

# Strategic

## Environmental Assessment

BENIN

*A shared vision for  
Lake Nokoué*

**A tale of two municipalities**

Relevant use of alternatives  
in The Netherlands

**Groundbreaking SEA  
development in Paraguay**



30 years Netherlands Commission for  
Environmental Assessment

Past | Practice | Prospects

# Dear reader



Three decades ago, Strategic Environmental Assessment, SEA, was still in its infancy. Since the nineties, however, SEA has developed into a valuable and potentially impactful approach that supports governments in taking well-substantiated, strategic, and future-proof decisions. It helps to

balance interests and to translate good intentions into workable policies, programmes, plans and projects.

This magazine is proof of the continuous development SEA has undergone. Presently, we can confidently say that it has become an instrument proving its worth beyond 'just' assessing environmental aspects. Any quality SEA considers the full range of areas that are important in peoples' lives, such as health, income, security, mobility, access to resources, and cultural and social inheritance.

Considering the perspectives and interests of all concerned is at the heart of SEA, a rewarding but challenging job. Therefore, we should not work in isolation, but build mutually beneficial partnerships. Let us learn together and be an inspiration to one another.

With this special magazine, the Netherlands Commission for Environmental Assessment likes to mark its 30th Anniversary. It offers a rich collection of SEA views and experiences, drawn from or linked to the work of the NCEA over the last three decades. We feel honoured by the contributions of many, often high-level experts who wanted to share their experiences with us.

I wish you an inspiring read. The NCEA hopes to meet you for in-depth conversations and productive cooperation, anywhere and anytime.

Sincerely,

Simone Filippini  
Chair International  
Netherlands Commission for Environmental Assessment



# Contents

**Colophon**  
Strategic Environmental Assessment; Past, Practice, Prospects. Special 'Views & Experiences' issue on the occasion of the 30th Anniversary of the NCEA. © 2024, Netherlands Commission for Environmental Assessment. All rights reserved.

**Contact** Arthur van Schendelstraat 760  
3511 MK Utrecht, The Netherlands  
t +31 (0)30-2347660  
ncea@eia.nl / www.eia.nl  
**Editorial team** Anne Hardon, Anouk Werensteijn.  
**Final editor** Lineke Mook.  
**Design** BladenMakers.  
**Translations** Joy Burrough, Liduina Wildenburg.  
**Images** Lilian van Rooij (p. 6-7, 9, 18, 21), David Evison (p. 13), Pvince (p. 14), B. Sadler (p. 19), NathanAN (p. 22), Red Ivory (p. 26), Cocos Bounty (p. 30-31), Julian Peters (p. 33), Parallal/WWF-Paraguay (p. 34), WWF-Paraguay (p. 35), IFAD (p. 47), Riccardo Mayer (p. 48), Juriz (p. 55), Landry Fanou (p. 54-55).  
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The Netherlands Commission for Environmental Assessment offers independent support in the application and improvement of strategic environmental assessment (SEA) and environmental and social impact assessment (ESIA) practices. At the explicit request of governments, the NCEA provides advice, coaching, capacity building, and knowledge & learning activities.

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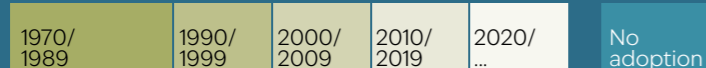
For many countries, the NCEA maintains an overview of the current status of SEA (and ESIA) legislation. Go here.

# SEA adoption worldwide

Historical overview of the legal adoption of Strategic Environmental Assessment 1969-2024

Composed by: Anne Hardon and Arend Kolhoff

This map shows where and when strategic environmental assessment is included in the legal or policy framework of countries around the world. While legal adoption does not necessarily mean effective implementation, this map does show that an increasing number of countries publicly and formally recognise the importance of SEA. An encouraging trend!



# “I never left since *then*”

Interview with frontline workers Ineke and Arend

A significant part of the 30 years of experience of the NCEA resides in the minds of two Technical Secretaries: Ineke Steinhauer and Arend Kolhoff. In this interview, they take us back to the early days of the organisation, closely associated with the smell of coffee and ink, and the sound of a buzzing fax machine.

Text: Lineke Mook

**T**he NCEA was established in 1993. Where were you around that time?

**Arend:** “I was living in Yemen at that time, where I worked for a company called Euro Consult. This was right after the unification of North and South Yemen and I was leading a small team of Yemeni and Dutch students conducting field work. The father of one of the

students happened to be the boss of the NCEA, who dreamt of starting an international department. He called me and said: ‘I have a possible job for you; I think you fit the profile. I had never heard of the NCEA before, but this is how I ended up here. And I never left since then.’”

**Ineke:** “I got my job actually two weeks before Arend did. It was perfect

timing, because I just returned from Bolivia, where I had lived for over four years. A friend showed me the advertisement in the newspaper. I was lucky he pointed it out to me, as I would have overlooked it. The director was at that time assembling a team that could essentially cover the whole world, so I was hired because I speak Spanish. That was a huge advantage in the then crowded job

*“He called me and said: I have a possible job for you.”*

market. Later I heard there were over three hundred applications.”

**What was your motivation to start working for the NCEA?**

**Ineke:** “I have a background in Biology. In Bolivia, I worked for a rural development organisation. My job was to integrate environmental and ecological aspects in the programme of that NGO. In that sense, I was

familiar with environmental aspects and development cooperation. For me personally, this job offered the ideal combination of being based in the Netherlands while working abroad. By that time, I had two young children. Working for the NCEA offered me the opportunity to keep working for people and organisations in low-and-middle income countries”.

Archive photo - Arend points at a flood mark during a visit for the Bagan river multi-purpose project in Myanmar, 2016.



**Arend:** “A continuous line in my career is doing field work in combination with a science-based approach. I like working with people based on a good understanding of problems and opportunities. I want to contribute to the development of sustainable projects through supporting environmental impact assessment. I also like working close to the policy arena where decisions are taken. That altogether made – and still makes - this job very interesting.

**Back in the early days, how did you operate? What was the daily routine like?**

**Ineke:** “In the beginning, the international department, housed five employees: three technical secretaries and two assistants. Arend and I shared one office. The third secretary had his own. The assistants also shared one office. All messages arrived by fax. We had purchased a brand-new fax machine, which was stolen within two weeks. We never found out who did it.”

**Arend:** “We had to buy a new one right away, because the fax machine was crucial for our communications.”  
**Ineke:** “I remember my first trip abroad. I took a portable printer with me to be able to do some printing of the draft advisory reports that we drew up during the visit. I think we had a laptop by then. A big one, lots of kilos. One of the tasks of the Technical Secretary was to make sure that the experts had access to all relevant materials, so we carried a lot of printed copies with us.”

**Arend:** “Suitcases filled with paperwork, that is what I remember too! Then after a while, the international website was introduced to publish documents. We even won a prize with it. Best government website. But it took a while before it was in place. We had to build up our international portfolio from scratch. We first started with Dutch projects to get to know the ins and outs of the job. It took almost five years before

*“During my first trip abroad, I took a portable printer with me.”*

the international department dealt with international assignments only. After three years, I finally had my first NCEA trip abroad.”

**Ineke:** “The initial approach of the NCEA was to review all projects funded by the Ministry of Foreign Affairs and required environmental impact assessment. At that time, a lot of projects were funded bilaterally. The Netherlands was active in 72 countries, so the NCEA was covering almost half the world. After these first years, the work expanded quickly.”

**Arend:** “Although at first, we only did three or four advisory reports a year. The process of communicating and arranging all the preparations was time-consuming. We also had to do a lot of awareness-raising at local ministries, since most countries were not aware of environmental impact assessment nor the existence of the NCEA. It was all about making ourselves known to embassies and ministries.”

**What was the first SEA case you were involved in?**

**Arend:** “For me, it was Lake Tai in China. It was in 2001. Back then, the Netherlands used to have a lot of bilateral programmes in China, can you imagine?

Shanghai, the second city of the country, largely depends on Lake Tai for its drinking water. It is a very shallow lake, and at that time it was heavily polluted. They asked us for solutions. With fifty million people living around that lake, it clearly did not fit the ESIA framework. Along the way, it turned into an SEA. Together with the Chinese government, we worked out some alterna-

*“I have witnessed how SEA brings people from different ministries and silos together.”*

Archive photo - Ineke (third from the left) takes part in a meeting between the NCEA and a delegation of stakeholders in Colombia, 2013.



tive solutions, that went beyond the typical end-of-pipe solutions, such as wastewater treatment plants. Instead, it focused on addressing the causes of the pollution, mainly pig farms.”

**Ineke:** “My first SEA was years earlier, in Ecuador. It was initiated by the Dutch Embassy. This SEA was about the Josefina landslide near Cuenca, at the confluence of four rivers. The landslide entered a village, causing a lot of casualties. Apparently, the Embassy knew the concept of SEA. The Embassy contacted us and said: “We urgently need to do something before more damage is done. We need the Commission here to help us.” It was 1994, so I had been working for the NCEA for about six months. The concept of SEA was completely new to me. It was learning on the job.”

**Arend:** “Over the years, we have elaborated the SEA process and procedures of course, but basically, we are still

learning on the job. There is no one size fits all for SEA. Each situation is unique and requires a tailor-made approach. That is what makes this job very interesting. SEA intrigued me from the start. In 2003, we worked on the SEA of a biogas programme. This programme later on won all kinds of awards, even globally. And we knew that the strategic impact assessment had contributed hugely to this result. That is when I realised how influential SEA can be, although at that time SEA was not widely adopted yet.”

**What is your future dream?**

**Arend:** “To show much more ambition and arrange more funds and capacity to make people and organisations aware of the power of strategic environmental assessment. In particular, I see many opportunities to achieve sustainable impact by introducing and applying sector-specific SEA.

**Ineke:** “My wish for the future? Strong environmental assessment agencies and structures in each country. I have witnessed how SEA brings people from different ministries and silos together. That is so powerful. We need to find more and better ways to document and communicate these practices to inspire people and organisations around the world.”



# WHY SEA? X4

## The added value of strategic environmental assessment

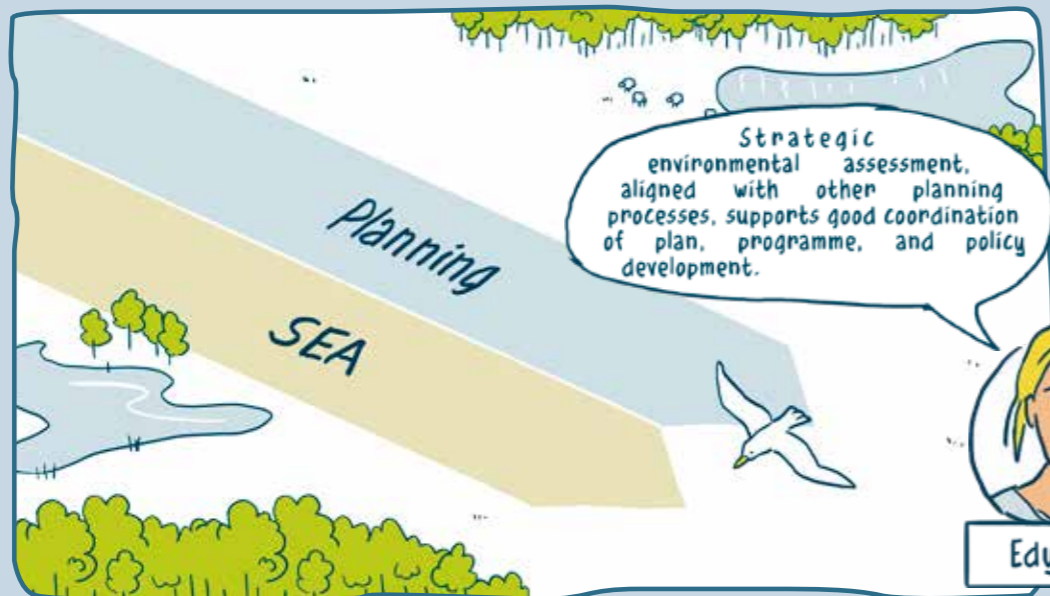
Composed by: Colored Goods / Tupilak Studio

1

"Strategic Environmental Assessment compares various scenarios and development alternatives. This helps to identify the most sustainable solution and to balance multiple objectives and ambitions."



2



Strategic environmental assessment, aligned with other planning processes, supports good coordination of plan, programme, and policy development.



3



Gwen van Boven

4



"Strategic Environmental Assessment results in a shared vision and increases support for the decisions taken."



Watch our animation on SEA

The Ranganadi Dam in Uttarakhand. According to the International Energy Agency, hydropower is expected to remain the world's largest source of renewable energy into the 2030s.

# CASE *Balancing power*

SEA as a powerful support tool for the hydro energy sector

Text Arend Kolhoff

Renewable energy is often associated with wind turbines and solar panels, yet most sustainable energy is currently generated through hydropower, a source of energy particularly widely deployed in Asia. How is the sector dealing with the many trade-offs and increasing impacts of climate change? And what role can strategic environmental assessment play in hydropower planning? A case study from Uttarakhand, India provides insights.



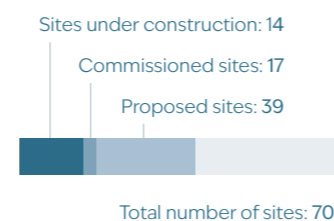
**S**now-clad peaks, beautiful lakes, lively cities and ancient temples. A tourist hub and a retreat for people seeking rest and spirituality. Located at the foot of the Himalayas, the state of Uttarakhand offers all of this. As well, Uttarakhand is uniquely endowed with glaciers and rivers spread over six river basins such as the Ganges sub-basin, Alaknanda and Bhagirathi. No wonder hydropower for export is considered to be an important asset in the state's economic development plans. Since the formal inception of the state in

2000, Uttarakhand has been referred to as *Urja Pradesh*, Power State.<sup>1</sup> The calculated hydropower potential of the six basins combined is calculated at over 27 thousand megawatts. To give meaning to this figure: one megawatt is equivalent to powering about 1,000 households.

Around 2010, only 14% of that potential was actually utilised. The state's energy plan had formulated ambitions for large-scale expansion of hydropower facilities. This involved as many as 70 water dams concentrated in two headstreams of the



Number of sites in the state's baseline energy plan



Ganges: Alaknanda and Bhagirathi. The construction of 14 of these sites was already underway, while another 17 sites had been commissioned. For construction in the future, another 39 sites were proposed.

**Environmental and social concerns**

Major concerns from different perspectives had been raised regarding these plans. The Ganges has great historical and symbolic value and is vital for numerous activities and applications: from irrigation to fisheries and from industry to religious rituals

such as a "the holy dip" performed by thousands of pilgrims every year.<sup>2</sup> The Alaknanda and Bhagirathi river basins also support rich biodiversity,

*"The Ganges has great historical and symbolic value."*

both on land and in water. The basins offer a huge range of vegetation: from the lower subtropical scrub to broadleaf forests at medium altitude

and coniferous forests near the tree line. The riverbanks form corridors and vital migration pathways for a multitude of species. There was much uncertainty about the impact of the hydropower development plans on water levels, river systems, the availability of water for different uses and ultimately the impact on biodiversity and socio-economic wellbeing.

**Finding the middle ground**

Needing environmental and forestry clearances for construction of various hydropower projects, in 2010 to 2012, the State Government of



An Indian family taking a holy bath in the Ganges during the celebration of Makar Sankranti in Haridwar, Uttarakhand.

*“80% of the annual flow of the River Ganges occurs during the four monsoon months.”*

Uttarakhand submitted its proposals to the designated federal agency, the Ministry of Environment, Forest and Climate Change (MoEFCC).

In turn, the MoEFCC assigned the Wildlife Institute of India to execute environmental assessment studies of all proposed projects to support informed decision-making:<sup>3</sup> a challenging task, entailing seeking the

best balance between water withdrawal (for industry, irrigation and power generation) and maintaining the continuity of the river flow regimes to support biodiversity and cultural and religious services. The challenge was compounded by the imbalance between water demand and seasonal availability that arises

because over 80% of the annual flow of the River Ganges occurs during the

four monsoon months, resulting in widespread flooding between June and September. During the rest of the year, the lean season flows could be significantly affected by the hydropower projects in the upper reaches of the Ganges, and vice versa. Climate change is exacerbating this problem.

#### **Taking the best approach**

The planned impact assessment study aimed to safeguard priority areas for the conservation of terrestrial and aquatic biodiversity in the Alaknanda and Bhagirathi basins. A second objective was to provide a risk forecast of dam-induced changes that might impair the connectivity of river ecosystems and thus pose a threat to endangered fish species, and the third was to provide insight into the extent to which species would need protecting if all development plans went ahead as planned. The study

assumed that mapping these direct impacts would also give a good picture of cumulative and indirect impacts on human social and economic wellbeing. The existing EIA process as defined under the legislative framework could not be applied to the series of projects planned, as it would have failed to capture the cumulative impacts of multiple dams. In addition, as the construction of a number of sites was already underway and quite a few other sites had been commissioned, it was not

possible to subject the overall plan for all 70 sites to an SEA beforehand. A hybrid approach was therefore adopted, combining a basin-wide cumulative environmental impact assessment (CEIA) with an SEA. The CEIA considered the combined impacts of all built, commissioned and proposed dams. Its findings were fed into the SEA in order to identify the prospects and risks associated with the existing plan and to align the energy plan with the environmental goals. This hybrid approach departed significantly from traditional approaches and from the provisions under national legislation. It contributed to determining locations for the energy projects and ways of operation that were least disruptive to existing biodiversity.

#### **Methods used**

First, 18 sub-basins were delineated

for assessing the cumulative impacts of all dams on the targeted species of mammals, birds, plants and fish that are highly sensitive to habitat changes. Helped by literature about the relevance of flow regimes as a key factor for shaping the ecology of rivers, two most relevant stress factors were identified: “river length affected” and “forest area loss”. The first stress factor concerns the proportion of the catchment affected by dam installation. This includes parts of the river that may be drained as well as parts of the land that will be flooded. The second stress factor concerns the location, extent and nature of the forest area to be cleared or submerged as a result of hydropower plant construction and operation. In all 18 designated sub-basins, a score was given to both stress factors to indicate the degree of impact on the selected species and their habitat. To get the broadest view of alternative solutions, four scenarios were then developed. In the first, only the 17 commissioned but not yet implemented projects were included, to determine their impact on biodiversity. The second scenario assessed the impact of all 31 commissioned sites. The third scenario considered the cumulative impacts of all 70 implemented and proposed sites combined. The fourth assessed the additional impact of the 39 proposed sites.

The scenarios clearly illustrated the share of the already existing, planned and proposed dams in the cumulative impact on biodiversity in the two river basins. It showed that 24 planned projects could have significant impacts on habitats of rare, endangered or threatened species or species protected under the Indian Wildlife

Protection Act. One of the sub-basins is in the Nanda Devi UNESCO World Heritage Site and hosts areas of outstanding universal value.

#### **Presentation of alternatives**

Based on the four scenarios and their predicted outcomes, three alter-

*“24 planned projects could have significant impact on habitats of rare, endangered or threatened species.”*

natives were presented for decision-making on the state’s energy planning. The scenario analysis yielded estimates of overall gains and losses for biodiversity and power production. It showed, for example, that

proceeding with all commissioned projects, including those already under construction, would affect 47% of the stretch of the rivers and 87% of fish species would be affected by changes in the environmental flow.

In 2012, the alternatives and key recommendations were presented to the MoEFCC (the key environmental regulator), and to the National Ganga River Basin Authority. They were also shared with a range of stakeholders, including the hydro development agencies, the Government of Uttarakhand (which is the planning agency), the conservation community and religious leaders. A long trajectory was needed to bring together and balance the many interests and to clear out a number of uncertainties.

#### **Major influence**

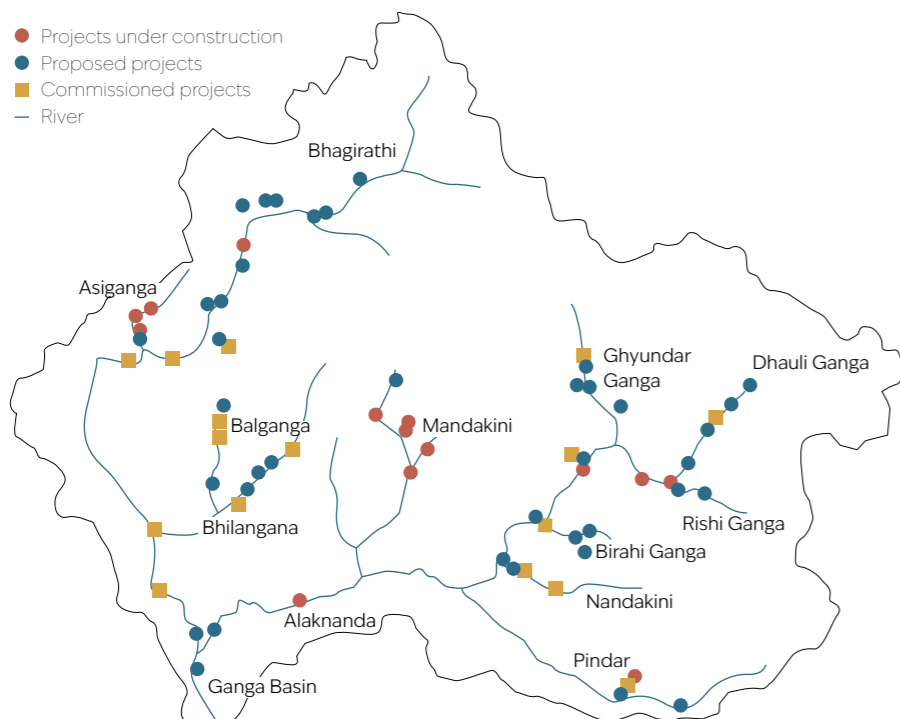
The SEA eventually turned out to be



1. Mongabay/Jeet Singh, 2021. The role of hydropower projects in development and disasters in Uttarakhand.
2. Kumar P., 2009. Environmental flow assessment for a hydropower project on a Himalayan river.
3. Rajvanshi et al., 2012. Assessment of Cumulative Impacts of Hydroelectric Projects and Terrestrial Biodiversity in Alaknanda and Bhagirathi Basins Uttarakhand.
4. Government of India, 2012. National Water Policy. Ministry of Water Resources, River Development and Ganga Rejuvenation. New Delhi.
5. Government of India, 2018. Ministry of Water Resources, River Development and Ganga Rejuvenation, Order No. S.O.5195 (E). Published on 9th October 2018 in Gazette of India, New Delhi.

## Hydropower projects

Hydropower projects in Alaknanda and Bhagirathi Basins within Uttarakhand State, India: the situation when the SEA was commissioned.



of major influence in both the shorter and longer term. In the first place, it led to 24 ecologically most sensitive sites being excluded from the list of proposed future projects in the state's energy plan. Its underlying presented studies led to the Government of India recognising the importance of protecting river ecosystems for conserving biodiversity and to a shift in the water management policies. It was emphasised that such a shift in the policy for managing biodiversity would also help to maintain the cultural and religious services these ecosystems provide for human wellbeing. In addition, the SEA process contributed to policy and leg-

islative reforms, namely the adoption of environmental flow standards for all dams in the basin as well as the development of a national e-flow policy. iv Remarkably, the e-flow levels specified in these standards were higher than earlier recommended and were even stricter than the levels recommended in the CEIA study by the Wildlife Institute of India. The 2018 revised national e-flow policy even states that: "Maintenance of uninterrupted flows along the entire length of the river would be ensured without altering the seasonal variations." [...] The existing projects, which currently do not meet the norms of these environmental

of appropriate assessments, development planning can be directed to deliver ecological, social and economic securities linked to power generation.

*For a full case description and other detailed hydropower cases, see the publication "Strategic Environmental Assessment for More Sustainable Development of the Hydropower Sector" (2021).*

flows, shall also have to comply and ensure that the requirements of stipulated environmental flow are met within a period of three years from the date of issue of this notification.<sup>6</sup>

With this regulation, India has become one of the few countries that are integrating environmental flow provisions into their water resources policies.

### Take-aways

The case of Uttarakhand State's energy plan clearly illustrates the potential influence of SEA on decision-making at all levels – from plans to individual projects – including two major legislation reforms. It also shows that when driven by good governance and influenced by outcomes

Source: Rajvanshi et al., 2012

# Embarking on SEA



Lady Justice Dr. Christine Echookit Akello

**In 2012, the Government of Uganda embarked on the development and review of environmental laws. As the Legal and Corporate Manager of NEMA, it was my responsibility to coordinate this process. Accordingly, I constituted a team of technical officers and we set to work.**

The National Environmental

Act No. 5 passed in 2019, incorporating key SEA provisions, followed by the National Environment (SEA) Regulations No. 50 in 2020. The Guidelines for SEA in Uganda were also published in 2020. From 2016, in the role of Deputy Executive Director at NEMA, I coordinated the approval process.

Plainly, this journey had not been without challenges. For many technical officers, it was hard to distinguish between ESIA and SEA. They wondered why SEA should cover activities in a landscape when projects in the same area were already covered under ESIA. And as government policies, plans and pro-

grammes already where subject to Regulatory Impact Assessment (RIA) before they could be adopted by the Cabinet of Ministers, the added value of SEA could not be fathomed.

The regulatory framework for SEA in Uganda is still relatively young and I am yet to witness the positive effects of this trajectory. I was - and still am - convinced that, alongside RIA, SEA will help the government to be much more mindful of the environmental and social considerations at strategic and landscape level, compared to considering this solely at project level. I also believe that SEA is instrumental for government agencies in taking the lead to ensure that environmental and social considerations are taken into account. Therefore, I am hopeful that our efforts will not miss their impact.

For those involved in similar processes, let me close by sharing some recommendations, based on our experience. The first one is to ensure that SEA is rooted in the parent law or Act of Parliament in order to give it prominence. The second is to bring key government institutions on board to ensure their policies, plans and programmes, as well as ESIA's for projects, are informed by and in line with the SEA. The third is to adopt frameworks that are in tune with the country's specific context, so that cumulative and widespread environmental and social impacts are considered and can be mitigated adequately.

***"Plainly, this journey had not been without challenges."***

# The state of play of SEA

Taking stock of SEA development since 1996

In the 1990s, Strategic Environmental Assessment (SEA) gained momentum. Separated by half the globe, two SEA professionals set out to take stock of the state of the art of SEA. Now, twenty-five years later, what has become of the findings in their report? The two authors have recently reassessed what and how much has changed in the SEA field. An interview with Barry Sadler and Rob Verheem.

Text Lineke Mook

## How did the idea for the SEA report come about and how did you get involved in it?

*Barry:* “The report was part of a wider initiative by the International Study of the Effectiveness of Environmental Assessment (ISEA), in which I served as Director and lead investigator. This study was undertaken by the Canadian Environmental Assessment Agency and the International Association for Impact Assessment

*“But then I realised that trying to do the impossible would probably be a great adventure.”*

in collaboration with a consortium of government agencies, NGOs and research institutes.

“At that time, SEA was still emerging. In Canada, for example, there was no formal SEA procedure yet. In the background, however, diverse initiatives were underway. These approaches contained SEA-like elements or were similar to SEA in all but name, and they included early

work in which I got my start in the field in 1972. Among these initiatives were a series of major public inquiries in the 1970s that addressed national public policy issues or had major regional planning dimensions associated with large-scale energy developments in the Canadian north.

In the USA, the assessment of plans and programmes had been an established part of the National

Environmental Policy Act since 1969, albeit not always extensively applied. Elsewhere, the potential of SEA was becoming widely recognised, and various initiatives and activities were underway in a number of countries. Therefore, we decided to include SEA as a major component of the international effectiveness study.”

**Rob:** “I got involved through a phone call by the Dutch Ministry of Environment in 1994. I was just back from a couple of years at the European Commission working on the European Union ESIA and SEA directives and had recently resumed my work at the NCEA. The Ministry asked if I would be interested in co-authoring a special publication on the international state of the art of SEA.

Even though I had some experience with SEA both in the Netherlands and with the European Commission, I did not at first feel up to the task of writing a report claiming to describe the state of practice worldwide. But then I realised that trying to do the impossible would probably be a great adventure. And so, I said yes.”

**In those days, what did you think of SEA and its potential?**

**Barry:** “In 1994, SEA could be considered as being at take-off stage and as a critical area of interest for further work going forward. Our hope was that the study would have an impact, particularly as it involved the collaboration of several progressive governments and institutions. From

there, we looked for a wider, long-term pick-up. This all happened faster than in the most optimistic prospects outlined in the SEA study.”

**Rob:** “I also saw a huge potential. At that time, the emphasis in many countries was heavily on ESIA for decisions on projects, while the important decisions were taken at strategic level, without proper impact assessments. That did not make sense to me. Also, at strategic level, there seemed to be considerably more room to move in finding the best alternatives to achieve sustainable development.”

**Where did you start?**

**Rob:** “Once I had said yes, I started thinking about a possible set-up. On a piece of paper, I noted down my own main questions about SEA and presented those to Barry as a point of departure. I believe Barry liked this from the start. We started polishing our ideas and after some bouncing back and forth, the framework was in place.”

**Barry:** “Yes, I liked Rob’s idea of starting with questions, then present the cases and then close with answers.

It was a basis in which we could move forward. We did not agree on everything, and it took some time to align our views. I am glad about that, because in the end, it benefited the quality of the study.”

**How did you work together on the report? You were in two continents.**

**Barry:** “My arrangements were somewhat decentralised. I was based in British Columbia, using a home office. The Agency was in Ottawa, two thousand miles and three time zones away. I used a home-based computer and was in regular contact with the Agency as well as with Rob by phone, mail and fax. Of course, there were some spells of slow-going, but this arrangement allowed me to concentrate on writing this and other

reports. So, it worked quite well.”

**Rob:** “For communication with Barry I used the phone, one of those with a curly wire. Later on, I guess we used email as well. The most exciting moments were the expert meetings. To sit together and take time to discuss

the pros and cons, chances and risks of SEA. Being relatively young, it was an opportunity for me to listen and learn from seasoned experts.”

**Barry:** “For me, the whole two years were exciting.

We worked on something innovative, creative and fulfilling. It was exactly what I wanted to do. I could not believe my luck!”

**Two years later, in 1996, you published the report, titled “Strategic Environmental Assessment: Status, Challenges and Future Directions”. What were the most striking findings?**

**Rob:** “We pointed out a number of potential challenges and opportunities that even now, 25 years later, have not materialised. One important example is the need for SEA to focus on sustainable development instead of ‘just’ environment. Another one is the use of SEA for the development of policies rather than plans and programmes. And the need to integrate SEA with other strategic planning tools such as green economics and environmental accounting.”

**How was the publication received?**

**Barry:** “It was generally well received, although obviously, the conclusions and study finding were not without their critics. The publication has been widely cited, especially in the first years after its appearance, of course.”

**Rob:** “What I found very special was at some point to receive a version that had been translated into Japanese, including our names in characters.

*“I heard someone referring to the study as her ‘red bible.’”*

*“For me, the whole two years were exciting. We worked on something innovative, creative and fulfilling.”*

Rob Verheem holding a version of the 1996 study, translated into Japanese.



What also stands out as a memory is when at some point at an IAIA meeting, I heard someone referring to the study as her ‘red bible.’”

**Barry:** “Later on, it became more archival and buried in the avalanche of SEA literature of course.”

**Around 2021, the report resurfaced. What caused this revival?**

**Barry:** “Our own curiosity, I guess.

Rob came up with the idea to evaluate the findings after 25 years. I immediately liked and endorsed the idea. We drafted four questions: ‘How has SEA evolved over the past 25 years?’ ‘What has improved compared to 1996?’ ‘What about SEA still doesn’t work?’ and ‘What does this mean for SEA in the coming 25 years?’

We sent the questions to a wide range of SEA experts, and in parallel, we an-



“Strategic Environmental Assessment: Status, Challenges and Future Directions” and reflection study materials.

swered them ourselves. We organised a few consultation and validation sessions and now we are about to share the findings and propose a follow-up agenda, to be discussed at IAIA24, the Annual Conference of IAIA, in Dublin this spring.”

**Exciting! What are the main findings so far?**

**Rob:** “These are both positive and not so positive. On the positive side, we can see a fast-growing application of SEA in low- and high-income countries over the last 25 years. But at the same time there are often valid concerns that planners and decision-makers have with SEA and that we should address. Including better showing the downstream gains that SEA may have for them.”

**Barry:** “The development and reach of SEA have indeed been impressive. Adoption has become worldwide, SEA laws and procedures have become formalised, and there is an extensive body of application and practice. At the same time, we still need to find ways to gain more traction on decision-making. I very much look forward to the opportunity to discuss our findings with the impact assessment community and other stakeholders. And to try to chart a course forward for the coming twenty-five years.”

# Minimising risks, *maximising* opportunities

Strategic environmental assessment  
for the mining sector

The rocketing demand for minerals offers resource-rich countries a vital opportunity for growth. Such growth can boost sustainable socio-economic development while minimising negative environmental and social impacts. To what extent this is achieved largely depends on good coordination and governance. Previous experience, such as the uranium rush case in Namibia, shows that SEA can play an important role here.

**Text** Joyce Kortlandt and Carlos Ortega

**E**nvironmental and social impact assessment (ESIA) for large mining projects is applied throughout the world. Strategic environmental assessment, which takes place at the level of mining policies, plans and programmes, is adopted much less often. Yet, it offers many advantages – particularly to resource-rich countries that are struggling to gain a foothold in the rapidly evolving resources markets. For example, SEA is able to identify the cumulative effects of multiple activities. It also gives insight into how best to balance the interests of the mining sector



The full paper of IGF and the NCEA is called 'Strategic environmental assessment for the mining sector' and contains more good practices and recommendations. The paper can be found here.



with other social, economic and environmental interests. These and SEA's other advantages on top of project-level ESIA underline the potential of SEA as a relevant strategic planning tool for mining (see overview on the right).

The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) and the NCEA have brought together several case studies to address the potential of SEA for the mining sector and to shine a light on obstacles that need to be overcome. Among these, the cases from Ghana, Mozambique and Namibia demonstrate the positive influence of SEA on policy, practice or both.

In Ghana, strategic environmental assessment carried out in 2014 assisted the Minerals Commission

of the Environmental Protection Agency and other key stakeholders to improve the draft Minerals and Mining Policy<sup>1</sup>. It

***“It helped them to focus on strategic decisions and long-term objectives.”***

helped them to focus on strategic decisions and long-term objectives, and it supported the mining permit process for artisanal and small-scale miners.

In Mozambique, an SEA was carried out for the development of Tete province, a predominantly mining area located in the lower Zambezi valley<sup>2</sup>. The ongoing development of the mining and

#### **Advantages of SEA for the mining sector, on top of project level ESIA.**

Strategic environmental assessment:

1. Gives insight into management needs.
2. Shows how to balance mining with other interests.
3. Assists governments in regulating and including small-scale and artisanal mining.
4. Identifies cumulative effects of multiple mining activities.
5. Addresses the impact of mining proposals on longer term infrastructure planning.
6. Assesses the contribution of mining to a country's development strategy.

agricultural sectors intensified the pressure on water and land. An SEA carried out between 2011 and 2016 supported the development of a strategic vision for the Zambesi Valley. Combined with other plans, this resulted in an integral territorial plan as a legal basis for all lower-level plans.

With support of the Southern African Institute for Environmental Assessment, the government of Namibia initiated an SEA in response to the “uranium rush” relating to the increasing global demand for power<sup>3</sup>. In 2007, the Ministry of Mines and Energy imposed a moratorium on issuing new Exclusive

## **“SEA brought us together under one roof”**

**A number of dialogues with experienced stakeholders from different sides of the playing field helped to expose key opportunities and challenges for applying SEA on mining. One such dialogue was with Mr Israel Hasheela, Deputy Director at the Geological Survey of Namibia for the Division of Engineering and Environmental Geology.**

“By training, I am a geologist.” This is how Mr Hasheela starts his story. “Around 2009, I participated in the strategic environmental assessment for the uranium rush. I was not yet a Deputy Director at that time. As a middle-level geologist, I reviewed the terms of references for the various consultants of the expert team, that would carry out the SEA. Gradually, we went into the actual SEA. We started with collecting baseline data in the designated area, the central Namib, which included geological information on the uranium deposits. Later on, I played a role in the stakeholder engagement process. A number of communities living in the central Namib were quite concerned about the effects of the many uranium mines popping up in the area. We therefore held numerous public engagements, including townhall meetings, meeting with targeted interest groups, the mining industry and general public, up to the level of involving youth groups within the region. We also used radio broadcasting to reach the whole nation. This is how we ensured reaching all levels of stakeholders as much as possible. The technical information as well as the extent of the uranium rush was not easy to grasp for all stakeholders. Different tools had to be used, and language had to be toned down to make sure people would understand and contribute input in the process. After all this was done, we continued with the strategic environmental management plan (SEMP). We collected and assessed environmental quality monitoring data and produced annual reports reflecting the status of different indicators of the SEMP.

The SEA itself had no legal enforcement, as it was designed to be a voluntary process that acted as a guide for sustainable environment in the central Namib. This SEA emerged from the need of the industry and the government to make sure that there is a good understanding on uranium mining, as well

as the associated possible impacts on the nearby communities and the environment. This would then also allow for sustainable development in the region, as well as answer concerns about the issue of radiation effects on the nearby communities. We had to chart a new way without relying on any existing examples of SEA, although of course we could make use of other legislative instruments, such as the Environmental Management Act.



Mr Israel Hasheela

The SEA was influential in various ways. A few years after the development of the SEA, the moratorium from 2007 was lifted. Although the lifting was not 100% due to the SEA, the SEA still helped to answer a lot of questions. Together with uranium prices going down a bit, this brought a lot of relief. Another influence was on regional planning: specifically, infrastructure planning in the region. The SEA helped to concentrate infrastructure such as roads and water pipes in a few places or corridors, so that environmentally sensitive areas could be spared as much as

possible. Also, the SEA's recommendation to build new roads linking the industry to the harbour was adopted. This prevented the daily used national roads from being burdened with heavy industrial traffic. As a third influence, the SEA greatly helped in forecasting cumulative impacts.

***“The management plan prepared us for whatever scenario we would find ourselves in.”***

For the SEA, we worked out various scenarios on how intense the uranium rush could turn out. We combined these scenarios with

management alternatives describing how to organise ourselves or how to organise matters in each of these scenarios.

To me, stakeholder participation has been one of the most successful elements in this whole process. SEA brought us together under one roof – the government, the mining industry, local authorities, the affected communities, as well as the wider public. The aspect of carefully managing issues of concern really came out strongly. It was quite a resource-intensive process, but worth it in terms of making sure environmental and socio-economic cumulative impacts and synergies of mining are well understood. Another successful element was the scenarios prospect, combined with the management plan coming out of it. It prepared us for whatever scenario we would find ourselves in. Even more, now with uranium prices starting to pick up, the mapped-out scenarios would put us in a better position to predict the future and be better prepared for increased activities.”



These examples show that SEA, depending on context and need, can be used as an effective strategic planning tool for spatial planning or for sector development. In Mozambique, the SEA was linked to a regional development plan within a certain geographical area, while in Ghana and Namibia, the SEA focused on national policies and regulations for the mining sector.

Another observation is that SEA is capable of serving various stakeholder groups. Although only

*“According to mining companies and other stakeholders, the SEA encouraged better projects.”*

governments are in a position to initiate an SEA, there are clear benefits for the mining companies and civic society too.

Unfortunately, there are also many barriers preventing governments from applying SEA, such as too little awareness and understanding about SEA and its benefits, limited institutional capacity and the lack of political will or ability to integrate SEA with existing planning and decision-making processes. These thresholds, however, should not discourage us. The stakes are high, because the booming mining industry offers significant opportunities but also has far-reaching impacts on the natural and social environment.

In collaboration with many other partners, IGF and the NCEA are committed to assisting decision-makers in applying SEA for minimising risks and maximising opportunities in the mining sector. Together with a growing number of governments, companies and civil society organisations, we are confident that these efforts will pay off.

Prospecting Licences (EPLs) until the completion of the SEA. According to mining companies and other stakeholders, the SEA encouraged better projects and lowered the threshold for ESIA. On top of this, the companies benefited financially, thanks to the use of shared facilities and the lower costs for ESIA procedures.

# CASE **A shared vision for Lake Nokoué**

The essence of independent SEA coaching toward strategic development



Benin



Text Stephen Teeuwen

In 2018, the Netherlands Enterprise and Development Agency (RVO) initiated a project to dredge the transport channels of Lake Nokoué in Benin. Following the advice of the NCEA, the focus shifted toward strategic development of the whole lake area. According to stakeholders, independent coaching and facilitation added a lot of value in this process.

1. Netherlands Commission for Environmental Assessment, Approach for the Ghana SEA for the mining sector: Memorandum by the NCEA (2011).
2. Ministério da Economia e Finanças & Ministério da Terra, Ambiente e Desenvolvimento Rural, Plano Especial de Ordenamento do Território do Vale do Zambeze (Biofund, 2015).
3. Southern African Institute for Environmental Assessment, Strategic Environmental Assessment for the central Namib Uranium Rush (2010).

A traditional acadja fishery in Lake Nokoué. Acadja are artificial systems created by fishermen to increase fish production. Overfishing is one of Lake Nokoué's main challenges.



ADELAC, Royal Haskoning DHV and the Dutch embassy participate in the scoping workshop for the Lake Nokoué SEA.

**S**outhern Benin is a hotspot of construction activities and economic development. This coastal zone is home to Benin's major cities which continuously require new infrastructure to support their growing populations. It also accommodates the country's largest lake, Lac Nokoué: an important source of income, a means of transportation, and an ecologically sensitive zone. Despite or because of this, Lake Nokoué faces many challenges, including the rise of invasive plant species, pollution, siltation, and overfishing. All in all, the region has attracted the interest of Beninese and foreign investors.

To address several issues surrounding the lake, the Netherlands Enterprise and Development Agency, RVO, planned a dredging project. In line with the existing institutional cooperation, they requested the NCEA to review the scoping for the report. The purpose of this process step is to specify the tasks to be completed by the consultant.

#### **Zooming out: from a single project level to a full SEA**

The NCEA's main observation was that the challenges facing the lake and the potential generated by the project went beyond the project level. Instead

*“The challenges facing the lake went beyond the project level.”*

of focusing on this one project, it would therefore be useful to take a more overall view of the possibilities for the lake. Therefore, the NCEA suggested developing a strategic plan and conducting a strategic environmental assessment (SEA). This would enable

RVO to oversee various scenarios, consider their feasibility with or without the support of international donors, and how an RVO financed project could fit in.

This advice came at the right time. The project had been transferred to the newly established Invest International, which was interested in taking a more strategic approach to its project development

procedures. An added benefit was that through a strategic planning process, made transparent through an SEA, the Beninese authorities were able to mobilise more funds by involving other donors. In 2019, it was indeed decided to take the project to a more strategic level.

However, strategic planning and strategic environmental assessment are complex procedures, and the responsible authority in Benin, ADELAC, had limited experience in conducting these processes. On the recommendation of Invest International, the NCEA was asked to coach them.

#### **‘Tour du Lac’**

The coaching of ADELAC by the NCEA officially started in December 2019, when the SEA was launched. The NCEA attended the opening meeting and established agreements with ADELAC on how the coaching could provide the most added value. The first activity involved supporting the execution of a ‘Tour du Lac’, a series of consultations among the ten municipalities located along the lake shores. The NCEA provided training for the ADELAC officials responsible for the consultations and shared experiences from other countries. Ultimately, the results of the consultations formed an important part of the content of the SEA.

#### **Other forms of support**

IN addition to the training sessions, the NCEA supported ADELAC in its role as competent authority for the strategic plan and the SEA. Throughout the process, the NCEA maintained contact with the members of the steering committee and shared its observations on the progress with ADELAC. It attended several meetings, including the meeting



A sand mining project in the Lake Nokoué basin as one of the many development activities in the area.

where the scoping report was presented by the consultant.

Lastly, the NCEA, was requested to facilitate the closing meeting, where the steering committee approved the draft development programme. The NCEA had no vested interest in the outcome of the political decision-making, unlike all other parties, including Invest International and the consultant. As the NCEA was trusted not to have an own agenda during the discussions, it was able to assume the role of a neutral facilitator.

#### **Conclusion**

A few weeks after the closing meeting, in July 2023, the SEA was submitted for approval to the Beninese competent authority, the ABE. Invest International intends to finance a ‘backbone’ dredging project that will allow for the development of other projects in the area. ADELAC is recognised as the authority for development in and around the lake and is now in a position to mobilise donors to fund these projects.

Overall, the Lake Nokoué Programme is an example of the various forms SEA coaching can take: the NCEA provided training, discussed the planning process with stakeholders, provided observations, and acted as neutral facilitator in the final decision-making meeting.

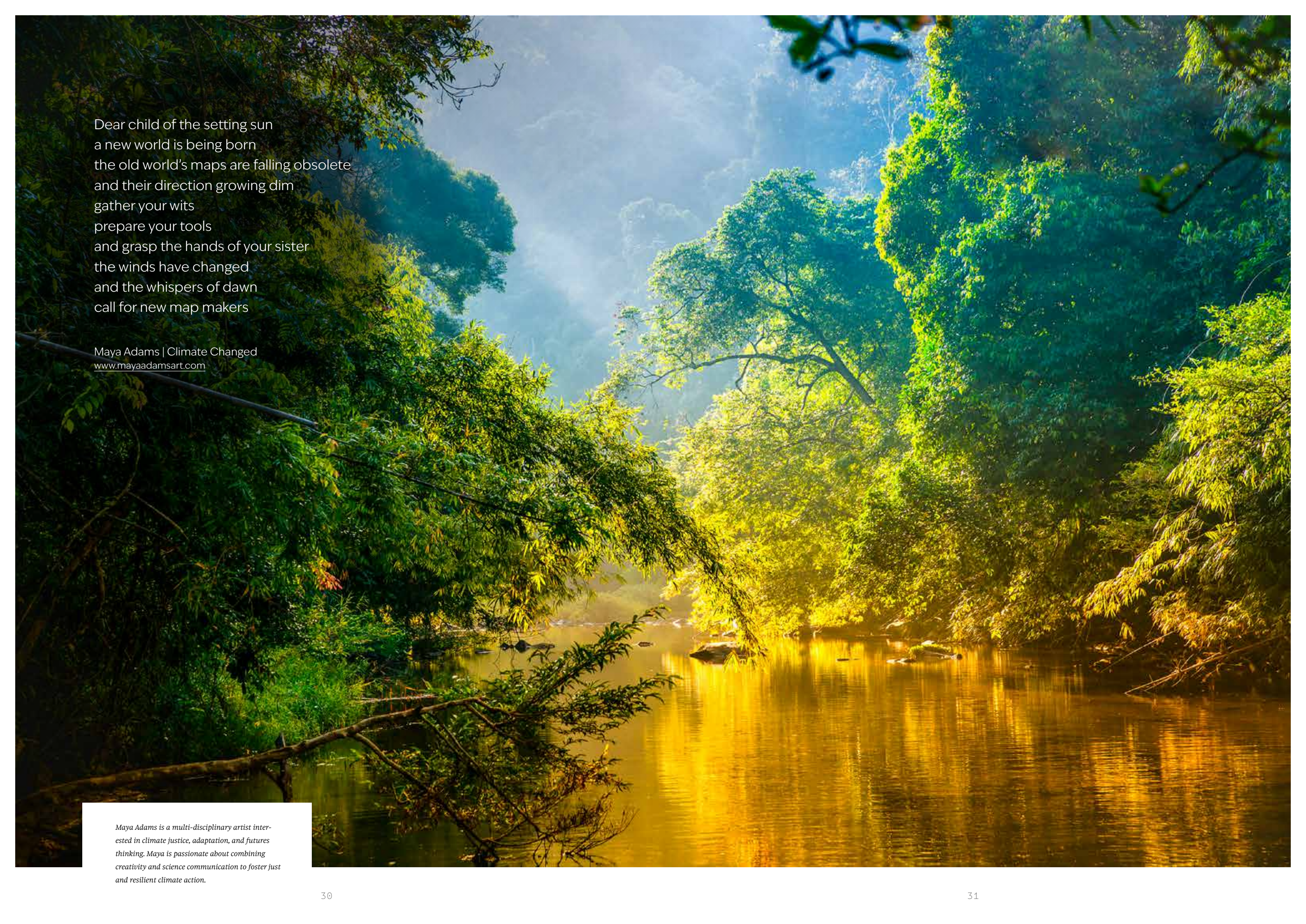
*“The Lake Nokoué Programme is an example of the various forms SEA coaching can take.”*

#### **Main take-aways**

The decision to transition from development at the project-level to development at the strategic level, clearly paid off. The development programme as well as the SEA identified several ‘solution packages’ to address the different challenges in the lake. The selected solutions had broad ownership, thanks to the stakeholder consultations early in the process and the involvement of various local government authorities throughout.

Due to its neutral position in the process, the NCEA was able to support the debate on the various development options that had been studied in the planning process.

In addition, the NCEA's experience in similar political processes in West-Africa was valuable in gaining a good understanding of the political support for the final programme proposal.



Dear child of the setting sun  
a new world is being born  
the old world's maps are falling obsolete  
and their direction growing dim  
gather your wits  
prepare your tools  
and grasp the hands of your sister  
the winds have changed  
and the whispers of dawn  
call for new map makers

Maya Adams | Climate Changed  
[www.mayaadamsart.com](http://www.mayaadamsart.com)

*Maya Adams is a multi-disciplinary artist interested in climate justice, adaptation, and futures thinking. Maya is passionate about combining creativity and science communication to foster just and resilient climate action.*



# “Their voices need to be heard”

Interview with SEA young professional Alicia Pedrozo

Text Lineke Mook

Since the rise of Strategic Environmental Assessment, a new generation is ready to carry the torch and take SEA a step further. One of those young professionals is Alicia Pedrozo, Programme Officer for WWF-Paraguay. Five years ago, she began to delve into SEA as part of her involvement in the ‘Chaco-í Masterplan’. So far, what did she take from it? And how does she envision the future of SEA in Paraguay?

A sunny day, but not too hot. Starting with a good cup of coffee before going through emails and catching up with the to-dos. This is what a favorite working day looks like for Alicia (33). In her free time, she loves to walk her five dogs, visit new places, or enjoy quality time with family and friends.

## What motivates you to work for WWF?

I love to work in projects or programmes focused on securing and strengthening the livelihoods of the indigenous people and other local communities. They are the ones who know the most about their territory and the solutions they need for sustainable management of resources, ensuring their conservation over time. They need their voices to be heard and I am happy

to support them through my work. The programmes and projects touch upon food security, climate adaptation, access to water. These and other critical issues are closely linked to environmental sustainability and good governance.

Being involved in the WWF projects as a Programme Officer is very rewarding. I facilitate and coordinate actions and activities, including those in the field. At the same time, my work has a strategic component when it comes to facilitated spaces for the integration and development of territorial plans at local and regional level. I contribute to this by coordinating meetings, events and joint actions, as well as training sessions, with civil society actors and

*“They need their voices to be heard and I am happy to support them through my work.”*



Guarani women making music and performing a song. Guarani women make music and perform a song. The Pantanal is home to several indigenous populations, such as the Guarani.



Paraguay

governments, both at national and sub-national levels. This altogether makes my job very interesting and meaningful.

## The Chaco-í masterplan. What is it about?

The Chaco-í masterplan is a conceptual plan for the logistical and urban development of the region, known as Chaco-í. It is a wetland region, accommodating unique and essential ecosys-

tems that need to be recognised and respected. At the same time, this area is undergoing significant transformations, especially in and around the cities. This is without adequate territorial or strategic planning, without considering the long-term socio-environmental impacts. Part of the masterplan is the construction of the ‘Heroes del Chaco’ bridge, connecting the capital city of Paraguay, Asunción, with the surrounding area.

## How did WWF-Paraguay get involved?

The masterplan itself was released

*“The area is undergoing significant changes, especially in and around the cities.”*

in 2018. Around the same time, SEA training sessions for government institutions and civil society organisations were facilitated by the NCEA. This was part of the 'Pacha' project, supported by the Dutch Ministry of Foreign Affairs in collaboration with WWF Netherlands. Following these training sessions, the Ministry of Urbanism of Paraguay and

*“The process itself was truly enriching and it provided an essential source of information.”*

WWF-Paraguay expressed interest to jointly carry out a Strategic Environmental Assessment on the conceptual masterplan. The objective was to provide a framework of environmental and social standards, to ensure the viability and sustainability for development and management plans. In 2021, WWF-Paraguay and the Ministry of Urbanism signed an agreement to formally start the SEA. It was a major breakthrough and a crowning achievement after many initiatives of WWF-Paraguay in 2018 and 2019.

**A big achievement indeed! What was your role in this SEA?**

WWF-Paraguay committed to hiring a multidisciplinary technical team to implement the project. I was involved from the beginning, providing support in drafting the terms of reference and technical profiles for the selection process of the technical team. I also participated in the selection process and was involved in overseeing the

development of the SEA. This included the technical review of each of the products that formed part of the technical work, from the diagnosis to the final recommendations. I coordinated meetings, dialogues and interviews, to ensure the participation of stakeholders from both government and civil society.

**Participation of stakeholders seems such a huge task, considering the many interests. How did you arrange that?**

Right in 2021, the appointed techni-

cal team began with the creation of a stakeholder map, followed by the elaboration of an outreach plan. In September 2021, an SEA workshop focused on the Chaco'i plan was organised and led by three institutions: the Ministry of Urbanism, the NCEA and WWF-Paraguay. This workshop included a field visit to the study area along the river. The technical team, representatives of the national government, and local municipalities participated in this workshop. Subsequently, the technical team carried out field visits to conduct on-

site verifications, holding interviews, meetings and dialogues with local stakeholders, including both local inhabitants and local authorities.

**What point have you reached now? What are the next steps?**

We are currently editing and revising the SEA document to prepare it for future publication, together with the elaboration of an executive summary. High priority will be given to the drafting of an article sharing this first experience. It will be developed by local technicians in collaboration with

scientific and academic experts. Paraguay currently does not provide a regulatory framework for SEA. The development of this very SEA highlights the importance for regulation. Therefore, it is of utmost importance to continue this process, focusing on capacity building, influencing decision makers and sharing the results of the SEA with civil society to make them aware of this experience.

**I sense a lot of energy here. How do you personally look back on the trajectory? What do you take away from it?**

Since 2018, I have had a completely new but extremely satisfying experience in this process. Collaborating

Alicia Pedrozo.



with government institutions, both at national and local level, has proven to yield positive results over time. Although it is important to keep in mind that these processes take time, SEA has proven to be a fundamental component in strategic decision-making.

I am confident that at the end of the day our efforts will translate into very positive results. The process itself was truly enriching and it provided an essential source of information. Not only for decision-makers, but for civil society in general. For me personally as well.

**Based on this experience, what potential do you see for SEA in Paraguay and beyond?**

I am convinced that SEA in Paraguay has a significant future. As the country is developing rapidly, the proper functioning of large natural areas and their ecosystems is being compromised. For the sustainable development of the country, informed decision-making and adequate consideration of environmental impacts in projects, programmes and plans, are crucial.

For non-governmental organisations such as WWF, SEA represents a valuable instrument to advocate for environmental conservation and promoting sustainable practices. It enables NGOs to actively participate in decision-making processes.

It provides a sound scientific basis for addressing the direct and indirect environmental impacts of plans, programmes, and projects. By engaging in SEA, NGOs can effectively influence policy formulation and collaborate with governments and other stakeholders to achieve more equitable, environmentally and people-friendly development.

In general, as a systematic framework for assessing and mitigating the adverse impacts of plans, programmes and policies on ecosystems and biodiversity, SEA supports a harmonious balance between human development and environmental preservation. For current and future generations.

*“It is of utmost importance to continue this process.”*



# Our partners

about the NCEA

The Netherlands Commission for Environmental Assessment has turned 30! This page features a small selection of statements about the NCEA's work. They symbolise the numerous encounters with inspiring people and organisations. Many thanks for the great cooperation!

Composed by Emmy Dortant

“Working with the NCEA has greatly contributed to the quality of our project results in Mali. Their international experience and in-depth knowledge of the local context added a lot of value in the process of developing the regional sustainable development plan and strategic environmental assessment.”

**Ms. Eva Peppelman**  
Project Manager at VNG International

“I appreciate the willingness of the NCEA to share its international expertise and experience in reviewing ESIA and SEA applications. It continues to be hugely valuable in advancing our goals of boosting capacity in impact assessment”.

**Mr. Gary Baker**  
Chief Executive Officer, International Association for Impact Assessment

“In several projects I saw the added value of the NCEA's presence in African countries. In this region Environmental Assessment practice is still young. In 7 years a great development took place, and the support of the NCEA was fundamental in this.”

**Mr. Karim Samoura**  
Ad-interim Minister of Environment Guinea & former external expert for the NCEA

“A factor that consistently had a positive impact on stakeholder processes was the work done with the NCEA. Not only did this lead to a better understanding of SEAs and ESIA's by local communities and government, it also in multiple cases increased the trust between various stakeholders.”

**Ms. Marielouise Slettenhaar-Ket (WWF) and Mr. Sander van An del (IUCN)**  
‘Shared Resources Joint Solutions’ evaluation report

“The support of the NCEA for carrying out the ongoing strategic environmental assessment of the mining sector is an opportunity for the MEMC and its collaborators to enrich their studies.”

**Mr. Sanata Semde**  
Director of the Ministry of Mining, Energy and Quarries in Burkina Faso (MEMC)

“We are delighted to work hand-in-hand with the NCEA to strengthen and improve the capacity of our members on environmental and social impact assessment, and we look forward to joint activities of mutual interest.”

**Ms. Clémence Naré**  
Senior Law Advisor, IGF

“The NCEA's contributions have greatly improved both impact assessment practice in general as well as specific environmental impact assessments in the Netherlands and worldwide.”

**Speech during IAIA Awards ceremony 2017**  
at the IAIA awards ceremony 2017

“I was honoured to be part of the joint NCEA and SAIEA team which developed ESY map, a diagnostic tool for assessing a country's legal, institutional and implementation framework for ESIA. It was a privilege to work with such a professional team at the NCEA.”

**Ms. Bryony Walmsley**  
Director at Southern African Institute for Environmental Assessment

“The NCEA's activities perfectly align with the greening objective of the Dutch agenda for foreign trade and development, to which the NCEA can make a unique contribution.”

**Mr. André Loozekoot**  
Strategic Foreign Policy Advisor for Green and Inclusive Growth, the Netherlands Ministry of Foreign Affairs

“The support of the NCEA was very useful. They were able to provide excellent comments to the EIA reports.”

**Ms. Felicidade Munguambe Salgado**  
Director at IMPACTO and former National Director for EIA, Mozambique

# CASE SEA

## as a suitable platform

for a debate on sustainability



Since 2014, large reserves of fossil fuel were found off the coast of Senegal. The discovery caused the expected stir, both nationally and internationally. Strategic environmental assessment offered good opportunities to bring together the interests of different national and international actors.

Text Sibout Nootboom

### National conference

In 2018, a national conference on offshore natural gas resources was organised by the Ministry of Environment. The conference focussed on several questions relating to sustainable development. Will this work for or against the people of Senegal? Will thousands of artisanal fishermen benefit or suffer from offshore activities? Is there a potential threat to biodiversity? How will the state use the revenues? What could be the impact on the country's energy system? In his closing speech, Prime Minister Mahammed Dionne called for a Strategic Environmental Assessment (SEA) to address such issues. This was also in response to a call in Senegal, that anything related to oil and gas development should be transparent to prevent that a privileged few might benefit disproportionately from this new national source of income.

### Governmental guidelines for offshore oil and gas development

In 2023, the SEA report was published. In one of its public consultations, the government had denounced the topics on which it would soon adopt sectoral guidelines. These topics included the management of hazardous waste, management of polluted drilling water and drill cuttings, environmental monitoring, reduction of greenhouse gas emissions, and future public stakeholder participation. To integrate various policy areas, such as energy, fisheries, environment biodiversity, and marine protection, an interministerial group was established in 2021 to conduct the SEA. This enabled the government to provide a comprehensive and coherent set of guidelines, feasible for implementation by relevant authorities and the private sector. The interministerial group was seen as a major step forward. The Ministry of Energy chaired the group, making it a stronger counterpart of the international oil industries, better prepared to guide the investments. On the other hand, a

*“The Prime Minister's statement at the national conference was the first crucial moment.”*

remaining point of attention was preparing public guidance for long-term private investment strategies, particularly those onshore.

**Steps towards the governmental guidelines**

Over the five years between 2018 and 2023, various government bodies discussed the development of the offshore sector and the required government guidance. This involved organising many consultations among invited NGOs, oil companies, and local governments, both at the national level and in the most affected regions. Widely announced public hearings were facilitated. In 2021, a procedure for SEA was agreed upon and formalised in an interministerial decision, making the consultations ‘official’. In 2022 and 2023, progress accelerated as a consultancy firm was hired to structure the discussion. With the SEA officially announced and set for publication, this was not without obligation: stakeholders had high expectations.

As often happens in such cases, the SEA might have been simply a unilateral effort by the mandated department of the Minister of Environment. The dialogue between the ministry, the oil companies and the NGOs might have been focussed only on the rather narrow scope of environmental impacts. Other significant impacts and possible measures that need be taken into consideration when designing a sustainable policy for the oil and gas sector, might have been overlooked. The Minister of Environment had chosen to collaborate with the Minister of

Energy, to obtain more administrative power in this sector, and to invite other ministries with responsibilities related to this issue. It had become an innovative procedure and a process of joint fact-finding.

**Drivers of success**

Such strategic collaboration between several ministries engaging in an early dialogue with the private sector and NGOs about the development of a sector, was not common in Senegal. Several vital moments can be identified that led to this innovative approach. The Prime

*“While the ministries played a leading role, other actors also facilitated this way of working.”*

Minister’s statement at the national conference (‘we will conduct an SEA’) was the first crucial moment. Through a

compelling narrative, SEA was positioned as a key instrument for the responsible development of the oil and gas sector. It paved the way for generating broad support, based on dialogue and sound analysis contributing to joint fact-finding on a national scale.

It was not without risk to the Prime Minister to advocate for a transparent procedure for strategic decision-making without having a budget ready to finance a sound SEA. Transparency also poses a risk for the administration, which could face an overwhelming number of responses.

The decision to establish an interministerial working group, was made possible by top administrators in the Ministry of Environment and the Ministry of Energy, who had the courage to propose this new arrangement to their ministers. These administrators again had been inspired by informal leader networks that were active between 2018 and 2021 – and that continued to inspire the implementation of the formal SEA. These leader networks consisted of senior administrators



from the same ministries, as well as some civil society organisations and other ministries. Together, they developed a narrative that convinced the top administrators and ultimately their ministers to embark on this adventure. The ‘narrative’ sessions were facilitated by top administrators, many of whom had attended the conference in 2018. They gave their people a safe space to develop cross-ministerial ideas. Prejudices such as ‘The Ministry of Energy is simply interested in the rapid development of natural gas’ and ‘The Ministry of Environment typically wants to slow down the process’ were thus given less chance.

The group of ministries commissioned their representatives to develop a groundbreaking Terms of Reference for the consultants’ research to prepare an SEA report. The selected consultancy firm had not planned to write legal guidelines, thus the group of ministries ensured that these were written in another way, to complement the SEA. They saw to it that the consulting firm came up with recommendations that were useful and applicable to Senegal. In other words, the administrative leaders enforced a high level of ambition, while looking at feasibility and ownership.



**Mr Papa Samba Ba, Hydrocarbons Director at the Senegalese Ministry of Energy**

“A main takeaway from the whole process is that we need to strengthen ad hoc inter-ministerial cooperation, in this sector and elsewhere.”

**Mr Baba Drame, Director of the Environment and Classified Establishments**



“It makes me proud that the Senegalese government, from the outset, has been determined to integrate the environmental and social dimension into oil and gas development.”



Read the full interviews here



**International actors**

While the ministries played a leading role, other actors also facilitated this way of working. It was a series of events that built upon each other. For example, prior to 2018, the president of Senegal had appointed a top civil servant at the level of ministers to coordinate governance in this sector (the 'COS Pétrogaz'). This civil servant and his office had been instrumental in the national conference in 2018. The World Bank supported the Senegalese energy transition and provided the financial support necessary to hire an SEA consultant.

*“While the ministries played a leading role, other actors also facilitated this way of working.”*

All these smaller decisions and interactions of actors who were not necessarily in contact with each other, contributed to a joint window of opportunity to assist Senegal in making responsible choices for its offshore oil & gas development.

**Takeaways**

- Leadership from Senegalese authorities at all hierarchical levels proved crucial to the success of the SEA trajectory.
- Complex strategic issues require ad hoc collaboration among authorities. Strategic Environmental Assessment has helped structure such an interministerial collaboration.
- Sustainability issues can be sensitive and require an investment in social and political capital (trust). Beyond being a technical study, SEA can provide a platform for building trust through the facilitation of constructive dialogues.
- Responsible authorities, holding full ownership of the planning and decisions, may need assistance in enhancing the quality of process. Combining a sector-related tendering procedure by World Bank with an independent free of charge process expert from the NCEA, worked well.
- The NCEA's availability and flexibility as a government-to-government arrangement without having any deadlines of its own, allowed for tracking the unpredictable dynamics in Senegal. Investing in aftercare and reflection may fall outside the scope of donors. Yet, process support in this phase can be of great value in maintaining and further developing the trust and integration mindset that emerged during an SEA process.



The Netherlands Commission for Environmental Assessment

# 30 years of international engagement

Composed by Emmy Dortant

1985

The first European Environmental Impact Assessment Directive takes effect.

1987

**EIA Decree comes into force in the Netherlands.**  
Formal launch of the Netherlands Commission for Environmental Assessment (in Dutch: Commissie mer).

1993

**NCEA's international department is established.**  
Start of the cooperation with the Netherlands Ministry of Foreign Affairs.

1999

**100th** international advisory report published.

2003

**56** Active in 56 countries since 1993.

2005

**200th** international advisory report published.

2002

**Start of the Knowledge and Learning Platform** aimed at knowledge transfer and exchange.

2012

**Launch** of the forerunner of the sustainability analysis programme.

**300th** international advisory report published.

2009

**The NCEA launches country profiles on its website.**  
Up-to-date information about ESIA and SEA legislation, per country.

2007

**Start of first regional ESIA capacity development programme.**

2015

**400th** international advisory report published.

2013

**84** Active in 84 countries since 1993.

2017

**The NCEA receives the IAIA institutional Award.**  
For its outstanding contribution to impact assessment practice.

**Start of a cooperation with WWF and IUCN.**  
A 4-years programme to foster multi-stakeholder dialogue

**500th** international advisory report published.

2019

**Development of renewed ESY -Mapping tool in collaboration with SAIEA.**  
A diagnostic tool for assessing the quality of a country's ESIA system.

2024

**99** Active in 99 countries since 1993.

2023

**Start of a new ten-year cooperation** with the Netherlands Ministry of Foreign Affairs.

2020

**Start of a collaboration** with IGF on ESIA and SEA for mining.



30 years of international engagement. Watch our throwback video!

How to best support rural and locally led development?

# Four questions for *Dr. Jyotsna Puri*

Text Leyla Özay

**W**hat do you consider to be challenges for sustainable development in rural areas, and how do you see the role of Strategic Environmental Assessment to address these challenges?

“Sustainability has many sides and faces that we need to take on board when making investment decisions: operational sustainability, financial sustainability, impact sustainability and so on. The focus of IFAD is on the entire food system and agricultural production value chains. This means that we look into many different aspects, such as nutrition, climate change and social protection. Looking at the environment and the climate, there is a big trade-off between the future and the present. This comes with tough dilemmas. An investment can, for example, affect soil health in the long run

but provide the food and nutrition that is needed in the short run. I also see that vulnerabilities of rural people tend to worsen: for example, because smallholders are easily dislodged as soon as larger farmers and market forces come into play.

For international financing institutions such as ourselves, environmental assessment tools like strategic environmental assessment are key for dealing with potential vulnerabilities and the interests of future generations. We need to ensure that our investments are harmless and at the same time improve environmental conditions such as soil health and biodiversity. Although IFAD does not carry out Strategic Environmental Assessments, we have embraced Social Environmental Climate Assessment Procedures, which we apply at the design phase but also during and after each investment. This helps us in building the concept of ‘do no harm’ intentionally into our programmes and in enhancing our positive contributions to rural communities.”

*“Sustainability has many sides and faces.”*



**Jyotsna Puri is the Associate Vice-President** of the Strategy and Knowledge Department (SKD) at the International Fund for Agricultural Development (IFAD), based in Rome. At IFAD, she leads the organisation's strategy work in key areas and provides the vision for evidence-informed advice on programme designs and implementation. She also contributes to resource mobilisation and state-of-the-art policy advice. The SKD is responsible for taking social, environmental and climate safeguards while ensuring that IFAD's investments generate benefits in these areas.

**Based on lessons learned at IFAD, what recommendations would you like to share with the SEA community to make Strategic Environmental Assessment contribute better to rural development?**

“The first recommendation is to mind of the crucial role of land tenure and secure land rights in effective and sustainable rural development. I mean, this is the main reason why IFAD started hosting the International Land Coalition. Land tenure and secure land rights are key determinants for how much environmental and climatic considerations are taken on board in land use decisions, be it at the individual or at the community level. Before designing rural development, we must gain a good understanding of how land tenure systems function and the different types of user rights that exist in the particular context of the invest-

ment. Therefore, we need to closely engage with communities and take on board their definitions. The second recommendation is to be cautious about the tension between theoretical constructs and the reality on the ground. When using planning tools or strategic tools like SEA, the approach needs to be adaptive to the local context. To give you an example: many people will agree on the usefulness of sustainable alternatives like agro-ecology practices. But we cannot simply introduce agro-ecology to any context without taking into account realities like imperfect

*“Mind the crucial role of land tenure and secure land rights in effective and sustainable rural development.”*





Regenerative and nature-based solutions have been part of traditional farming systems for a long time.

markets or price competition. In our assessments at IFAD, we integrate environmental and operational considerations with cost-effectiveness and financial sustainability. We believe this is key for making sustainable alternatives truly applicable.”

**What does locally led development mean in the daily work of IFAD?**

“All of our investments are country-led and designed to respond to a country’s need. At the same time, we are aware that needs represented at the central level can be very different from those at the local level. So, at a conceptual level, locally led development sounds good, but putting this into practice is rather complex.

In the context of my work, when I think of locally led development, I think of regenerative agriculture and nature-based solutions, such as half-moon cultivation or the use of locally adaptive crops. These concepts may seem new to us and are increasingly being embraced as highly resilient and low-emission practices. Frankly speaking though, these practices have been part of traditional farming systems for a long time. Such knowledge has long been neglected and underutilised. We are now bringing this local knowledge back into our daily work on the ground through concepts like agroforestry and agro-ecology.

The extent of a government’s engagement in a country is one of our key indicators for measuring the effectiveness of our work.

Governance and leadership are key factors that determine how strong or weak our programmes are. We need their involvement in designing our investments and in organising participative and consultative processes in such a way that these are founded on local values and principles.”

*“Tools like strategic environmental assessment are key for dealing with potential vulnerabilities and the interests of future generations.”*

# CASE *A tale of two municipalities*

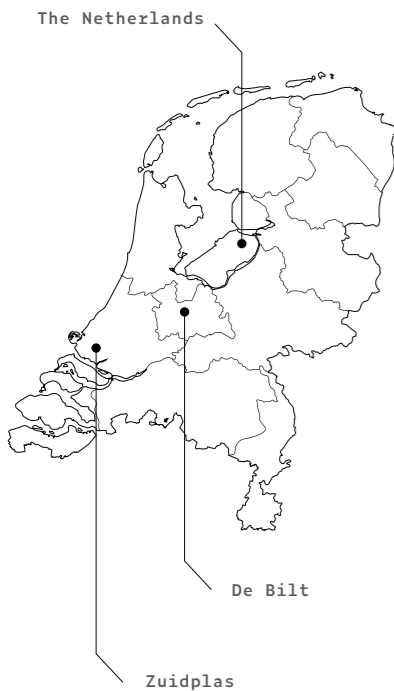
Two examples of relevant use of alternatives in SEA



Two municipalities in the Netherlands, about fifty kilometres apart: De Bilt, in the forest-rich centre of the country, and Zuidplas, a stone's throw from Rotterdam, at the deepest point in the Netherlands. Both conducted a strategic environmental assessment with effective use of alternatives. What can we learn from their approach, challenges and outcomes?

Text Pieter Jongejans

*“The Zuidplas polder is located in one of the lowest parts of the Netherlands, a few metres below sea level.”*



**D**e Bilt means “the bump”, and this municipality is indeed on a low hill. Most Dutch people associate the place with the national weather station located

here. De Bilt has around 43,000 inhabitants, distributed over several residential centres and the surrounding areas of forests and meadows.

Under the new Environmental and Planning Act that came into force on 1 January 2024, each municipality must develop a long-term environmental vision for its spatial development. The vision includes important decisions about housing, mobility, the generation of renewable energy and the planning of rural areas. In the run-up to this new legislation, De Bilt had already started to develop its vision. Among the specific challenges De Bilt faces are climate-related water management (in other words, coping with droughts and flooding), soil and nature preservation, and water quality management.

Fifty kilometres southwest of De Bilt lies Zuidplas, which has as its slogan “village-style living in the Randstad suburbs”. It has four residential hubs

and a population similar in size to De Bilt’s but increasing rapidly. A new settlement has therefore been planned in the Zuidplas polder. This “Fifth Village” will have 8,000 houses, 65 hectares of business park, facilities, infrastructure, nature areas and water bodies. Because this polder is in one of the lowest parts of the Netherlands, a few metres below sea level, the area is very vulnerable to the effects of climate change and soil subsidence. This requires careful consideration, with attention to the long-term consequences, in order to prevent negative impacts being felt by future generations or in other areas. The development plan of the Fifth Village has a long history. Various government levels have been involved in determining the location and other decisions. Zuid-Holland province, the Water Board and other stakeholders have all contributed their perspectives to the development of this new residential area.

**The use of alternatives**

The De Bilt and Zuidplas SEAs both made use of alternatives to explore possible directions for development and their consequences.

**De Bilt**

De Bilt municipality had proposed a somewhat conservative provisional

Artist impression of the ‘Fifth Village’. Image: municipality of Zuidplas.



**The SEA procedure**

An environmental vision like the one developed for De Bilt outlines the spatial development of a municipality and therefore sets the framework for developments that have significant environmental consequences, such as the building of homes, the expansion of business parks, or the installation of wind turbines. Under the Environmental and Planning Act of the Netherlands, every environmental vision must undergo a strategic environmental assessment to check its soundness.

Zuidplas municipality has drawn up zoning plans for the Fifth Village. These are less strategic, but still set the framework for further design and licensing, which is why another SEA is needed to endorse them.

course that assumed low ambition and little change. Partly based on extensive conversations with residents and other stakeholders, in the SEA it was decided to explore the extremes of what was possible, using two axes: a y-axis going from low to high dynamics and an x-axis going from local to regional profiling. The exploration yielded four alternatives to which various strategic options were then applied, such as where to site housing and business parks, the number of houses, the arrangement of water, nature and agriculture in rural areas, and the locations and forms of renewable energy generation.

This approach clearly made visible which topics required choices to be made and what the effects of these choices would be. Using elements from the four explored alternatives plus some additional measures, a preferred alternative was composed. It is substantively very different from the provisional course. Its ambitions for nature, water and sustainable mobility are higher—enhancements that

can be attributed to the greater public participation and the elaboration of alternatives that was part of the SEA.

**Zuidplas**

Because of its location, new developments such as housing pose major challenges to the planning for Zuidplas, which is why preconditions and high ambitions were set for the development, particularly in relation to climate resilience and sustainability. The SEA for Zuidplas did not focus on

*“The preferred alternative is substantively very different from the provisional course.”*

selecting the right locations for housing and other facilities but was applied to determine the ideal concept for this new residential area. The SEA report showed that the original “basic alternative” fell short of the ambitious requirements. Using four other alternatives, the SEA explored how the ambitions could be achieved. The first alternative focused mainly on climate resilience, the second on sustainable mobility, the third on circularity and sustainable energy and the fourth on what is called the green-blue framework (in other words, how nature and water work best together in this specific area). Based on a comparison of environmental impacts, proposals to get the best out of each alternative were developed and largely incorporated into the zoning plan, for the municipality’s approval, on which the municipal county decides. For each of the environmental aspects, the SEA report described which measures could be taken to limit any negative effects.

Using four distinctive alternatives to explore the “corners of the playing field” proved to be very valuable for decision-making. The preferred alternative incorporated many elements from the four variants and turned out to be much more in line with the ambitions set for this area than the “basic alternative”. The impact assessment showed that the final plan has significant environmental and other



The beautiful surroundings of De Bilt.



Watch the two-minute video of Ruwan Aluvihare looking back at the SEA process for Zuidplas polder.



A visual representation of the four alternatives as explored by de municipality of De Bilt.



An artist impression of the ‘Fifth Village’. Image: municipality of Zuidplas.

advantages compared to the original plan. “This in-depth process, for example, led to a much stronger focus on water infiltration and an improved water management plan”, says Ruwan Aluvihare, who was involved as an urban planning expert in the NCEA working group conducting the SEA review: “It also resulted in a comprehensive mobility plan instead of

just focusing on cars. And it entailed much more”.

**Success factors**

Because De Bilt and Zuidplas both applied the SEA early in the planning process, the assessment played an important role in every step of the process. An SEA and a vision or plan usually need largely the same kind of information. The SEA report provides an important source of information and ensures transparency. This worked out well in both cases.

In the case of De Bilt, another success factor was the involvement of the municipal administration and the city council in the SEA process. This increased the support for the choices made. “I had no previous experience with SEA, but I’m going to recommend my colleagues to use it too”, says alderman Pim van de Veerdonk. In both cases, a third good practice was the early involvement

of the consultancies responsible for making the SEA report. Instead of merely producing the report, the consultancies contributed intensively to the process and the consultation rounds. This improved the readability of the reports, as did the graphics, especially those presenting the alternatives.

In 2021, the NCEA in collaboration with a number of municipalities developed a guidance document on SEA for environmental visions. Pieter Jongejans, Technical Secretary at the NCEA: “It’s great to see how our recommendations work out in practice.

In both cases, there is still room for improvement. But it is clear that the municipalities of De Bilt and Zuidplas explicitly embraced SEA as an approach to improve their vision, their plan. That has certainly paid off.”

**Next steps**

The municipality of De Bilt has adopted the final environmental vision and will draw up programmes for its elaboration on specific themes and sub-areas. The basic information provided by the SEA report is reusable and will be constantly updated and supplemented, thus also forming the basis for monitoring. Monitoring and evaluation are important steps in the so-called “policy cycle” of the Environmental and Planning Act in the Netherlands.

The municipality of Zuidplas is further elaborating the zoning plans for the Fifth Village into urban designs, exploitation plans and implementation plans. The province, Water Board and

*“I had no previous experience with SEA, but I’m going to recommend my colleagues to use it too.”*

other public and private stakeholders are closely involved in this phase, to ensure that all ambitions will actually be achieved. Construction of the first phase of the Fifth Village is planned to start in the second half of 2025.

# Ten days in Mauritania

Photo report of an NCEA work visit

Text Anouk Werensteijn

As a delegation of the NCEA, we visited Mauritania to engage with several stakeholders and organisations involved in the mining sector. This was at the request of the government of Mauritania to review the SEA for the mining sector development policy in Mauritania. During our ten day journey, our goals were to share our knowledge of environmental assessment, and to collect as much data and as many views as possible to deliver a sound review report. Join us on our visit to this beautiful country!

## Monday to Wednesday

Our first stop was in Nouakchott, at the conference room of the Ministry of Environment. Here, we kicked off a three-day training session with the technical staff of the Ministry of Environment. After a brief introduction on the NCEA, we discussed useful environmental monitoring tools, and introduced SEA and ESIA, emphasising their importance in governing the mining sector. Providing this training gave us the opportunity to share the core of our approach to environmental assessment with the participants; it is not just about compliance, it is about working towards better governance.

In the following two days we started our consultation with key stakeholders in the mining sector in Nouakchott for our review of the draft SEA for the mining sector.

## Thursday

We very much enjoyed the warm hospitality of Hidi Taleb, the

President of the Association for Family Protection and Environmental Protection, and his wife Meimouna Dewla. During our visit, Hidi assisted us in connecting with officials, dealing with logistics and, lucky for us, introducing us to some nice cultural and culinary aspects of Nouakchott. We were treated to a very special and delicious meal of fruits and Thieboudienne and Méchoui, two traditional Mauritanian dishes.

One of the officials that Hidi Taleb connected us with, was Ibrahim Sar, the head of the fishermen's association. This encounter gave us a better understanding of the perspectives of fishermen on the mining sector. At the fishing port of Nouakchott, we saw the fishermen in action, bringing in their catch of the day and putting the boats away. A moment to remember!

## Friday to Sunday

After consulting with all relevant stakeholders, we travelled to the Inchiri region in the centre of

Mauritania



Mauritania. Our first stop there was at the Tasiast gold mine. After a brief tour of the mining pit (helmets on!), we spoke with the head of operations and the environmental and social safeguard expert about the design of the Tailings Storage Facility. How does this facility help to manage environmental risks? And what measures are taken to avoid the intoxication of wild migratory birds? We visited a second Tailings Storage Facility at a semi-industrial mining company, specialising in residuals from artisanal gold mining, and three other semi-industrial gold mines as well as another artisanal mine in the same region.

Driving back from our site visit in Akjoujt, several members of our group took a break for the late afternoon prayers. We stopped at a resting station by the roadside. While exploring the area, we were intrigued by these little guest houses amidst the beautiful scenery!



Training with the Ministry of Environment



Dinner with Hidi Taleb and Meimouna Dewla



Fishermen in Noakchott port



Visit to Tasiast gold mine



Semi-industrial gold mine



Guest houses by the road



Beautiful view of the beach



The travel group at the beach



# “SEA brought us together *under one roof*”

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*“It is of utmost importance  
to continue this process”*

*“I had no previous experience with  
SEA, but I’m going to recommend  
my colleagues to use it too”*