

# The Mangrove Breakthrough



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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**

Over 1 million hectares of mangroves have been lost since 1996, highlighting the urgent need for action to protect these vital ecosystems. While progress has been made in recent years to slow the rate of loss, the potential of mangroves to benefit both people and biodiversity, as well as their vital role in mitigating climate change, requires urgent collective action. It is time to turn the tide in mangrove action through long-term protection and sustainable finance to ensure lasting benefits.

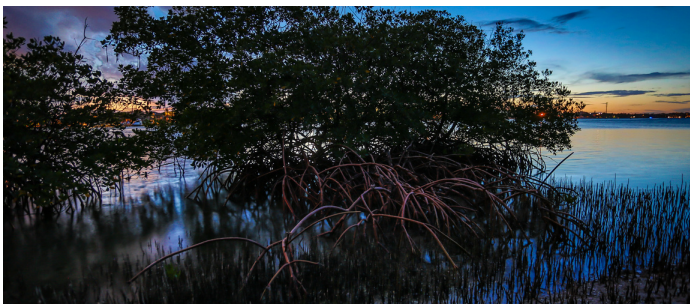
Building on the [Breakthrough Agenda](#), and the work of the [Global Mangrove Alliance](#), the Mangrove Breakthrough provides a framework for State and non-State Actors to work together towards the shared ambition of securing the future of over 15 million hectares of mangroves globally by 2030, through 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

## An umbrella for leading mangrove initiatives

The Mangrove Breakthrough **Community of Action** is a group made up of **civil society organizations, governments,** and the **private sector**, working together to achieve the Breakthrough's goals through various actions and projects.

Joining the Mangrove Breakthrough and its Community of Action means becoming part of a global movement that accelerates critical climate and biodiversity targets. It also provides an opportunity to showcase leadership in mangrove action and contribute to or receive financing for projects. By being part of this Community of Action, stakeholders ensure successful mangrove interventions that build on the best available science, best practices, and lessons learned.



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**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 Guiding Principles

Stakeholders endorsing to the Mangrove Breakthrough commit to science-based mangrove restoration in a fair and equitable way. The following principles serve as guardrails, so endorsers can contribute to the Mangrove Breakthrough in a meaningful and productive way, and to ensure successful mangrove interventions:



Safeguard nature



Employ the best information and practices



Empower people



Align to the broader context - operate locally and contextually



Design for sustainability



Mobilize high-integrity capital



## Endorsing the Mangrove Breakthrough

By endorsing the Mangrove Breakthrough, stakeholders pledge to:

- Set and meet ambitious but achievable contributions toward the goal of securing the future of 15 million hectares of mangrove globally by 2030
- Join the Mangrove Breakthrough’s Community of Action to support its global objectives through sharing best practices and relying on the latest science
- Set up the enabling conditions and, if possible, providing catalytic funding, to attract capital for mangrove action
- Adopt the Principles as guardrails to ensure contributions are meaningful, productive, equitable, and science-based

## Catalyzing global ambitions

The recognition of the value of healthy mangroves and their benefits for mitigating and adapting to climate change, safeguarding biodiversity, disaster risk reduction, and achieving sustainable development goals is present in many international frameworks and agreements.

The Mangrove Breakthrough directly supports the achievement of the goals of the Paris Agreements, the ecosystem conservation and restoration goals under the Kunming-Montreal Global Biodiversity Framework, Ramsar resolutions, 30x30 targets, the UN Decade on Ecosystem Restoration and the UN Decade of Ocean Science.



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## Impact of the Breakthrough

In achieving the Mangrove Breakthrough, we estimate a climate benefit of sequestering over 43.5 million tons of CO<sup>2</sup> into mangrove biomass and safeguarding or sequestering an additional 189 million tons of CO<sup>2</sup> 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.**



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To date, the Mangrove Breakthrough is endorsed by the following stakeholders:

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

Jennifer Ring at: [jennifer.ring@systemiq.earth](mailto:jennifer.ring@systemiq.earth)



earth security



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# Annex: The Mangrove Breakthrough in detail

Next 7 years	USD Price per Ha	Goal in ha	Total	Source for Price   Notes
<b>Halt loss</b>	382	16,800	6.4 million	Zeng et al., (2021) Global potential and limits of mangrove blue carbon for climate change mitigation. Curr. Biol.  <a href="https://doi.org/10.1016/j.cub.2021.01.070">https://doi.org/10.1016/j.cub.2021.01.070</a> Note this includes yearly maintenance costs at \$25/ha
<b>Restore half</b>	1,097	409,200	450 million	Su et al., (2021) A meta-analysis of the ecological and economic outcomes of mangrove restoration. Nat. Commun.  <a href="https://pubmed.ncbi.nlm.nih.gov/34413296/">https://pubmed.ncbi.nlm.nih.gov/34413296/</a>
<b>Double protection</b>	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.  <a href="https://doi.org/10.1016/j.cub.2021.01.070">https://doi.org/10.1016/j.cub.2021.01.070</a>  <b>Note</b> this includes yearly maintenance costs at \$25/ha
<b>Ensure sustainable finance to existing mangrove extent</b>	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.  <a href="https://doi.org/10.1016/j.cub.2021.01.070">https://doi.org/10.1016/j.cub.2021.01.070</a> 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.
		<b>Total Hectares</b>	15,109,200	
		<b>Total needed investment</b>	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.