We need wetlands: The urgent case for global wetland targets

White Paper 2022

Wetlands INTERNATIONAL

Foreword

Wetlands are the unsung heroes of our planet and the people who call it home. Teeming with biodiversity, they store carbon, hold most freshwater, improve water quality, and support billions of livelihoods. However the loss of wetlands is intensifying the climate, biodiversity and water crises; when wetlands suffer, we suffer.

In my home country Uganda, water scarcity is a major issue threatening the health and survival of people and wildlife. People's livelihoods are at great risk from the impacts of climate change – storms, floods, and droughts. As a child, my family's grocery shop flooded every time it rained, triggering my mother's asthma. I would stay home from school to drain the water and care for my mother. Every time it rains, I feel terror.

My community endures this, yet we did little to create the climate crisis. Africa is one of the most vulnerable continents to climate change but is responsible for less than 4% of global carbon dioxide emissions[1]. Climate injustice is a heartbreaking reality felt across Africa and beyond.

Resolved to defend the most affected people and areas, I am fighting to protect wetlands, which play a unique role in mitigating climate change, and helping communities adapt to its effects. In Uganda the destruction of these superhero ecosystems continues as they are used for settlements and industry. When the government advances infrastructure and industrialisation, wetlands are continually threatened. Together with other youth advocates, I am mobilising to restore the Nateete and Busage wetlands, Lelant swamp, and Lubiji wetland. Local grassroots action is powerful, but we need world leaders to act with us. This crisis requires global ambition and unprecedented collective action. Let them stop making empty promises and instead turn their words into action for a better planet.

People are suffering right now.

I urge you to feel in your hearts the injustice - the livelihoods and entire ecosystems disappearing. Where did our humanity go? Let us think of the beauty our grandparents experienced and feel guilt for what we are leaving future generations. We need our natural environment in order to breathe, and we need to protect it to create a safer world.

I urge you to take action to restore wetlands and keep 1.5 alive. I stand with Wetlands International and people across the world to call for global targets and action for wetland restoration.

By **Patience Nabukalu,** climate justice and environmental activist from Uganda

Yus Rusila Noor

Nanang Sujana

Wetlands International: We Need Wetlands

Preface

Wetlands are vital to securing a liveable future for people and nature. Capturing, storing and providing water, providing productive lands, storing more carbon and hosting greater biodiversity than forests, wetlands matter to each and every one of us.

Yet these ecosystems have been overlooked and therefore they continue to be lost. It is astonishing that we have no global wetlands targets to reverse these negative trends. Global targets are critical to drive coherent action worldwide. As COP15 conversations are postponed and wetlands continue to be sidelined, awe-inspiring creatures in watery habitats are going extinct. Wetlands are literally going up in smoke and down the drain. Wetland degradation is causing huge greenhouse gas emissions, loss of productive land, as well as more extreme floods and droughts.

We are in a critical decade for action and COP15 must move wetlands to the top of the agenda. Join us in calling for ambitious targets for the conservation and large scale restoration of the world's wetlands, before it really is too late.

By **Jane Madgwick,**
CEO, Wetlands International

Introduction

Wetlands store almost a third of global soil carbon[2], and support 40% of global biodiversity[3], despite covering just 6%[4] of the earth's surface. These facts alone are enough to indicate the significance of wetlands in our efforts to fight climate change and halt biodiversity loss.

Nevertheless, wetlands are disappearing three times faster than forests, with 35% of wetland ecosystems lost since 1970[5]. As COP15 and COP27 negotiations take place this year, it has never been more urgent to understand the value of wetlands and to set biodiversity and climate targets for the next decade and beyond.

This white paper provides a global assessment of the potential of wetlands to offer a key solution to global warming and biodiversity loss. It will look first at the carbon storage potential of wetlands and what this means for limiting global warming to below 1.5 degrees Celsius, before exploring the importance of wetlands for global biodiversity. Key case studies will bring real-world context to the data, highlighting the communities that rely on wetlands and demonstrating the gains that can be made for people and nature through the protection and restoration of these critical ecosystems.

What is a wetland?

Wetlands are ecosystems periodically or permanently saturated with water, and encompass a varied range of habitats from lakes, rivers, fens, peatlands and deltas, to mangroves, coral reefs and seagrass meadows. In addition to their significance for biodiversity and climate mitigation and adaptation, wetlands support the livelihoods of over one billion people globally. They are relied on for the access they give to freshwater, for the natural resources they provide, and for the protection they offer coasts against storms and rising sea levels. We simply cannot survive without wetlands.

Wetlands International: We Need Wetlands

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Overlooked superheroes

Wetlands are multifaceted superheroes, simultaneously sequestering carbon, protecting coasts, supporting livelihoods and providing habitats for a huge proportion of global biodiversity.

Despite this, wetlands are frequently overlooked in global policy on climate mitigation, biodiversity loss and adaptation, absorbed into global land and ocean targets with little consideration of the need for these complex ecosystems to be managed under their own set of targets.

In contrast, forests have (rightly) received consistent and meaningful attention in global negotiations over the last decade and beyond, exemplified most recently by the global leaders' pledge at COP26 to halt and reverse forest loss by 2030. It is within this context that Wetlands International has produced this white paper, in order to demonstrate that securing the future of wetlands is crucial to securing the future of the planet, and to argue for specific global wetlands targets to be adopted.

COP15 provides a major opportunity for wetlands

Biodiversity and climate experts have united to warn that the nature and climate crises must be solved together[6], and COP15 has been heralded as a pivotal moment. During the pre-COP15 talks in Nairobi, Kenya, and beyond, we hope this report will serve as an important reminder of the power of wetlands in securing a safe and habitable future for all life on Earth.

At this time, the COP15 summit has been delayed four times and the date and location remain unconfirmed. In the face of the ecological emergency, this summit is critical to stopping and reversing the global destruction of biodiversity. COP15 and action for wetlands cannot wait.

Rodolgo Iturraspe

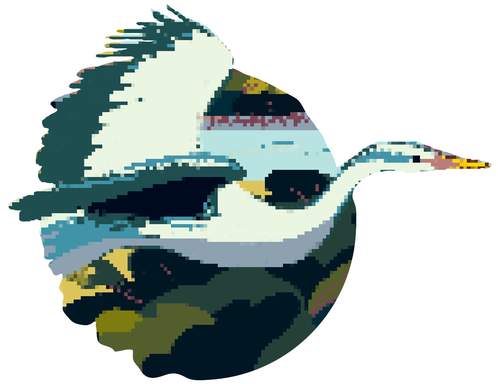
The carbon storage of wetlands

According to a damning assessment by the IPCC last year, unless we take rapid and transformative action on carbon reduction, we are unlikely to limit global warming to 1.5 or even 2 degrees Celsius. What's more, the UN scientific body's latest report[7] on impacts, adaptation and vulnerability warns of the 'rapidly narrowing window of opportunity to enable climate resilient development' at our current rate of warming. A significant element of the transformative action needed involves the protection of nature; the same report emphasises the necessity of conserving and sustainably managing 30-50% of the earth's surface (including land, freshwater and ocean). The incentive for this is the multiple benefits and services that nature provides, one of which is the sequestration (drawdown and storage) of carbon, which has a mitigating effect on climate change. In short, protecting and restoring biodiversity serves as a nature-based solution to the climate crisis. Given that wetlands contain some of the highest stores of soil carbon[8], they are an exceptional nature-based solution.

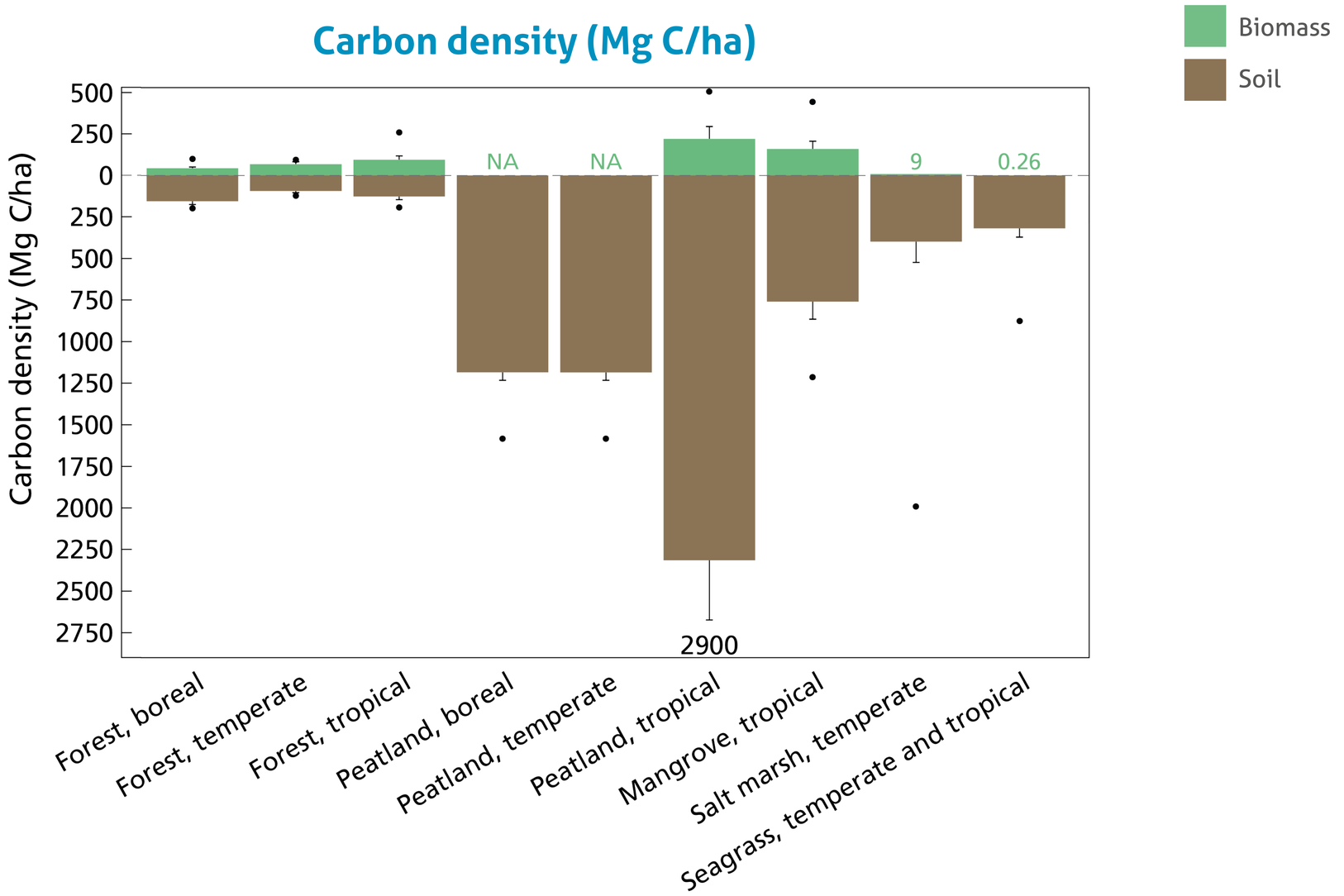
Much of the global conversation around landscape conservation focuses on reducing deforestation, with forests rightly viewed as key ecosystems when it comes to targets for carbon sequestration on land. Oceans too are the subject of significant targets for conservation given their ability to absorb carbon. However, this land-ocean binary fails to allow for the specific and unique properties of wetlands as interfaces between land and water, meaning wetlands are often overlooked in global targets for conservation and restoration.

Mangrove forests, for example, get less publicity than tropical forests, despite the fact that the destruction of mangrove ecosystems results in 10% of total CO_2 emissions[9] from deforestation globally. Similarly, peatlands alone hold 30% of all carbon stored on land – roughly twice the amount[10] stored in the world's forests – despite comprising just 3%[11] of the global land surface. Considering this, it becomes clear that the conservation and restoration of wetlands must be a significant part of global action on carbon drawdown and climate mitigation.

To illustrate the carbon storage of wetlands, we have created the below infographic, which compares the carbon storage per hectare of several wetland ecosystems – namely mangroves, seagrasses, salt marshes and peatland - with that of tropical forests. Our aim here is not to criticise the focus of global conservation on tropical forests, rather to demonstrate that a reframing of conservation and restoration aims within policymaking and the wider public consciousness is necessary in order to acknowledge the value and importance of wetlands when it comes to addressing the climate crisis.



The carbon storage of wetlands

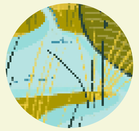


Source: Temmink et al. 2022

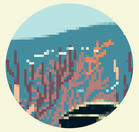
Wetlands and biodiversity

40%
of the world's plants and animals make their homes in wetlands

200
new species are discovered in freshwater wetlands every year



3,000
species of fish are supported by mangrove ecosystems



25%
of all marine life is supported by coral reefs

We are at a critical point for global biodiversity. Currently, one quarter of plant and animal species[12] are threatened with extinction, and it's estimated[13] that humans have caused the loss of 83% of all wild animals and half of all plants. These losses are devastating for countless reasons, not least because of the intrinsic value of nature. On a more practical level, there's a clear economic argument for halting and reversing nature loss, with the World Economic Forum revealing that over half of global GDP[14] is threatened by biodiversity loss and the destruction of nature.

Why are wetlands key to protecting biodiversity?

A staggering 40%[15] of the world's plants and animals make their homes in wetlands, and every year 200 new species[16] are discovered in freshwater wetlands. Meanwhile coastal wetlands such as mangroves are among the most biodiverse ecosystems on Earth. According to the UN[17] there are over 40 birds, 10 reptiles, 1 amphibian, and 6 mammal species that are only found in mangroves, and the ecosystems support more than 3,000[18] species of fish.

Coral reefs – perhaps less likely to be universally understood as a wetland – boast more species per unit area[19] than any other marine ecosystem, and support an estimated 25%[20] of all marine life. This includes 4,000 species of fish, 800 species of hard corals, and over 1 million species of other animals[21].

Healthy wetlands can also play a key role in climate adaptation, building resilience in local communities across the world who are vulnerable to the impacts of the climate crisis. If we don't protect wetlands then we are threatening the lives that rely on these environments for their existence and protection. However, currently the protection and restoration of wetlands is not accounted for in global nature and climate agreements, and the first draft of the post 2020 Global Biodiversity Framework failed to mention 'wetlands' in the text.

Global targets for restoring and protecting wetlands

Wetlands International proposes five global, habitat-based targets, based on the best available science, that reflect the scale of change needed to improve ecological and social resilience.

1. Peatlands

The remaining undrained peatland carbon stores remain intact and 10 million hectares of drained peatland are restored by 2030.

2. Mangroves

A net gain of 20% in global mangrove cover by 2030.

3. Rivers and floodplains

Remaining free-flowing rivers and floodplains are preserved and river connectivity is enhanced, restoring floodplain ecosystem functionality and area by 2030.

4. Tidal flats

A net gain of 10% in the area of tidal flats by 2030.

5. Migratory birds

50% of the estimated 7,000 critically important sites identified along flyways come under favourable management by 2030.

CASE STUDY

Saving High Andean wetlands

High Andean wetlands are central to local economies, including ensuring pasture for llamas, alpacas and domestic animals, providing peat for fuel and food resources to local communities, and representing an invaluable cultural heritage. Their associated peat bogs are important carbon sinks.

Decades of human activity has impacted this ecosystem, from unrestricted livestock grazing to climate change and pollution from extensive mining activity.

In 2017, Wetlands International in Argentina commenced a five-year initiative to protect the High Andean wetlands[22], and the people and wildlife that are inextricably linked with them. It began with a two-year pilot project working with local communities of Pozuelos Lagoon in Argentina and Junin Lake in Peru, to identify and reduce threats to wetlands.

The next five-year phase is focused on improving the conservation status of five threatened High Andean wetland systems in Argentina and Peru. Continuing to adopt a participatory and inclusive approach, this project works collaboratively with communities to support sustainable grazing for cattle, restore wetland habitats and advocate for better wetland management. As a result, today more than 631 families have participated in the programme implementing better livestock grazing practices in more than 20,000 hectares, and more than 238 hectares of wetlands are under management with restoration actions.

Finally, activity involves advocacy to ensure that mining operations comply with legal, social and environmental standards in collaboration with local communities, NGOs and governments. Efforts in Argentina are focused on Salinas Grandes-Guayatayoc Lagoon and Altiplano of Catamarca in Argentina, which face imminent threats from lithium mining.

* This project is a Wetlands International programme financed by DOB Ecology.
Our partners are ECOAN in Peru, and FARN and YUCHAN in Argentina.

Alan Chamorro

CASE STUDY

Safeguarding Sahelian wetlands for food security

Wetlands play a crucial role in supporting food security across the Sahel. These 'blue lifelines' comprise rivers, floodplains, inland deltas and lakes, which are essential for farmers, fishermen and pastoralists - especially in times of drought. As food production increases in the Sahel, these wetlands are under increased stress.

Many of the smallholders depending on these wetlands have limited access to technologies, knowledge, credit and markets; limiting their ability to invest and experiment with more sustainable and profitable food production practices.

This programme is working to enable sustainable food production[23] in Lac Wegnia and the Sourou Basin in Mali, as well as around Lake Ziway in Ethiopia. Bringing together farmers, cooperatives, suppliers, buyers and governments, it ensures smallholder farmers are included in the benefits of sustainable growth and economic development.

The project is creating positive impact for local communities by enabling access for farmers to technologies and resources, building knowledge on hydro-ecological functioning of landscapes, establishing an ecological buffer zone along the Lake Ziway to reduce negative impacts from crop production, facilitating cross-sector platforms, and connecting farmers to markets.

*This project is carried out by Wetlands International, Caritas Switzerland, International Water Management Institute and hydrosolutions GmbH.

Caritas Switzerland

CASE STUDY

Conserving tropical peatland in Indonesia

Tropical peatland forests in Central Kalimantan, Indonesia are threatened by the process of felling and draining, to make place for plantations which cause high levels of carbon emissions, fires and biodiversity decline.

To protect the tropical peatland forest, Wetlands International and other key partners intervened to restore and conserve 149,800 hectares of intact peat swamp forest, preventing it from becoming an industrial timber plantation.

The Katingan-Mentaya Peatland Restoration and Conservation Project[24] is the largest Verified Carbon Standard approved REDD+ project in the world, with potential emissions reductions reaching an average 7.4 million tonnes of CO_2e per year. Measures of the initiative are protecting diverse wildlife of the area, including a population of 4,000 orangutans.

Advocating for the phasing-out of drainage-based plantations on peatlands and finding shared solutions across sectors, the project collaborates with local communities and supports through capacity building.

*This project is a collaboration between Wetlands International, PT Rimba Makmur Utama, Permian Global and Yayasan Puter Indonesia.

Yus Rusila Noor

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