



**Wetlands**  
INTERNATIONAL

# The Source

2019 Annual Review of Wetlands International





**WETLANDS  
INTERNATIONAL  
IS THE ONLY GLOBAL  
NOT-FOR-PROFIT  
ORGANISATION  
DEDICATED TO THE  
CONSERVATION  
AND RESTORATION OF  
WETLANDS**

### **What are wetlands?**

Wetlands occur wherever water meets land – mangroves, peatlands, marshes, rivers, lakes, deltas, floodplains, flooded forests, rice-fields, and even coral reefs. Wetlands exist in every country across the world and every type of region – polar, tropical, wet, dry, high and low altitude.

Healthy wetlands are key to restoring nature and healing our climate, yet the world has lost up to 65 per cent of its original wetlands. Urgent action is needed to reverse this decline and revive these natural wonders.

### **Our Vision**

A world where wetlands are treasured and nurtured for their beauty, the life they support and the resources they provide.

### **Our Mission**

To inspire and mobilise society to safeguard and restore wetlands for people and nature.

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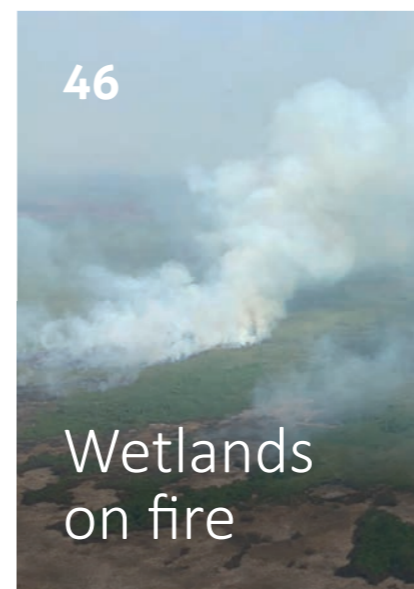
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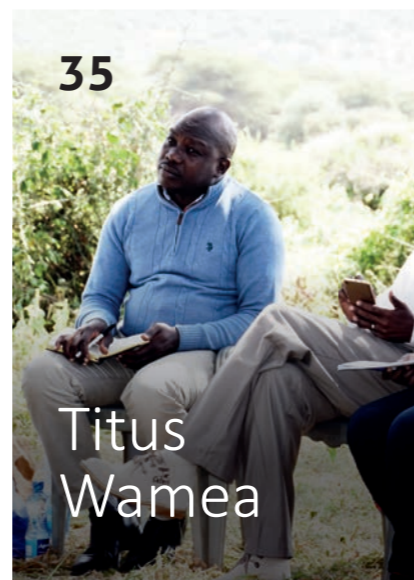
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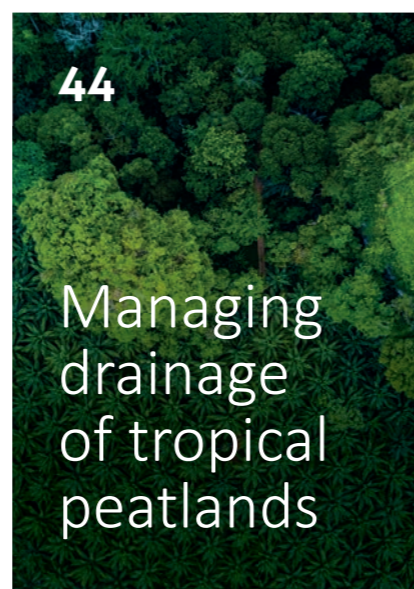
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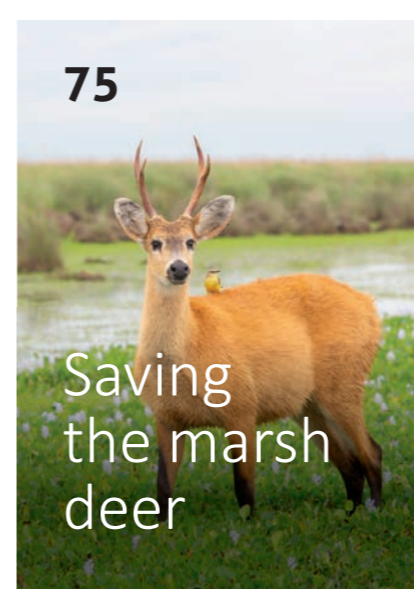
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# FROM OUR CEO

Jane Madgwick, CEO, Wetlands International

**Given the precipitous decline in wetlands worldwide, highlighted by the 2019 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report, a priority for Wetlands International has been to design pathways to upscale our impact: from local habitat improvements to whole landscape transformation, developing local economies based on wetland values. In this annual review, you can find examples of how we are developing data-driven tools and capacities to help steer and mobilise on-ground interventions for impact at scale. You can also gain a sense of how we work in unusual partnerships across sectors to design and mobilise nature-based solutions at scale.**

"Nature-based solutions" such as restoring wetlands and forests were given a political boost in 2019, hailed by world leaders as necessary to reduce greenhouse gas emissions and make our cities safe. At the Climate Action Summit in New York, hundreds of commitments were made by governments, cities, companies, NGOs and individual champions.

However, many were "add-on extras" to traditional infrastructure plans, or over-simplistic approaches such as planting trees, rather than systemic solutions. What's clear from this is that we have important work to do to mobilise society around nature-based solutions with healthy, functioning ecosystems at the centre, integrated with mainstream development and climate action.

Our work over the last decades in peatlands, deltas, along coasts, rivers and their floodplains has yielded a mega-store of knowledge, tools and approaches, which can inform up-scaling and replication. This now needs to come to the fore.

With this in mind, we contributed to the landmark publication "Adapt Now: A Global Call for Leadership on Climate Resilience" by the Global Center on Climate Adaptation and engaged strongly throughout the year advising on its Action Tracks. We announced three significant commitments linked to ambitious partnerships to elevate the role of wetlands in tackling issues of Asian coastal and city protection from



Jane Madgwick, CEO, Wetlands International



Wetlands International global leadership team came together in The Pantanal, Brazil, for its annual meeting 2019

water risks and community resilience, peace and human security in the Sahel (see Blue Lifelines, page 68).

Wetlands International is playing a vital catalytic role in developing clear propositions for future large-scale public and private sector investment. Working as a key member of strategic partnerships like the Global Resilience Partnership, Ecoshape, Global Mangrove Alliance and Global Peatland Initiative, is a promising means to leverage these outcomes.

In 2019, as for every five years, we reviewed our Strategic Intent and drafted the basis for a new ten-year direction. We consulted our stakeholders around the globe and held webinars to establish dialogue over the main adjustments needed to meet the emerging trends. Overall, we were encouraged to respond to emerging trends, be ambitious and to influence global agendas to enable more action for wetlands, while staying true to our roots. In November, we brought this all together in an extra-special, annual meeting of our global leadership team, held in the biggest wetland of the world, The Pantanal, Brazil, where we recently established an office and programme.

As a result, our Strategic Intent 2020-2030 presents a revised mission and clarity on how we will work to scale up impact for healthy nature, resilient communities and to reduce climate risks in three main wetland landscapes: deltas

and coasts, river and lake system and peatlands. I would like to say a huge thank you to those who gave their valuable advice and encouragement in this process. Your continued support and this new framing will help us to focus, to develop the organisation and our partnerships, with a renewed common purpose.

Many plans were made in 2019 for the anticipated "super year" for nature in 2020, intended to drive forward a coherent global agenda to tackle climate change and to re-set global targets for biodiversity. With the post-2020 biodiversity framework in development, we raised the issue of the connectivity of wetlands being confined to protected islands, and advocated for the need for an additional target of restoration of 50% of the loss of wetlands over the last 50 years.

Understandably, due to the COVID-19 pandemic, and the need to put the protection of human lives first, these pivotal processes have been postponed. This raises uncertainty about political commitment and resourcing. But, there are signs of a revival of "listening to the science". The growing recognition of the need for urgent climate action, and to heal the Earth by restoring ecosystem health, alongside human health is encouraging. We hope that there will now be an awakening to the inter-connectedness of people and nature that will lead to new, joined-up action.

# ACHIEVEMENTS

**This chapter presents the achievements realised by Wetlands International in 2019, together with its partners. We have organised these achievements along our five streams of work. As laid-out in our strategic intent 2015-2025 we developed targets that we aim to achieve by 2020. The section below summarises progress towards these targets.**

## Summary

Below we assess our achievements in 2019 in the context of the five-year targets set for the five streams of work that enable us to chart our progress in implementing our strategic intent 2015-2020. As we will focus our action from 2020 on three streams of work (Deltas and Coasts, Rivers and Lakes, and Peatlands) our assessment at the end of this strategy period comprises results over five years of action. Achievements described are the result of our entire network working in collaboration with many other partners, locally and internationally. We focus on those achievements for which the Wetlands International's contribution was instrumental.

In summary, there was significant progress in all streams towards the targets in 2019 and over the five-years since January 2015. We are on track to achieve or exceed our ambitions in nearly half of the targets. In the others substantial progress has been made but more time is required to fully achieve the targets.

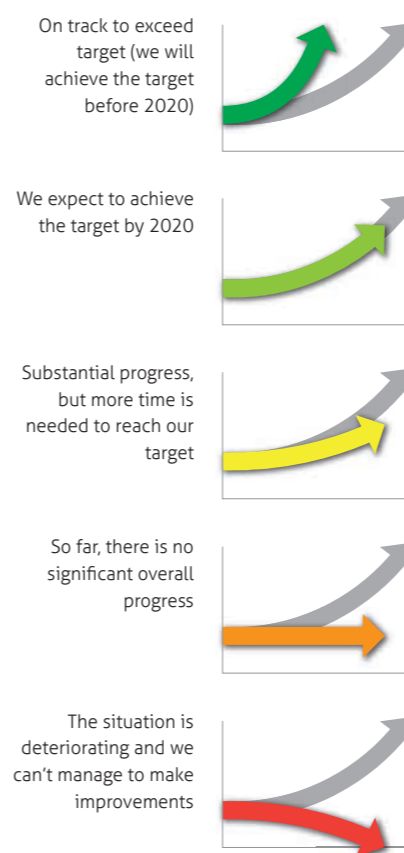
Some of the stand-out achievements are seen in action to conserve or restore iconic wetlands for biodiversity, while bringing benefits for climate mitigation and adaptation and community livelihoods. While this is the case across all streams, most notable are the wetland priorities of the Inner Niger Delta being included in the Mali water policy and strategic plan for natural resources, restoring peatlands in the Puna region of the High Andes, establishing a Ganges-wide floodplain restoration programme in India, and supporting the establishment of the Yellow Sea World Natural Heritage site in China.

There were key achievements that result from building co-operation with economic sectors and applying innovative wetland management techniques and financing mechanisms that integrate wetland values into the economy. These include the mainstreaming of Building with Nature in Indonesia as a national priority in tackling acute coastal erosion and the multi-country interest in taking this approach to the Asian scale, the payment for ecosystem services agreement secured in the Philippines, the inclusion of paludiculture (agriculture on wet peatland) as a supported land use in the Common agricultural policy of the European Union, the launch of a water fund in the Sebou Basin in Morocco, and engaging a wide network of private sector actors to promote new commercial crops for re-wetted peatlands in Southeast Asia.

Of course not everything went according to plan. Rising social conflicts have held us back from field work, for example, in the Sahel. In our efforts to change damaging practices in Southeast Asian peatlands, we enabled positive steps in terms of the uptake of wise hydrological management of palm oil plantations on peatland, but were met with opposition from the pulp and paper industry on the roadmap for withdrawal from peatland cropping. We also suffered unexpected delays in obtaining government approval for new projects in several countries.

Scaling-up our successes remains an overall challenge for the organisation that we plan to tackle systematically, directed by our new strategic Intent 2020-2030

## OUR SCORING SYSTEM



Blue Lifelines in the Desert

## Blue Lifelines in the Desert

We have continued to integrate improved wetland management into socio-economic development, in the Upper Niger / Niger Delta, Upper Sourou sub-basins and increasingly in the Central Rift Valley in Ethiopia.

In Mali, we helped ensure that future investments in the Inner Niger Delta and Sourou Basin will be guided by priorities for wetlands that are now anchored in the new national water policy. By working with communities and establishing cooperative groups we have shown that wetland habitat can be restored alongside sustainable fishery management and rehabilitated local scale agricultural infrastructure. We have successfully transferred this learning into a strategic plan for the restoration and conservation of biodiversity and natural resources in the Inner Niger Delta.

Human conflict continues to play significant role in the region, slowing the roll out of our programmes and the opportunities to scale up. However, regional and global development banks are starting to see wetland restoration as a way of increasing cooperation in and among countries.

**Improved status of at least 3 major wetland systems in the Sahel, as part of efforts to achieve sustainable and climate resilient development.**

Replenished water stores from mountains to sea

## Save and restore mountain water towers

There is continued progress in 2019.

In the Puna region of the High Andes management and restoration actions implemented with local communities and local government have improved the status of 76,136 hectares of peatbogs and grazing marshes in two internationally important wetland systems.

A second phase of this programme has been secured that will expand the work in five locations and provide a springboard to work regionally and leverage funds for large-scale management and restoration in future.

In the Himalayas we started engaging in smaller initiatives with the development of a fuller programme scheduled by the close of 2020.



**Investments in restoration and sustainable management of high altitude wetlands in 2 ecoregions committed to by governments and International Finance Institutions.**

Replenished water stores from mountains to sea

## Water and food secure wetland communities

We will exceed our target thanks to further government and multilateral investments committed from GIZ and the Nile Basin Initiative to three major wetlands in the Nile Basin; Sango Bay - Minziro (Uganda and Tanzania), Sio-Siteko (Kenya -Uganda) and Semiliki (Uganda/ DRC).

In Kajiado County (Kenya) the local Water Resource User Association has secured investment to improve the condition of their watershed.

In the Sebou basin (Morocco), we worked with WWF as part of a wider partnership to launch a water fund -- the first of its kind in the Mediterranean.

In other watersheds we have helped create an enabling environment. We positively influenced the policy and planning in Uganda, where all land titles in wetland areas have been cancelled, and in Debkhal Chaul basin, (India) where 15 villages have been engaged in basin scale integrated risk management.



**Public and private investment commitments in 6 watersheds to safeguard and restore freshwater wetlands as measures for water and food security.**

Replenished water stores from mountains to sea

## Floodplains for safety and security

We made substantial progress but will need more time to reach the investment commitments of this target.

In India, the set-up of a Ganges-wide wetlands restoration programme under the National Mission of Clean Ganga should lead to major investment along this iconic river.

The Paraná-Paraguay Corridor programme ('Corredor Azul') piloted better livestock raising on 25,000 hectares. We produced an assessment of the impact of the 'Hidrovia' scheme for improved navigation along the river corridor which is used to influence investments towards a more positive result for the river.

In the Philippines we piloted nature-based solutions to reduce the risk of landslides, erosion and flooding along the Agusan River Basin. This is also being used to influence national policy for integrated river basin management.



**Public and private investment commitments for 3 flagship landscape scale floodplain restoration programmes**

Vibrant Coasts and Deltas

## Maintain intact coastal wetland environments

We are on track in implementing coastal wetland conservation strategies in Cacheu (Guinea-Bissau), Saloum-Niumi (Senegal and Gambia) and the Rufiji- Mafia-Kilwa seascape (Tanzania), and other regions, covering an area in excess of 150,000 hectares.

In these regions, small scale community-based conservation and livelihoods measures are being upscaled and management plans are under development. Several of our corporate partners have shown interest to support the development of carbon projects to resource the conservation and restoration of mangroves to compensate for their carbon footprint. Among others we are exploring opportunities for developing such projects in Guinea-Bissau and Indonesia.

Vibrant Coasts and Deltas

## Sustainable coastal production systems

Our work on promoting sustainable production systems has made substantial progress, as part of broader coastal zone management initiatives.

In Demak Indonesia, the introduction of sustainable aquaculture practice, following the low external input sustainable aquaculture (LEISA) method increased household income of Indonesian farmers by 300% and reduced impacts from habitat conversion and pollution. These areas have also become important breeding areas for thousands of waterbirds, especially herons.

Similar results have been attained with the promotion of sustainable rice and cattle farming practices in West Africa and Argentina respectively.

**A model for integrated wetland landscape management involving conservation and production systems (rice, oil-palm and aquaculture) is implemented in 2 areas, contributing to environmental and food security.**



**High value coastal wetlands totalling at least 150,000 hectares are conserved and restored.**



Vibrant Coasts and Deltas

## Degraded coastlines and heavily modified environments, including urban areas

We will exceed our target for uptake in three large-scale coastal planning initiatives.

Our Building with Nature project in Indonesia emerged as a landmark initiative that shows how 'building with nature' can boost coastal resilience in rural and urban areas. Our outreach has stimulated commitments to invest in nature-based solutions among national government and multilateral agencies, including in Panama and the Philippines.

We engaged the interest of governments in five countries in Asia to develop an ambitious programme that stimulates large-scale adoption of Building with Nature across the region. This offers opportunities to upscale impact beyond 2020.



**Building with Nature is mainstreamed in 3 landmark urban planning and hydraulic infrastructure developments, enhancing community resilience.**

Vibrant Coasts and Deltas

## Integrated management of deltas

Action in ten key deltas is on track.

We participated in global and regional initiatives that promote sustainable management of deltas and coastal areas. In coastal cities including Semarang, Panama City and Manila, we successfully integrated wetlands in urban development and flood risk reduction plans. In several rural deltas we developed integrated management plans that support conservation and restoration of wetland ecosystem and sustainable management of water flows, including in the Paraná (Argentina), Rufiji (Tanzania) and Saloum (Senegal) deltas.

In 2019 we supported integration of wetland conservation and restoration in the Manila Bay master planning process.

With the Indonesian government we developed a roadmap to address soil subsidence problems along the northern coast of Java.



**Healthy ecosystems sustain human populations and biodiversity in 10 key deltas across the world.**


Peatland Treasures

## Protect and conserve the remaining intact peatlands

We have made progress to influence policy in four peatland regions. Together with the Alliance for Global Water Adaptation and GIZ we developed guidance that provides governments with the building blocks to include wetlands in their UNFCCC Nationally Determined Contributions (NDC) planning and reporting and we will work with the NDC Partnership and individual countries in 2020 to roll this out.

In the Himalayas we mapped the presence of peat and used this to influence the Indian government's NDC.

We assessed the NDC potential of Nile Basin wetlands as a contribution to a wider programme of work with governments in the region.



**Governments and key private sector actors (drivers of conversion) in at least 4 key peatland regions have active policies to avoid the development, conversion and degradation of intact peatlands.**

Peatland Treasures

## Rehabilitate and restore degraded peatlands

Restoration to reverse degradation is progressing steadily in two major peatland regions and at smaller scale in others.

We provided technical advice to the Russian government regarding investments around Moscow, where about 100,000 hectares of peat has been rewetted to reduce fire risk.

We supported the Indonesian Peatland Restoration Agency to restore more than 765,000 hectares through a mix of direct restoration and technical advice.

We supported canal blocking to rewet and restore the Badas peat dome, Brunei, also reducing fire risk. With the Roundtable on Sustainable Palm Oil we delivered training for wise hydrological management of oil palm plantations on peatland, however our roadmap towards sustainable peatland management for pulp and paper plantations in Indonesia was rejected by industry.



**Governments and key (peatland based) private sector invest in at least 5 peatland regions have reversed the degradation of over 3 million hectares of degraded peatlands (7% of the global area of degrading peatlands) achieving substantial GHG emission reductions.**

Peatland Treasures


## Develop and promote sustainable land-use on re-wetted peatlands

Although substantial progress has been made, more time will be needed for widespread uptake of paludiculture, or agriculture on wet peatlands.

In Europe, we succeeded in our advocacy to have paludiculture included in the EU's Common Agricultural Policy post-2020 definitions which designates this as a supported land-use in 27 countries.

Together with government and private sector actors we established the Paludiculture Forum for Southeast Asia and through this worked with 350 households where villagers planted 250 hectares with sago in Indonesia.

The Indonesian Peatland Partnership Fund (IPPF) resulted in a further 3500 hectares of sustainable paludiculture development that supported improved community livelihoods in 17 villages.



**Governments and key (peatland based) private sector (e.g. palm oil, pulp for paper, biofuels) as well as local communities are actively piloting or upscaling paludiculture as an innovative means for sustainable and peatland landscape management and climate change mitigation.**



Healthy Wetland Nature

## Halt and reverse the loss of wetland habitat and species

We have made good progress in our contribution to halt and reverse the loss of iconic wetland habitat and species but need more time to achieve the target.

In Indonesia, the Ministry of Environment and Forestry adopted the International Waterbird Census as the monitoring modality for protected areas.

With our advice and advocacy, the Indian Government's National Action Plan for Conservation of Migratory Birds and their habitats along the Central Asian flyway will steer action for conservation of iconic wetlands.

In the Inner Niger Delta in Mali we helped four communities to establish plans that integrate the need and potential for ecosystem restoration to support climate change adaptation. In China, with national and international partners, we contributed to the 'migratory bird sanctuaries' along the Yellow Sea coast to Bohai Gulf of China (Phase I)" being formally designated as a World Natural Heritage site, helping safeguard one of the largest intertidal mudflat systems in the world.



**The extent and quality of habitat has been improved in 5 iconic wetland ecoregions worldwide and the conservation status of 10 flagship species has been improved.**

Healthy Wetland Nature

## Investment in wetlands as natural capital

We have seen encouraging achievements in 2019 and are on track. We worked with key platforms such as the Global Center for Adaptation and the Global Resilience Partnership to build political will and private sector interest in wetland nature-based solutions.

In Indonesia the government has invested significantly in the 'Building with Nature' approach across the country to address coastal erosion (see also Vibrant Coasts and Deltas, pages 12-13).

In Argentina, an agreement was reached with the government on the how to develop guidelines for environmental impact assessments in wetland landscapes to reduce the impact of infrastructure developments along the Corredor Azul.

Cagayan de Oro became the first city in the Philippines to approve and adopt a river basin-wide Payment for Ecosystem Services (PES) and annually earmark PHP 10 million to support the rehabilitation of watersheds.

With The Nature Conservancy we developed green infrastructure measures, including reforestation and constructed wetlands, in the Upper Juan Diaz basin that can reduce flood risk in downstream neighbourhoods. These were recognised by Panama City and a multilateral development bank as part of a larger \$100 million investment.



**Showcase public and private investments in wetlands as Natural Capital deliver sustainable development.**



# Wetlands International and partners commit for transformation at UN Climate Action Summit

The focus of the UN Climate Action Summit in 2019 was to generate concrete proposals that can be accelerated for climate action. UN Secretary-General António Guterres called for tangible plans that will help countries reach the scale and speed of mitigation, adaptation and resilience needed to deal with the climate emergency. The summit elevated political attention to the power of Nature-Based Solutions (NBS) for climate and sustainable development.

The CEO of Wetlands International, Jane Madgwick, was honoured to be an invited speaker in the Nature-based Solutions day of the Summit, where the NBS for Climate Manifesto was launched. She called attention to the need and opportunities to focus on water and wetland NBS, alongside forests and introduced Wetlands International's ambitious plans with partners to tackle land degradation and water insecurity in the Sahel and to enhance coastal resilience in Asia. These commitments are included in the nearly 200 initiatives and best practices from around the world, featured in the [NBS Contributions Platform](#).

The "Blue Lifelines for a Secure Sahel" (BLISS) initiative, a broad collaboration led by Wetlands International, involving the African Union Great Green Wall Initiative and CARE, aims to enable investments and action to revive and safeguard the region's rivers, floodplains, lakes, deltas and ponds — improving water and food security, restoring peace and building resilience for communities.

The initiative will encourage countries and investors to put local communities and wetland restoration at the heart of sustainable development and climate adaptation measures. The aim is, by end 2030, to have restored and safeguarded 20 million hectares of wetlands in at least six major wetland systems, so improving the adaptive capacity and security of around 10 million people across the Sahel.

Building with Nature is a way of planning, designing and building coastal, river and delta infrastructure that works with nature and natural processes rather than building in or fighting against nature. Buoyed by the successful mainstreaming of Building with Nature in Indonesia, the partners for Building with Nature Asia' are developing propositions for the implementation of Building with Nature in 15 landscapes in five countries by 2030, boosting the resilience of around 30 million people.

A Shared Ambition on 'Accelerating Adaptation through Building with Nature in Asia' was presented by EcoShape and Wetlands International during the 'Building a Resilient Future' event on 22 September in New York, convened by the Global Resilience Partnership (GRP).

During the GRP day of events, Wetlands International and One Architecture made public their joint commitment on climate-resilient cities, working together to integrate wetlands in the urban landscape. The overarching goal is to build more resilient, and livable-, cities across Asia.



*With global emissions are reaching record levels and showing no sign of peaking, UN Secretary-General António Guterres called on all leaders to come to New York on 23 September for the Climate Action Summit with concrete, realistic plans to enhance their nationally determined contributions by 2020, in line with reducing greenhouse gas emissions by 45 per cent over the next decade, and to net zero emissions by 2050.*

## STORY HIGHLIGHTS

**No system of concrete coastal defences is as cheap or as effective as a belt of mangroves.**

The Mangrove Capital Africa programme works across three major sites with the aim to restore more than a million hectares of African mangroves.

**A joint management plan for the Rufiji delta, Tanzania, puts villagers at its heart, creating a partnership in which their skills and local agency can be deployed for conservation.**

Developing alternative livelihoods, including oyster farming and honey production, helps ease pressure on the mangroves.

# RESTORING MANGROVES

By Fred Pearce

Mangroves are backwaters. Neither land nor ocean, they are where seawater and freshwater, silt and salt, mingle in creeks and swamps. To many, these ecological backwaters are seen as economic and social backwaters too, ripe for economic development to advance the lives of their inhabitants. That is a big mistake, one that Wetlands International is working hard to correct.

Ecologically, mangroves are immensely rich habitats, providing valuable services. The tangled roots of most mangrove species are nurseries for an estimated tenth of all marine life. And in a world of ever more intense tropical storms, eroding currents and rising sea levels, their dense roots and foliage are vital defences for the land against wind and waves.

*Healthy functioning mangroves are vital habitats above and below water.*



Mangrove kingfisher

No system of concrete coastal defences is as cheap or as effective as a belt of mangroves. No prawn pond is as productive as the mangroves that they often replace. No human-made fish nursery will deliver as much as a thicket of mangroves. And nobody knows how to conserve and prosper from mangroves as well as their inhabitants -- such as the 48,000 people with whom we work in 19 villages dotted across the Rufiji delta in Tanzania, East Africa's largest mangrove forest.

"Everything in our lives depends on the mangroves," says Yusuph Salelie, the chair of the delta's Mfisini village. "Our houses are built of mangroves; the fish we catch live in mangrove roots; the mangroves clean our air; we even get salt from the mangrove areas."

Through the centuries, Salelie's people have learned how to profit from those resources without destroying them. But in recent times, this cut-off delta region has become increasingly threatened by the modern world -- by mangrove cutting for timber, by rice farming, and by would-be external investment for big farms and cattle ranching, urban development and harbours.

The delta's villages have traditionally operated their own laws for policing their mangroves and keeping outsiders

away. "We used to designate where and how many trees could be harvested," Salelie says. It largely worked, as the survival of large areas of mangroves in the delta shows.

But he complains that his village committee, like the others in the delta, no longer has the legal power to prevent outsiders from coming in. The Tanzanian government has banned all use of mangrove products. This makes villagers and outsiders alike into outlaws. This, he says, is a mistake. With the laws policed by a Forest Service that has only five staff and a single fibreglass boat to cover the 53,000-hectare delta, the result is a legal vacuum. Tensions have risen.

In 2019, we were working to bridge the gap between the Forest Service and the villagers, by bringing all sides together to draw up a joint management plan for the delta. It will divide the delta into zones that will protect mangroves while making sure villages can use the resources and sustain their livelihoods. Crucially, it will put the villagers at its heart, creating a partnership in which their skills and local agency can be deployed in the name of conservation.

And we want to go beyond conservation to restoration in the delta. In 2019, we began a pilot project for community-based ecological mangrove restoration, digging channels to flood abandoned rice fields that have recently



Livelihoods, such as this fisher's, depend on mangroves.



Container vessel in port of Dar es Salaam, Tanzania. The Rifiji delta region has become increasingly threatened by urban development and harbours



One of the values of mangroves is that they function as fish nurseries.

## Natural restoration is much more effective than planting



been taken over by cattle herders. The aim is to scale this up in 2020 to restore 200 hectares ourselves, and to train villagers to do more. We are also working, initially with six villages, on developing alternative livelihoods to ease pressure on the mangroves, including oyster farming and honey production.

Our work on the Rufiji delta is the latest example of our innovative efforts to protect and restore mangroves across the tropics. We have won a reputation for encouraging natural regeneration rather than the planting projects more widely adopted. Research has shown that planting mangroves has a very low success rate. Typically, 80 per cent or more fail to grow, either because they are the wrong species or because coastal conditions are wrong.

“Natural restoration is much more effective than planting,” says our technical officer for deltas and coasts, Menno de Boer. This is possible because in most mangrove regions there are still fruits and propagules floating in tidal waters. Given the chance, they will settle in the mud and grow of their own accord. Our aim is to give them that chance, through ecosystem management that reduces erosion, prevents the encroachment of aquaculture, and provides a stable coastline for regeneration.

We combine this knowhow with incentivising communities to protect the spaces where the mangroves can grow, by offering a deal in which communal work on ecosystem management is recompensed with microcredit and training for local development projects.

Our flagship programme is Mangrove Capital Africa, a ten-year initiative we began with DOB Ecology, a Dutch environmental philanthropy group. It builds on a three-year project in the Cacheu River National Park in Guinea Bissau, funded by the Turing Foundation, which has the largest dense assemblage of mangroves in West Africa, and in which several hundreds of mangroves have been restored. With this new initiative, the work is upscaled to the Saloum Delta on the border between Senegal and Gambia, as well as the Rufiji Delta in Tanzania.

An assessment during the year found that more than 11,000 people in the Saloum delta had increased their incomes thanks to credit we advanced for small-scale projects such as beekeeping and home gardening activities. In return they abandoned over-fishing and excessive harvesting of many mangroves for firewood.

To bolster public support for this work, we reached more of the 100,000 people living in and around the Saloum



## Everything in our lives depends on the mangroves

delta during 2019 through our promotion of theatre, environment clubs in schools and community radio to raise awareness about the value of mangroves, and instil pride in this natural heritage. More than 50 radio programmes were broadcast on 12 stations.

The ultimate aim of Mangrove Capital Africa is to increase the ecological, social and economic value of more than a million hectares of African mangroves. We have global ambitions too. In 2019, with partners including NASA and geographers at Aberystwyth University in Wales, we published a series of maps of the world's mangroves and their health. The maps have already been used to devise more restoration plans and to help countries report progress towards achieving several Sustainable Development Goals.

For too long, mangroves have been ecological backwaters, ignored by forest and marine conservation communities alike. We are changing that.



### Partners

Aberystwyth University  
The Nature Conservancy (TNC)  
soloEO  
NASA  
JAXA  
The CSO platform  
University of Dakar  
The Tanzania Forest Service

### Donors

Turing Foundation  
Waterloo Foundation  
Otter fonds  
Oak foundation  
DOB Ecology

*For the entire list see Annex*



# ANNADEL SALVIO CABANBAN

PROGRAMME MANAGER 'PARTNERS FOR RESILIENCE' - PHILIPPINES  
HEAD OF OFFICE PHILIPPINES

### Who is Annadel Cabanban?

I'm the eldest of six kids, and so I have five younger brothers and sisters. I'm happy that I am back in the Philippines and I can now celebrate birthdays with them. I worked in academia until 2016. Afterwards, I started working for non-governmental organisations in both Malaysia and the Philippines. I have also worked for the United Nations Environment Programme in Thailand and the United Nations Office for Project Services in the Philippines.

As a marine biologist, I feel honoured to be working in the Philippines on coastal and marine conservation, especially as I am a recipient of scholarships from the Philippines and Australia. Working for Wetlands International fits well with my philosophy, as it is an organisation that builds links between science and policy, and that has a mission to conserve wetlands for people and nature.

On a personal note, I enjoy reading autobiographies and watching courtroom dramas like Suits. This is my evening reward. I also like jazz. My favourite artists are Wynton Marsalis, Ella Fitzgerald, and Serafia. They are all great to me.

### What was the most significant success you had in 2019 in the project?

Our most significant success was incorporating the 'Building with Nature' approach as part of the integrated coastal management for the northern part of Manila Bay. This intervention in the northern part of Manila Bay is part of

the draft Manila Bay Sustainable Development Masterplan. There is a wide expanse of wetlands there, like mudflats and mangrove forests.

Unfortunately, they are heavily disturbed. Building with Nature, will protect parts of the coastline, prevent flooding, restore habitats of water birds and migratory birds, and rehabilitate habitats of fish, shrimps, shellfish, and crabs that are important for food. Because of our success with this, we are hopeful that the northern part of Manila Bay, which has a breathtaking amount of biodiversity, especially of migratory birds, will be invested in by the public and private sectors.

### What are your goals for 2020?

In 2020, I would like us to strengthen some of the river basin management councils in the Philippines. We can do this by providing them with the necessary business-planning skills so that they can raise funds for their respective integrated management plans. The goals of management plans is to rehabilitate the watershed so that it will continue to store water, reduce risks to flooding and landslides, and provide clean water to drink and to grow food.

### What is your favourite species?

I have several favourite species, depending on the wetland. But if I had to pick one, it would be the angelfish. They're colourful and beautiful.

## STORY HIGHLIGHTS

The rewetting of the Orshinsky Mokh peatland, Russia, means it is no longer a fire hazard.

Katingan, Indonesia, one of the world's largest peat-swamp forests with rich biodiversity, has become a showcase as the Indonesian government plans to restore 2.4 million hectares of damaged peatlands by the end of 2020.

We worked with UN Food and Agriculture Organization on strategies for 'wet agriculture' on peat that minimises damage from drainage.

# PEATLANDS WILL SAVE THE WORLD

By Fred Pearce

The Orshinsky Mokh peatland is wet again. In 2019, after five years of effort, water levels have risen by a metre across an area of 65 square kilometres. It has been a triumph of ecological restoration. Like many other peatlands in the region around Moscow that had been partially drained for peat extraction, the bog had become a major fire hazard after extractors abandoned large areas in the early 1990s.

“They used to have fires here all the time,” said Professor Vladimir Panov of the Tver State Technical University, who devised the rehabilitation of Orshinsky Mokh. “It was dry here till a year ago,” he said as we watched bulldozers move peat to block another drainage canal. “Now you can see the soil is getting waterlogged again. The reeds are new; sphagnum is spreading too.”



Tatiana Minayeva, project coordinator, PeatRus and Wetlands International Associate Expert

His work was part of a project to block hundreds of kilometres of drains, supervised by Wetlands International and known as "restoring peatlands in Russia", or PeatRus. The initial aim was to prevent a repetition of devastating peatland fires during the summer of 2010, by rewetting some 410 square kilometres of drained peatlands. Over the past decade, the vulnerability to fire has been reduced fourfold, and the mire has been put on a path to full restoration of its biodiversity and ability to store carbon, says Tatiana Minayeva, the project coordinator.

With new international funding agreed in 2019, the plan is now to wet a total of 1400 square kilometres, with full ecological restoration of 350 square kilometres.

From the snow-covered boreal peatlands of Russia to the swamp forests of the tropics, peat bogs are among the world's largest natural stores of carbon – the result of vegetation accumulated in boggy ground over thousands of years. But they are menaced by agricultural drains, peat mining, forestry and overgrazing. Peatlands damaged by human activity already emit up to 8% of all anthropogenic greenhouse-gas emissions. Unless protected and restored, peatlands threaten to unleash carbon dioxide over the coming decades that could cause runaway climate change.

So beside our work in Russia, we have been busy restoring peatlands across the world. In Mongolia, we have been

helping herders restore their pastures and protect springs as water sources. In Borneo we have been masterminding the protection of one of Indonesia's largest intact peat swamps in the face of encroaching loggers and palm oil companies, and in 2019 achieved success in restoring water levels on the Badas peat dome in Brunei, after blocking drainage canals. In Peru and Argentina we are beginning work on improving 760 square kilometres of high altitude peat bogs. Everywhere our work also involves securing the livelihoods of grazers and other people who use and harvest them.

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In early 2019, a dry El-Niño year on the tropical island of Borneo, there were huge fires extending across thousands of square kilometres of forests and peatlands. But they did not take hold in Katingan, on the south of the island, where for the past five years we have been providing technical input to protect 150,000 hectares of forested swamp. Two small fires crossed into the project area, but were swiftly doused by some of the 500 local villagers trained as fire-fighters under the project. It was a small but significant triumph.

The primary purpose of the Katingan conservation project is to lock up carbon. It is funded by carbon credits sold



*Eriophorum angustifolium*, commonly known as common cottongrass is a species of flowering plant in the sedge family, Cyperaceae. Native to North America, North Asia, and Northern Europe, it grows on peat or acidic soils, in open wetland, heath or moorland.



Tver oblast peatland in Russia during winter restoration activities.





## Unless protected and restored peatlands threaten to unleash emissions that could accelerate climate change



to polluters to offset their emissions. But for the project, the area would have been turned into an industrial timber plantation. "The forests would have been destroyed and the peat swamps drained," says David Stone of Permian Global, which manages the project in partnership with Wetlands International and others. Stopping that prevented the release in to the atmosphere each year of an estimated 7.5 million tonnes of carbon dioxide – some from deforestation but most from the gradual oxidation of the drained peat. The carbon credits represent that gain.

Happily, there is a major ecological gain too. Protecting one of the world's largest peat-swamp forests and the several endangered species that live there in large numbers, including 3500 orangutans, 10,000 gibbons and 500 proboscis monkeys.

The year 2019 saw the project achieve financial security when Volkswagen and other companies bought its credits. But to ensure that the carbon stays put for centuries to come, it also needs acceptance from the 40,000 or so Dayaks and others who grow rice, tap rubber and cultivate rattan in the surrounding forests. To that end, project managers from Permian Global have sought agreements with the 34 surrounding villages, ensuring their land rights and helping them grow crops sustainably, as well as recruiting them as firefighters for the project.

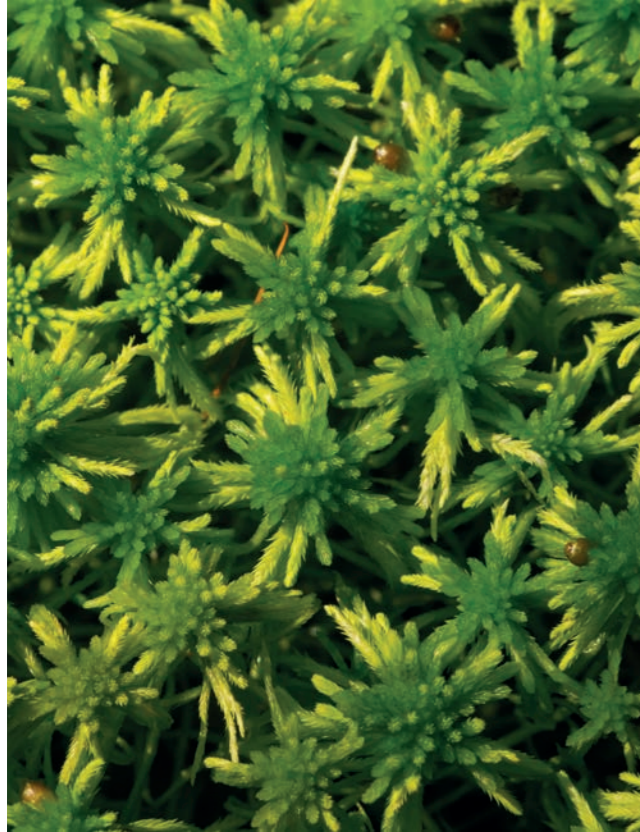
Beside its own successes, it has become a showcase for what can be achieved as the Indonesian government develops its own ambitions to restore 2.4 million hectares of damaged peatlands by the end of 2020.

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Peatlands make up only around 3% of the world's land surface, but they contain twice as much carbon as the world's forests. The importance of their conservation and restoration is increasingly recognised in international climate negotiations. Indonesia and Russia, which ratified the 2015 Paris agreement on fighting climate change in 2019, are among countries that plan to incorporate peatland protection and restoration into their emissions reduction strategies. During 2019, we helped both countries to develop methodologies for accurately calculating emissions from peatlands; and we provided technical expertise to help more nations join them.

Countries with great potential to benefit include Mongolia, where extensive peatlands overlaying permafrost are disappearing rapidly due to overgrazing, mining and agricultural expansion. We recently completed work with local herders there, piloting how to restore peat on their pastures. Further monitoring of this restoration, including its impact on carbon balance, integrated with a strategic plan for peatland in Mongolia we have also developed, will help

Protecting the Katingan peatswamp forest, Indonesia, has meant securing habitat for 3500 orangutans, 10,000 gibbons and 500 proboscis monkeys.



## Agriculture can make use of peatlands without draining



such projects to be included in the country's future climate change commitments.

Many peatlands are unlikely ever to be given over entirely to nature. So an important aspect of successful peatland conservation is finding ways to make productive agricultural use of them without draining. In 2019, we worked with the UN Food and Agriculture Organization on strategies for helping peatland people grow new "wet crops", a technique known as paludiculture.

Wet crops can include reeds for biomass burning, moss for horticulture, and in tropical regions such as Indonesia the cultivation of medicinal plants. One enticing possibility is growing swamp jelutung, a tree that produces a latex valuable in dentistry and for making chewing gum. It is reckoned to be potentially a more valuable crop than oil palm. During the year, we worked to include incentives for paludiculture in the Common Agricultural Policy of the European Union, where drained peatlands contribute up to a quarter of agricultural emissions; in Russia, where we organised a round table to further ideas; and in Indonesia, where the government's peatland restoration plans are unlikely to succeed without considering the needs of locals.

### Partners

Greifswald University  
Institute of Forest Science  
Michael Succow Foundation

Ministry of Natural Resources and environment of Russian Federation

Mongolian Academy of Sciences

Russian Academy of Sciences

The Mongolian Ministry of Environment and Tourism

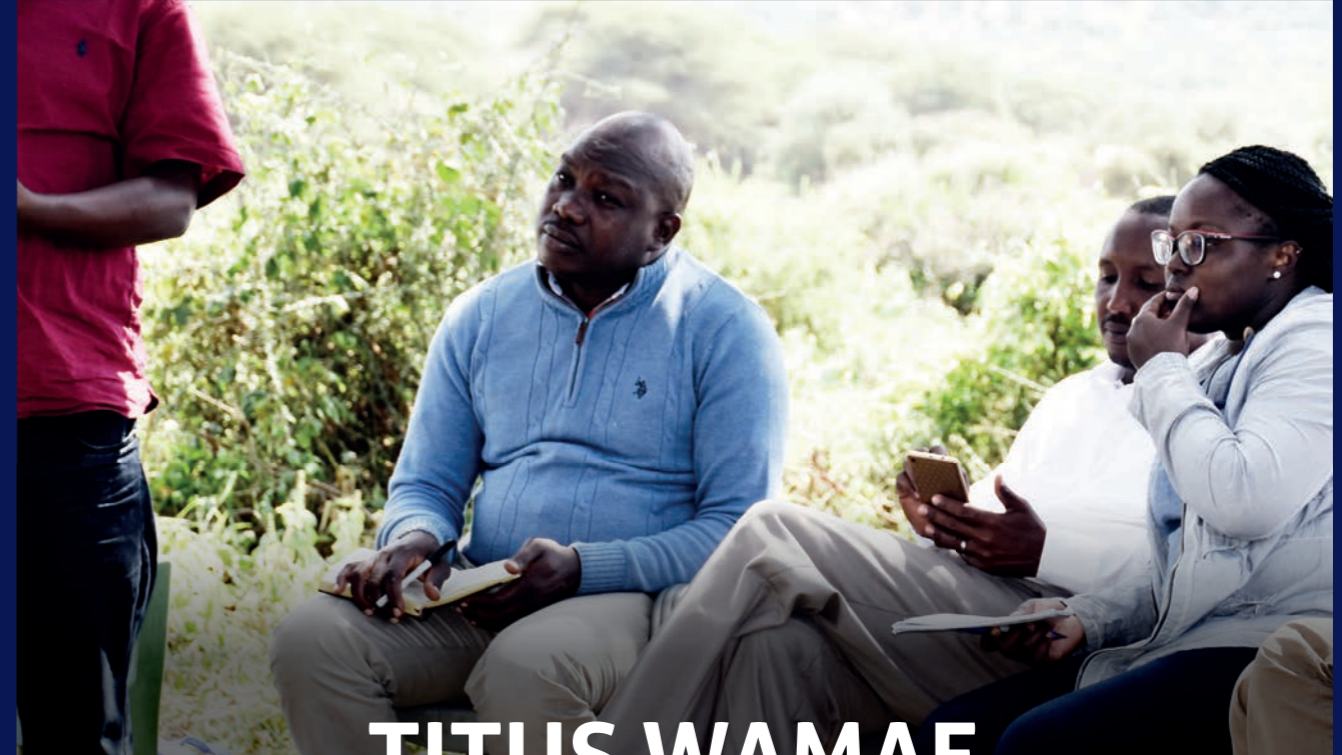
### Donors

International Climate Initiative of the Federal Ministry for the Environment

Japan Fund for Poverty Reduction funds Managed by the Asian Development Bank

Nature Conservation and Nuclear Safety, the funds managed by the KfW bank

*For the entire list see Annex*



## TITUS WAMAE

REGIONAL POLICY AND ADVOCACY OFFICER  
OFFICE: EASTERN AFRICA

### Who is Titus?

My name is Titus Wamae. I work for Wetlands International as the Regional Policy and Advocacy Officer in Eastern Africa supporting programmes in South-Sudan, Tanzania, Ethiopia, Kenya and Uganda since 2016. The programmes include Partners for Resilience (PFR) II, Watershed-Empowering Citizens, and Mangrove Capital Africa among others. I am a certified Environmental Impact Assessment/Audit Expert and hold a Master's Degree in Environmental Law, Bachelor of Science Degree in Environmental Science and a PGD Environmental Journalism and Communication. Currently I am enrolled for a PhD in Environmental Law at the University of Nairobi. In 2010, I was honoured with the prestigious Kenya Head of State's Commendation (HSC) presidential award by the President of the Republic of Kenya as recognition by the state for my contribution to environmental conservation and community development.

### What was your biggest personal work achievement in 2019?

I facilitated the establishment of Kinnaite Wetlands Working Group (KWWG) in Torit State in South Sudan. This is a multi-stakeholder forum that provides a platform to discuss wetlands management issues affecting the Kinnaite Watershed. The forum is comprised of representatives from senior Torit State government officials; members of the Health and Environment Committee of Torit State Legislative

Assembly; civil society organisations such as Eye of Mercy, the War Widow Women Association; NGOs, the youth (moyimijis) president; community representatives from nine payams/villages; and the private sector.

KWWG is chaired by the Director General, State Ministry of Health and Environment and acts as the steering committee for the development of the Kinnaite Wetlands Management Plan to ensure sustainable wise use the Kinnaite wetlands resources.

### What is the nicest thing about working at Wetlands International?

One of the things I love at Wetlands International is that we share a lot of information and knowledge with each other around the network. There is always someone available for consultation on a specific topic. Another thing is that we work with a clear focus, vision and mission.

### What do you want to achieve in 2020?

The PFR programme ends in 2020. My main achievement would be my contribution in building community resilience against disasters and livelihood improvement in PFR focus areas in Kenya, South Sudan, and the Horn of Africa through community institutional and capacity strengthening, lobbying and advocacy on policy formulation and implementation, risk-sensitive investments and practice.

# Early warning tool predicts conflicts linked to wetland degradation

What if we could predict and prevent violent conflicts linked to water insecurity and wetland degradation? Wetlands International is part of the Water, Peace and Security Partnership, which in December 2019, launched a groundbreaking new tool (WPS) with this very aim, predicting the risk of violent conflicts connected with water, up to 12 months in advance.

The WPS Global Early Warning Tool, launched at the World Meteorological Organization in Geneva in the presence of Sigrid Kaag, Dutch Minister for Foreign Trade and Development Cooperation, uses machine learning to forecast exactly where organised violence is likely to occur. It will support development, disaster response and defense experts to help defuse conflicts before blood is shed.

## **Water scarcity can multiply potential for conflict**

Rising water insecurity, resulting from growing demands for water and poor water management, as well as more uncertain rainfall due to climate change, is certainly not the only driver of conflict, but it is an important and often overlooked one. A quarter of the world's population lives in extremely water-stressed areas. Water scarcity, pollution and floods, can multiply the potential for conflict between different groups of people who use the same natural resources. Tensions rise as people fight for their livelihoods, to protect their families, their crops or herds. Conversely, conflict resolution measures that help communities to share land and water resources can help to restore peace.

Previous early warning tools have only focused on vulnerabilities such as political,

economic, social and demographic factors to predict conflict. The WPS Global Early Warning Tool is unique because it combines these factors with environmental variables linked to water, such as rainfall, water scarcity and crop failures, to understand the full picture.

Jane Madgwick, CEO, Wetlands International, who spoke alongside Minister Kaag at the event said: "Healthy ecosystems like wetlands underpin community livelihoods and jobs in the most water-stressed countries. Keeping these wetlands in good condition helps to sustain human well-being and peace. Understanding the dynamics of how people interact with ecosystems is key because if certain thresholds, like water flows, are crossed then this can start to diminish the natural productivity and so trigger local tensions. Predictive tools like WPS Global Early Warning Tool are effective when used in conjunction with cultural and scientific knowledge on ecosystem functionality. That is why this project involves a broad partnership of organisations and combines insights not only from the sky but also from the ground."

## **WPS partners**

The Water, Peace and Security (WPS) Partnership involves six partners: IHE Delft, World Resources Institute, Deltares, The Hague Centre for Strategic Studies, Wetlands International and International Alert. It is funded by the Netherlands Ministry of Foreign Affairs. The initiative is intended to become an open network that can bring together knowledge, capacities and activities directed at scaling up preventative action in the context of water stress-induced conflict, migration, or other forms of social destabilisation.



Wetlands International Management Team (MT) and Supervisory Council (SC), from left to right: Hasting Chikoko (SC), Richard Holland (MT), Ron van Leeuwen (MT), Jane Madgwick (MT), Eliot Taylor (SC), Kazuaki Hoshino (SC), André van der Zande (SC), Angelique van de Beeten (SC).

# FROM THE SUPERVISORY COUNCIL

André van der Zande, Chair

It is the job of the Supervisory Council and Board of Association to oversee and guide implementation of the strategic intent, the annual plan and budget, membership relations, finance and risk management, and CEO performance. Although a seemingly dry list of responsibilities, being a member is a rich experience that enables us to see projects, to manage and restore wetlands at first hand, to meet people who benefit from healthy wetlands, and to interact with staff and stakeholders around the world. As Chair since 2015 I have seen a remarkable progress in how the organisation performs. Our network is developing fast and we are seizing opportunities to scale-up the impact of our work.

The Supervisory Council and Board of Association met twice in full session during the year, once in the Netherlands in June and a second time in Kerala, India, at the invitation of Wetlands International South Asia in November.

In Kerala we saw the crucial importance of the coastal lagoon systems in protecting settlements against sea level rise and in reducing the impact of inland flooding that result from heavy monsoon rains. We discussed with local stakeholders the challenges of accommodating a growing population in this coastal zone and the opportunity that nature tourism provides. Kerala offered an amazing mix of sensations, including the calmness of a boating trip on the Kerala backwaters and an inspiring climb to the Jatayu Rock that showed the interconnectedness of nature, mythological history and art. I was proud to see the crucial and respected role our South Asia team plays in India in many wetland management plans. We also met the South Asia Board and exchanged experiences and ideas for the development of Wetlands International in the region and globally.

The revision of the Wetlands International strategic intent for the period 2020-2030 was a key item in 2019 involving consultations and inputs from around the network and a wide range of stakeholders. It was also an important year in that the Wetlands International mission was changed to,

'we inspire and mobilise society to safeguard and restore wetlands for people and nature' to reflect better the role that the network plays. On recommendation of the Supervisory Council and Board of Association, the General Members Meeting in December endorsed these key changes. The Supervisory Council also supported the set-up of a new network management team, including heads of offices, and the recruitment of two new functions: Director for Operations and Network Development, and Director for Resources Directors in the global office. We know that the personal capacities and dedication of our staff is our greatest asset.

During the year we were fortunate to welcome Carlos Saavedra, Maggie White and Hastings Chikoko as new members of the Supervisory Council and Board of Association bringing with them many years of high-level work in the conservation, development and water arenas. Inevitably we also said goodbye to our friends Dan Martin, Gonzalo Castro, and Eduard Ayensu who completed their terms as members. Their wise counsel, enthusiasm for wetlands and good spirits will be missed.

We are all looking forward to the coming decade of action in which we all do our utmost to safeguard and restore wetlands for people and nature.



Wetlands International Supervisory Council and Management Team meet fishers at the coast of the local community in Kerala, India. From left to right Prof J K Garg (Treasurer, Wetlands International South Asia Society), Dr Sidharth Kaul (President), Prof C K Varshney (Member, Governing Body), Prof E J James (member, Governing Body) and Ritesh Kumar (Director, South Asia).



# HASTINGS CHIKOKO SUPERVISORY COUNCIL MEMBER

**Could you tell us a bit about your background?**

**How did you come to be a cities and climate expert?**

I am an economist who specialised in green economy because I believe that a healthy economy needs a healthy planet. I worked for many years with the World Conservation Union (IUCN) in Zimbabwe, South Africa, Kenya and at IUCN Headquarters in Switzerland. It was at IUCN where I came acquainted with the work of the United Nations Framework Convention on Climate Change (UNFCCC) and developed the passion to work on climate change issues.

Looking at the trends in urbanisation, I noticed that the world gets almost 67 million new urban dwellers every year. It became evident to me that our future is urban and the battle on climate change will be won or lost in cities. I became convinced that it is important to cascade support

to city governments to enable them pursue low-carbon and resilient growth pathways. This is what motivated me to join C40 Cities Climate Leadership Group and even understand urbanism better by studying more on cities at the London School of Economics (LSE Cities).

**What brought you to your role as supervisory council member with wetlands international?**

First, I am a birdwatcher - so anything that brings me and my binocular closer to wetlands is appealing. When the opportunity to contribute to the work of Wetlands International presented itself, I did not even think twice.

I feel that given my collaboration and conversations with a big network of mayors and urban professionals, I can contribute to Wetlands International's strategic intent es-

pecially at this time when the organisation is looking into a focus on cities. Urbanisation and the consequential land use options are putting pressure on wetlands in urban areas and I felt a call of duty to do something. I am convinced that mismanagement of wetlands is one of the root causes of climate risks in cities and that should not happen under any mayor's watch.

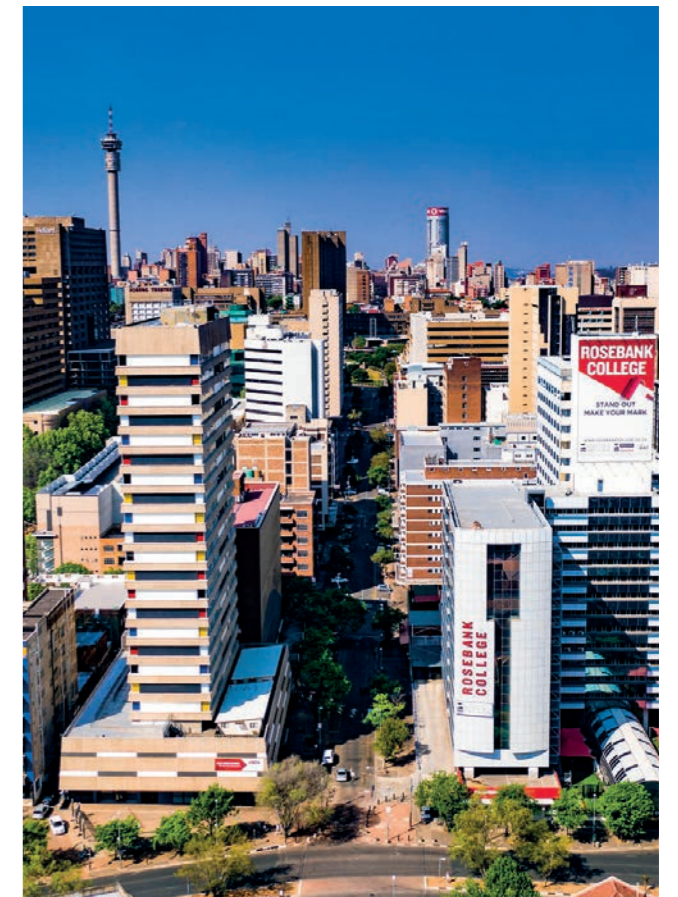
**How do you see the safeguarding and restoration of wetlands contributing to the battle against impacts of climate change in cities?**

The organisation I work for partnered with other climate change organisations and published a report: The Future We Don't Want, outlining how climate change could impact the world's greatest cities. While urban population continues to grow, climate hazards are increasingly threatening cities and urban residents, through increasing inland and coastal flooding, as well as prolonged heat waves and fires. Cities are under pressure to invest in adaptation measures that safeguard people, assets and services. Before considering such investments, I believe it is wise for cities to first look at what they have – including assets and services that are provided by nature. Nature-based solutions have potential to address urban challenges and improve the well-being of urban residents in a cost-effective way.

This brings me to the role of wetlands in addressing climate change impacts in cities. I always tell mayors that better-managed wetlands provide flood defence similar to expensive dykes and dredges. There is uncontested evidence that wetlands slow the flow of water which, among other benefits, results in the reduction of flood damage in cities. And this is in addition to the health impacts derived from the way wetlands purify urban run-off water and, of course, the aesthetic value that a birdwatcher like me look for when choosing where I should live. I therefore would like to see mayors, urban professionals and businesses increasingly recognise that wetlands are not just another vacant land for the next commercial or housing development project.

**What do you see as the role for wetlands international in a highly competitive and crowded urban space?**

The urban space may look crowded but there is more work to be done to achieve sustainable and resilient cities. I see a key role for Wetlands International to place the best available science and knowledge in the hands of mayors and city officials. This will inspire sound urban policies and regulations so that urban economies can derive maximum value from wetlands. Wetlands International can also help in bringing cities' voices to international policy making platforms that it has access to.



The city of Johannesburg.



Local man of Gede Pangrango fishing in the lake using a traditional net in Java, Indonesia.

# Ramsar Partners for Wetlands call for a specific programme on wetland restoration

As the UN Decade on Ecosystem Restoration was declared by the UN General Assembly in 2019, Ramsar International Organisation Partners (IOPs), including Wetlands International, called for a specific programme on Wetland Restoration as part of it. By restoring, conserving, and wisely using our wetlands we can make significant contributions to The Global Goals.

The Decade on Ecosystem Restoration aims to massively scale up the restoration of degraded and destroyed ecosystems as a proven measure to fight the climate crisis and enhance food security, water supply and biodiversity.

Ramsar IOPs highlighted how natural wetlands have declined across inland, coastal and marine habitats, with serious impacts for people on food security, fisheries, water provision for agriculture and domestic needs, and as natural protection from storms and floods. All wetland-

dependent animal and plant species have also been affected. Wetland loss also influences our ability to store carbon and support broader climate adaptation.

With the call Ramsar IOPs urged governments to give special attention to wetlands.

**“We must reverse the decline of natural wetlands, and one key strategy to do that is to restore wetlands and their functions as a key ally to adapt to climate change impacts, and to help store carbon.”**

#### The Ramsar IOPs are:

BirdLife International  
The International Water Management Institute (IWMI)  
The Wildfowl & Wetlands Trust  
Wetlands International, World Wide Fund for Nature (WWF)  
The International Union for Conservation of Nature (IUCN).



## MICHAEL SUCCOW

FOUNDER, MICHAEL SUCCOW FOUNDATION AND PARTNER IN THE GREIFSWALD MIRE CENTRE

#### Who is Michael Succow?

I was born in 1941 and grew up on a farm in Brandenburg (East Germany). While studying biology, I became a passionate peatland ecologist and had to witness the drainage of vast mire landscapes in Northeastern Germany in the 1970s/80s. In 1990, I managed to secure almost 10% of German Democratic Republic territory as protected areas, literally in the last moment before Germany's reunification. For this coup, I was awarded the Right Livelihood Award in 1997. With the prize I founded the Michael Succow Foundation (MSF) for the Protection of Nature in 1999, which means that we celebrated the 20th anniversary of the foundation in 2019.

#### Why did the Michael Succow Foundation become a member?

MSF as partner in the Greifswald Mire Centre engages strongly in peatland conservation and restoration, but also in promoting them in policy making. We see the strength of a network like WI-EA to join forces with coordinated action towards policy makers in the EU and its' Member States. Peatlands are still underrepresented in most of the platforms, we want to change this together with strong allies!

#### What's been your biggest success in 2019?

Hard to say, there were so many peaty highlights in 2019: from discovering new peatlands in Eastern Africa, establishing a large cattail plantation for paludiculture, high attention on peatlands at the UNFCCC Climate Summit in Madrid to a


workshop to discuss European peatland strategies with participants from 11 EU-Member States and beyond. Peatlands are getting out of the niche and receive the recognition they deserve. And last but not least, we celebrated the foundation's 20th anniversary with a big event in Greifswald!

#### What would you like to see achieved for the post-2020 biodiversity framework?

Mass extinction is reality due to overexploitation of nature, habitat loss and climate change. Conservation and restoration, but also more sustainable land use should be top on of the agenda. Peatlands are among the most vulnerable ecosystems with the highest proportion of degradation. Numerous species specially adapted to the wet conditions are on the brink of extinction and the carbon storage is dissolved, contributing to accelerated climate change. There is only one message: Peatlands must be wet!

#### What would you like to see Wetlands International and its members achieve in 2020?

Bringing wetlands and peatlands even higher on the political and social agenda, especially in this decisive year on the EU Biodiversity Strategy, the global biodiversity framework, but also in the EU's common agricultural policy and the EU Green Deal. Environmental problems don't fade away in these times of a pandemic but they should become even more prominent as we see how vulnerable we are as human beings. We have to tackle these issues not for the sake of nature, but for our own sake!



## The Roundtable on Sustainable Palm Oil adopts standards to limit peatland degradation

The Roundtable on Sustainable Palm Oil (RSPO) has adopted new standards on peatland draining, developed in partnership with Wetlands International, to help curb the degradation of peatlands that would contribute significantly to greenhouse gas emissions. The RSPO, a trade body that certifies palm oil across 3.89 million hectares in south America, west Africa and Indonesia, will use the drainability assessment (DA) procedure to assess the potential for replanting based on ground water levels and drainage possibilities.

Dipa Rais, Technical Officer Hydrology at Wetlands International Indonesia, who worked on the assessment with the RSPO since 2017 said: "Global production of, and demand for, palm oil has increased rapidly in the last decade. A huge part of it comes from drained peatlands. Without careful planning for the future of these peatlands, reaching drainability limit will be inevitable along with numerous associated damages."

"The official adoption of the assessment can contribute in preventing future irreversible damage to hydrology, ecology and economy of peatlands and communities at landscape scale. Permanent flooding, salt water intrusion, pyrite oxidation and increased management costs, are just few examples of these foreseeable harm," he added.

### Going up in smoke

The major issue with draining peat for growing palm oil is that the peat, comprising partially decayed plant material, oxidises as it dries out, releasing the carbon into the air as carbon dioxide. This causes the land to subside and is a major source of emissions.

Over 25 years a hectare of oil palm plantation on peat will emit more than 2000 tonnes of carbon dioxide amounting to about 500 million tonnes of carbon dioxide a year in Indonesia alone -- more than half the country's total emissions, according to Kristell Hergoualch, a scientist at the Centre for International Forestry Research (CIFOR).

The problem is made worse by fire -- either those that occur naturally, or those that are deliberate to clear existing forests. Wet peat does not burn because the moist conditions prevent oxidation and keeps fires from starting.

### New threats to Indonesia peatland

But, while the RSPO has taken positive steps to curb peatland degradation through drainage, peatland in Indonesia, in particular, is facing a new threat. The Indonesian government's relaxation of regulation protecting carbon rich peat landscapes now only requires land concession holders to maintain the water table in the highest point of a peat dome. Areas with a peat depth of less 3m are now exempt from having to use the drainability assessment procedure. The resulting peatland degradation is expected to jeopardise the goal set by the Indonesian Peatland Restoration Agency (BRG) to restore 2.4 million hectares of peatlands by 2020.

### Paludiculture as an alternative

Plantations that must be phased out under the drainability assessment guidelines can either be phased out or transition to paludiculture, the cultivation of more water-tolerant crop types such as sago without major degradation to the peat.

# Wetlands on fire

Fires can occur naturally in different ecosystems and in some circumstances are considered a vital natural process. But, when they are explosive, pervasive, persistent and unprecedented in magnitude, it signals a worrying shift.

2019 was the year that saw a lethal combination of El Niño weather pattern, rising temperatures, severe drought and the increased lighting of fires to clear land for agricultural expansion contribute to raging fires across Indonesia, Australia, the Pantanal and the Amazon. Millions of hectares burned, with a devastating effect on wildlife, nature and people across whole continents.

The world's largest wetland, the Pantanal, has suffered a three-fold increase in outbreaks, than in 2018. The Brazilian Pantanal was hit by unprecedented fires that engulfed at least 2.4 million hectares across the region in October and November 2019, with second and third outbreaks up to early 2020, when fires were finally extinguished due to rain. Wetlands International called on government agencies and communities to work together to solve this situation.

Equally concerning are the fires affecting peatlands, such as in Indonesia. The drying out of peatlands through drainage makes them especially fire-prone, and ignition can result in the emission of vast quantities of carbon dioxide, as well as impacting biodiversity and causing human widespread health hazards.

Attention is now turning to fire prevention through the rewetting of drained peatlands. In Russia, millions of hectares of drained and abandoned peatlands are vulnerable to fires, such as those that covered Moscow in smoke during the extremely dry summer of 2010. Since then some 410 square kilometres of drained peatlands have been rewetted (see pages 29-30). And, over the past decade, the vulnerability to fire has been reduced fourfold, and the area put on a path to full restoration of its biodiversity and ability to store carbon.

Wetlands, packed with layers of soaking peat and topped with living moss, can play a heroic part in curbing the effects of global climate change, but only if we protect those that remain and bring back the ones we humans have already damaged and destroyed.





## STORY HIGHLIGHTS

The Parana delta's hydrology is economically and ecologically important. It sustains ranching, fishing, beekeeping, handicrafts, tourism and recreation.

Ranching should be done in a way that does not damage the wider ecosystem services of the delta.

Wetlands International encourages ranchers to move their cattle with the water and take advantage of the flood pulse to improve the quality of pastures.

Hidrovia, a planned shipping highway, poses a "big threat" to these wetlands.

# SHIFTING DEVELOPMENT NORMS: PARANÁ DELTA

By Fred Pearce

Buenos Aires is spreading. The Argentinian metropolis has a population of more than 13 million, and is pushing out across its hinterland on the Paraná Delta at the mouth of the Plata estuary, draining the delta as it goes. Meanwhile, ranchers have relocated their cattle from the grasslands of the pampas onto the delta. Wetlands International has been working in 2019 with the delta's inhabitants and regulators to turn this human and livestock tide, and protect one of South America's most important wetlands.

The Paraná Delta covers 1.7 million hectares, the size of Northern Ireland. It is the endpoint of the Paraguay-Paraná river system, which drains a huge area of South America, including all of Paraguay, and much of Brazil, Bolivia and Argentina. Its freshwater marshes, widely used for cattle grazing, are dotted with islands where most of its more than 40,000 inhabitants live.

*The freshwater marshes of the Paraná Delta are widely used for cattle grazing.*



Thousands of fishing livelihoods depend on the health of the Paraná Delta.

The delta has more than 30 protected areas. In 2016, the government designated more than 240,000 hectares for a new Ramsar site. In August, we published a management plan for the site, developed with the government. We also launched with local partners a strategy for maintaining a biodiversity corridor through the delta, to connect protected areas and maintain passage for native species such as the critically endangered marsh deer (see Saving the Marsh Deer, page 75).

But piecemeal protection is not enough when the entire hydrology of the delta is under threat and when ranchers and developers see its very wetness as an impediment. Land-filling, sand mining, and the construction of dikes, homes, industry, ports and other infrastructure, are all gathering pace. Such developments are short-sighted. For the delta's hydrology is economically as well as ecologically important. It sustains fishing, hunting of coypu, beekeeping, handicrafts made from its rushes, tourism and recreation.

An economic assessment we commissioned concluded that 80% of the direct economic benefit came from cattle raising, which is of growing importance as traditional grazing lands on the pampas are taken over by soy crops. But it also found that the indirect value of ecosystem services, such as flood control and buffering against storms, was four times higher. That means ranching needs to be carried out in a way that does not damage the wider services.

So how to do it? We have explored this during 2019 by developing with the National Ministry of Environment a handbook on how to draw up environmental impact assessments for development projects in wetland ecosystems.

Most ranchers have traditionally practiced "island ranching", releasing their cattle onto the unfenced marshes for fattening in summer. That works fine. But in recent years, ranchers have increased their stocking rates in the delta, leading to overgrazing and soil erosion. Worse, they have constructed dams and dikes to divert water and prevent their grazing land from being flooded.

Such works clearly damage the delta. So, we are encouraging ranchers to adapt to the wetland hydrology, by moving their cattle with the water. "Instead of decoupling the farmland from the wetland, we want them to take advantage of the flooding pulse to improve the quality of forage and pastures," says Ruben Quintana from the National University of San Martín.

In 2019, we piloted this new approach with seven ranchers operating on 14,000 hectares across the delta. The ranches range in size from an 8500-hectare estate on one of the Ibicuy islands, to 120 hectares near Gualeguay.

At a workshop we organised in August, producer Carlos Weber summarised the dilemma that ranchers face be-



Plans for the Hidrovia Waterway have been revived in 2019. This would make a shipping highway 50 metres wide from the Pantanal to the ocean. It is a major threat to the Paraná Delta.



The Paraná Delta sustains livelihoods from fishing, beekeeping, tourism and handicrafts



The "Corredor Azul" programme, launched in 2018, aims to safeguard the entire fluvial corridor from the Pantanal wetland, 3400 kilometres down one of the world's last large free-flowing river systems to the Paraná Delta.

## The value of ecosystem services such as flood control was 4 x higher than the economic benefit from cattle raising



Cattle ranchers can take advantage of the flooding pulse to improve the quality of forage and pastures

tween day-to-day risks on the delta and long-term collective needs. "Floods affect our cows and calves," he said. That was a problem. "But we need to stop degrading our wetlands, and work to restore them. So we need to discuss the right production systems for flooded areas." After the workshop, 15 other ranchers signed up to join the project, bringing our "reach" to 26,000 hectares.

During the year we also researched alternative production methods, such as raising water buffalo -- which appear better suited to the wet conditions than regular cattle, and whose meat commands a high price -- and assessing their potential environmental impacts.

We have been working too with the delta's artisanal fishers, who are marginalised by larger operators and exploited by traders. In 2019, we held a workshop to launch the Paraná Delta Artisanal Fishers Network to train and empower them. It builds on our collaboration with four fishers' cooperatives that have signed work plans to ensure the sustainability of their activities. In return, we are helping them improve their livelihoods.

The 30 members of the La Palometa Fisherfolks Association used to sell their catches at low prices to big merchants sold on to lucrative export markets. Our support helped them build capacity to fillet their fish and sell directly -- and more profitably -- to local markets.

We are also linking up with other critical economic activities in the delta. In October, we held our first dialogue with the forestry sector, to consider water management and biodiversity conservation in forest areas.

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Our work on the delta is part of a wider decade-long project, launched in 2018, to safeguard the entire fluvial corridor from the Pantanal wetland, the world's largest tropical wetland, for 3400 kilometres down one of the world's last large free-flowing river systems to the Paraná Delta. We call it the "Corredor Azul", or blue corridor.

The aim is to protect both natural wetland ecosystems and the livelihoods of the people who depend directly on them, including more than 10,000 fishing families, those who service eco-tourists, and the tens of millions dependent on the rivers' water supplies and wetlands' ability to soak up floods. In particular, we have been working to get wetlands properly incorporated into environmental impact assessments. In Argentina, for instance, that has not been the case.

Governments have supported our programme. But hard choices await. Looming on the horizon is the long-discussed Hidrovia Waterway project to create a shipping highway 50 metres wide from the Pantanal to the ocean, to



## Without the power of the Pantanal to hold back water, the result could be massive flooding downstream

export soy and other grains, iron ore, gypsum, timber and agricultural products from the heart of the continent. The scheme was formally revived in 2019.

Wetland International's Argentine director Daniel Blanco says that Hidrovia is a "big threat" to the Corredor Azul's wetlands. River widening at two critical points in the Pantanal could drain substantial parts of the wetland. Without the huge regulatory power of the Pantanal to hold back water, the result could be massive flooding downstream, including in the delta.

But, he says, "it is not the intention of the Corredor Azul programme to stop Hidrovia, but rather to influence the initiative to reduce its impacts, and maintain the natural hydrological connectivity of the rivers and their floodplains." Wetlands, he says, "should be part of the equation when planning and designing a big infrastructure initiative like Hidrovia." And we will be there every step of the way, advocating for what Blanco calls "a more integral vision" that recognises the importance of wetlands.



### Partners

Universidad Nacional de San Martín (UNSAM)

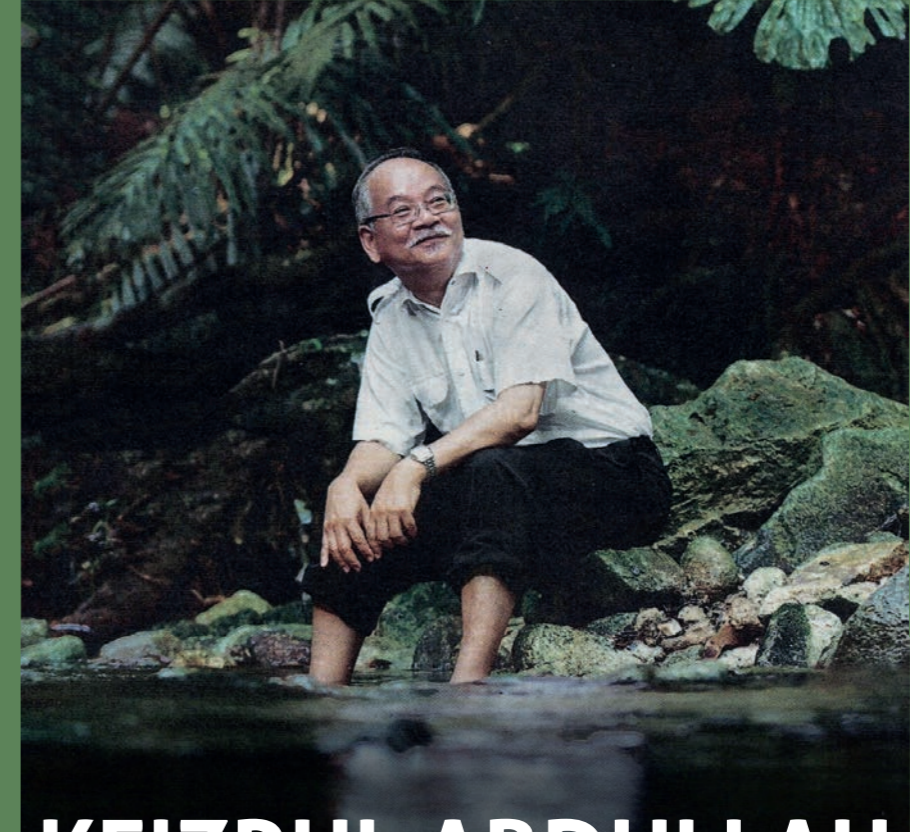
Universidad de Buenos Aires (UBA)

INTA Paraná (National Institute of Agricultural Technology)

### Donor

DOB Ecology

*For the entire list see Annex*



## KEIZRUL ABDULLAH

CHAIRPERSON OF THE COUNCIL (BOARD OF DIRECTORS) - MALAYSIA  
MALAYSIA OFFICE

### Who is Keizrul Abdullah?

My name is Keizrul Abdullah. I am Chairperson of the Council (Board of Directors) in Malaysia. I have been associated with Wetlands International since 2004. Presently in Malaysia we are working on two different areas concerning wetlands. One is Building with Nature (BwN) to restore wetlands, and the other is the introduction of constructed wetlands in two townships here. Building with Nature represents an innovative approach to protect the coast against erosion and floods, it works with and alongside the dynamics of nature. The constructed wetlands in the two townships will function as retention ponds against floods as well as improve the wetlands ecosystem. This way we keep people safe and bring nature back to the urban concrete jungle.

### What was your biggest personal work achievement in 2019?

In July 2019, I participated in an expert workshop on Building with Nature organised by Wetlands International with the Global Centre on Adaptation (GCA). We got eight Asian countries involved, Indonesia, Vietnam, Malaysia, Philippines, Japan, China, India, Singapore. It brought people together who did not know anything on BwN. The participants of the workshop resolved to introduce the BwN concept in their home countries. Now we are

developing pilots in five Asian countries. This workshop was a key moment in the process.

### What is the nicest thing about working at Wetlands International?

I am a water engineer by training, and in my career I worked on water and environmental engineering issues, mainly in the planning, development and management of irrigation, drainage, river, floods and coastal projects. My job was to improve the water system from a technical point of view. With Wetlands International, I am able to broaden my outlook to the bigger landscape view and to include nature and the ecosystem into the process. This way we can not only help keep people safe from water stresses and disasters, but also bring them closer to nature.

### What do you want to achieve in 2020?

Despite all the challenges we have during the current COVID-19 crisis, I hope we can finalise the constructed wetlands for the two townships. The first one should be operational this year. But construction activities has stopped for now, due to the virus. When the construction is finished, we can do a baseline study on biodiversity and keep track of the development over the coming years. For BwN I hope we can apply the lessons learned on a pilot project.

# WETLANDS FOR A SAFER WORLD

With €1 million from the Dutch National Postcode Lottery

## Update on investments and outcomes in 2019

2019 was the second year of a three-year investment of a €1 million grant, with which we built on our programmes to catalyse actions and investments of others, so scaling up benefits for people and nature. In 2019, we invested € 235,940 of the grant as “seed finance”. The breakdown is included in the final annex of the report. Here we summarise how we targeted these investments and how this links to our plans for 2020.

## Wetlands, Peace and Security

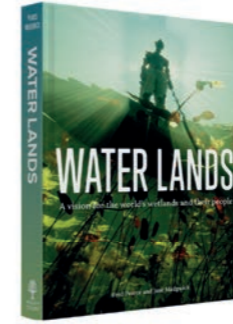
We secured new partners; increased our project portfolio working on the connection between wetlands, water, peace and security in the Sahel and launched an overarching commitment “Blue Lifelines for a Secure Sahel (BLISS)” with partners, in the frame of the Water Action Track of the Global Commission on Adaptation. The National Postcode Lottery grant enables us to build on this, by supporting local and national dialogues and preparing a portfolio of landscape propositions ready for investment post-2020, that will help to accelerate climate adaptation alongside recovering nature. These measures are needed to help prevent and resolve rising social conflicts over water and wetland natural resources in the region.

## Mangrove Capital

The grant enabled Wetlands International to contribute to mobilise the Global Mangrove Alliance together with partners, resulting in new projects, profile, influence and new donors. We published new information on mangrove status and created the basis for establishing Global Mangrove Watch, which will be launched in 2020 – an online one-stop shop that brings together and makes available geospatial data on mangrove forests to guide and support conservation and restoration of mangroves globally. In 2020, the grant will help us to mobilise a portfolio of new mangrove initiatives in East Africa and to explore the potential for carbon financing as an upscaling mechanism for mangrove restoration.



Community establishes permeable structure to catch sediment to let mangroves grow back naturally.



## Wetlands 2020

The grant enabled the design and publishing process for our landmark book on wetlands: "Water Lands", which was launched on World Wetlands Day 2020, and is disseminated through major online outlets and influencers, helping to build attention for wetlands in the post-2020 biodiversity agenda. In 2020, we will launch a digital campaign and storytelling hub to inspire and mobilise youth and rally supporters behind specific calls to action for wetlands.

## Peatland Treasures

The grant was not applied to peatlands in 2019, principally due to changes in the team and a focus on implementing existing peatland projects. In 2020, the grant will enable Wetlands International to implement a strategy to put peatlands on the map for carbon finance; mobilise our partnerships, knowledge and expertise to help save peat mega-stores, and to influence national climate policies and plans which will open up public and private sector investments.

## Institutional development

The grant enabled the establishment of a new finance system for the global office which will increase our efficiency and generation of timely management information, as well as the provision of institutional support to offices in Africa, South Asia and Indonesia to improve governance, personnel development and operational systems. In 2020, we will continue to strengthen our network institutional capacity. Part of the grant will be applied to assist offices to mitigate impacts of Coronavirus by improving communications, IT platforms and tooling for remote working.



## Building with Nature

The grant enabled Wetlands International to engage with key actors in five cities (Semarang, Indonesia; Chennai, India; Panama City; Manila Bay, Philippines and Buenos Aires, Argentina) to influence schemes aiming to build resilience to water risks such as storms, floods and water scarcity. By bringing wetlands expertise and community perspectives into the design processes (in Semarang and Chennai), we are able to promote wetland solutions as part of major flood risk infrastructure (e.g. in Panama City), influence national urban resilience programs (such as in India and the Philippines) and potentially influence larger regional investments (from regional investment banks or EU Green Deal) beyond 2020. Over 2020, the grant will further help to develop the political and technical basis for attracting major investments using Building with Nature solutions in five Asian countries.



Mangrove are starting to grow naturally in the area where sediments was caught and consolidated in Demak, Indonesia.

## STORY HIGHLIGHTS

Semarang, Indonesia is battling with coastal erosion, exacerbated by the removal of mangroves, and subsidence, caused by groundwater pumping.

The future of the entire coastline and its millions of inhabitants can only be secured if the mangrove restoration is complemented by ending land subsidence.

Restored mangroves and mud flats welcome new bird life, including night herons and great and little egrets.

Solving the flooding problem in Panama City is complex and involves many parties.



# BUILDING WITH NATURE

By Fred Pearce

The city of Semarang is sinking. The booming industrial port on the north shore of the Indonesian island of Java is in deep trouble. As the land sinks and the sea invades, the roofs of houses in places around the harbour are almost at the floor level of others that have been raised up.

The capital of the Central Java province, which has a population of almost two million, was built on marshland. In recent times, its numerous textiles factories and other industries – not to mention the city's inhabitants – have been pumping huge quantities of water from beneath the marsh, causing parts of the city to sink by between 6 and 19 centimetres every year, inundating buildings and damaging infrastructure. To make matters worse, the mangroves that once held back the waters of the Java Sea have long been removed.

*Parts of Semarang, a booming city on the northern shore of Indonesia's populous island of Java are regularly under water as the land sinks. Pumping groundwater is driving subsidence.*



Permeable structure that traps sediment to stabilise the coastline at Bogorame Timbulsloko village, Java.

Along the adjacent coast, the story is the same. The land is sinking because of Semarang's pumping, and with mangroves replaced by prawn ponds in rural areas, the sea is swamping the land. "We've lost 500 metres to the sea in the last ten years," said Maskur, a teacher in Wedung village, as our boat headed past the submerged banks of former prawn ponds and out into a bay unmarked on any maps. Nearby Timbulsloko village is now almost an island, connected to the mainland by a five-kilometre causeway.

In the past five years, Wetlands International and Dutch water engineers have been working with the inhabitants of nine villages east of Semarang, and local experts, in an innovative project to erect offshore brushwood barriers that capture silt, stabilising the coastline and allowing mangroves to re-establish themselves. The labour of community groups was exchanged for our support for local economic activities such as improved aquaculture and tourist developments. We have since been working on developing village regulations to protect the restored mangroves.

This strategy of "Building with Nature" appears to be working, with sediment accumulating behind the barriers and mangroves starting to emerge, with ecological as well as coastal defences and community benefits. The new and restored mangroves and adjacent mud flats in Wedung and elsewhere were in 2019 also being occupied by new bird life, including night herons and great and little egrets which community groups are now protecting.

The Indonesian government is adopting the same approach to provide protection for dozens of other coastal communities across the country, says Abdul Muhari, formerly of the Ministry of Maritime Affairs, a project partner, and now head of early warning at the government's National Disaster Management Authority. So far, permeable brushwood barriers have been erected along 23.5 kilometres of flood-threatened coast in Java, Lombok and Sulawesi. We worked in 2019 with the ministry and the government's Geospatial Information Agency to develop national mangrove maps to boost conservation and restoration.

But it has become clear that around Semarang subsidence is flooding land and limiting mangrove restoration. The future of the entire coastline and its millions of inhabitants can only be secured if the mangrove restoration is complemented by ending land subsidence.

So in 2019 we worked with a design team, ONE Resilient Semarang, to draft a wider strategy for coastal protection in and around the city. Its centrepieces are restoring a mangrove "green belt" along the coast, and ending the groundwater pumping by providing new water sources. The aim is to incorporate the ideas into future regional infrastructure planning. We hope to integrate a 2000-hectare mangrove and fishing park into the government's existing plan for a coastal road on a sea wall that, depending on its design, could help mangrove recovery or kill it by cutting the green belt off from the ocean.

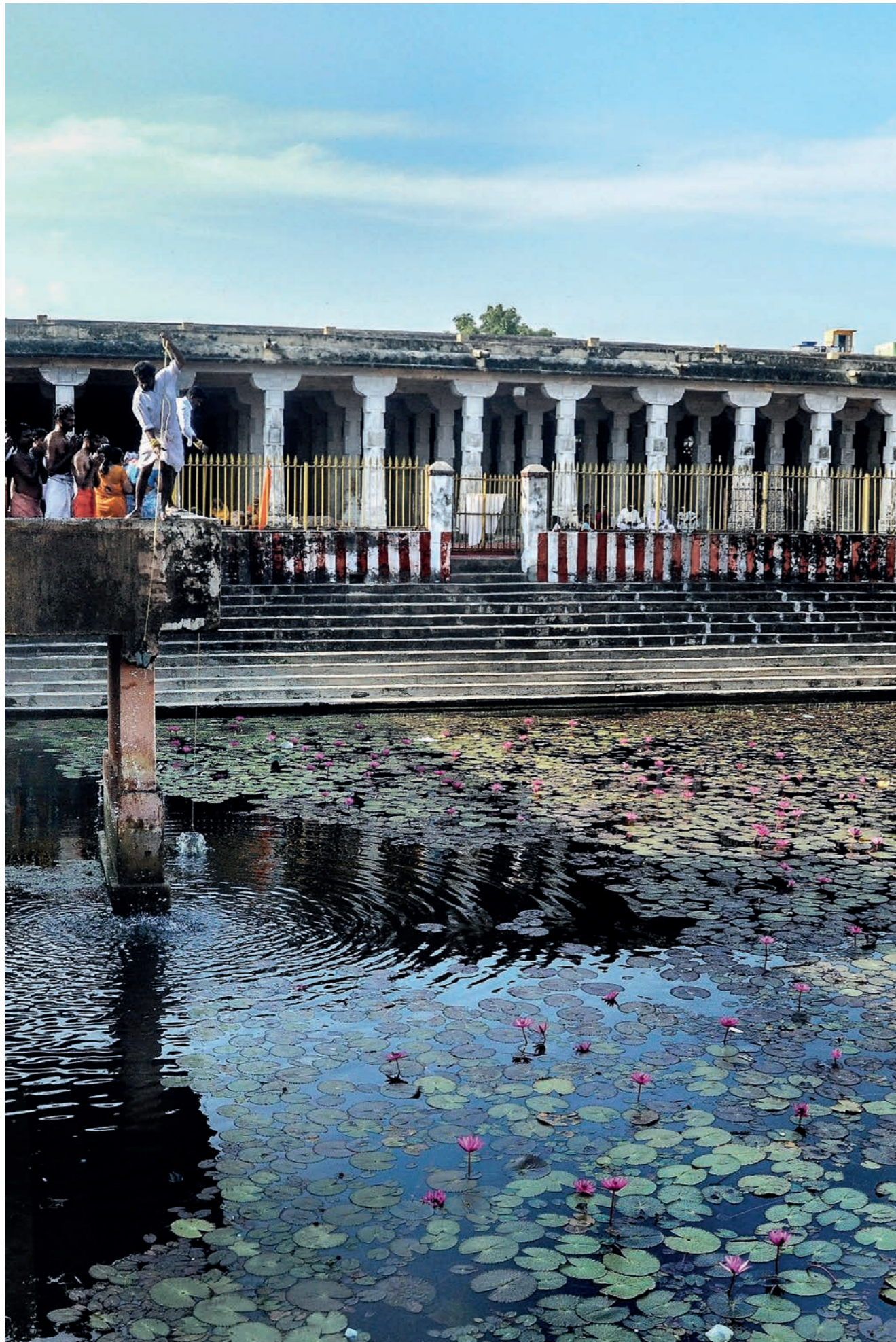


Sinking land and the conversion of the mangroves to fish ponds has created a crisis along Java's northern shore. The ocean has invaded several kilometres inland, obliterating whole villages.



One of the animals that take advantage of the mangroves are crabs.





One of Chennai's tankas - traditional local reservoirs linked in cascades that captured and transported rainwater, combining flood protection and water supply. But today, only 15 per cent of the city's wetland remains.

## The aim is to encourage municipal authorities to see their wetlands as natural reservoirs for floodwaters

But this is just the start. These are widespread problems. With the Indonesian government, we launched a National Roadmap in Land Subsidence, offering potential natural solutions. And in 2019, we worked to scale up the idea of natural solutions to flooding and other water management problems on coasts, deltas and rivers across Asia. This is being done both within the Building for Nature programme and the Dutch government's Water as Leverage initiative, which has targeted three flood-ravaged cities: Semarang; the Indian megacity of Chennai; and Khulna, on the Ganges delta in Bangladesh.

The aim is to encourage municipal authorities to see their wetlands not as wastelands to be drained for urban growth, but as areas to be nurtured because they provide natural reservoirs for floodwaters, protecting the rest of the city.

Chennai has grown rapidly on a flat plain close to the Bay of Bengal. Until the 1980s, the plain was mostly wetland. It had more than a thousand tanka, traditional local reservoirs linked in cascades that captured and transported rainwater, so combining flood protection and water supply. But today, as the city of 11 million people has spread, only 15 per cent of the wetland remains.

As a result, the city suffers, at different times, from both damaging floods and severe water shortages. We are helping develop local plans to ease the problems by reviving the tanka and wetlands, while also replacing urban concrete and asphalt with permeable surfaces that allow



A Community meeting, part of the Water as Leverage initiative, Chennai, India

rainwater to recharge underground water reserves, and restoring a coastal lagoon.

At the Climate Action Summit in New York in September 2019, we formally launched an initiative to leverage funding to develop such solutions in 15 more landscapes in five countries. The aim is to benefit 10 million people in the coming decade, through improved security and climate resilience for water, food and livelihoods.

Building with Nature "integrates the services that nature provides into civil engineering practice," says Fokko van der Groot of our partner Ecoshape, a public-private platform of Dutch dredging and engineering companies and knowledge institutions of which Wetlands International is an active partner. The ultimate aim, says Yus Rusila Noor, head of the Building with Nature programme at Wetlands International Indonesia, is no less than "to transform the civil engineering sector of Asia".

This may not be easy. The expertise and ambitions of environmentalists and engineers can be very different. An important part of the work is educating future engineers about natural solutions, which we undertook in 2019 in eight universities and training institutions, reaching 2000 students in the year.

And there is a growing body of case work from across the world for them to study. For instance, in 2019 we continued our work with partners to develop plans and seek



## Drained floodplains and the removal of mangroves make 'perfect storm' conditions of peak river flows and high tides



investment to use nature-based solutions to mitigate flood risk in Panama City in Central America. Flooding there causes more than 85 per cent of its economic losses due to disasters from natural hazards. This is because a construction boom has drained floodplains and marshes, and removed part of the mangroves that once protected the city from the "perfect storm" conditions of peak river flows, tropical storms and high tides. A quarter-million inhabitants are now living in 75 flood-prone neighbourhoods.

The worst such neighbourhood is Juan Diaz, where 50,000 people live on a low-lying river floodplain that has been invaded by buildings built on elevated ground, its creeks straightened and drains clogged. When it rains, there is nowhere for the water to go other than to the lowest-lying houses.

Solving the problem is complex and involves many parties. Pouring concrete won't fix it. So we work with architects, the city authorities, the Inter-American Development Bank and the Dutch water experts, to initiate local water dialogues involving everyone from community groups to university academics and developers, to seek solutions. The dialogues have drawn up an action plan that includes both restrictions on new development and the revival of wetlands on the floodplain and upstream. The task now is to ensure that the plan is carried out, through our continued engagement in the city's needs.

### Partners

The Indonesian Ministry of Marine Affairs and Fisheries (MMAF)

The Indonesian Ministry of Public Works and Housing (PU)

EcoShape  
Witteveen+Bos  
Deltares  
Wageningen University & Research  
UNESCO-IHE  
TU Delft  
Von Lieberman  
Blue Forests  
Kota Kita  
Diponegoro University (UNDIP)

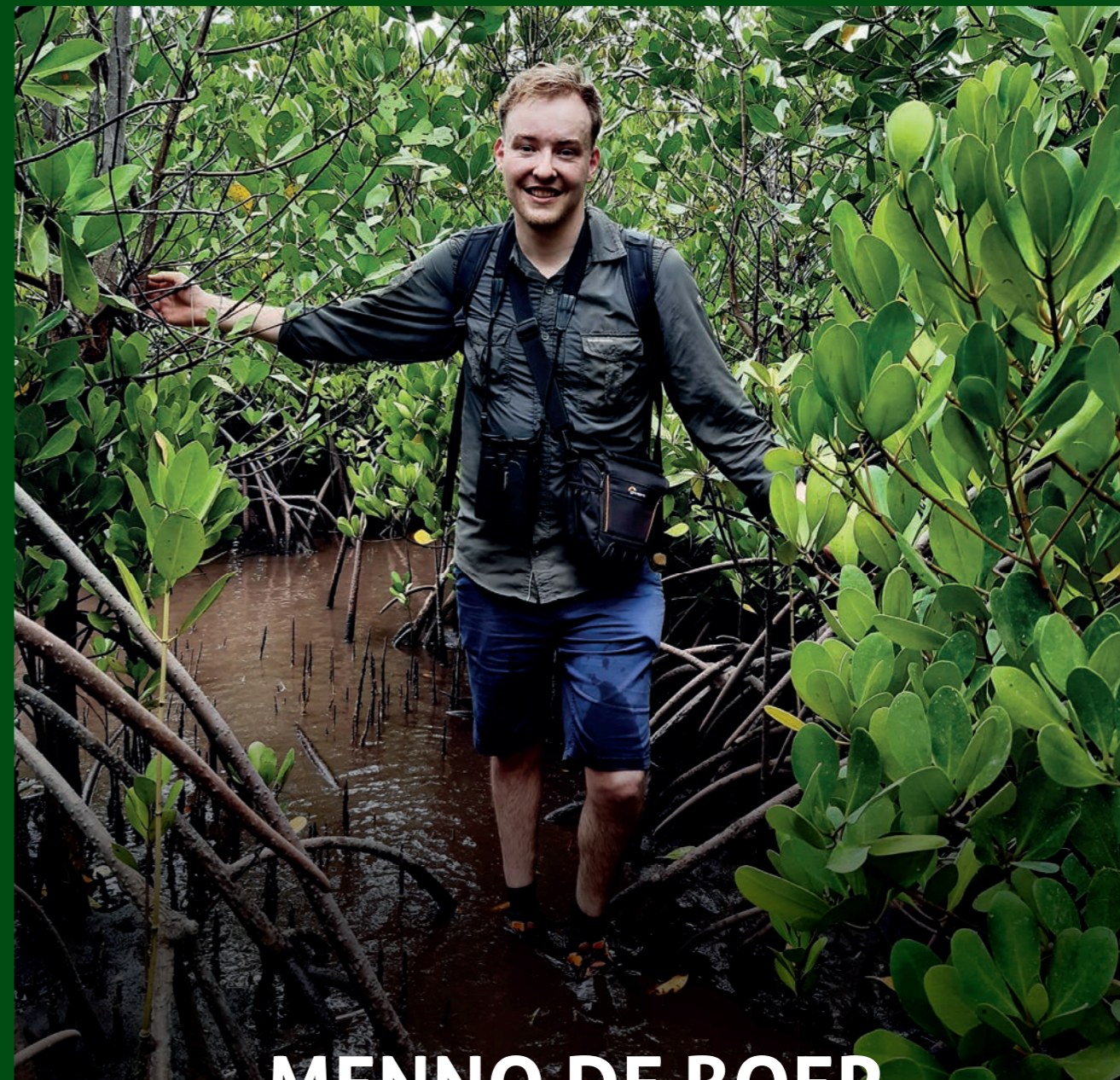
### Donors

The Dutch Sustainable Water Fund

The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of the International Climate Initiative (IKI)

Waterloo Foundation  
Otter Foundation  
Topconsortia for Knowledge and Innovation

*For the entire list see Annex*



## MENNO DE BOER

TECHNICAL OFFICER, OFFICE EASTERN AFRICA

### Who is Menno de Boer?

I grew up in the west of the Netherlands, and I've spent a large part of my life surrounded by water. In 2017, I was fortunate in that I started my career in the field as an intern in Guinea-Bissau for Wetlands International. Now, I am a technical officer in the Deltas and Coasts team, working on projects to protect and restore coastal wetlands in Africa.

### What is the nicest thing about working for Wetlands International?

I enjoy working out in the field. When I walk through the mangroves, or across an abandoned rice field, I feel a very close connection to the place and people we're working so hard to protect. We also get to engage and empower the people living in and around the mangroves, and I think that's amazing.

### What was your most significant personal achievement last year?

It would be the acceptance of the second phase of the Mangrove Capital programme. It was, of course, a team effort, but it was one of my main tasks and seeing it being accepted was an honour.

### What is your favourite species?

My favourite species is the Atlantic humpback dolphin. When I worked in the Saloum Delta in Senegal, I came across this rare species, which I had no idea about. Unfortunately, there are only a few thousand left due to them getting stuck in fishing nets and noise pollution caused by engines and drilling. This is what makes my work even more relevant. One of my aims this year is for us to improve the management of the Saloum Delta, making sure this species can thrive there.

## STORY HIGHLIGHTS

Wetlands in the region have long been the Sahel's, most important natural resources but they are almost everywhere in decline.

Peace and security require adequate water.

To prevent lakes from disappearing in Ethiopia's Rift Valley, we worked in 2019 with the Maki Batu Union of some 9000 farmers to reduce water needs.

The Blue Lifelines for a Secure Sahel initiative aims to revive wetlands and natural water sources to improve livelihoods, boost food production, reduce conflicts and buffer the region against climate change.



# BLUE LIFELINES

By Fred Pearce

On 23 March 2019, central Mali erupted into violence. Gunmen killed some 160 Fulani herders and burned huts in the village of Ogossagou. The massacre was reportedly by an ethnic vigilante group retaliating against villagers who had joined an Islamic terror group. Other attacks followed. In the aftermath, with protests across the country, the prime minister resigned and the government fell.

Jihadism has taken hold in Mali, with the main force, the Katiba Macina, operating out of the remote villages of the Inner Niger delta, a wetland on the edge of the Sahara desert where West Africa's biggest water course, the River Niger, spreads out across an area the size of Switzerland.

*Water scarcity is fuelling armed conflicts in Mali.*



Women selecting the day's fish catch.

Until recently, the ethnically diverse delta was a peaceable region. Bozo fishers, Fulani herders and Bambara and Sonrhai farmers cooperated to share the wetland's resources. Fishers ruled in the wet season; then farmers planted as the waters receded, and herders move in after the crops were harvested. Five years ago, this author had travelled the delta at will. One fisher told how "Bozo and Fulani have lived together here for centuries."

No longer. Since the Ogossagou massacre, law and order has broken down. There are many causes. But one is the growth of disputes over water and the natural resources it sustains. These disputes are exacerbated by water diversions upstream that are drying out the wetland.

With partners, Wetlands International has been working for many decades with delta communities from different ethnic groups. We have provided technical expertise, training and access to micro-credit to help them manage and share the delta's natural wealth, in exchange for their time and effort in restoring wetland ecosystems.

In Akka village, we helped villagers plant bourgou grasses (also known as hippo grasses) in lake shallows to nurture more fish and provide fodder for cattle. In Kakagnan, we encouraged women to band together to plant fruit trees and irrigated kitchen gardens. In Simina and Noga, our help allowed villagers to divert river water into ponds for

fish and cattle. Such projects have also restored some 500 hectares of valuable flooded forests and more than 2000 hectares of bourgou in the delta.

"Despite the insecurity, we are still in action" says CEO Jane Madgwick. "Our aim is to nip in the bud conflicts over diminishing natural resources such as fisheries or access to bourgou before they escalate into ethnic disputes and turn violent."

During 2019, we helped municipalities in the delta organise dialogues aimed at reconciliation between communities. In Djenné, the dialogues resolved disputes over damage to fields caused by migrating herds and introduced new regulations on herd movements. "Since the application of the regulation, our animals move freely and stay in the two communes without conflict," says Amadou Cissé, vice-president of the Djenné coalition.

But peace and security require adequate water, and that requires government action. In 2019, we helped equip staff at the inter-government Niger Basin Authority with data, models and other tools to help manage the river and allocate its water. In particular, we commissioned research into how demand for water upstream of the delta – for instance the long-planned Fomi hydroelectric dam in Guinea and Mali's plans to expand the irrigation – can be met without further damaging the delta.



Fisher and his nets in the Inner Niger Delta, Mali



The African Sacred Ibis, native to the Inner Niger Delta, feeds wading in very shallow wetlands and in wet pastures with soft soil.



Lake Abijata is in rapid retreat as water is abstracted from the interconnected lakes of Ethiopia's Central Rift Valley. The biggest users of water are giant European flower growers.

## It's now possible how best to optimise water sharing and define the threshold levels below which we could anticipate conflict

It is now possible to quantify how best to share water among different stakeholders to optimise benefits for different users, and to define the threshold levels below which we could anticipate conflict arising," says Madgwick. "It looks possible to enhance agriculture, energy and safeguard the delta. But it will take political will."

Luckily, political will does remain. In 2019, we successfully anchored wetland conservation and restoration in the new Malian National Water Policy. And we helped four municipalities establish development plans that will manage water to protect major wintering grounds for water birds from Europe.

Wetlands such as the Inner Niger Delta have long been the Sahel's most important natural resources: economic engines, ecological jewels and life-saving human refuges during droughts. But they are almost everywhere in decline. Dams and irrigation diversions, intended to harness water for economic development in this arid region end up dispossessing those people most dependent on its free flow.

The result is conflict -- sometimes exploited by militants -- and outmigration. Many Africans taking boats to Europe come from villages caught up in conflicts over the Sahel's diminishing wetlands. Since 2013, more than two million people have fled the shores of Lake Chad, which has been reduced to a tenth of its former size by the abstraction of water from the rivers that once fed it.



In 2019, we were working in many parts of the region to head off such disasters, helping governments to secure better water allocation, and wetland communities to make best use of what they have. Our strategy is to promote dialogue around water as the key natural resource on which all others depend, as a route to conflict prevention and resolution.

In Ethiopia's Rift Valley, we have organised local and Dutch experts to analyse ways forward in the Ziway-Shalla, an inland basin whose lakes are being emptied for irrigation by both smallholders and giant European flower growers. Lake Abijatta, famous for its flamingos, has lost a third of its surface area and may disappear entirely within two decades.

To prevent that, we are working with farmers' cooperatives, public authorities and others to alleviate the threats, through everything from more efficient farming to a new properly-enforced water allocation plan. In 2019, we worked with the Maki Batu Union of some 9000 farmers to help them adopt drip irrigation, which could reduce their water needs by 25-30 per cent.

But national action is not enough. Many rivers in the Sahel cross borders. We need to build international political will. So at the UN Climate Action Summit in New York in September 2019, we announced a commitment to establish the Blue Lifelines for a Secure Sahel initiative (BLiSS). The aim is



## It's inconceivable to talk of restoration of the dry lands without paying equal attention to the wetlands



a movement across the region that will revive wetlands and natural water sources to improve livelihoods, boost food production, reduce conflicts and buffer the region against climate change. By 2030, we aim to restore and safeguard 20 million hectares of wetlands in six river systems, making 10 million people richer, healthier and safer.

The African Union is a partner in driving forward the ideas behind BLiSS in the Great Green Wall Initiative. Once envisioned as a barrier of trees from the Atlantic to the Red Sea that would keep the sands of the Sahara from invading the Sahel, we propose it expands its focus to become an engine for better governance of the desert's most valuable human and ecological resource – its water.

In 2019, we also collaborated with the G5 group of Sahel countries (Burkina Faso, Chad, Niger, Mauritania and Mali) on its initiative to improve sustainable economic development by combatting the linked issues of migration, land degradation and climate change. We made the case that the inclusion of wetland restoration was vital to ending land degradation.

These are big tasks. But as Elvis Paul Tangem, the African Union's coordinator for the Great Green Wall Initiative, put it in 2019: "It is inconceivable to talk of restoration of the dry lands without paying equal attention to the wetlands." And the alternative is not good. In February 2020, there was another massacre in Ogossagou, in which another 40 people died.

### Partners

Blue Forests  
Deltares  
Diponegoro University (UNDIP)  
EcoShape  
Kota Kita

The Indonesian Ministry of Marine Affairs and Fisheries (MMAF)

The Indonesian Ministry of Public Works and Housing (PU)

TU Delft  
UNESCO-IHE  
Von Lieberman  
Wageningen University & Research  
Witteveen+Bos

### Donors

Otter Foundation

The Dutch Sustainable Water Fund

The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as part of the International Climate Initiative (IKI)

Topconsortia for Knowledge and Innovation  
Waterloo Foundation

*For the entire list see Annex*



The largest land animal in Paraná Delta, the Marsh Deer

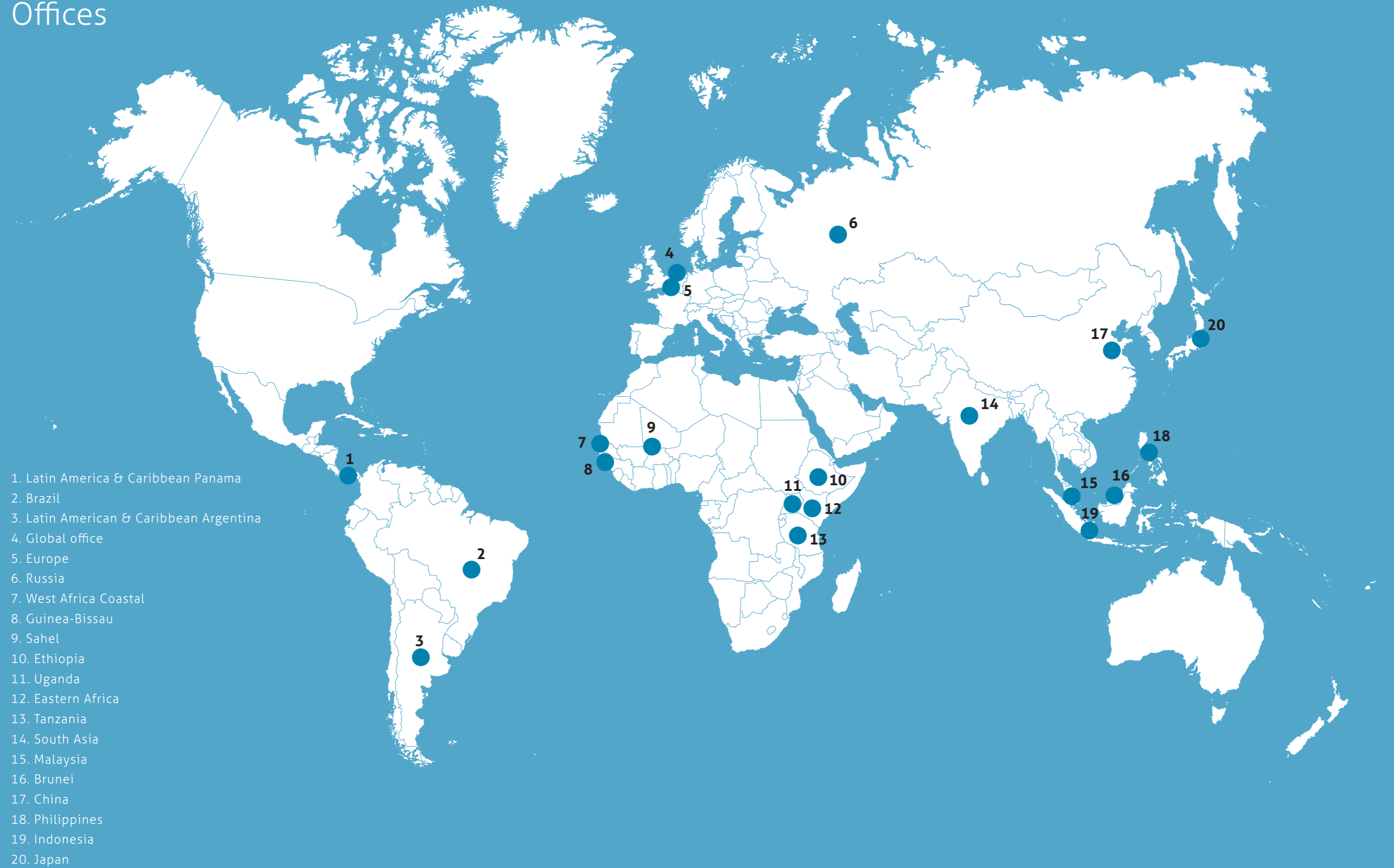
## Saving the marsh deer in the Paraná Delta, Argentina

The very charismatic marsh deer is one of the largest land mammals of the Paraná Delta, Argentina. Marsh deer live in and around marshes and lagoons and have large hooves with elastic interdigital membranes which are useful for swimming and walking on soft and floating vegetation. The marsh deer is a critically endangered species mainly due to the destruction of their traditional habitats and hunting.

In 2019 Wetlands International began a new programme to safeguard and restore biodiversity in the Paraná Delta, as part of a wider effort in the wider Paraná-Paraguay River Corridor. Conserving the marsh deer is an element of the "Corredor Azul" programme.

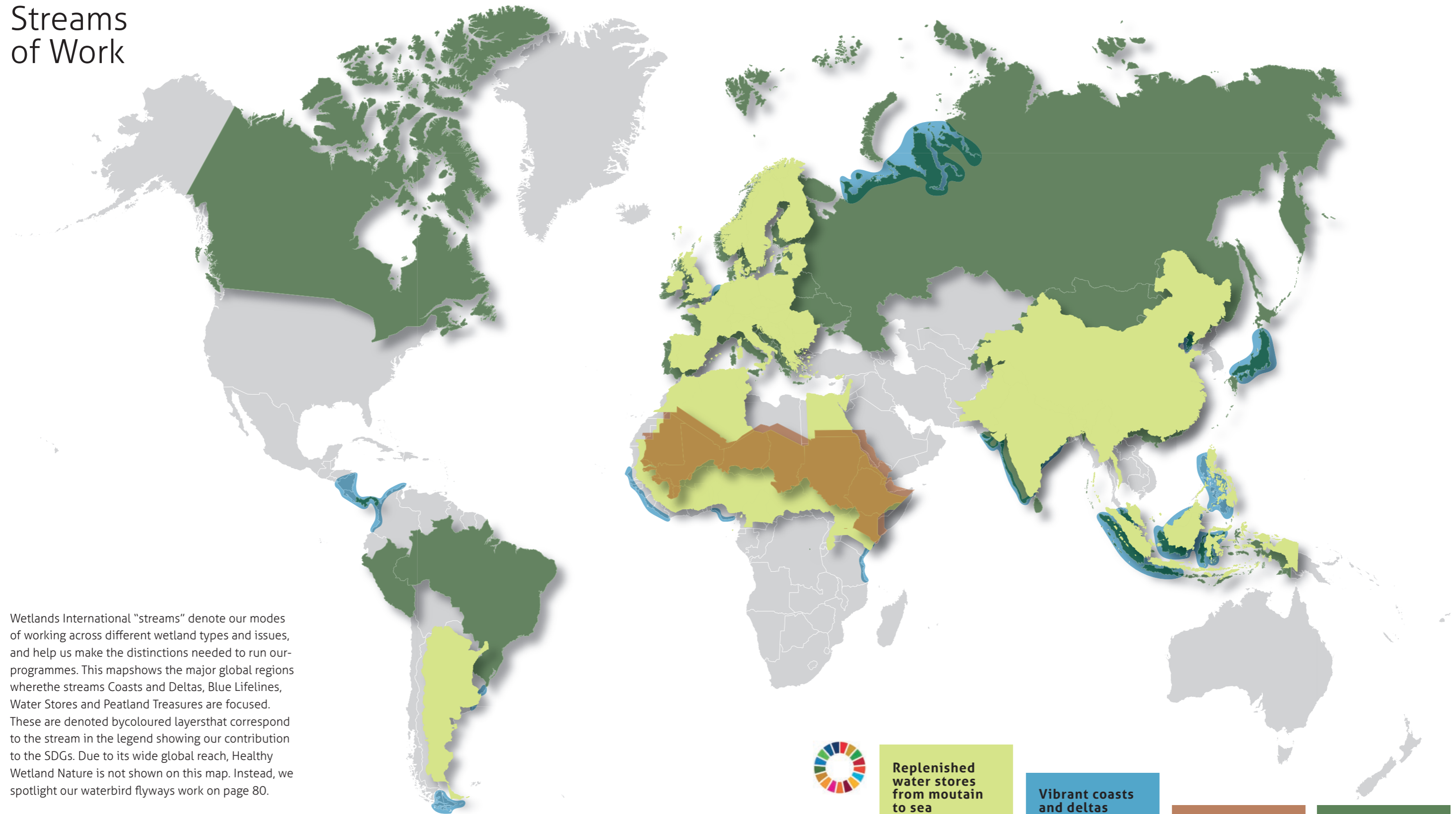
The extensive wetlands and wealth of nature in the delta is threatened by unsustainable activities like industrial scale cattle ranching, lumber harvesting and urbanisation. Conservation of the marsh deer and its habitat requires coordinated policies and measures are required involving national municipalities, NGOs, private companies, local and regional institutions. This is being taken forward as part of a bigger picture approach that aims to promote sustainable development in harmony with safeguarding and restoring the ecosystem health and functionality of the delta.

# Wetlands International Offices



1. Latin America & Caribbean Panama
2. Brazil
3. Latin American & Caribbean Argentina
4. Global office
5. Europe
6. Russia
7. West Africa Coastal
8. Guinea-Bissau
9. Sahel
10. Ethiopia
11. Uganda
12. Eastern Africa
13. Tanzania
14. South Asia
15. Malaysia
16. Brunei
17. China
18. Philippines
19. Indonesia
20. Japan

# Streams of Work



Wetlands International "streams" denote our modes of working across different wetland types and issues, and help us make the distinctions needed to run our programmes. This map shows the major global regions where the streams Coasts and Deltas, Blue Lifelines, Water Stores and Peatland Treasures are focused. These are denoted by coloured layers that correspond to the stream in the legend showing our contribution to the SDGs. Due to its wide global reach, Healthy Wetland Nature is not shown on this map. Instead, we spotlight our waterbird flyways work on page 80.



## Contributing to the Sustainable Development Goals

The world has committed to Agenda 2030: 17 Sustainable Development Goals (SDGs), and the Paris Climate Agreement. Providing water for all, ending poverty and hunger, reducing water-related disasters, mitigation and adaptation to climate change all depend on healthy wetlands. Our work across Coasts and Deltas, Blue Lifelines, Water Stores and Peatland Treasures all contribute to achieving the Sustainable Development Goals.

### Replenished water stores from mountain to sea



### Vibrant coasts and deltas



### Blue lifelines in the desert



### Peatland treasures





# Working on flyways

A flyway is a geographically defined unit for the purpose of monitoring and managing migratory bird populations, and around which countries can work together to determine the best approaches for their conservation.

There are at least 7,000 sites globally that are critical to the survival of migratory waterbirds, providing nesting, feeding and resting habitat. These 'critical sites' support at least 1% of a waterbird population. They also support freshwater and coastal species.

The annual International Waterbird Census (IWC), which monitors and assesses waterbirds in all flyways, took place across 13,000 sites in 150 countries. As international coordinator, we use the IWC data to provide vital information to guide conservation from site to flyway.

## Flyways

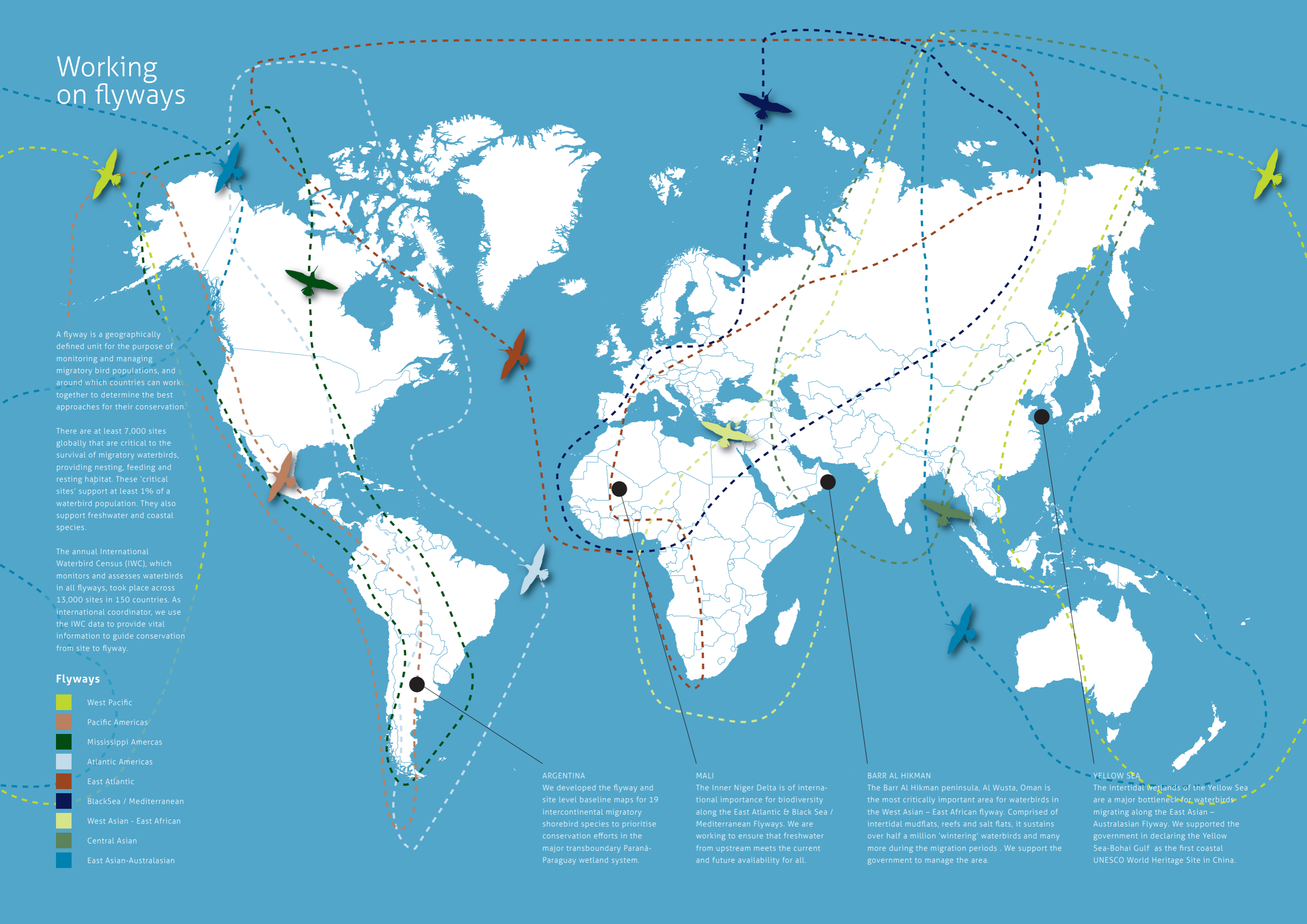
- West Pacific
- Pacific Americas
- Mississippi Americas
- Atlantic Americas
- East Atlantic
- BlackSea / Mediterranean
- West Asian - East African
- Central Asian
- East Asian-Australasian

**ARGENTINA**  
We developed the flyway and site level baseline maps for 19 intercontinental migratory shorebird species to prioritise conservation efforts in the major transboundary Paraná-Paraguay wetland system.

**MALI**  
The Inner Niger Delta is of international importance for biodiversity along the East Atlantic & Black Sea / Mediterranean Flyways. We are working to ensure that freshwater from upstream meets the current and future availability for all.

**BARR AL HIKMAN**  
The Barr Al Hikman peninsula, Al Wusta, Oman is the most critically important area for waterbirds in the West Asian – East African flyway. Comprised of intertidal mudflats, reefs and salt flats, it sustains over half a million 'wintering' waterbirds and many more during the migration periods. We support the government to manage the area.

**YELLOW SEA**  
The intertidal wetlands of the Yellow Sea are a major bottleneck for waterbirds migrating along the East Asian – Australasian Flyway. We supported the government in declaring the Yellow Sea-Bohai Gulf as the first coastal UNESCO World Heritage Site in China.



# FUNCTIONING OF THE ORGANISATION

## Wetlands International Network of Offices

### Strategic intent

Wetlands International's Strategic Intent (2015-2025) provided direction for its global network and set the guiding framework for the 2019 annual action plans. The strategic intent was reviewed in 2019 in consultation with members and stakeholders and key adjustments adopted. An updated Strategic Intent (2020-2030) will be published later in 2020.

### Achievements

Results that contribute to the ambitions of the strategic intent are delivered through programmes and projects by our offices collaboratively, in line with the local context where they operate and the expertise of their team. A summary of achievements is provided on pages 8-17. A project list (see pages 32-35 Annex) provides an overview of the main projects implemented in 2019.

### Wetlands International network

Wetlands International is an independent global network organisation of offices which implement a joint strategic intent and take action to safeguard and restore wetlands in

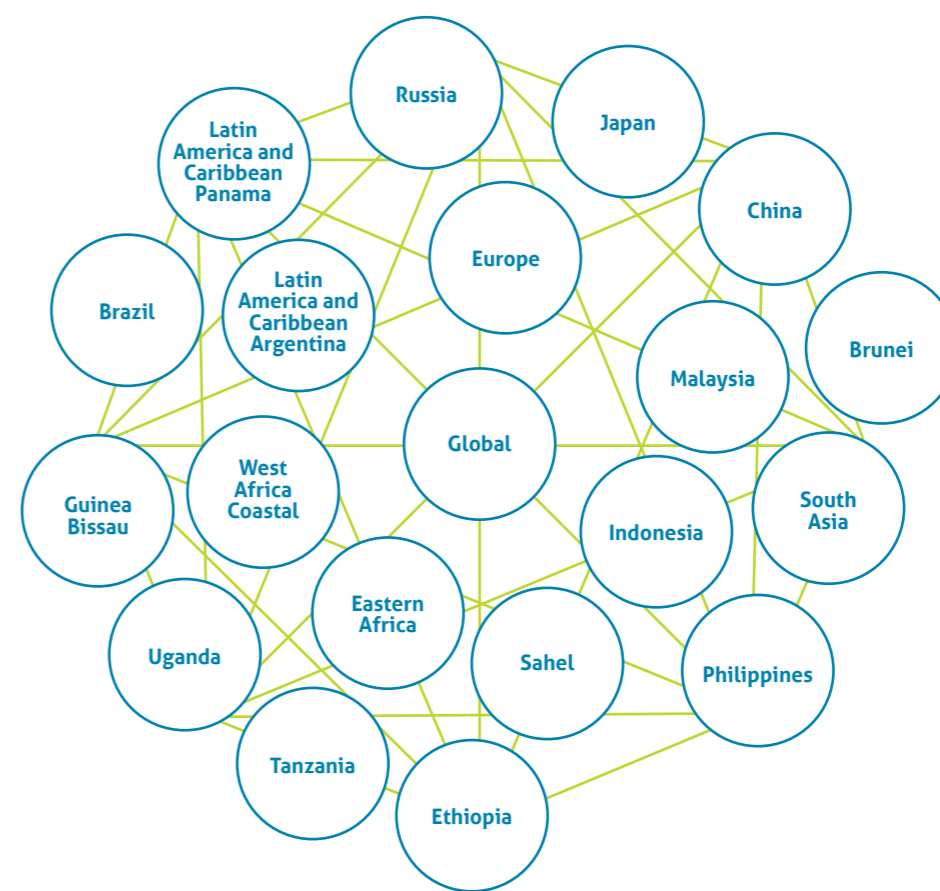
more than 100 countries worldwide. Our offices and where they are located are shown on page 76 of the annual review.

### Global office

The Global Office, based in the Netherlands and led by the CEO, serves the entire network in a representation, communications, technical support and fundraising capacity. The office is responsible for keeping the daily work of the network aligned with decisions taken by the network management team and global board. Global office staffing and related human resource issues in 2019 are presented on page 88.

### Communications and advocacy

To ensure we speak with one voice globally, external communications and the use of the Wetlands International brand are guided by a communications policy and brand strategy supported by a dedicated team based at the global office. This team is responsible for our global brand strategy, which guides how we present the organisation worldwide. A new head of communications and advocacy was appointed in 2019.



# Network Organisation Chart

## Governance

Wetlands International has two complementary forms of international governance: an association of members (governments and NGOs), and a foundation overseen by a supervisory council whose members also constitute the board of the association. The 2019 report from the supervisory council can be found on page 38. Where network offices have an independent legal status they are governed by national/ sub-regional boards, of which the network CEO is an ex-officio member.

## Network Management

The global board, consisting of the Wetlands International CEO and heads of each office, is responsible for strategic decisions on positioning, programme priorities and institutional issues. The global board delegates operational decision-making to the network management team chaired by the CEO and with four members from among heads of office and four global functions (Programme, Resources, Communications, Operations). In 2019 the network management team met online bi-monthly and the global board met in person in October. The global office management team facilitates network executive management as well as managing the Global Office. Programme development and project implementation is undertaken by all Offices working in collaboration with each other and many partners.

## Accountability

Transparency and accountability towards our stakeholders are part of our core values, including actively seeking feedback on our performance. A dedicated section of our website provides our annual reports and annual accounts,

and information about key global policies including Conservation and Human Rights Framework, INGO Accountability Framework, Code of Conduct, Corporate Engagement, Anti-corruption, Ethical, Gender, and Partnership policies can be found [here](#).

## Anti-Corruption and Whistle blowing

All staff are introduced to the anti-corruption policy in their Induction and are encouraged to be vigilant and discuss any suspicions with their line manager or head of office. All stakeholders can approach Wetlands International with their grievances or complaints related to possible cases of fraud, corruption. The complaints procedure is available on the Wetlands International website. In 2019 there were no recorded cases of fraud or corruption and no complaints received.

## Corporate Social Responsibility

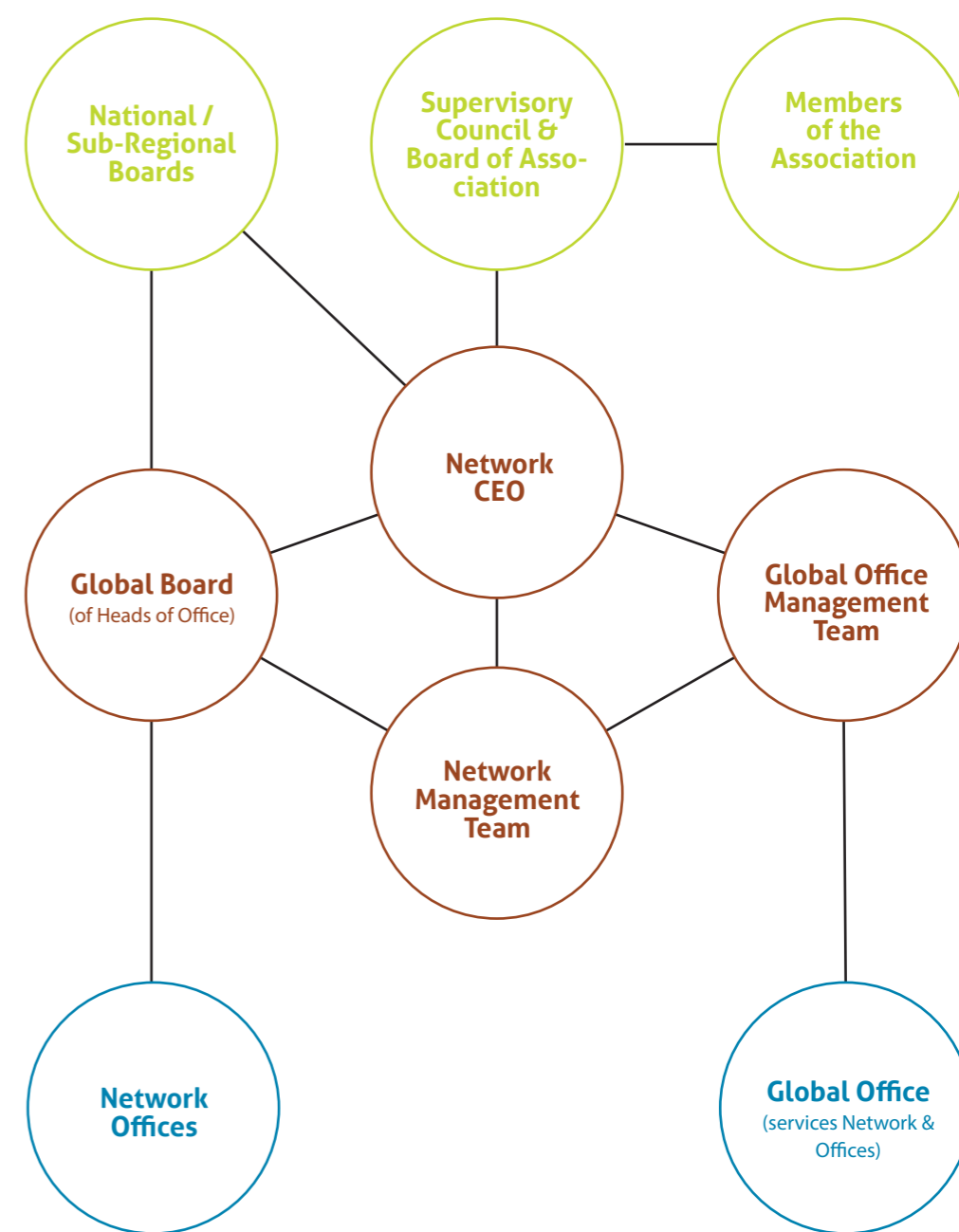
Wetlands International strives to act in its daily operations in a sustainable and socially responsible way. In our office in the Netherlands, we actively encourage our employees to use public transport and all flights booked are compensated for their CO2 emission (409 tonnes in 2019).

We take further steps to reduce our ecological footprint where practical. We publish as much as possible our communication materials online and only essential stationary material is printed. We use web meetings for internal and external meetings. Office supplies such as coffee, tea and paper are organic, fair trade and recycled. We have an automatic energy saving light system and office waste is separated for recycling.

## GOVERNANCE

## NETWORK EXECUTIVE MANAGEMENT

## PROGRAMME DEVELOPMENT & IMPLEMENTATION

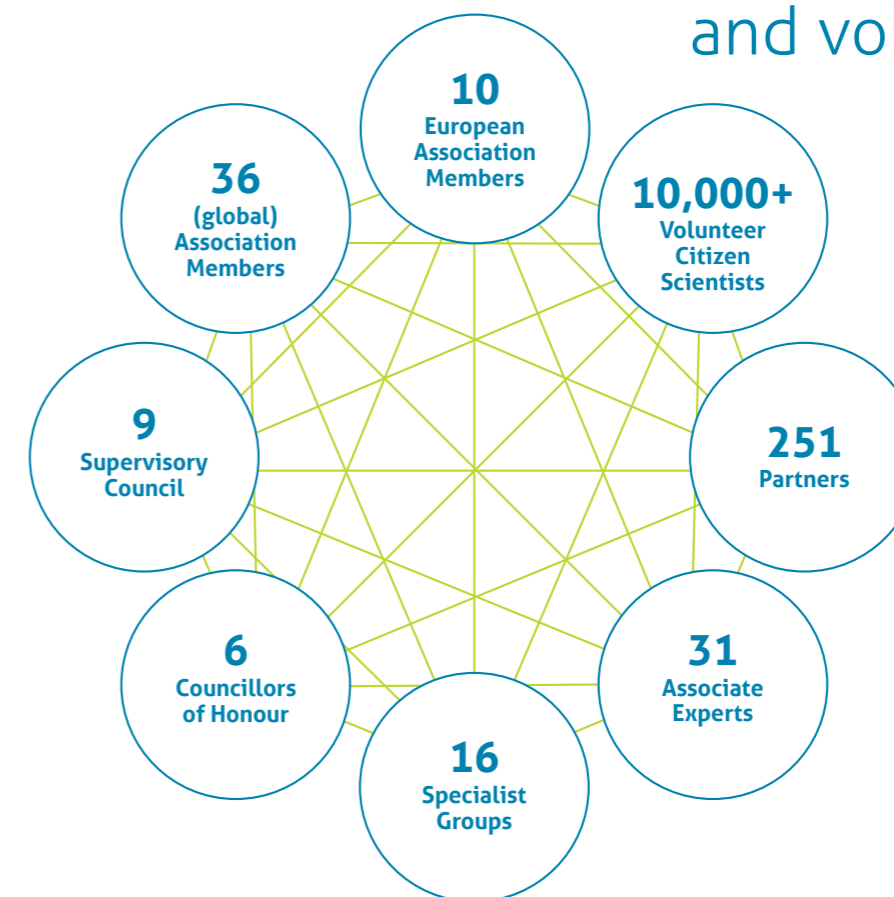


# Risk Management

A risk register is updated at every reporting cycle, including mitigating measures, and discussed with the Wetlands International Supervisory Council. The top five risks are specified in the table below.

Risk	Area of risk	Potential Impact on organisation	Mitigation measures
1. Political instability and conflict	Governance (external)	This risk is prevalent across most regions where we work and can mean that all office operations are suspended or that specific projects delayed significantly or cancelled.	Maintain close contacts with heads of office, diplomatic networks and with donors. Strengthen cooperation with local communities. Incorporate flexibility in project design.
2. Loss of members	Governance (internal)	Wetlands International has more than 40 Governmental and NGO members. They are a key constituency that help advance our strategic intent and pay membership fees that support key work of the organisation.	Engage with members in conjunction with Ramsar meetings. Strengthen communications and relationship management with delegates. Launch on-line campaign in 2020.
3. Insufficient resource development to implement the strategic intent and cover organisational costs	Financial	Without a strong pipeline of new prospects and project proposals it will not be possible to maintain core staff, nor create the positive impact needed for wetlands and the communities who depend on them.	Management team, heads of offices and programme heads have time reserved to identify and develop opportunities. The global offices will recruit a new resource development manager and hold bi-weekly meetings to review opportunities.
4. Delay in project implementation creates over-run in time and over-spending	Financial	Delays can reduce the level or quality of project achievements and cause negative financial results in offices.	A programme head is assigned to supervise each large international project. They take responsibility for flagging any progress issues and solutions to programme leadership team and to the management team.
5. Insufficient staff capacity to deliver on complex, co-funded international projects	Operational	Over-stretched staff are unable to deliver quality results on time. This affects delivery and reliability of our operations.	Proposal design includes organisational development wherever possible. Close cooperation with heads of office on capabilities and development needs

## Associated members, experts and volunteers



### Increasing our reach as a network

The strength of the Wetlands International network is more than the sum-total of its offices. Through working with influential partners, specialist groups, experts and members, we accelerate our momentum and strategic results.

Members and the supervisory council provide active governance and, together with Counsellors of honours, bring high-level expertise, guidance and connections. Specialist groups, associate experts and partners provide expertise, evidence and advice that underpins Wetlands International's approach on science, policy and practice. Partner organisations with whom Wetlands International works regularly to implement programmes and projects are listed on pages 46-49 of the Annex. We are especially proud of our long-standing engagement with volunteer and citizen science groups, such as those who participate in the International Waterbird Census, that are vital to mobilising a whole-of-society response.

### Members

Government and NGO members of the (global) association provide long-term support and strategic guidance to the organisation. Members passed resolutions including endorsement of the revised mission and direction of the Strategic Intent (2020-2030) at the annual members meeting in December 2019. Our European Association has 10 NGO members that jointly steer our programme action across the region.

### Strategic Partnerships

Wetlands International works with in many and varied partnerships in nearly all of the work it undertakes. Our partnership policy lays down principles that guide why and how long-term strategic relationships are developed and managed. There were no new strategic partnership agreements in 2019.

# Spotlight: Global Office Social Report 2019

Wetlands International has a highly professional and motivated group of staff in its global office. We are proud to have staff who are passionate about our mission. This section provides insight into our global office staff and human resource practices throughout 2019.

## Diversity

Our staff has a diverse educational, cultural, and professional background, which matches with our role as an international NGO. This diversity enables us to learn from each other and to shape our international programmes to create more impact. In December 2019, the number of global office staff was 39. During the year we had staff with 12 different nationalities, an average age of 46 years and a balanced male/female ratio of 46/54.

## Employment contracts

Our policy is to give new staff two fixed-term contracts of 12 months each to ensure a good match between the job and the new employee, as well as to provide some necessary flexibility. After a fixed term contract(s), employees who perform well are offered a permanent job. Due to the number of new staff starting in 2019, the number of permanent contracts reduced to 19. In 2019 the number (on average) of full-time staff (26) was the same as the number of staff working part-time (13).

## Incoming and outgoing employees

In December 2019 the organisation had 39 employees, an increase of one over the previous year. There were however many staff changes with 15 new employees joining the

organisation and 11 leaving. This meant in 2019 a transition of 30% of our staff. We held exit interviews with staff leaving so as to ensure we learn from the experience and to improve the work environment. Lessons learned included increasing the clarity about job content, expectations, decision making, and sharing feedback on a regular basis.

## Rewarding practices

The salary scale of Wetlands International is based on an average of the organisations involved in the Partos benchmark (2008). The scales are adjusted up to 2% annually, considering inflation (Netherlands consumer price index) and the organisation's financial position. Scales within the grade are defined by years of relevant experience in a role and/or in combination with experience gained in previous positions.

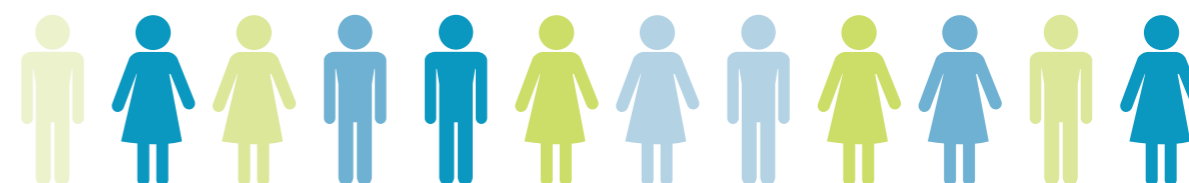
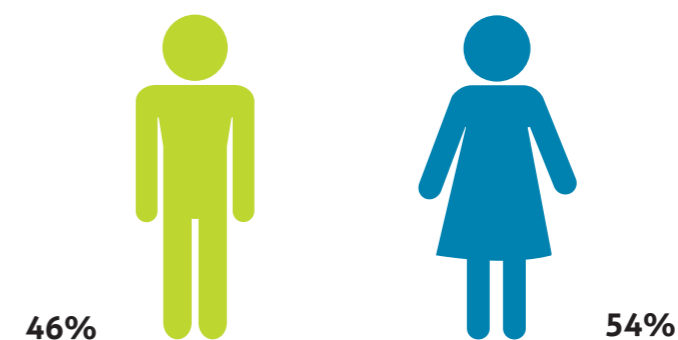
## Health

We pursue an active policy to ensure staff take regular leave to keep a healthy balance between work and home. As a result, we hardly have any long-term absences. Our short-term sick leave percentage for 2019 was 1.7%.

## Integrity

Wetlands International has a Code of Conduct that applies to all staff. This is the basis for a safe working environment in which staff are free to be themselves, act with integrity and transparency, and where there is zero tolerance for inappropriate behaviour, such as intimidation or sexual harassment. In 2019 the external Person of Trust reported two cases that were addressed satisfactorily and closed.

# Global Office Staff



12 NATIONALITIES

AVERAGE AGE: 46

## STAFF NUMBERS

total: 39  
fte: 33.7  
part-time: 26  
full-time: 13



## CONTRACT TYPE

permanent: 19  
fixed time: 17  
project: 3



## HEALTH

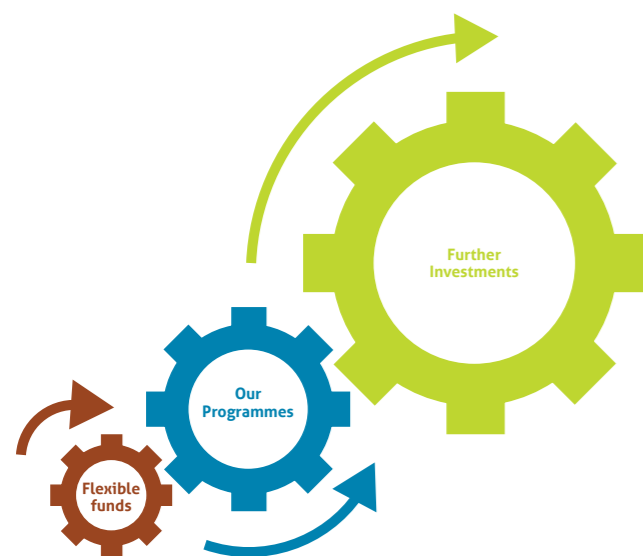
short-term  
sick leave 1,7%

# SUMMARY OF FINANCE AND RESOURCING

This section provides a summary of Wetlands International's finance and resourcing in 2019. A detailed version can be found in section 1 and 2 (annual accounts) and section 3.1 of the Annex. Wetlands International focusses its work where wetlands matter most to both people and nature. Our programmes and initiatives are developed to meet our strategic goals which are set out in our strategic intent and are organised into five streams, namely Healthy Wetland Nature, Blue Lifelines in the Desert, Water Stores from Mountains to Sea, Peatland Treasures, Vibrant Coasts and Deltas (see section 3.1 of the Annex for details of where we work with these streams). Our programmes are increasingly large-scale and long-term, involving transboundary and transcontinental work with involvement of several offices. The offices of the network (global and local) work together for resource development, with network offices increasingly being financed directly by donors.

## Our funding model to leverage investment

Our funding model revolves around leveraging greater investment using small initial flexible funds to bring together actors and develop pilot projects. Using very little flexible funds, we are able to bring actors together and develop small pilot projects, which in turn leverage larger programmes supported by finances of partners and additional donors. Our programme results allow us to leverage larger scale public and private sector investment in wetlands.



## Resourcing the Global Organisation

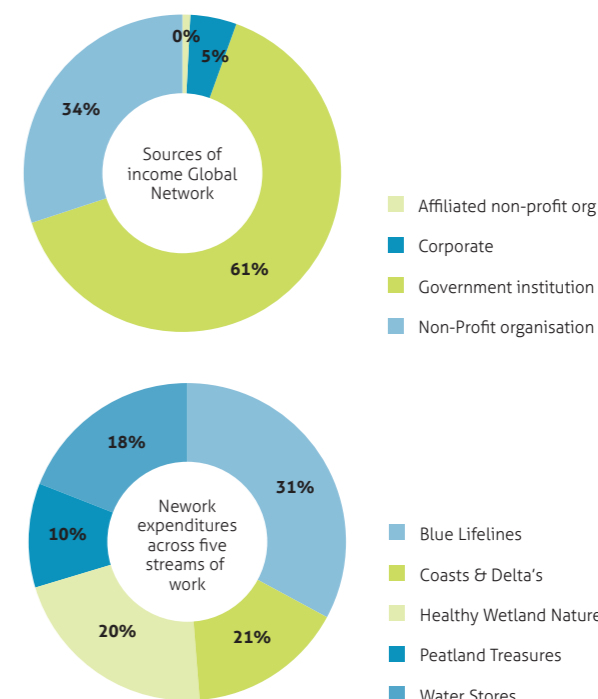
The main source of income of Wetlands International for 2019 came from project funding. The total Wetlands International global network project income is based on the information obtained from the network and estimates made. The total network project income of 2019 amounted to € 14 million (see section 3.1, Annex).

## Our sources of income and expenditures across the sectors

The private sector contributed 5%, government 61% (32% Dutch government, 15% German government and 14% other governments). Trusts, foundations and NGOs account for 34% of our donor income. The list of projects 2019 (paragraph 3.1, Annex) gives an overview of all projects implemented throughout the year, with details on the amounts funded, the project period, the donor name and types, which of the five streams of our strategic intent the project contributes to, as well as the Wetlands International offices that participated in project implementation.

## Our sources of income and expenditures across the five streams

Across our five streams, Blue Lifelines accounted for the greatest portion of our income at 31%, Healthy Wetland Nature made up 20%; Water Stores accounted for 18%, with Deltas and Coasts at 21% and Peatland Treasures contributing 10% of our income.

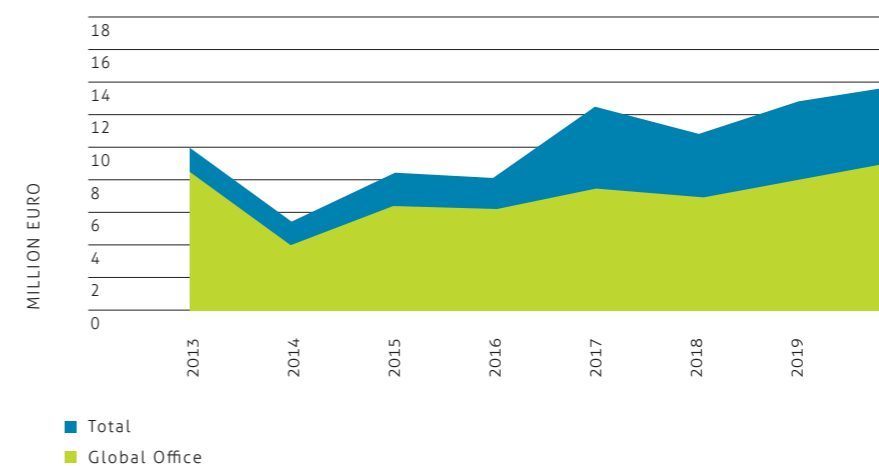


## Increased resource development by network offices

Until 2016, network offices raised 25% or less of our project income. In 2019 this increased towards 42% and we expect the increase of the network to continue in 2020 and beyond. This development allows us to bring management and donor coordination close to the action and impact, while the global office provides support where required.

Projects that are managed through the global office, are mostly implemented by our network offices and members, affiliated scientific institutions, partners and experts. A significant number of these projects are subcontracted to these offices and affiliates.

TOTAL PROJECT INCOME NETWORK AND GLOBAL OFFICE (FOUNDATION)



# Colophon



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