

The Mangrove Breakthrough



© Sarah Waiswa

Climate change is the greatest threat of our time. The ability of mangroves to provide food, shelter, and livelihoods, while harboring incredible biodiversity, building coastal resilience, and acting as immense carbon sinks makes mangrove conservation and restoration a uniquely effective strategy to have in our arsenal to combat climate change. With coastal communities already facing the impacts of a changing climate, we urgently need to invest in conserving and restoring mangroves now as nature-based solutions to adapt to our changing planet.



RACE TO ZERO

Progress has been made in recent years to restore and protect mangroves. Rates of mangrove loss appear to have slowed in recent decades, but with many remaining threats, it's time to turn the tide in mangrove conservation. Over 1 million hectares of mangroves have been lost since 1996, representing ample opportunity for restoration. And long-term protection and financing is the only way to ensure lasting benefits.

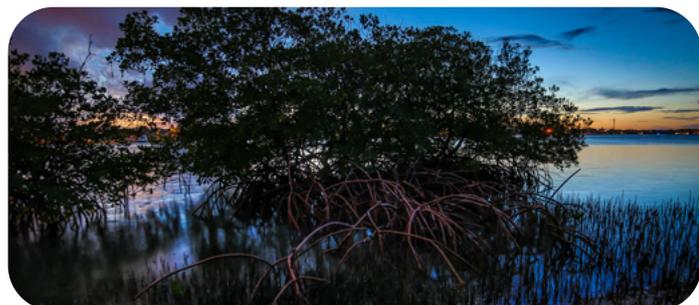
Individually, governments, NGOs, and the private sector can make a difference towards mangrove protection and restoration. But by joining together we can accelerate the change to the pace needed to reach critical biodiversity and climate targets globally and avoid fragmentation. We can jointly ensure successful interventions that build on the best available science, best practices and lessons learnt, preventing common exacerbations to an already low survival rate by failure to reinstate functionality and connectivity of these vibrant ecosystems.

Building on the [Breakthrough Agenda](#) launched at COP26, and the work of the [Global Mangrove Alliance](#), the Mangrove Breakthrough provides a framework for state and non-state actors to work together towards a shared ambition, jointly formulate strategies, align work plans and ensure exchange and collaboration to address implementation challenges.

A Community of Action

The Mangrove Breakthrough Community of Action consists of civil society organizations, governments, and the private sector, all of whom implement action and projects to advance the Breakthrough. To align ambition, endorsers of the Breakthrough commit to bold but achievable contributions toward a shared science-based and a measurable goal of 15 million hectares of mangrove globally by 2030, through collective action on:

- Halting mangrove loss
- Restoring half of recent losses
- Doubling the protection of mangroves globally
- Ensuring sustainable long-term finance for all existing mangroves



© Ralph Pace

The Mangrove Breakthrough is a community of action dedicated to sustainably managing and increasing mangrove cover by 2030 by catalyzing a USD 4 billion shared global goal.

The Mangrove Breakthrough Principles

Parties endorsing the Mangrove Breakthrough commit to science-based mangrove restoration in a fair and equitable way. This will enable the conditions for mangroves to thrive and provide resilience to climate change and multiple goods and services.

The following principles serve as guardrails, so endorsers can contribute to the Mangrove Breakthrough in a meaningful and productive way:

- **Safeguard Nature:** protect the remaining intact mangrove ecosystems, enhance their resilience and implement science-based ecological restoration protocols
- **Employ the Best Information and Practices:** use the best available science-based knowledge, including indigenous, traditional, and local knowledge, for mangrove interventions
- **Empower People:** implement social safeguards to protect and enhance community member rights, knowledge and leadership and to achieve fair and equitable benefit sharing
- **Align to the Broader Context:** operate in the local context and take a land and seascape approach, while aligning to international trends and their local implications
- **Design for Sustainability:** create sustainable mangrove projects and enable policy conditions that address the root causes of loss and degradation and the risk of reversal, ensuring durability for the longest time scale possible
- **Mobilize High Integrity Capital:** ensure capital flows at the scale needed and allow funding to be distributed to ready-to-scale projects

Strategic Partnerships

The Mangrove Breakthrough builds on the expertise of the Global Mangrove Alliance (GMA) to drive best practice approaches. The GMA is a world-wide collaboration between leading mangrove conservation organizations, the best mangrove scientists, civil society organizations, governments, local communities, businesses, and funding agencies to accelerate mangrove conservation and restoration for coastal peoples and biodiversity.

Some examples of how sectors may contribute to the goals of The Mangrove Breakthrough are:

- **Governments:** driving action at the political level: setting hectare goals to protect and restore mangroves that align with the Breakthrough principles and targets; aligning mangrove restoration and protection with global commitments (e.g., NDCs, 30x30)
- **Public and private financial institutions:** de-risking investment and mobilizing capital for long-term finance for mangrove restoration and protection
- **NGOs:** driving implementation on the ground with grassroots organizations; establishing a National Chapter of the Global Mangrove Alliance and contributing to the identification of a pipeline of bankable projects
- **Philanthropy:** supporting the launch of bankable projects on the ground and de-risking investments; supporting the establishment of the Mangrove Breakthrough Secretariat.



© Tim Calver

Impact of the Breakthrough

In achieving the Mangrove Breakthrough, we estimate a climate benefit of sequestering over 43.5 million tons of CO₂ into mangrove biomass and safeguarding or sequestering an additional 189 million tons of CO₂ in the soil. Restoring half of recently lost mangroves would potentially benefit 37 commercial marine species of fish, crabs, bivalves and shrimp by providing habitat for over 25 billion juveniles each year. And the coastal protection provided by mangroves against flooding and storms – securing lives, infrastructure and economic security – has been estimated to reduce flood risk for over 15 million people and over \$65 billion worth of property annually.

USD 4 Billion
raised under the
Breakthrough would
have an outsized impact
on benefits as total
ecosystem services add
up to **USD 700 Billion.**



© Global Mangrove Alliance / Felipe Jacome

To date, the Mangrove Breakthrough is endorsed by the following initiatives

Please indicate your interest in joining The Mangrove Breakthrough by contacting:

Ignace Beguin at: ignacebeguin@climatechampions.team

Benjamin Christ at: contact@mangrovealliance.org



Annex: The Mangrove Breakthrough in detail

Next 7 years	USD Price per Ha	Goal in ha	Total	Source for Price Notes
Halt loss	382	16,800	6.4 million	Zeng et al., (2021) Global potential and limits of mangrove blue carbon for climate change mitigation. Curr. Biol. https://doi.org/10.1016/j.cub.2021.01.070 Note this includes yearly maintenance costs at \$25/ha
Restore half	1,097	409,200	450 million	Su et al., (2021) A meta-analysis of the ecological and economic outcomes of mangrove restoration. Nat. Commun. https://pubmed.ncbi.nlm.nih.gov/34413296/
Double protection	382	6,100,000	2,330 million	Zeng et al., (2021) Global potential and limits of mangrove blue carbon for climate change mitigation. Curr. Biol. https://doi.org/10.1016/j.cub.2021.01.070 Note this includes yearly maintenance costs at \$25/ha
Ensure sustainable finance to existing mangrove extent	150	8,583,200	1,287 million	Zeng et al., (2021) Global potential and limits of mangrove blue carbon for climate change mitigation. Curr. Biol. https://doi.org/10.1016/j.cub.2021.01.070 These hectares may not be at risk of loss or require additional protections, but this goal aims to ensure sustainable financing to existing protection and management regimes. N.B. Current extent (2020) per Global Mangrove Watch = 14.7 million ha. We subtracted the other goals from this to ensure no double counting with above lines on protection and halting loss.
		Total Hectares	15,109,200	
		Total needed investment	4.07 billion	Yearly investment need through 2030: 600 million

Annex: The Mangrove Breakthrough in detail

Halt Loss

Reduce net mangrove losses driven by direct human actions to zero.

Rates of mangrove loss appear to have slowed in recent decades, and it is an opportune moment to set the challenge to halt further losses. While we can aspire to halt all losses, this target refers to direct, and therefore manageable, human driven loss. However, recognizing that mangroves are dynamic ecosystems, we acknowledge the possibility of making further gains as mangroves naturally colonize new locations[1]. Any such gains should be seen to offer additionality to the gains made by halting losses of remaining cover.

Between 2010-2020, over 60,000 ha were lost, and we can estimate that 37,300 ha of this was due to direct human impacts. To bring such losses to zero by 2030 we need to start to reduce loss rates from now. Assuming a linear rate of reduction in human driven losses this would save approximately 16,800 ha by the end of 2030 compared to business as usual.

Restore Half

Restore mangroves to cover at least half of all recent loss.

Over 1,100,000 ha of mangroves have been lost since 1996, the year that sets the baseline for our definition of “recent” loss; however, not all of these are restorable due to erosion or urbanization. It is estimated that 818,300 ha of mangroves are considered “restorable”, and the goal seeks to restore half of this area by 2030. This is a deeply ambitious goal. Although the target does not include areas which would be near-impossible to restore, the “restorability” even of the remaining areas is likely to be highly variable. Assuming science-based restoration practices are employed and result in long-lasting restoration, restoring half of recent loss would be 409,150 ha by 2030 (~51,000 ha per year).

Double protection

Ensure long-term protection is increased from 40% to 80% of remaining mangroves.

With 41% of the world’s mangroves currently in protected areas, mangroves are already well covered compared to many other ecosystems. However, fundamental to lasting reduction of loss and restoration efforts is ensuring that those efforts are not reversed, through the incorporation of mangroves into permanent forms of protection.

These include traditional protected areas, but also Other Effective Area-based Conservation Measures (OECMs), which could encompass indigenous lands and areas of sustainable use where mangroves are protected from clear-felling and conversion. Given the current global mangrove area and what is already protected, the Mangrove Breakthrough aims to secure a further 6,100,000 ha under conservation measures.

Sustainable Financing

Ensure sustainable finance to existing mangrove extent.

This metric is not included in the Global Mangrove Alliance’s target. The hectares accounted for in this line are calculated by using the Global Mangrove Watch’s 2020 extent and subtracts out the goals on doubling protection and halting loss. While these mangroves are not perceived as under threat or degraded, it is important to note that there is a cost to maintaining mangroves and ensuring sustainable finance flows is critical to ensure that they remain safe into the future. The Mangrove Breakthrough is including this metric to show the full cost to financing all mangroves across the world. The \$25 per hectare is an average and will vary greatly across countries.

The Mangrove Breakthrough will ensure sustainable finance for existing mangrove extent in order to maintain and sustain existing coverage of 14.7 million hectares.