The Source
2020 Annual Review of Wetlands International
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% 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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In 2020, Wetlands International became an active partner in the Decade on Ecosystem Restoration, pledging to work with others to recover diverse, functioning wetlands as a basis for a resilient and liveable Earth. We had planned to host regional stakeholder gatherings to build collaboration for safeguarding and restoring wetlands, while also celebrating our 25th anniversary as a global organisation. In addition, a packed agenda of convention meetings for biodiversity (CBD), wetlands (Ramsar) and climate (UNFCCC) meant that in January 2020 the stage was set for a hectic global schedule.

FROM OUR CEO

Jane Madgwick, Chief Executive Officer, Wetlands International

It turned out differently. The rapid spread of the Covid-19 pandemic changed everyone’s priorities dramatically. In March, we took measures to ensure the safety of staff and partners and helped each other adapt to new ways of communicating and working. We re-shaped our stakeholder engagement through an online campaign #PowerofWetlands and this generated an inspiring movement of youth champions for wetlands.

As you can read in this annual review, our staff have been innovative and determined in helping people living in and around wetlands secure their well-being while still conserving nature’s values. Thanks to pre-existing strong collaborations with local communities, partners and government agencies, much of our planned programmes could continue, albeit in an adapted form.

We used web meetings and workshops to finalise our Strategic Intent 2020-2030, with the support of our stakeholders and members, to fulfil our governance responsibilities and engage audiences relevant for our programmes. Working from home for much of the year brought some benefits to individuals but also the challenge of keeping a sense of team and introducing new staff to the organisation. Learning from this experience will lead to some permanent changes in our way of working.

Despite the constraints, 2020 included many highlights and milestones. The launch of the Global Mangrove Watch platform, that combines previously dispersed data and can guide policy and practical actions for mangroves, is something that was only a dream a decade ago. Setting up a new wetland carbon programme, rejuvenating our global peatlands programme, and agreeing to innovative partnerships with two leading companies, has built the foundation for a new portfolio of major landscape initiatives.

2020 was the final year of our €1 million grant from the Dutch Postcode Lottery which supported many of the outcomes featured in this review. We were delighted in early 2021 to be awarded an additional €1.5 million grant which will enable us to strengthen our effectiveness and leverage more impact from our programmes in the coming three years.

We have set high ambitions for this decade in our Strategic Intent, including 2030 global targets on wetland recovery which we are inviting others to adopt and integrate in their action plans. The scale of wetland recovery that we need is daunting, which means that sustaining and restoring wetlands needs to become everyone’s business.

I am grateful to all our members, partners and donors for your continuing support. Please enjoy our stories in this review and use it to bring many others on board!

Thank you.
Supporting indigenous communities in the world’s largest tropical wetland, the Pantanal

In 2020, communities in the Pantanal suffered back-to-back crises with the Covid-19 pandemic and the highest number of fires in the last 22 years. The Pantanal forms the largest tropical wetland in the world and approximately 40,606 square kilometres or 30% of its wetlands were engulfed by flames. Together with partners and the Brazilian government, we coordinated support for indigenous communities by providing water and food parcels, and helping them become self-sufficient in growing food and setting up tree nurseries in readiness for restoration. The fires affected not just the Pantanal, but the entire blue corridor that reaches down to the Paraná Delta in Argentina, all of which we are working to safeguard through our Corredor Azul Programme.


IN SHORT

Urban wetlands for heat-proofing cities

Urban wetlands are well known for their ecosystem services of flood protection, biodiversity habitat and aesthetic values, but they also play a key role in regulating urban microclimates. In fact, urban wetlands can be a solution for cities struggling with the urban heat island (UHI) effect. Especially in a healthy state, they absorb heat and reduce temperatures in their surroundings. We investigated this UHI reduction service in Mexico City and published a compendium guide with the Climate Centre.

https://www.wetlands.org/casestudy/urban-wetlands-for-cooler-cities/

Youth power in Rift Valley, Ethiopia

Ethiopia’s Central Rift Valley lakes are under threat by negative impacts from human activities in the last two decades. To reverse the worsening situation, various stakeholders including Ethiopia Wildlife Conservation Authority (EWCA), local communities, and Wetlands International are working closely on a number of initiatives. One of these is the formation of four community-based youth associations whose livelihoods are directly linked to the lakes. They have been trained on restoration and alternative livelihoods, wetlands management and negotiation skills. So far, restoration has been conducted in over 700 hectares by 862 youth members.


AEWA celebrates 25 years

In June 2020, we celebrated the 25th anniversary of AEWA, the Agreement on the Conservation of African-Eurasian Migratory Waterbirds. Wetlands International is proud to be a long-standing partner and serve on the Technical Committee of AEWA. Together with AEWA we have worked on landmark projects and tools such as the Climate Resilient Flyways Project, the Critical Site Network Tool, Conservation Status Reviews and the Wings Over Wetlands partnership that delivered significant outcomes for the betterment of waterbird populations, their habitats, and wetland communities.

INTRODUCTION TO THE NEW STRATEGIC INTENT 2020-2030

Over 2020-2030, Wetlands International aims to safeguard and restore tens of millions of hectares of wetlands, bringing multiple returns for nature and people. Our theory of change encapsulates the three main phases of our work: to inspire, mobilise and upscale.

For this period, we are orientating our work to achieve three, interconnected global impacts: healthy wetlands, resilient wetland communities, and reduced climate risks.

Our vision, targets and strategic interventions are shaped according to landscapes. We focus on three broad categories of wetland landscapes: Coasts and Deltas, Rivers and Lakes, and Peatlands. “Streams” of work are defined according to the specific contexts of these wetland landscape types.

According to our strategic framework, we work in three wetland landscape types to upscale solutions and achieve six outcomes. In turn, these result in three impacts, Healthy Wetlands, Resilient Communities and Reduced Climate Risks.

Healthy Wetlands

Wetland habitats and functions safeguarded and restored: We aim to help conserve a selection of the most intact wetland ecosystems and restore others within a full range of wetland types across the world. We also aim to restore other freshwater systems, peatlands, deltas and coastal ecosystems for their intrinsic, cultural and ecosystem-service values. We will prioritise ecological networks that connect landscapes, such as flyways and swim-ways.

Wetland species recovered: Building on our long track record for waterbird conservation, we will contribute to the conservation of wetland biodiversity by working on selected flagship species and groups of species linked to specific habitats.

Resilient Communities

Water and food secured for wetland communities: We aim to prevent further wetland loss and degradation that undermines the natural productivity and water storage capacities of peatlands, floodplains, mangrove forests, deltas and lakes. We aim to improve and diversify the livelihoods of people dependent on wetlands, and promote best practices in agriculture and aquaculture, integrating wetland values into the local economy.

Reduced Climate Risks

Reduced societal conflict and displacement from wetlands: We will in particular strive to resolve situations where deterioration of wetlands – caused by upstream abstraction, climate change or population growth – contributes to loss of livelihoods, human displacement, conflict and migration. Where necessary, we will use peacebuilding and conflict resolution measures to address imbalanced power relations between stakeholders, building capacity for vulnerable and marginalised people to defend their rights to water and wetland resources.

Wetland carbon stores secured and enhanced: We aim to bring wetlands into activities to adapt to and mitigate climate change, which is otherwise a threat to the integrity of all wetlands. Improving the condition of peatlands, river systems and coastal ecosystems such as mangroves, saltmarshes and seagrass beds will also reduce their emissions of greenhouse gases and return many to their role as carbon sinks.

Wetland Nature-based Solutions integrated into infrastructure developments: We aim to steer urban water infrastructure investment and land-use planning towards using wetlands to meet challenges such as water insecurity and flooding that are conventionally addressed by civil engineering – an approach that often causes further loss and deterioration of wetlands.

According to our strategic framework, we work in three wetland landscape types to upscale solutions and achieve six outcomes. In turn, these result in three impacts, Healthy Wetlands, Resilient Communities and Reduced Climate Risks.
ACHIEVEMENTS

This chapter presents our results achieved in 2020. We have organised these achievements along our three streams of work (Coasts and Deltas, Rivers and Lakes, and Peatlands) in relation to the ambition laid out in our Strategic Intent 2020-2030. The section below summarises the first steps taken towards our targets.

Achievements described below are the result of our team across the world working in collaboration with many other partners, locally and internationally. These are a selection from a much wider range of results, and in several cases are based on work that started in previous years. We are highlighting those achievements where Wetlands International’s role or contribution was particularly significant.

In short, positive steps were made last year towards our 2030 targets despite the significant disruption in all programmes caused by the Covid-19 pandemic. At the end of 2020, we believe we have established a solid foundation for future delivery and are largely on track towards our 2030 targets.

Impact Area - Healthy Wetlands
Results that stand out include:
• launching the Global Mangrove Watch Platform that makes geospatial information related to mangroves worldwide available for policy makers and practitioners;
• starting an initiative to restore 2,500 ha of mangroves in Guinea-Bissau in partnership with the Dutch Energy company Greenchoice;
• the designation of the Kabartal and Asan Conservation Reserves as Ramsar Sites in Bihar, India and the start of their respective management plans; and
• launching the “PeatRus” project that expands the restoration of peatlands to 11 provinces and enables the emissions reductions to be included in Russia’s enhanced Nationally Determined Contribution (NDC).

Impact Area - Resilient Wetland Communities
Highlights include:
• an agreement with government authorities reached by communities with our support that will promote better practices in island cattle raising, tourism and real estate development in the Argentinian Paraná Delta (376,000 ha);
• 200 hectares of land restored in the Ziway-Shalla basin in Ethiopia through community managed enclosure sites. A quarter of a million seedlings were planted and physical soil and water conservation structures built to reduce sedimentation into Lake Ziway; and
• the roll-out on a national scale by the Indonesian government of 3 successful peat-wise local business models. In the district of Tapanuli Selatan we also restored 51 ha of peatlands and strengthened communities through the establishment of Bio-rights contracts with 15 community-based organisations.

Impact Area - Reduced Climate Risks
Key results achieved include:
• developing a joint plan for establishing a large programme on Building with Nature in Asia, in collaboration with partners and government agencies from China, India, Indonesia, Malaysia and the Philippines;
• launching a partnership agreement with Boskalis, a global leader in dredging and maritime services, to enhance coastal wetland habitats that provide some of the greatest carbon stores for Blue Carbon;
• the adoption of peatland protection and restoration in the EU’s Common Agricultural Policy (CAP) with paludiculture becoming eligible for payments that will promote peat-wise land management; and
• increased uptake of wetland solutions in governmental NDCs reported to the UNFCCC that increase action to reduce emissions and repair drained peatlands at a huge scale, for example in Argentina, Ireland, Russia and Peru.

Setbacks
Of course, not everything went according to plan. Many of our programmes suffered delays and required substantial replanning due to the global Covid-19 pandemic. For example, the Roundtable on Sustainable Palm Oil (RSPO) “drainability assessment” to help identify where palm oil plantations should be phased out and restored to functional peatlands was delayed, as face-to-face interactions were not possible. Fortunately, there was understanding shown by our donors and in several cases support to use project resources to help local communities adapt (see the article on page 22).

On the following pages we report our 2020 achievements per stream and impact area, indicating the progress towards our 2030 targets.
COASTS & DELTAS
2030 GLOBAL GOAL

Our goal is to safeguard and restore coastal wetland ecosystems as essential features of resilient and productive coastal landscapes. We will achieve our goal by tailoring our work to the different contexts we typically encounter in our target areas, ranging from heavily degraded or modified coastal areas to intact wetland landscapes.

Coasts & Deltas
Healthy wetlands

In 2020, together with Aberystwyth University, solioEO and The Nature Conservancy, we launched a beta version of the Global Mangrove Watch platform. This online platform makes available real-time geospatial data on trends in mangrove status, distributions and their values and threats. By providing this information in an easy-to-use format, we help practitioners and policy makers to plan, prioritise and monitor their mangrove conservation and restoration projects and support integration in climate, development and conservation policies (see also page 35).

We started a partnership with Dutch energy provider Greenchoice to accelerate and support climate change mitigation by protecting and restoring wetlands that yield climate, biodiversity and community benefits. As a first step, we initiated a 2,500 ha restoration project in Guinea-Bissau that will restore mangroves on abandoned rice fields.

In Indonesia, participation in the international waterbird census has grown substantially, with no less than 500 people from government, NGOs and bird clubs joining the annual count, covering 120 sites. As the monitoring has advanced, the Ministry of Environment and Forestry adopted the International Waterbird Census as the monitoring modality for protected areas, as a part of the National Partnership for Conservation of Migratory Birds and Their Habitat.

Coasts & Deltas
Resilient wetland communities

We formalised partnership agreements with public authorities in Argentina to support the development of a land-use management plan of the Victoria Islands Multiple Use Reserve, a large sector of the Paraná Delta (376,000 ha). We are supporting the recently created Planning Committee to implement better production practices. Adapting activities such as island cattle raising, tourism and real estate development, so that they safeguard wetland functions will help restore vital fishing and beekeeping, and provide habitat for the marsh deer, capybara, and emblematic migratory birds.

Coasts & Deltas
Reduced climate risks

Substantial momentum was created for Building with Nature (BWN) projects across Europe. By 2030, we aim to integrate wetlands into 8 million hectares of coastal production systems.

By 2030, we aim to safeguard 2 million hectares of high value coastal wetlands, including those sites which make up vital wildlife migration corridors.

By 2030, we aim to mainstream Building with Nature and promote Blue Carbon solutions, influencing €10 billion of investments in coastal infrastructure solutions.

After nearly 5 years of implementation, our Building with Nature Indonesia programme in Demak won the prestigious Flood and Coast award by the UK Environment Agency in the categories “international excellence” and “coastal management”. This offers a strong encouragement to further expand this work across the continent.

We launched a partnership with Boskalis, a global leader in dredging and maritime services, to enhance coastal wetland habitats that provide some of the greatest carbon stores Blue Carbon. Further, we also aim to enhance the sustainability performance of the sector at large by exploring opportunities for impact mitigation in coastal engineering projects and promoting widespread adoption of Building with Nature approaches.

With partners in the Ecoshape consortium, we completed a new book that presents Building with Nature concepts and solutions (see also page 37). Summarising dozens of applications in different settings, the book is one of the best global resources for those interested in applying Nature-based Solutions in both coastal and freshwater environments. Eleven universities in Indonesia incorporated Building with Nature training modules in their curricula. As a result, about 2,500 students will be trained each year which will help create a new generation of engineers skilled in designing Building with Nature solutions. 750 people from many countries and disciplines were trained in two Massive Open Online Courses (MOOC) on Building with Nature in collaboration with the Delft University of Technology.
Our goal is to catalyse investment to safeguard and restore rivers, lakes and their accompanying wetlands, as part of wider freshwater systems; and to provide water security for people and nature, climate resilience, and sustainable and peaceful landscapes.

Rivers & Lakes

Healthy wetlands

Water resource and climate scenarios were completed for the Upper Niger basin and the Inner Niger Delta. These showed that drier years will increase significantly and, in combination with the current plans for agricultural and energy development in the region, will place the livelihoods of delta communities based on fisheries and farming under high stress.

In the Inner Niger Delta, the Ministry of Environment, Forest and Climate Change and Government of Mali in their respective management plans. The Asan site is a 444 ha stretch of the Asan River running down to its confluence with the Yamuna River in Dehradun district of Uttarakhand and supports 330 species of birds. Kabartal covers 2,620 ha of the Indo-Gangetic plains, in Begusarai district of the state of Bihar and acts as a vital flood buffer for the region as well as providing livelihood opportunities and critical habitat for biodiversity. In the Himalayas, the South Asia team prepared an inventory of high-altitude wetlands (HAWs) along with a guidebook for managers of HAWs to assist in integrated management plans.

By 2030, we aim to safeguard 10 million hectares of high value river and lake wetlands, focusing in five basins.

Rivers & Lakes

Resilient wetland communities

We launched a 5-year Water, Peace and Security programme, supported by the Netherlands Ministry of Foreign Affairs, that is implemented in partnership with IHE Delft (lead), World Resources Institute, International Alert, the Hague Centre for Strategic Studies and Deltares. The programme will stimulate dialogue in Mali, Eastern Africa, Iraq, and Afghanistan around solutions to conflicts where water insecurity is an important factor.

In Lac Wegnia, and the Sourou Valley in Mali and in Ziway-Shalla, Ethiopia, coalitions of farmers, local actors in agriculture value chains and local governments have been established to promote innovations towards sustainable agricultural water and wetland use, in partnership with Caritas, Hydrosolutions and IWMI with the support of the Swiss Agency for Development and Cooperation.

In India, the Kabartal Wetland and Asan Conservation Reserve have been designated as Ramsar Sites and we are supporting the Ministry of Environment, Forest and Climate Change in the implementation of ecosystem-based risk reduction measures.

The government of Argentina recognised the contributions made by wetlands to climate change adaptation and mitigation in its Nationally Determined Contribution (NDC) report presented to the UNFCCC in December 2020. This is an important step in integrating wetlands conservation and restoration needs into government climate financing priorities.

By 2030, we aim to safeguard and restore 60 million hectares of wetlands as integral elements of productive river and lake landscapes.

Reduced climate risks

A core partnership with the International Water Management Institute, CARE and International Alert for the Blue Lifelines for a Secure Sahel “Big Idea” was established to develop landscape propositions in key wetland landscapes and a strategy to engage on these with the World Bank, the United Nations Convention to Combat Desertification, the European Union and the African Union’s Commission for the Great Green Wall Initiative.

In India, the development of over 50 grassroots development plans (Gram Panchayat Development Plans) were completed along with 7 district-level disaster management plans that will assist in the future leveraging of resources for the implementation of ecosystem-based risk reduction measures.

The status of 70,000 ha of peatlands and freshwater marshes in two internationally important Ramsar sites in the Puru region of the High Andes in Argentina and Peru was improved through management and restoration actions implemented with local communities.

By 2030, we aim that £500 million is committed to enable Nature-based Solutions in freshwater wetlands, for climate mitigation and adaptation.
In Russia, we started Phase 3 of the award-winning “PeatRus” project which will expand wetland restoration to 11 regions in the coming 3 years. By the end of 2020, fire risk was reduced in 95,000 ha, climate-smart rewetting completed on 65,000 ha and ecosystem functions restored on 22,000 ha of peatlands. Once completed, the estimated GHG emission reductions are 324,000 to 650,000 tonnes CO₂eq per year. Knowledge from this work has been incorporated in the Russian Federation’s Nationally Determined contribution (NDC) as reported to the UNFCCC.

In Eastern Africa, inventory work completed in the Nile Equatorial Lakes, the Sudd and the Blue Nile sub-systems showed the total area of peatlands and other organic soils in the Nile Basin amounts to about 30,445 km² (3,044,500 ha) with a peat carbon stock of 4.2 to 10 giga-tonnes of organic carbon. As this represents 5-10% of the total tropical peatland carbon stock, it shows the potential for carbon emission avoidance for the countries concerned.

In Indonesia, we supported the government’s Peat Restoration Agency to complete peatland ecosystem restoration plans in another 4 hydrological units to reach 14 units overall. We supported the Verra-accredited carbon accounting, project management and monitoring of the largest REDD+ tropical peatland restoration project (Katingan Mentaya), totalling 149,880 ha of intact peatswamp forest, combined with the sustainable management of 156,00 ha in the mixed-use community buffer zone with our long-standing partner Permian Global.

Work on high altitude peatlands or bofedales in the High Andes resulted in improved management trialled successfully in 56 ha of peatbogs and a further 130 ha was restored. By 2030, we aim to safeguard over 20 million hectares of high value peatlands, including bringing 5 major peatland landscapes back into good ecological condition.

In Europe we were successful in getting peatland protection and restoration included as a valuable measure in the Common Agricultural Policy (CAP) and “paludiculture” as a land-use that is eligible for CAP payments. This expands the economic basis for peat-wise land management.

Reducing climate risks

As a member of the NDC partnership, we launched a policy brief Locking-up Carbon in Wetlands with AGWA at Stockholm Water Week. The brief showcases the importance of reducing carbon emissions from wetlands and has stimulated governments to consider seriously including wetlands as components of their NDCs under the UNFCCC.

In Indonesia, we set up 3 successful peat-wise local business models which are now being rolled out on a national scale by the government. Further, in the district of Tapanuli Selatan, we restored 51 ha of peatlands and built strengthened communities through the establishment of Bio-rights contracts with 15 community-based organisations. This included trainings on Ecosystem-based Disaster Risk Reduction (Eco-DRR), in this case prevention of peat fires, sustainable peat management and the diversification of livelihoods.

By 2030, we will reduce the impact of peat-based industries in 10 million hectares of peatland, with a focus on palm oil, pulp and timber.
Wetlands for a Safer World: how we invested 1 million Euros from the Dutch Postcode Lottery

In our 2017 proposal “Wetlands for a Safer World”, we promised to leverage investments and actions to realise our long-term ambitions, in turn benefiting people and nature. We indicated that the Dutch Postcode Lottery grant for 2018-2020 would be used mainly as “seed finance”, to enable upscaling and application by others of effective wetland solutions. We also proposed to invest in measures which help Wetlands International raise wetlands higher on the agenda and improve our institutional capacity and financial resilience.

Over 2018-2020, we invested the €1 million grant in a consistent set of themes. Below, we summarise the main outcomes, drawing attention also to the achievements and outcomes in 2020.

We brought our stories and experience on wetlands into the spotlight by publishing a landmark book Water Lands and a variety of media. We used these stories as a means to raise awareness about wetlands and their values, as well as to engage youth groups and mobilise their support for investing in wetlands as Nature-based Solutions. Part of the grant was allocated to increase our communications capacities and competencies, particularly in social media channels and allowed us to establish new collaborations and platforms to amplify our messages.

We established a unique niche and project portfolio for wetlands in cities that is leveraging large-scale Building with Nature investments, for example in urban flood management, as well as highlighting the positive contribution that wetlands have for urban heat island effect (UHI) reduction.

We achieved greatly enhanced recognition of the need to improve the condition of wetlands and water as part of efforts to address human security and bring peace in the Sahel. In particular, we forged an international and African coalition who are committed to mobilise action to safeguard and restore wetlands in the region.

We forged an international, inter-sectoral partnership to mobilise Building with Nature in Asia and gained additional political support and resources to help materialise this ambition in the five countries of Indonesia, the Philippines, India, Malaysia and China.

We forged an international, inter-sectoral partnership to mobilise Building with Nature in Asia and gained additional political support and resources to help materialise this ambition in the five countries of Indonesia, the Philippines, India, Malaysia and China. We re-established our global leadership role in championing and enabling the conservation and restoration of peatlands, and opened up a series of partnership opportunities to create impact on the ground in Europe.

To further boost our climate change mitigation work, we established a new global programme on wetland carbon and forged three new strategic partnerships (with Greenchoice, Boskalis, Commonland and Landscape Finance Lab), which will help establish and accelerate a pipeline of high quality large scale mangrove and peatland recovery projects for carbon financing.

Operational improvements include a new finance system that will enhance our efficiency and improve financial management standards, the mobilisation of the Network Management Team, the further institutional development of individual offices and supported staff to enable good internal, partner and stakeholder communications during the Covid-19 pandemic.

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It was the largest national lockdown in the world. In March 2020, with Covid-19 spreading fast through its cities, India saw tens of millions of poor migrant workers going home to their villages. From Uttarakhand in the north to Bihar in the east and Gujarat in the west, that often meant workers and their families walking hundreds of kilometres back to communities in wetlands.

Swollen by the new arrivals, those communities urgently needed basic supplies of food, medicines, personal protection and jobs. But they also needed assistance as people, often for the first time, sought to survive by taking up employment on farms and within wetlands. A humanitarian disaster threatened to turn into a significant surge in demand for natural resources.

**SUPPORTING WETLAND COMMUNITIES THROUGH THE PANDEMIC AND ON TO A BLUE-GREEN RECOVERY**

By Fred Pearce

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STORY HIGHLIGHTS

With our partners in India, we provided emergency relief supplies and training courses on how wetlands management can also create local employment for returning labour migrants.

We helped the Orang Asli people in Malaysia’s peatlands establish partnerships with private companies to sell their handicrafts and sponsor ecological restoration.

With our partners in Brazil, we provided food and clean water to more than 400 indigenous and traditional communities’ families across the Pantanal.

Now is the time to plan and develop along pathways that promote both social and ecological healing and create resilience for both nature and those who depend on it.

Farmers in Kenya and Uganda planted 9,270 trees and bamboo seedlings to help restore the Sio-Sitoka transboundary wetland. As schools were temporarily closed due to the outbreak of Covid-19, children joined the practical restoration lessons.
Wetlands International’s teams, headed by South Asia director Ritesh Kumar and with support from humanitarian partners such as Caritas and Seeds India, organised support for the returning migrants and their communities, in landscapes where the partners have ongoing engagements. They provided emergency relief supplies and emotional support. And when the communities were prepared, they provided training courses in how wetlands management can also create local employment to help fill their bellies, while safeguarding the ecology of vital the hydrological “buffers” that provide abundant food and water, and prevent rivers flooding local farmland.

The challenges were great, with pandemic restrictions making access to wetland communities especially difficult. But the gains were great too, in helping people suddenly thrown back on wetlands for their survival to appreciate the resources at their disposal, and to share experiences and learn how to manage them better.

Similar stories have played out in wetlands around the world during the pandemic. Even where there have been no forced migrations, locked-down communities have been increasingly reliant on their wetlands for food and livelihoods. And Wetlands International has brought a vital skillset to help them. Its history of engagement with wetland communities, network of contacts and environmental expertise means it has often been the essential intermediary to bring emergency aid to where it is most needed, and to bolster wetlands management to secure the future of the wetlands themselves.

From the Saloum delta in Senegal to the lakeside communities of Argentina’s Andean mountains, and villages in the mangrove swamps of coastal Indonesia, Wetlands International has been providing guidance and everything from the masks and antiseptic gel that save lives, to the computers, internet connections and drones that allow cut-off communities to communicate with the outside world and monitor their wetlands.

“The pandemic should be a wake-up call,” said CEO Jane Madgwick in April, as the virus spread across the planet. “Now is the time to plan and develop along pathways that promote both social and ecological healing,” to provide resilience for both nature and those who depend on it. The world talks about the need for a “green recovery” from the pandemic. Wetlands International sees it as a blue-green
In the long run, the health of the wetlands will be the best defence for the health of their communities. Needs and threats have been diverse for wetland communities. The Orang Asli people in Malaysia, who depend on the Gombak River and natural resources in the local peatlands, have been cut off not just from vital supplies but also from eco-tourists. Their main source of income in recent times has been selling wetland products such as woven bags, carpets and wild vegetables to visiting tourists. So in 2020, as a continuation of its work building their capacity to conserve and restore the river and streams of their homeland, Wetlands International has helped them establish partnerships with private companies to sell their handicraft and to sponsor ecological restoration.

In Indonesia, Wetlands International switched its training courses to Zoom and WhatsApp. It allowed communities in Demak, on the shores of northern Java, to continue restoring the mangroves that protect their villages from storms and developing eco-friendly aquaculture. Keeping up the pace on these projects, known as Building with Nature, was especially vital when outsiders were banned from entering the villages, fish markets had collapsed and residents working in nearby factories were being laid off.

Elsewhere, our team in Indonesia, under director Nyoman Suryadiputra, has been drawing up plans to help communities combat an epidemic of Dengue fever that can lead to hospitalization in facilities that are already under pressure from the influx of Covid-19 patients. The innovative idea is to construct small artificial wetlands containing water-purifying aquatic plants and fish that predate mosquito larvae at mosques and other public places. The mini-wetlands will keep clean the shared ablution waters and help prevent the proliferation of the mosquitoes that transmit the fever.

Indigenous communities in the world’s largest inland wetland, the Pantanal in the heart of South America, were hit in 2020 by a crisis within a crisis. As Covid-19 began its killing spree, the worst drought there in half a century unleashed unprecedented wildfires across the desiccated wetland. Our Brazilian team, under Rafaela Nicola’s direction, partnered with SOS Pantanal and an aid initiative Uniao BR to provide food and clean water to more than 400 indigenous and traditional communities’ families across the Pantanal. Under the Corredor Azul Programme, Wetlands International worked in support of local community livelihoods, equipping the Kadiweu indigenous
Celebrating Mr. I Nyoman Suryadiputra’s exceptional accomplishments in 25 years serving Wetlands International in Indonesia

This year, Wetlands International is celebrating its 38th anniversary in Indonesia. For many of these years it was led by director I Nyoman Suryadiputra, who worked with passion to foster staff, pioneer new techniques, implement and guide various collaborations with the government, knowledge institutions, the private sector, other non-governmental organisations and community groups.

Pak Nyoman’s leadership guided the development of Wetlands International in Indonesia, including setting up our legal entity, Yayasan Lahan Basah and becoming the leading non-governmental organisation for managing wetlands in Indonesia. More than a quarter-century after joining this organisation, Pak Nyoman will retire as Chairman of the Executive Board and Director of Wetlands International in Indonesia. But birds never fly too far from their nest, and neither will Pak Nyoman. With his deep expertise in limnology, peat, mangroves, community engagement and policies in wetlands, he will continue to provide support to the organisation in the years to come. We would like to recognize his grand contribution, including to the global network of Wetlands International, and thank him for all he has done. We wish him all the best and look forward to future collaboration.
Wetlands are very local. No two are the same. But when solutions to problems work in one place, scaling up the lessons for elsewhere can still be vital. And nowhere is that proving more true than in Wetlands International’s Building with Nature project in Indonesia. The five year multi-disciplinary initiative, with Dutch engineering and Indonesian government partners, aims to save the rapidly eroding coastline of northern Java, using innovative methods to encourage the natural regeneration of lost mangroves. The project formally ended in 2020, but its methods and ideas are set for replication across the Indonesian archipelago and more widely through Asia.
Many coastlines in South and Southeast Asia have lost coastal mangroves in recent decades. They have been widely replaced by ponds excavated to farm shrimps and fish. But those mangroves trapped silt, and rebuffed winds, waves, high tides and even tsunamis — protecting the coasts and their inhabitants from danger. So their loss has often accelerated coastal erosion and exposed communities to danger.

In Demak on the north coast of Java, the loss of mangroves has triggered an invasion by the Java Sea that has reached several kilometres inland, engulfing the ponds, and drowning villages or leaving them elevated on stilts and connected to the land by threads of raised land. Around 70,000 people suffered the effects.

With its partners, Wetlands International sought to turn the tide. Starting in the village of Timbulsloko, which is today reached by a five-kilometre causeway past washed-away rice fields and fish ponds, Building with Nature sought to reverse the land loss with novel technology and incentives for locals to adopt more sustainable livelihoods that preserved and restored the mangroves.

The technology has worked, with villages erecting a total of nine kilometres of permeable brushwood barriers — a little like outsize nets on tennis courts — in the shallow waters a few metres offshore. The barriers do not aim to stop the tides. Instead they mimic mangroves by capturing silt and slowing scouring currents, allowing mangroves seeds in the passing water to settle in the silt and re-establish themselves. Nature does the planting, not humans.

The work of erecting and maintaining the barriers was done by villagers. Their labour has been recompensed with financial support and training for new local economic activities, through Wetlands International’s Bio-rights conditional loan system, under which loans are written off if the restoration work is successfully completed. “The engagement of local communities is vital as in the long run they are the ones, together with village government, who will maintain the barriers,” says Yus Rustia Noor, head of programmes at Wetlands International Indonesia.

Blue Forests, an Indonesian NGO that ran the coastal field school in Demak, says some 400 local farmers learned to replace expensive chemical pesticides and fertilizers in their ponds with home-made organic alternatives, and found they improved water quality and yields. Blue Forest’s programme manager Woro Yuniati, who devised the curriculum, says many also tried out the idea of restoring mangroves around their ponds, to dampen the effect of waves.

The villages now have some 420 hectares of improved shrimp ponds, whereby yields have now tripled and farmers’ profits have doubled.
mangroves. Pond yields have tripled and farmers’ profits have doubled. Other alternative livelihoods funded by the project include small-scale tourist developments, often based on organised visits to the mangroves and the bird life they attract — though they have suffered during the pandemic lockdown.

The barriers are now in the hands of the communities that they protect, supported by local government administrations and a forum of community groups called Bina Noto Segoro (Bintoro), which is Javanese for “to manage the sea”.

The mangroves cannot solve all the problems of the disappearing coast, says Bregje van Wesenbeek, of Deltares, a Dutch research institute and partner on the project. The area is also suffering subsidence because of the abstraction of groundwater by industry in nearby city of Semarang. And dams and dykes on rivers draining into the sea nearby reduce the supply of silt needed to rebuild the coast. In mid-2020, a major tidal surge temporarily engulfed many of the new aquaculture ponds.

Still, the project has been widely hailed as a success. In its final weeks of formal activity at the end of 2020, Building with Nature Indonesia won the Flood and Coastal Excellence Award from the British government’s Environment Agency. Its engineering and social methods are being taught into Indonesian universities and copied by the Indonesian government elsewhere.

The Ministry of Maritime Affairs has erected around 25 kilometres of brushwood barriers on other threatened coastlines in 13 districts across the country, including in Lombok and Sulawesi. Some 30 million people in coastal communities stand to benefit, says the ministry’s Hendra Yusran Siny, who has been responsible for the upscaling.

The Indonesian government wants to share the good news across the region, he says. “Building with Nature can be applied to other Asian countries too, and beyond. Across the world thousands of kilometres of tropical mud coasts are suffering dramatic erosion from lost mangroves. We can help. Indonesia, as the world’s largest archipelago... has the potential and experience to take a leading role.”

Coastal engineers remain hesitant, waiting to see if the techniques are proved to work better than concrete, says Datuk Keizrul bin Abdullah, the chair of the board of Wetlands International in neighbouring Malaysia, and one of his country’s leading civil engineers. But so far, Malaysia, the Philippines, China, Thailand, India and the Asian Development Bank have all expressed interest in replicating Indonesia’s experience of Building with Nature.

Meanwhile, for the Indonesian city of Semarang, as part of the project activities started...
of the Water as Leverage for Resilient Cities Initiative, Building with Nature has developed designs that promote a landscape connection with the green belt being restored in Demak. This urban water initiative also runs in Chennai, India and Khulna, Bangladesh. It is pioneered by the Dutch special envoy for international water affairs and won the 2020 Dutch Design Award for best commissioning.

The plan now, Keizrul says, is to recruit other governments and to identify one site in each country to pilot Building with Nature solutions such as permeable structures to hold back the tides, “so we can show stakeholders it is viable, cost-effective and acceptable to local communities.” At a workshop in early 2020, on the eve of lockdown, Malaysian planners, academics and government officials identified four potential sites to pilot.

“Af[ter that, we are looking to quickly scale up to ten or more projects in each country,” Keizrul says. “Our ambition is to benefit tens of millions of people in cities and settlements along vulnerable Asian coasts, lakes, rivers and deltas, by integrating the services nature provides into civil engineering practice.”

We can show stakeholders that Building with Nature is viable, cost-effective and acceptable to local communities

Building with Nature: Creating, Implementing and Upscaling Nature-Based Solutions

As an active Ecoshape consortium member, we collaborated to produce the book Building with Nature: Creating, Implementing and Upscaling Nature-Based Solutions which officially launched at the Climate Adaptation Summit in January 2021. Building with Nature offers a proven, innovative approach to creating Nature-based Solutions for water-related infrastructure that harnesses natural forces for the benefit of the environment, economy, and society. The book makes an urgent and compelling case for, and describes how to scale up, the Building with Nature approach to create sustainable infrastructure as well as rich and resilient landscapes.

Building with Nature in muddy coasts delivers multiple community benefits.


Partners

The Indonesian Ministry of Marine Affairs and Fisheries (MMAF)
The Indonesian Ministry of Public Works and Housing (PU)
EcoShape
Witteveen+Bos
Deltax
Wageningen University & Research
UNESCO-IHE
TU Delft
Von Lieberman
Blue Forests
Kota Kita
Diponegoro University (UNDIP)
One Architecture & Urbanism

Donors

Dutch Postcode Lottery
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

Children cycling through their local mangrove forest.
A Japanese satellite sensor circling the planet picked up an unexpected change in the mangrove forests amid the coastal creeks of the small West African state of Guinea-Bissau. About 300 hectares of the country’s extensive mangrove swamps in the Safim area close to the capital Bissau showed up as a giant red blotch on the processed satellite images. The mangroves were being rapidly removed.

Back at Wetlands International global office in the Netherlands, they scanned the data and contacted Joaozinho Sa, the head of our Guinea-Bissau operation. His team immediately set off to investigate – taking pictures, talking to local communities, and bringing back information to share with the government’s Institute of Biodiversity and Protected Areas (IBAP) to initiate a possible law-and-order response.
This event, early in 2021, was a notable early achievement for the Global Mangrove Watch (GMW), an online platform supported by Wetlands International that provides remote-sensing data for near real-time monitoring of one of the world’s most important coastal ecosystems. It went live in July 2020, using data supplied by the Advanced Land Observing Satellite of the Japanese Aerospace Exploration Agency (JAXA).

“Global Mangrove Watch is proving of incredible value,” says Menno de Boer, our Technical Officer for Coasts and Deltas. “Without the GMW platform, we would not have been able to know that anything was going on.” It could herald a new dawn for mangrove protection and restoration.

Mangroves were once forgotten backwaters, falling between the cracks in public thinking about ecosystems worth conserving – with little of the allure of either rainforests or coral reefs. That perception is changing. Especially with growing recognition of their extent -- they are found in 106 countries and cover more than 13 million hectares of intertidal areas, an area the size of Bangladesh – and their importance for climate as carbon-rich marine ecosystems.

Each year, mangroves capture millions of tonnes of carbon. A typical hectare holds more than a thousand tonnes, to five times more than the same area of rainforest. The tangled roots of mangroves are also vital nurseries for an estimated one-tenth of all marine life, as well as buffers against rising tides, coastal storms and eroding currents.

Yet some two-thirds of mangroves worldwide are thought to have been lost or degraded by human invasion or sea-level rise. A fifth of that loss have been since 1980, especially during a craze across Southeast Asia for converting them to shrimp ponds. A 2020 study found that Myanmar has lost more than 60% of its mangroves in just 20 years to rice paddy, oil palms, rubber and shrimp ponds and urbanization.

To keep track and fight back, the Global Mangrove Watch has been in development for almost a decade, initiated by Wetlands International, The Nature Conservancy, Aberystwyth University and SoloEO, in collaboration with dozens of academics, NGOs, funders and government agencies.

In Guinea-Bissau, local farmers helped break dikes to restore hydrology for ecological mangrove restoration.

Mangroves are found in 106 countries and cover more than 13 million hectares of intertidal areas around the world.

A new approach to salt production that makes use of solar heat instead of fuel wood was introduced in Guinea-Bissau – saving 3.1 kilos of wood per kilo of salt produced and reducing mangrove loss significantly.
The JAXA radar collects data from every mangrove region around once a week. The advantage of radar monitoring is that it can see through clouds that often persist in coastal regions, says de Boer. A specially devised model then compares the raw data with stored baseline information, and sends out an alert if there has been a change. In just one month, it issued more than a thousand mangrove disturbance alerts.

The changes may be complete clear-cuts or something more subtle, such as defoliation or construction work amid the trees. The images from Guinea-Bissau showed a dirt road constructed across a creek near the site of mangrove disturbance – evidence of a new human invasion.

As well as triggering rapid responses to illegal mangrove conversion, the GMW data will generate annual maps identifying areas under threat and forest loss trends. This will all support the work of the Global Mangrove Alliance, a coalition of NGOs set up by Wetlands International and others in 2017 with the ultimate aim of increasing mangrove cover by 20% from 2015 to 2030 – making good the losses suffered since 1980.

This is the latest phase in work by Wetlands International over many years highlighting the importance of mangroves and promoting their protection and restoration through interactions with governments and local communities, from Guinea-Bissau and the Rufiji delta in Tanzania to Java in Indonesia and the coastal defences of Panama City.

These local networks help identify and root out mangrove plunderers, draw up local management plans with communities, and help with the nitty gritty of mangrove restoration, whether through planting or protecting habitat to allow natural reseeding and recovery.

Guinea-Bissau has long been a focus. In total, it has some 250,000 hectares of mangroves. They protect more than 70% of its coastline. Unusually, it has seen a net gain in mangroves of 330 hectares since 1996. One reason has been our long-running work in the Cacheu River Mangroves National Park in northern Guinea Bissau. Covering almost 90,000 hectares, it has the largest dense assemblage of mangroves in West Africa. We have helped with restoration of mangroves on abandoned rice fields in many areas of the park.

A typical hectare of mangrove holds more than a thousand tonnes of carbon, up to five times more than the same area of rainforest. Not only do mangroves offer vital protection for coastal communities, their tangled roots are also vital nurseries for an estimated one-tenth of all marine life.

In Panama City, mangroves offer the cheapest and most effective system of defence against storms and flooding, which has devastated the city in previous years.
The Global Mangrove Watch tracks changes in mangrove cover over time, such as this loss of mangrove cover in Samarinda, Indonesia, between 1996 and 2016.

So what happened after the GMW alert in Guinea-Bissau? The team investigating the alert found that the mangrove swamp was being turned by villagers into a rice field. But it was entirely legal, part of a government plan to promote food security in poor communities. “We cannot intervene,” Sa’s mission reported. “But we hope we have sensitized the state authorities so they will reduce future proliferation of rice fields in mangrove areas.”

It was a frustrating end to the episode, says de Boer. But Pete Bunting of Aberystwyth University agrees there is an upside. “The most important part of the GMW platform and alerts is getting the data in front of decision makers.”

Who is Elizabeth Wamba?
I grew up and studied in Kenya. I had a brief stint as a journalist before venturing into corporate communications. I had always been interested in nature and wildlife conservation turned out to be more than indulging in a hobby. Field work was a constant breath of fresh air – from driving through Africa’s iconic national parks and reserves teeming with diverse wildlife and vegetation to the occasional sail into marine parks. I was intrigued not just by biodiversity, but also the linkages to communities and the intricate, delicate and sometimes unique relationships between humans and nature. In my current role as Regional Communications Officer for Eastern Africa, I explore the wetland ecosystems of the region and the lives they support with the same eagerness and excitement.

What was your biggest personal work achievement in 2020?
This must be joining Wetlands International at the onset of an unknown and growing pandemic and having to learn and work under strict containment measures. Despite these challenges, the support from my colleagues in programmes and communications smoothed the transition. I learned new terminology and concepts specific to wetland ecosystems. I was also able to pick up communications work after a nine-month gap and offer much-needed support to our programmatic objectives.

What is the nicest thing about working at Wetlands International?
That would be understanding your role in the bigger picture and then working together as a team to achieve programmatic and organisational goals and objectives. I love that I can steer the communications function fully, giving ownership to results, achievements and lessons learned. The knowledge and expertise within the organisation is extensive and colleagues are always willing to share what they know. For example, within three months, I had learned loads about mangroves and their ecosystems and integrated water resources management, which is a whole new life! Learning is continuous here and that’s big for me!

What do you want to achieve in 2021?
Working in close collaboration with colleagues, I hope to positively contribute to the communities that live in and derive basic services from wetlands in this region. Besides that, I would like to raise the profile of our work and the substantive role of wetlands in the socio-economic, political and cultural well-being of the communities we work with. Finally, in the longer term, I hope to pursue innovative ways to engage the youth, whose energy, power and creativity in restoring our environment is urgently needed, while borrowing from the wisdom of elders who have always been the custodians of Africa’s wetlands.

What is your favourite species and why?
Tough question! I have loved cats since childhood, with my wild favourite being the leopard. Nonetheless, I remain both intrigued and terrified by sea creatures such as the octopus and have a never-ending fascination for birds. Isn’t it phenomenal and profound how each species fits snugly into the cog of life and that there is still so much we don’t know?
“After living in Muara Manompas village for almost fifty years, this is the first time we have a programme where the community is really involved.” The words came from Waldemart Silitonga, a leader in one of twenty villages signing up to a Wetlands International project in late 2020 to rewet peatlands in the Indonesian province of North Sumatra.

The words signified community buy-in for a key pilot project recruiting villagers to block drainage canals and reinstate cultivation of wetland-adapted crops, known as paludiculture, across hundreds of hectares. The hope was that it could also kick-start a revival of peatlands in Sumatra and across Indonesia, as part of a wider engagement of government and communities in incorporating carbon-rich wetlands into the country’s Nationally Determined Contribution (NDC) to fighting climate change.

CARBON PARTNERSHIPS TO SAVE WETLANDS AND THE CLIMATE

By Fred Pearce

STORY HIGHLIGHTS

Wetlands are the planet’s biggest terrestrial carbon sinks, holding the greatest potential of all ecosystems for delivering Nature-based Solutions to climate change.

While more than a hundred countries have mangrove forests, fewer than 30 initially included them in their Nationally Determined Contributions (NDCs) for climate mitigation.

Countries can review their NDCs every five years and include the “low hanging fruit” that tackling Blue Carbon offers.

We are ready to support Ireland to turn its knowledge into action, restoring its amazing peatlands to benefit people and nature for the long term.

Wetlands like the tropical peatlands of Sumatra, Indonesia are the planet’s biggest terrestrial “carbon sinks”, holding the greatest potential of all ecosystems for delivering Nature-based Solutions to climate change.
Wetlands are the planet’s biggest terrestrial “carbon sinks”, holding the greatest potential of all ecosystems for delivering Nature-based Solutions to climate change. In the climate debate they have so far been side-lined by concern for tropical rainforests. But in 2020 that began to change, with ever more governments recognising the potential to incorporate peatlands, mangroves and other wetlands in their NDCs.

To fast track this encouraging development, Wetlands International has been stepping up to count the carbon, provide conservation and restoration advice and form partnerships to help companies to contribute and governments to deliver on their promises. From Peru to Mongolia, Indonesia to the Grenada, and Argentina to the Philippines, we are using the climate agenda to help drive global wetland restoration.

Indonesia has around 25 million hectares of peatlands and mangroves, more than any other country. Their loss in recent decades has haemorrhaged carbon dioxide into the atmosphere. And this continues. There are plans to drain up to two million hectares more wetlands for plantations and other land uses by 2030, potentially releasing hundreds of millions of tonnes of CO₂.

This would be a tragedy. But the potential to end the destruction, and begin restoration of wetlands and their carbon stores, is equally great. A major problem in achieving that is conflicting government policies, with different agencies dedicated to either converting or conserving and restoring wetlands. In future, recognition of the climate role of wetlands will hopefully tilt the balance towards conservation and restoration.

In 2020, Indonesia was updating its NDC in preparation for the planned climate COP in Glasgow at the end of the year. Wetlands International had a seat at the table, in a Strategic Coordination Team for Wetlands Management, to draw up a roadmap for the NDC update, under the leadership of the Ministry of National Development Planning (BAPPENAS).

As part of this, we are working with Conservation International and CIFOR on pilot projects to restore wetlands in North Sumatra – such as the peatlands around Muara Manompas – and West Papua. The target is to avoid deforestation of 80,000 hectares of mangroves and peatland forests, preventing emissions of 30 million tonnes of CO₂ – gains that can form part of the country’s NDC to reduce emissions by 29-41% below business-as-usual in 2030.

In many places in Indonesia, the pressure to drain peat and plant oil palm remains strong. So community buy-in is essential. We have acted as a bridge between government policy and community engagement. In Muara Manompas, several endangered species live in the peatswamps of North Sumatra, including just 500 proboscis monkeys.
Siilitonga said his fellow villagers had been involved in planning the peat restoration from the start, and would benefit from Wetlands International’s Bio-rights incentive mechanism that reconciles paludiculture and other peatland-friendly livelihoods with the restoration work. They felt they owned the programme, he said.

But this is a global effort. If the world is to reach the 1.5-degree target set in the Paris Agreement, we need urgently to safeguard and restore wetland carbon stores. To that end, both public and private finance has to be mobilised. That is why we are collaborating both with governments on their NDCs and with companies to support best practice on responsible corporate climate action, as they seek to achieve net zero, through combining emissions reductions with Nature-based Solutions.

Sometimes our work on NDCs is an ongoing development that builds on past efforts to restore wetlands. For example, in Russia, our work to rewet peatlands that burned during the infamous bush fires in Russia a decade ago, known as PeatRus, is now in its third phase, involving seven districts. Russia still ranks third in world emissions from drained peatlands, but thanks to our work in helping develop its capacity for reporting on carbon and peatlands, restoration is likely to be an important component in the country’s action plan for adapting to climate change.

A flagship project of PeatRus has been the rehabilitation of the Orshinsky Bog, once a hub of peat extraction for fuel on the Volga floodplain in Tver, northwest of Moscow. So far its restoration has rewetted and restored biodiversity across some 22,000 hectares, as well as adding 320,000 tonnes of CO₂ to its biomass each year.

Elsewhere:
- In Peru, we have triggered the integration of the extensive Amazon and Andean peatlands into the country’s NDC climate mitigation programme.
- In Panama, we are helping exploit its Blue Carbon potential while also protecting its low-lying urban areas with mangroves.
- In Mongolia, we have been conducting assessments of the carbon potential of the country’s extensive wetlands, and how the herders who occupy most of them can be involved in protecting them for inclusion in the country’s next NDC.
- In India, we have initiated a climate vulnerability analysis of wetlands as part of a national communication to the UN on its climate policies.
- In Guinea-Bissau, we have joined with the Dutch energy company Greenchoice to initiate large-scale mangrove restoration for climate, community and biodiversity benefits.
NEW PARTNERSHIPS IN 2020

If we are to reach the 1.5-degree target of the Paris Agreement, we need to urgently safeguard and restore wetland carbon stores. To make that happen, both public and private finance have to be mobilised at scale. Both countries and companies need to take responsibility by reducing emissions while also supporting Nature-based Solutions. Wetlands International collaborates with companies to support them on their pathway to net zero through combined emission reductions and Nature-based Solutions. In doing so, best practice on responsible corporate climate action will be developed and shared. Such best practices can take different forms in different situations, and it will evolve as the rules of the Paris Agreement are being shaped. In 2020, we were proud to announce the following two new partnerships with leading companies:

**Boskalis**

Dredging and offshore contractor Royal Boskalis Westminster N.V. (Boskalis) and Wetlands International have worked together for several years as members of Ecoshape, a pioneering consortium developing Building with Nature principles for flood defence, coastal restoration and sustainable ports. The impacts of climate change on coastal systems and communities are becoming ever more apparent, but healthy coastal wetlands act as climate buffers and carbon stores. In 2020, Wetlands International and Boskalis joined forces to develop the knowledge and expertise required to safeguard and restore coastal wetlands to meet climate targets while benefitting biodiversity and local communities. Together we are committed to share the learnings from the collaboration with the sector as a whole.

**Greenchoice**

Wetlands International started working with the Dutch sustainable energy company Greenchoice in 2020. We are working together to accelerate and support climate change mitigation by protecting and restoring wetlands that yield climate, biodiversity and community benefits. We aim to be a catalyst that leverages further climate action by pioneering novel solutions and sharing our knowledge and experiences. Our first joint project concerns mangrove restoration in Guinea-Bissau, West Africa. The project in Guinea-Bissau will restore at least 2,500 ha of mangroves, removing carbon directly from the atmosphere and making a positive contribution to the local biodiversity and community in the process. We plan to develop further joint projects in other types of wetlands and other countries.

**Partners**

Greenchoice
Boskalis
Permian Global
exploring in 2020: Landscape Finance Lab & Commonland

**Donors**

Greenchoice
Boskalis
COmDN
Dutch Postcode Lottery
Ecoshape

More countries will tap the “low hanging fruit” that tackling Blue Carbon or peatlands offers

Further, we are working with dredging and offshore contractor Boskalis to develop the knowledge and expertise required to help restore coastal wetland habitat to meet climate targets, while addressing related issues such as biodiversity conservation.

There remains much potential. While more than a hundred countries have mangrove forests, fewer than 30 initially included them in their NDCs for climate mitigation. We hope that as countries review their NDCs every five years, more will tap the “low hanging fruit” that tackling blue carbon or peatlands offers.

One such country could be Ireland, where a fifth of the land is covered in peat. After advice from Wetlands International and others, the government in 2020 finalised a ground-breaking programme for rehabilitating its bogs, including turning the country’s main peat-fuel company into its chief peatland restorer. Dublin announced that from the start of 2021 it would report its greenhouse gas emissions and removals from bogs. “We are ready to support Ireland to turn its knowledge into action, restoring its amazing peatlands to benefit people and nature for the long term,” says our CEO Jane Madgwick.
Is West Africa’s biggest interior wetland, the Inner Niger Delta on the fringes of the Sahara Desert in Mali, on the brink of drying up? It seemed a ludicrous suggestion as intense summer rains coursed down the Rive Niger in October 2020, raising water levels in the delta to heights unseen for half a century. But the same month a series of academic studies commissioned by Wetlands International confirmed our fears that that is precisely the fate that awaits this desert jewel, if neighbouring Guinea goes ahead with the long-promised hydroelectric dam in the river’s headwaters.
Guinea wants the Fomi dam, which would triple existing water storage in the upper river, to become a power hub for the region. It could supply Gambia, Guinea-Bissau, Senegal, Cote d’Ivoire, Liberia, Sierra Leone and Mali. Meanwhile, Mali wants to use the regulated flow of water through the dam’s turbines to irrigate a giant state-run agricultural area known as the Office du Niger. The plan is to triple the irrigated area to 4600 square kilometres by 2045, and grow two crops a year for the first time.

But the water allocation for hydropower and intensive irrigated agriculture affects the delta, which is just downstream of the canal that diverts water for the Office du Niger. In the wet season, the delta swells to inundate an area the size of Belgium. This natural food production system feeds 40% of Mali’s cattle from wetland grasses, and produces 80% of its fish, sustaining the livelihoods of some three million people – fishers, recession farmers and migrating herders who move into the still-green oasis during the region’s long dry season.

“The delta and its ecosystems are vital for food security in Mali, as well as the wider region,” says Karounga Keita, the Mali-based Sahel director of Wetlands International, But the dam and anticipated irrigation diversions would wreck all that. “While food production will increase in the Office du Niger, it will drop in the delta.” Projects intended to make life better for Malians would likely make it worse – especially for those who are already poor and marginalised.

The new hydrological, ecological and social analysis, collectively known as Bamgire project, confirms a direct relationship between the extent of annual flooding in the wetland and the delta’s productivity. Its modelling concludes that the planned dam and irrigation works would reduce the production of rice that feeds Malians and people in neighbouring countries by 11%, fish catches that also supply markets across the region by 20%, and the elephant grass, known locally as bourgou, on which millions of livestock from across West Africa rely on for dry-season grazing by 7%, with repercussions for nomadic herders from Mauritania to Chad. Clay for pottery and wood for fuel would also decrease.

But these change in averages hides much bigger changes in the likely frequencies of extreme drought conditions, such as those experienced in the 1970s and 1980s, when they The productivity of the Inner Niger Delta depends on the annual flood pulse during the rainy season each October.

Planned upstream dam construction and irrigation works would reduce the Inner Niger Delta’s fish production by 20%.
caused famine and mass outmigration. The new modelling concludes that disaster years such as that suffered in 1984, the peak of the last drought, would occur not once every 50 years as at present, but once every ten years. This might worsen if the West-Sahelian climate becomes drier in the future due to climate change.

The Inner Niger Delta is a complex hydrological and ecological system, whose productivity depends critically on the annual flood “pulse” during the rainy season each October. Its huge fish output, which can be 130,000 tonnes in a good year, depends on flood dynamics that create spawning and nursing grounds. Similarly, the bourgou grasses on which the cattle depend require timely floodwater to germinate and grow. Stefan Liersch of the Potsdam Institute for Climate Impact Research noted in one Bamgire paper that “as a rule of thumb, the larger the inundated area the higher the productivity.”

But if the dam is operated to maximise hydroelectricity production, then it will reduce peak discharges down the river by 40%, which the models suggest will reduce the area flooded by 24%. This would “severely jeopardise the delta’s ecosystem integrity, and thus compromise its potential yields... and reduce livelihood options for millions of people,” concludes Liersch.

Declining productivity on the wetland would exacerbate the growing political instability in Mali, which suffered a military coup in August 2020. The region around the delta is already a cockpit of conflicts, with militant jihadists claiming to represent Fulani herders in the delta.

And the research concludes that drying out the wetland would probably also stimulate a major outflow of migrants. Some fear this could add to migrant flows from North Africa towards Europe. Interviews with more than a thousand delta inhabitants about their livelihood strategies concluded that the livelihoods of the inhabitants are already on a knife-edge, and the predicted 24% loss of productivity from the delta would result in a similar increase in people in the delta considering migration, “especially among fishermen and arable farmers”.

The prospects of the dam going ahead remained unclear at the end of 2020. Three years before, the government in Guinea had announced that Chinese backing was in place and construction was ready to begin. But since then,
THE WATER, PEACE AND SECURITY PARTNERSHIP WINS LUXEMBOURG PRIZE

Together with our partners, we accepted the Luxembourg Peace Prize for the Water, Peace and Security Partnership (WPS) in early 2020. This ground-breaking initiative was awarded for Outstanding Environmental Peace. It was founded in 2018 to identify and address water-related security risks by providing data, analysing risks and proposing solutions through capacity development and dialogue support. Data is fundamental to understanding where and how water shortages translate into social consequences, enabling decision-makers to take early and coordinated action.


The delta and its ecosystems are vital for food security in Mali as well as the wider region.

there has been silence, with speculation in 2020 that Chinese banks might be getting cold feet, because of the environmental and livelihood concerns raised by Wetlands International and others.

In theory, say the academics, releases of water from the dam could be tailored to ensure the wetland still benefits from some flooding. According to modelling, an “environmental flow regime” representing 58% of natural flow conditions, and mimicking its flood pulse might be enough. But the researchers warn that “if this is not done, then there will be the risk of the ecosystem collapsing.”

Experience around the world where such environmental flows from dams have been proposed, suggests that when dam operators are taking decisions about when to open and close their sluice gates, the demands for hydroelectricity come first, those of irrigation second, and those of everyone else a poor third.

The only floods in living memory in the delta to compare with those of 2020 happened in 1969. Right after that, drought swept across West Africa, and the delta largely emptied of water. The result was one of the great famines of the 20th century. The fear today is that the same pattern may repeat itself in the coming decade – but thanks not to the vagaries of the weather but to the short-sightedness of human engineering.

Declining productivity on the wetland would exacerbate the growing political instability in Mali

The delta and its ecosystems are vital for food security in Mali as well as the wider region.

Partners
Altenburg and Wymenga
International Water Management Institute (IWMI)
Potsdam Institute for Climate Impact Research (PIK)
University of Ottawa
Wolfs Company

Donor
Embassy of the Kingdom of the Netherlands in Mali

WPS partnership coordinator Susanne Schmeier participated in the award ceremony by video call.

One of the outputs of the WPS was the Global Early Warning Tool that uses machine learning to predict where violent conflicts are likely to occur.

Water availability can be an indicator for growing tensions and potential conflicts, as in Niger

Water Lands: A vision for the world’s wetlands and their people

In addition to the Covid-19 pandemic, the spotlight in 2020 was set firmly on the twinned crises of climate and biodiversity, and the choices the world must make to avoid catastrophe. Our landmark book Water Lands, written by journalist Fred Pearce and Wetlands International CEO Jane Madgwick, was released on World Wetlands Day, 2 February 2020, and set out a timely call to action for one of the world’s most overlooked ecosystems. As the first-ever fully illustrated reportage on the world’s wetlands, the book was very well received in all regions of the world and has served as a comprehensive source of stories to inspire action, from the peat bogs of Ireland to the marshes of the Brazilian Pantanal.

"Water Lands is exceptional because it shines a light on the importance of understanding how water systems have shaped nature, cultures and economies." - David Nabarro, Special Advisor to the United Nations

"Water Lands directs attention to the much-needed re-orientation between rapid economic development and long-term prosperity." - Ikai Ang’elei, Director, Friends of Lake Turkana

"As Water Lands makes plain, wetlands are precious beyond any utility we can quantify, beyond carbon storage or biodiversity improvement." - Charles Einstein, Author and Speaker

"Water Lands is exceptional because it shines a light on the importance of understanding how water systems have shaped nature, cultures and economies." - David Nabarro, Special Advisor to the United Nations

Water Lands: A vision for the world’s wetlands and their people

On 19 October, Wetlands International and Youth Engaged in Wetlands co-organised a youth dialogue that brought together 52 young wetland ambassadors, youth representatives from organisations including Global Youth Biodiversity Network, Youth Water Network, YOUNGO (the Youth Constituency of the UNFCCC), Youth4Nature and Re-Peat. The dialogue featured a representative from the NDC Partnership on Nature-based Solutions and a representative from Panama’s Climate Change Directorate (on the inclusion of wetlands in Panama’s NDCs) and Wetlands International on approaches to wetlands in climate action.

In the run up to the conferences of UNFCCC (climate) COP26 and the Convention on Biological Diversity (post-2020 biodiversity framework) COP15, we will use the campaign microsite as an advocacy tool and will ramp up the call for signatures and support via our Open Letter.

Meet our Wetland Champions

Maria Elisa Sánchez, Canada

Born in the second highest capital city in the world, Quito, María has been studying how mountain peatlands, such as the Helen Lake peatland in Banff National Park in Canada, are affected by a shift in winter precipitation due to climate change for the past two years. "They are natural ‘water towers’ because of their ability to collect water and release it slowly through time, but they are disproportionately affected by climate change," says María.

Tanvi Hussain, India

Getting the balance right is a major challenge for the Indian village of Hatimuria, which relies on a wetland called Bherbheri Beel in the state of Assam. Tanvi Hussain, a PhD student and scientist from the region, works on natural resource conservation with the communities who live around this wetland. "Conservation in a rural context means creating livelihood opportunities for the poor while in urban areas it is about convincing people to be more sensible about their lifestyle," says Tanvi.

Leonard Owuor Agan, Kenya

The Marura wetlands in Kenya span an area now characterised by agriculture, block making, harvesting, fishing, livestock rearing and irrigation. Locals derive more than 50% of their livelihood from the wetland’s resources. "We hope to inform and inspire people to get the products from the wetland in a way that it can be continuous without total destruction. Many people are not aware of the power of wetlands and how their lives are linked to the health state of it. This is what we hope to change," says Leonard.
Undoubtedly 2020 was a year of great concern and hampered connections for most of us. Gladly, we welcomed new members Ulrike Sapiro and Adrie Papma to the Supervisory Council and Board of the Association, bringing experience and networks from the private sector and development sector, respectively.

The fact that the Supervisory Council and Board of the Association normally only meets twice a year is usually not a problem because we combine the second meeting with field visits, staff contacts and stakeholder meet-and-greets. Digital interaction helped us to overcome the Covid-19 travel restrictions, but as we all felt, it has its limitations. We were also concerned about the impact of Covid-19 on the health of our staff and on our work in the field; we are proud to say that Wetlands International’s leadership reassured us with information about adapted programmes and a thorough and alert response to the pandemic, using updated risk analysis mapping as a tool, among others.

In our November 2020 meeting, the outlook for financial challenges in 2021 was discussed, which was subsequently overcome by project adaptations, a successful fundraising strategy and cost reductions. We received monthly reports from the Management Team and held extra meetings to monitor progress in the beginning of 2021. The relatively new Supervisory Council and Board of the Association quickly engaged to understand the operational challenges of the organisation, as well as the emerging opportunities being developed to enable wetland recovery worldwide.

We were delighted to(417,560),(520,646) hear the news that the COmON Foundation and the Dutch Postcode Lottery decided to back the organisation, with financial support in 2021 for institutional development and to mobilise strategic alliances for the recovery of mangroves, freshwaters and peatlands.

The really good news of 2020 was that Wetlands International managed to finalise the new Strategic Intent 2020-2030 through a very challenging and inclusive working process. Most of our Council members were able to participate in one or two webinars with our Regional Directors, members, partners and staff, complete with break-out sessions. This new Strategic Intent aims to upscale our proven wetland solutions and the efforts of others. We believe that this is necessary, considering the global state of wetlands, and having seen results from successful projects and programmes in the field. Let us hope that the post-Covid-19 years to come will be a great window of opportunity, with the enhanced awareness of the public and politicians for the importance of our natural heritage and natural resources.

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Who is Gastón Fulquet?
I am the Regional Coordinator of the Corredor Azul Programme, a long-term programme that aims to safeguard the health and connectivity of the Paraná-Paraguay river system and its iconic wetlands—the Iberá Marshes and the Paraná Delta in Argentina, and the Pantanal in Brazil. Before joining Wetlands International, I worked at the National Ministry of the Environment of Argentina as an advisor for international waters and integrated water management. I also hold a PhD in Social Sciences by FLACSO where I specialised in political ecology and international political economy.

What was your biggest personal work achievement in 2020?
2020 was a year full of personal and professional challenges in the context of Covid-19. We also experienced the driest period in over 60 years, with fires all along the Paraná-Paraguay wetland corridor. Within that frame, one of my biggest work achievements was keeping the programme running and the team motivated to continue finding creative ways to get our message across. We learned new ways of working together at a distance, but still brought significant outputs, clear messages, and practical solutions in moments of enormous uncertainty. We went beyond expectations even within this “new normal.”

This collective effort, between our technical and advocacy staff, resulted in the inclusion of a National Wetlands law in Argentina’s Nationally Determined Contribution (NDC) to the UNFCCC. We are aiming for a seat on the Advisory Board of the National Climate Change Inter-Ministerial Cabinet this year.

What is the nicest thing about working at Wetlands International?
I feel proud to be part of an organisation willing to build examples and develop evidence of how things can be done differently. I believe that real transformations begin by exercising dialogue with all actors in society who perceive the need for a change of paradigm and are ready to construct a new path, taking the best of what others have to offer. Wetlands International has that vision and puts a lot of energy, time, knowledge and experience into building bridges with others in hopes of more integrated solutions for the good of nature and society.

What do you want to achieve in 2021?
In 2021 I want to engage our Programme team in contributing actively to the discussions around wetlands and climate change. While changes in rainfall regimes across South America partially explain the intense fires experienced last year, the drought also made visible what can happen when wetlands are not able to perform their functions and provide essential services such as fire regulation and carbon sequestration. In that direction, we have been working for wetlands to be considered as fundamental ecosystems for climate change adaptation in Argentina’s Nationally Determined Contribution (NDC) to the UNFCCC. We are aiming for a seat on the Advisory Board of the National Climate Change Inter-Ministerial Cabinet this year.

What is your favourite species and why?
One of my favourite species is the Tuyuyú, also known as Jabí (Mycteria americana). This bird species is representative of our call to keep the Paraná-Paraguay Corridor connected and ecologically functional. In the search for the best habitat, the Tuyuyú flies over the more than 3,400 km separating the Pantanal from the Paraná Delta, considering the flood regimes of each of these macro-wetlands.

Who is Ken-Ichi Yokoi?
I joined Wetlands International in 2010, where I worked in the Japan office as a researcher until 2015 and now as the Director since 2016. Before joining Wetlands International, I was a fish researcher, carrying out research on the life history, reproductive ecology, and genetic structure of endangered freshwater fish that are endemic to the UNESCO World Heritage Site of the Ogasawara Islands in the Pacific Ocean. Later, I was involved in researching and improving aquaculture techniques for bluefin tuna, eel, and sweet smelt, amongst other species. At Wetlands International, I became involved in the survey of a broader range of wetland species, including plants and algae. I have loved dolphins since I was a child and dreamed of swimming with wild dolphins and whales. As a university student, I will never forget my excitement upon seeing a sperm whale for the first time, and I treasure my youth spent on a tropical island in everlasting summer. That experience was the starting point for what I am doing now.

What was your biggest personal work achievement in 2020?
The most significant achievement of 2020 was to set out action for 2021.

What is your favourite species and why?
A long time ago, I would have always mentioned the tiny goby Rhinogobius ogasawaraensis, which was the subject of my first research. Nowadays, just going to a wetland is exciting, and anything new is fascinating.
FUNCTIONING OF THE ORGANISATION

Covid-19
The Covid-19 pandemic affected people in every country in 2020 due to its health impact and the restrictions necessary to control its spread. Everyone had to change how they worked substantially, with many seeing major financial difficulties as they tried to adapt.

Wetlands International was no exception and faced a challenging situation in all of our offices. Impacts were felt directly by our staff, from illnesses, quarantine and worry about family, friends and future employment, to personal isolation caused by our offices being closed for much of the year. Project implementation suffered delays which required extensive re-planning and re-negotiation with donors, and we had to accelerate the use of IT systems to work effectively and securely virtually.

It was a struggle for everyone, but our staff showed enormous resilience, equally matched by the understanding and flexibility shown by our programme donors. In many countries our teams also took care to help wetland communities and our local partners adapt to the constraints imposed by the pandemic. See the examples pages 22-28.

Strategic Intent
Wetlands International’s Strategic Intent (2020-2030) was approved by the organisation’s governance in November and the General Members Meeting in December 2020. An introduction to the Strategic Intent is provided on pages 10-11 and can be downloaded in full here. This sets out ambitious goals across three streams of work and provides a framework for the global organisation within which multi-year regional and office specific strategies and annual action plans are developed and implemented.

Achievements
Results that contribute to the goals set out in the Strategic Intent are delivered collaboratively by our office teams through programmes and projects, in line with the local context in which they operate. A summary of achievements is provided on pages 12-19. A list of main projects carried out in 2020 is provided in pages 50-53 of the Annex.

Wetlands International network
Wetlands International is an independent global network of offices with shared values, brand and purpose that implement a joint strategy to safeguard and restore wetlands in more than 100 countries worldwide. Our offices and locations are shown on page 68.

Global Office
The Global Office, based in the Netherlands, 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. A brief social report for the Global Office in 2020 is presented on pages 76-77.

Communications and advocacy
Policy positions and our brand strategy ensure that we speak with one voice across the whole network organisation and guide our external communications and brand use. This work is supported by a dedicated team based at the Global Office. In 2020, the #PowerOfWetlands campaign was launched with the objective of mobilising support to make healthy wetlands a national and global priority to help heal the climate and restore biodiversity (see page 62).
Governance
Wetlands International is a non-profit organisation with charitable status (CBF) in the Netherlands and in most countries where it operates. The organisation 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 2020 Supervisory Council report is presented on pages 64-65. In cases where offices have an independent legal status, they are governed by national or 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, with members drawn from among heads of office and global functions. The global management team facilitate the work of the foundation globally. In 2020, the Network Management Team met every two months and helped steer the organisation through the challenges presented by the Covid-19 pandemic. The global board met in October and focused on the implementation of the Strategic Intent and priority setting for 2021.

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.

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. Stakeholders can approach Wetlands International with their grievances or complaints related to possible cases of fraud or mis-management. The complaints procedure is available on the Wetlands International website. In 2020 there were no 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 the Global Office in the Netherlands, we actively encourage our employees to use public transport and all flights booked are compensated for their CO2 emissions (21 tonnes in 2020). This represents a 95% reduction in relation to 2019 due to the impact of the global pandemic. Commuting to work and domestic travel were also reduced dramatically as staff worked from home for a large part of the year and online meetings became the standard way of working internally and externally.
## Risk Management

A risk register is updated at every reporting cycle, including mitigating measures, and discussed with the Wetlands International Supervisory Council. It is not surprising that dealing with the immediate and lasting effects of Covid-19 was ranked as the highest risk at the end of 2020. The top five risks as rated in December 2020 are specified in the table below:

<table>
<thead>
<tr>
<th>Area of Risk</th>
<th>Potential Impact on Organisation</th>
<th>Mitigation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Insufficient resources to implement the Strategic Intent and cover organisational costs</td>
<td>Financial</td>
<td>Without a strong pipeline of new prospects and project proposals, it will be harder to create the positive impact needed for wetlands and the communities who depend on them, and to maintain core staff.</td>
</tr>
<tr>
<td>3. Subcontracts and reporting are not of sufficient quality</td>
<td>Financial</td>
<td>Cost over-runs, disallowed expenditures (non-compliant with donor conditions) and insufficient delivery of results.</td>
</tr>
<tr>
<td>4. Political instability and conflict</td>
<td>Governance</td>
<td>Need to stop or substantially change implementation due to insecurity or change in government support.</td>
</tr>
<tr>
<td>5. Economic recession in multiple regions leads to less funds available and more competition</td>
<td>Financial</td>
<td>Less opportunity to develop and implement new programmes with impact on income and staff budgets.</td>
</tr>
</tbody>
</table>

### Increasing our reach

The strength of Wetlands International is more than the total of its staff and 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 Honour, bring high-level expertise, guidance and connections. Specialist groups, associate experts and partners provide expertise, evidence and advice that underpins our approach on science, policy and practice. Partner organisations with whom we work regularly to implement programmes and projects are listed on pages 69 onwards. 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 each year.

### Strategic partnerships

Wetlands International works within many 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. In 2020, we signed new strategic partnerships with Boskalis, a leading global dredging and offshore contractor and maritime services provider, and with Greenchoice, a Dutch sustainable energy company that is leading in making possible a decentralised energy transition. Boskalis and Greenchoice are introduced on page 53.

### Members

Government and NGO members of the (global) association provide long-term support and strategic guidance to the organisation. In December 2020, members passed resolutions to adopt the Strategic Intent (2020-2030), approve two new members of the Board of Association, endorse changes to the Articles of Association, and take note of the 2020 finance report (forecast) and the 2021 budget for the Association. Our European Association has 10 NGO members that jointly steer our programme action across the region.

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36 (global) Association Members
10 Supervisory Council
6 Counsellors of Honour
16 Specialist Groups
10,000+ Volunteer Citizen Scientists
251 Partners
10 European Association Members
31 Associate Experts
10,000+ Volunteer Citizen Scientists
Wetlands International is proud of its professional and motivated staff. This section provides insight into our global office staff and human resource practices in 2020.

**Covid-19**
The global pandemic changed many aspects of our working practices in 2020. We created a Corona team that oversaw our policies and practices to ensure the safety and well-being of our staff while endeavouring to deliver the best results possible for our mission. Working from home was the norm for our team in 2020 with no travel outside the Netherlands for more than nine months of the year. Our staff have adapted amazingly well and have shown an amazing resilience under difficult circumstances.

**Diversity**
In December 2020, the number of global office staff was 39. Our staff has a diverse cultural and professional background which matches our role as an international NGO. During the year we had staff with 11 different nationalities, with an average age of 45 years and a balanced male/female ratio of 42/58%. More than 75% of our staff have university degrees and those with PhD’s increased from 4 to 6.

**Employment contracts**
The average number of working hours per week during the year was 33 (fulltime is 36 hours). During 2020 we employed 9 new staff members and 10 staff members left. We have adjusted our way of working with staff contracts in order to maintain some flexibility in our staffing and following changes to Dutch employment law. This means that we now offer a permanent contract after a period of 36 months on a fixed term contract.

**Induction at a distance**
Working from home since March 2020 is not only a challenge for existing staff, but it is also difficult for new staff. We notice that it takes more time and energy for new staff to become familiar with the organisation in circumstances where they only meet their new colleagues online. Staff in line management positions have had to take on additional work in this respect.

**Health**
Despite the impact of Covid-19 and the difficulty of working online from home for an extended period of time, we are fortunate to have maintained a low level of sick leave (< 1%). Working from home meant that staff had a lower risk of infection in public transport or at the office.

We have provided staff with additional equipment (screens, chairs, keyboards, etc.) to enable them to work safely. In 2020, we had only one case of a staff member with long-term illness.

**Integrity**
Integrity and personal safety are top priorities for our organisation and we consider it important to be transparent about this. We have procedures on our website and intranet that enable external and internal complaints to be dealt with confidentially and without consequences for the person raising the issue. In 2020, no external complaints were received and there was no recourse by staff to the independent counsellor who is external to the organisation.

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**Spotlight: Global Office Social Report 2020**

**11 NATIONALITIES**

**STAFF NUMBERS**
- total: 39
- fte: 36.2
- part-time: 13
- full-time: 26

**HIGHEST LEVEL EDUCATION**
- PhD: 6
- master: 24
- bachelor: 7
- other: 2

**CONTRACT TYPE**
- permanent: 22
- fixed time: 14
- project: 3

**HEALTH**
- short-term
  - sick leave <1%

**INTEGRITY PROCEDURES**
- internal: 0
- external: 0
Who is Simon Akwetaireho?
I was born in Hoima District close to Budongo Central Forest Reserve, the largest tropical high forest in Uganda. Lumbering was lucrative then and we revered and respected those involved in the trade. This endeared me to study forestry at Makerere University. Later discovered that forests have immense socio-economic and environmental benefits besides timber. I had a seven-year community conservation stint at four wildlife national parks before moving to work on projects in the northern Albertine Rift forest and Lake Victoria. At Wetlands International, I am the Technical Officer working on a three-year project on Ecosystem-based Disaster Risk Reduction (EcoDRR) in Aswa River Catchment. I have a MSc. degree in Protected Area Management from the University of Klagenfurt, Austria; a PGD in Endangered Species Management from University of Kent at Canterbury, UK; and a BSc in Forestry from Makerere University, Uganda.

What was your biggest personal work achievement in 2020?
This would be supporting and empowering 33 farmers through our bio-rights approach in developing viable, market-oriented and profitable small-scale honey value chains. Commercial beekeeping is one of the ventures expected to increase household incomes and food security in addition to conserving the dwindling wetlands associated with Upper Agago sub-catchment in Abim District.

What is the nicest thing about working at Wetlands International?
It’s the open-door policy, inclusive and non-bureaucratic organisation which encourages quick decision making, open communication, mutual respect among staff and feedback on matters requiring urgent attention. This offers learning opportunities in the form of knowledge, best practices and experience exchange that comes with working across sectors, and in multi-disciplinary teams at all levels as well as North-South collaboration. We are also empowered to be fully in charge of all aspects project-wise; hence taking credit and recognition for, and ownership of the achievements made toward organisational mission and vision.

What do you want to achieve in 2021?
In 2021, my eyes and energies will be on increasing the visibility and publicity of Wetlands International in the project area through promoting an Information, Education and Communication campaign. As the EcoDRR project ends in December, my target is to support the project’s beneficiaries prepare sustainability plans as an exit strategy.

What is your favourite species and why?
My favourite species is the shoebill stork, a rare bird surviving in the wetlands Fringing Lake Victoria in the in the Kampala metropole. These wetlands are under immense pressure, and the shoebill stork, a charismatic and iconic species, attracts technical and financial support from the private sector and NGOs that are invested in the protection and sustenance of the critical wetland ecosystems.

Teresa Zuna
Project Manager
Office: European Association

Who is Teresa Zuna?
I am Portuguese but have lived in The Netherlands since 2012 when I began as a volunteer at Wetlands International by supporting the Ramsar Information System. I hold a Geography degree and a Master’s degree in Geographical Information Systems (GIS) and Land Modelling. At Wetlands International I’ve had different positions over the years, but since March 2021 I have worked as the Project Manager for a partnership focused on strengthening Integrated river management that I am facilitating through Wetlands International Europe. Bringing partners together and enabling them to achieve their goals, building their resilience towards the future, and helping them secure new funding.

What is your biggest personal work achievement in 2020?
In 2020, the Covid-19 pandemic posed unprecedented challenges and we had to be more flexible and adaptive than ever. I feel my biggest achievement in 2020 was a team effort, with Lammert Hilarides, Ildiko Nagy, Maria Stolik, Gulnar Bayramova, Nazalat Azimii, Marij Kleinsechiporst, Willeijn Podt, Joost van Dantzig and Ron van Leeuwen, when we started the implementation of the new financial and IT system that was launched in January 2021. This system is a great improvement, with increased information sharing between the different teams.

What is the nicest thing about working at Wetlands International?
It’s not just that I truly believe in the mission and values of Wetlands International – the nicest thing about working at Wetlands International is how inspired I feel to work with committed and engaged colleagues towards a common goal.

What do you want to achieve in 2021?
My goal for 2021 is to strengthen the partnership linked to integrated river management that I am facilitating through Wetlands International Europe. Bringing partners together and enabling them to achieve their goals, building their resilience towards the future, and helping them secure new funding.

What is your favourite species and why?
My favourite species is the hawksbill sea turtle. I always found sea turtles to be amazing, but it was only when I participated in a volunteer programme in Nusa Penida, Indonesia that I fell in love with them. One of my favourite hobbies is scuba diving and I encountered hawksbill turtles several times in my dives; watching them gracefully glide over the coral reefs is an unforgettable experience.

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SUMMARY OF FINANCE AND RESOURCING

This section provides a summary of Wetlands International’s finance and resourcing in 2020. A detailed version can be found in section 1 and 2 (annual accounts) and section 3 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 three streams: Coasts and Deltas, Rivers and Lakes, and Peatlands (see section 3.1 of the Annex for a list of projects).

Our programmes are increasingly large-scale and long-term, involving transboundary and international work that involves several offices. The network’s offices (global and sub-regional, national) work together on resource development and an increasing amount of funding is raised by offices other than the global office.

Resourcing the global organisation

The main sources of income of Wetlands International for 2020 came from projects as well as important annual contributions from our members. The total network project income is based on data obtained from all offices according to their national finance practices. The total network project income of 2020 amounted to €12.7 million (see Annex section 3.1).

Our sources of income and expenditures across the sectors

The major source of income from projects of Wetlands International in 2020 was from government grants, totalling 57%. In 2020, corporate funding (through our Collaboration Agreements) was 8% and 32% came from Trusts, Foundations and Non-Profits. Membership contributions are 3% of the total income. A full list of network projects can be found in section 3.1 of the Annex. This list provides an overview of projects implemented in 2020 per office and includes the stream, the amount funded, the donor and the donor type.

Our sources of income and expenditures across the three streams

Across our three streams, Rivers and Lakes accounted for the largest portion of our income at 55%, Coasts and Deltas at 34% and Peatlands contributing 8% of total network income.

Increased resource development by network offices

In 2020, network offices received and managed 34% of the total income directly from our donors. This is slightly lower than in 2019 (42%). This decrease was mainly due to delays of project activities during the Covid-19 pandemic.

Projects that are managed through the global office are mostly implemented by our network offices or by affiliated scientific institutions, partners and experts using sub-contracts.

Considerations looking ahead

We continue to navigate our way through the Covid-19 pandemic. Many of our projects have suffered delays on the ground due to the pandemic. We are pleased that there has been understanding and flexibility shown by our donors to adapt activities not only during 2020 but also in 2021. Our local and global teams have adapted to this situation swiftly and creatively.

We took measures in 2020 to reduce organisational costs as part of our adaptation to the pandemic and the completion of several large, long-term programmes. In 2021, we plan to invest in raising wetlands higher on the global agenda and to improve our network’s institutional capacity and financial resilience. This is possible thanks to two major grants received in 2021 from the Dutch National Postcode Lottery and the COmON Foundation. New partnerships forged in 2020 are starting to accelerate our work on wetland carbon in mangroves and peatland landscapes.

Operational improvements already include a new finance system launched in January that will increase our efficiency and further strengthen our financial management standards. In addition, there is a plan to develop a fundraising team across the offices, to strengthen communications and our influence and to improve knowledge management and learning.

By working in strategic alliances towards our big ambitions, we have been able to achieve strong results by combining efforts with key partners on fundraising. However, we continue to be dependent on project funding and therefore are vulnerable to shifts in donor priorities and increasingly competitive calls for proposals. Our priority is to secure long-term and multi-region programme development.

We also continue our efforts to enhance our base of members and supporters, and plan to explore mechanisms which will improve the financial resilience of the Wetlands International network as a whole.
“From the start of the Convention in 1971, Wetlands International has been indispensable to getting the Convention operational and on track. Providing reliable data and information on waterbirds and migratory birds was a starter motor for “discovering” new listable sites and also signalling threats for already listed sites (Montreux list). Wetlands International’s greatest gift to the Convention was showing how wise use of wetlands works on the ground. Scaling up these wetland solutions with new partners is our challenge for the years to come.”

“Freshwater availability and quality are increasingly material risks for businesses. The Coca-Cola Company is partnering with many expert organisations to protect local ecosystems like wetlands, grasslands, peatlands and forests worldwide. One example is our cooperation with Wetlands International and others to restore the Guanacache Wetlands in Argentina, as well as our support to improve the management of other wetlands of international importance like the Llancanelo lagoon.”

In 2021, the Ramsar Convention on Wetlands celebrates its 50th anniversary. What is the key role Wetlands International has played in the past 50 year of the Ramsar Convention and how can we collaborate more effectively with the parties over the next 50 years?

Name an inspiring example of how business contributes though wetland management to meet the 2030 global goals.
Question to our Members

In 2021, the Ramsar Convention on Wetlands celebrates its 50th anniversary. What is the key role Wetlands International has played in the past 50 year of the Ramsar Convention and how can we collaborate more effectively with the parties over the next 50 years?

Ms. Tomoko Ichikawa
Ministry of the Environment
Japan

Wetlands International has led the Asian Waterbird Census and the Waterbird Population Estimates that are indispensable for the conservation of migratory waterbirds and their habitats, providing crucial scientific data that can prove the importance of many wetlands that meet Ramsar criteria. We trust that Wetlands International continues to take the lead in wetland conservation by involving more stakeholders in many countries.

Mr. Jan-Petter Hubert-Hansen
Norwegian Environment Agency - Norway

Through the years, Wetlands International has done an admirable job putting crucial wetland issues on the agenda. In light of the importance of wetlands for biodiversity and climate change, Wetlands International’s efforts need to be increased and strengthened. For the coming years, I believe that a very good basis for more fruitful, efficient and strengthened collaboration with the Parties of the Ramsar Convention and the Members of Wetland International is in place already, namely the Wetland's International’s Strategic Intent 2020-2030, Scaling up the Power of Wetlands.

I’ve always seen Wetlands International as a kind of supplement to the Ramsar Convention on Wetlands, but with a less formal and more flexible approach, making it easier to realise certain projects on the ground. More countries need to become members of Wetlands International, which could make it easier to cooperate regionally on selected wetland topics under a Wetlands International umbrella, while also meeting the obligations of the Ramsar Convention. Norway therefore strongly urges other countries to become Wetlands International members!

Black-faced spoonbills wading in the coastal wetlands of Japan.

Norway has a wide variety of wetland types, and designated Ramsar sites such as the inland delta of Nordre Øyeren.
The achievements and progress made towards our 2030 targets, as set out in the Strategic Intent 2020-2030 and documented in this annual review, would not have been possible without our greatest resources: our teams across the network of offices, our worldwide network of volunteer International Waterbird Census (IWC) observers and the support of our donors, members and partners.

THANK YOU

The International Waterbird Census, one of the longest running and largest citizen science programme in the world can only bring together counts of millions of waterbirds through the investment of many hours of fieldwork by tens of thousands of volunteers. A big thank you to them.

Below, we would like to give special thanks to a few of our donors who were critical for Wetlands International’s impact in 2020:

• The European Commission for supporting the Eco-DRR programme and the LIFE Operating Grant for our Wetlands International – European Association.

• The International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Netherlands Enterprise Agency (RVO) for their support to the Building with Nature Indonesia programme, the Accelerating Adaptation through Building with Nature in Asia upscaling initiative, as well as the Climate Resilient Flyways projects.

• The Dutch Postcode Lottery for their major grant which provided seed finance that enabled us to add value and scale up our programmes. For the brief report on their 3-year grant, see page 20.

• To private trusts and foundations, including DOB Ecology for supporting major programmes in Africa and South America, the MAVA Foundation for funding our programme in the Mediterranean region, and the Arcadia Charitable Fund for supporting our project in the Yellow Sea.

• To all the donors of the Global Mangrove Alliance and especially of the Global Mangrove Watch: The Oak Foundation, the COmON Foundation and The National Philanthropic Trust, see page 38.

• The Embassy of the Kingdom of the Netherlands in Mali, the Netherlands Enterprise Agency (RVO), the Swiss Agency for Development and Cooperation (SDC) and others for funding our work in the Sahel, the Horn of Africa and elsewhere on the African continent.

• Many of the ministries of environment or development agencies, state and local governments from countries, such as of Japan, India, Malaysia, Switzerland, Germany, the Netherlands, Canada and Panama, and all government and NGO members who together enable us to coordinate the International Waterbird Census.

A big thank you, also to all the other donors listed on page 75 onwards of the Annex.
Student members from four villages in the Saloum Delta (Mbam, Foundiougne, Sokone and Dassilamé) in Senegal, Africa, and their teachers participated in an initiation session to counting waterbirds, alongside the international count organised on 15 January 2020.