IWRM. IWRM is required by law for catchment planning and management in Rwanda. The NCEA developed an approach to integrate SEA into a participative catchment planning process by aligning the IWRM and SEA process steps (Table below). Component added through SEA in blue.



Integrated catchment planning - IWRM & SEA - in Rwanda
1. Start plan process <ul style="list-style-type: none"> Identify stakeholders. Agree on roles, responsibilities and process structure.
2. Situation analysis <ul style="list-style-type: none"> Characterization of land & water system (technical, social, economic, gender and sustainability aspects).
3. Stakeholder priorities <ul style="list-style-type: none"> Identify stakeholder concerns (participatory).
4. Vision development <ul style="list-style-type: none"> Develop catchment vision and plan objectives (address both problems & opportunities). Define alternative ways to reach objectives.
5. Consistency analysis <ul style="list-style-type: none"> What other policies have consequences for the catchment?
6. Terms of Reference <ul style="list-style-type: none"> Set ToR for detailed planning and assessment, including assessment criteria.
7. Planning and assessment <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Quality assurance of documentation (preferably involving stakeholders).
9. Formal decision making <ul style="list-style-type: none"> Discuss with all stakeholders the alternative to prefer. Motivate the (political) decision in writing
10. Sector and agency planning <ul style="list-style-type: none"> Assign tasks to implementing district administrations or sector agencies.
11. Coordinated implementation <ul style="list-style-type: none"> Implementation within boundaries set by catchment plan.
12. Joint monitoring <ul style="list-style-type: none"> By stakeholders in catchment and regular monitoring organisations.

Home

Challenges & Solutions

Case: SEA for Tana Delta

IWRM & SEA

Table: IWRM & SEA

More info

In just about every country in the world, it is required by law to conduct an environmental assessment before major commitments are made. It can be conducted at two levels of decision making:

- Strategic level: such as a land use plan or an energy plan. This is called Strategic Environmental Assessment (SEA).
- Project level: such as a dam, motorway, airport or windpark. This is called Environmental and Social Impact Assessment (ESIA).

Environmental assessment regulation was developed in the 1960s to ensure that decision makers and the public would have sufficient information on environmental and social impacts of proposed plans and projects. An SEA and ESIA process and report should:

- deliver relevant **information** needed for decision making. Information on the impacts of the proposed action, but also on alternative decision options, mitigation measures and the management of impacts after decision making.
- **engage affected stakeholders** in a timely, transparent and inclusive way.
- be able to **influence** decision making by addressing relevant issues, providing usable inputs at the right time and ensuring that decision makers can be held accountable for their use of the assessment outcomes.

Contact

The NCEA

The Netherlands Commission for Environmental Assessment is an independent body of experts. It advises national and international governments on the quality of environmental assessment reports in order to contribute to sound decision-making. In addition, the NCEA supports the strengthening of EA systems in low and middle income countries, and makes its extensive knowledge of environmental assessment available to all.



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NCEA experiences, since 2005

International

SEA for river basin plans:

- [SEA for four integrated catchment plans, Rwanda, 2018](#)
- [SESA for River stabilisation plan, Bangladesh, 2016 & 2018](#)
- [SEA Lower Zambezi catchment plan, Mozambique, 2011](#)
- [SEA Regional development plan in lower Beni, Bolivia, 2011](#)
- SEA Prespa watershed management plan, Macedonia, 2010
- [SEA Madera river basin plan, Bolivia, 2007](#)
- [SEA Hidrovia river stabilisation plan for navigation - by five South American countries of Paraná/Paraguay Basin, 2006](#)

SEA for delta plans:

- SEA Benin Delta plan, (under preparation)
- [SEA Integrated Ayeyarwady Delta Strategy, Myanmar, 2018](#)
- [SEA Tana delta Land use plan, Kenya, 2014](#)
- SEA Inner Delta development plan, Mali, 2012

In the Netherlands (in Dutch)

- [Plan m.e.r. - Programma Integraal Riviermanagement \(IRM\), 2020](#)
- [Plan m.e.r. - Nationaal Waterplan 2022-2027, 2019](#)

Resources

- 2023 - Views & Experiences: SEA for spatial planning (under preparation)
- [2021 - Strategic Environmental Assessment for Sustainable Development of the Hydropower Sector](#). Five Influential Cases - India, Myanmar, Pakistan, Rwanda, Viet Nam. By the NCEA
- 2020 - [Environmental Assessment in Landscape Management](#). Improving governance, collaboration, transparency & inclusiveness. IUCN-NL, WWF-NL, NCEA, Netherlands Ministry Foreign Affairs. Available in English, French, Spanish

All resources are full text available at www.eia.nl/publications

Home

Challenges
&
Solutions

Case:
SEA for
Tana Delta

IWRM
& SEA

Table:
IWRM
& SEA

More
info