

Proposed contribution for the NBS proposition of the UNSG's Climate Action Summit 2019

Title:	Taking Action to Increase Global Mangrove Habitat by 20 percent by 2030: The Global Mangrove Alliance
A contribution to Workstream:	[Nature-based solutions]
Main objective/ thematic focus/ scope	<ul style="list-style-type: none"> - Mangrove forests deliver invaluable ecosystem services that play a critical role in supporting human well-being through climate regulation, disaster risk reduction, food security, and poverty reduction. Mangrove ecosystems provide protection from the impacts of climate change, often for some of the world's most vulnerable people, by attenuating wave energy and storm surges, adapting to rising sea levels, and stabilizing shorelines from erosion. Yet with 67% of mangroves lost or degraded to date, and an additional 1% being lost each year, mangroves are at a risk of being destroyed altogether. To accelerate a comprehensive global approach to large-scale mangrove conservation, restoration, and sustainable use, IUCN, World Wildlife Fund, The Nature Conservancy, Conservation International, and Wetlands International have come together to form the Global Mangrove Alliance (GMA). The GMA is an unprecedented collaboration that brings together NGOs, governments, industry, local communities and funders towards a common goal of halting mangrove degradation and increasing mangrove cover by 20% by 2030 with defined underlying objectives utilizing mangroves as a nature-based solution to enhance climate adaptation & mitigation, food security, and human well-being.
Context/rationale	<ul style="list-style-type: none"> - Mangrove ecosystems are some of the most productive ecosystems on earth, found on the coastlines of 106 countries. Mangrove ecosystems make up approximately 15.2 million hectares of land mass and their fate directly impacts the coastal communities living around or behind them. Healthy mangroves help ensure food security for local communities and contribute significantly to local livelihoods by providing employment for coastal populations. In addition, they play a key role in reducing the impacts of waves, moderating flooding, controlling erosion, as well as being important for cultural practices and community identity. Mangroves are also highly efficient carbon sinks, sequestering carbon at significantly higher rates per unit area than terrestrial forests, resulting in an average of 1,023 metric tons of carbon per hectare. When these ecosystems are degraded or converted, their carbon stores are released, turning an efficient carbon sink into a significant carbon source. Taken together, the ecosystem services provided by mangroves to developing countries are estimated to be worth approximately US\$ 33,000 - 57,000 per hectare per year. - To date, it is estimated that over 67% of mangrove historical habitat has been lost or degraded worldwide with 20% of that loss occurring since 1980. If this trend continues, all unprotected mangroves could be lost in the next 100 years. The current drivers of loss vary geographically but conversion of mangroves to rice paddies and aquaculture has resulted in the largest mangrove losses globally, particularly in Southeast Asia. Other significant drivers of mangrove loss include agriculture, urban and industrial development, coastal tourism development, pollution, and extraction of mangrove wood for building materials, charcoal, tannins and other products. Changes in water and sediment supply – such as resulting from dams and other upstream water diversion projects – can also have major impacts on mangrove ecosystems. - Mangroves provide some of the most cost effective, multi-benefit and sustainable approaches to achieve simultaneous climate adaptation, mitigation, food security, biodiversity and human benefits. However, to date, countries are still struggling to include mangroves in their national climate change and sustainable development plans. This is largely due

	<p>to lack of information, complicated jurisdictional issues, lack of capacity and on the ground examples, and not enough funding. Fortunately, the tide of popular opinion is shifting; governments, private sector, and coastal managers which once viewed mangroves as fringe ecosystems with little to offer, are beginning to understand and value mangroves by giving them the recognition, attention and protection they deserve. Much of what could be achieved to safeguard coastal habitat and mangroves, however, is paced against a ticking clock. Climate alteration, coastal migration and high population growth present risks we should and can prepare for.</p>
<p>Overview of the contribution</p>	<ul style="list-style-type: none"> - To accelerate a comprehensive global approach to large-scale mangrove conservation, restoration, and sustainable use, IUCN, World Wildlife Fund, The Nature Conservancy, Conservation International, and Wetlands International have come together to form the Global Mangrove Alliance. The GMA jointly works towards a goal of increasing mangrove cover by 20% by 2030 with defined underlying objectives utilizing mangroves as an ecosystem-based management tool to enhance climate adaptation & mitigation, food security, human well-being, and biodiversity. <ul style="list-style-type: none"> - Climate Adaptation—Increase resilience to impacts of climate and ocean change through USD \$10 billion in new investments - Food Security & Human Wellbeing— Improve the well-being of an additional 10 million people dependent on coastal ecosystems - Climate Mitigation—Eliminate all mangrove-associated greenhouse gas emissions by 2030 - Sustain Biodiversity—Ensure the long-term sustainability of mangrove associated biodiversity globally - These targets are accomplished through collective strengths and partnerships through several streams of work including developing novel valuation and financing mechanisms, improving policy and governance, building capacity, and increasing the evidence base through developing knowledge & tools to integrate mangroves and ecosystem services into national level mitigation, adaptation, and disaster risk reduction strategies. - The Global Mangrove Alliance is a joint effort with members from NGOs, governments, industry, local communities and funders all working together towards a common goal of halting mangrove degradation and increasing mangrove cover by 20% by 2030. To date 13 member organizations have joined, and 9 governments have endorsed the GMA.
<p>How the contribution leverages living natural systems as a solution to avert climate change?</p>	<ul style="list-style-type: none"> - Healthy mangroves and associated coastal ecosystems play a significant role for both climate mitigation and adaptation. Mangrove ecosystems provide a variety of adaptation benefits to society, serving as important natural defences against the impacts of natural disasters and climate change, including coastal erosion, extreme weather events, and sea level rise. Studies have shown that the natural infrastructure of mangrove belts only 100m in width reduce wave heights by up to 66%, protecting shorelines and reducing the vulnerability of local communities. Mangroves are also highly efficient long-term carbon sinks, sequestering carbon at significantly higher rates per unit area than terrestrial forests, resulting in an average of 1,023 metric tons of carbon per hectare. The carbon storage potential of mangroves (ca. 1,000 tC/ha), for example, is five times higher than tropical upland forests due to the carbon rich sediments in these ecosystems. If disturbed, mangroves can contribute up to 10% of the global deforestation emissions, despite accounting for just 0.7% of tropical forest area. The conservative annual carbon sequestration rate of mangroves is around 174g C m⁻² year⁻¹ (that is 14% of the global carbon sequestration per year).
<p>How might the contribution support both climate,</p>	<ul style="list-style-type: none"> - The GMA target of halting mangrove degradation and increasing mangrove cover by 20% by 2030 utilises mangroves as a nature-based solution to support targets for both climate mitigation and climate adaptation, and other

<p>mitigation and adaptation as well as other important co-benefits and social, economic and environmental outcomes in coming years including: Reduction in carbon emission and carbon capture (GTonnes); Increasing climate resilience; Social impact (job increase; poverty reduction, etc.) Net economic impact (total in US\$; how was it achieved?); Impact on realization of the 2030 Agenda for Sustainable Development; Just transition; Food security; Minimising species extinction and ecological losses and fostering an increase of biodiversity.</p>	<p>social and economic co-benefits such as food security, poverty reduction, and human wellbeing, as well as fostering the conservation and increase of biodiversity including the following targets:</p> <ul style="list-style-type: none"> - Climate Adaptation—Increase resilience to impacts of climate and ocean change through USD \$10 billion in new investments - Food Security & Human Wellbeing— Improve the well-being of an additional 10 million people dependent on coastal ecosystems - Climate Mitigation—Eliminate all mangrove-associated greenhouse gas emissions by 2030 - Sustain Biodiversity—Ensure the long-term sustainability of mangrove associated biodiversity globally <p>Mangroves have also been identified as a key contributor to reaching the targets of the 2030 Agenda for Sustainable Development, notably SDG14 and SDG13 both. The UN SDG14 Community of Ocean Action for Mangroves, jointly led by IUCN and the Ramsar Secretariat, has demonstrated that SDG14 voluntary commitments related to mangroves are also closely interlinked with contributions to SDG13 (climate action), SDGs 1 and 2 (eliminating poverty and hunger), SDG15 (sustainable use of terrestrial ecosystems), and SDG8 (ensuring livelihoods and economic growth).</p>
<p>Which countries and organisations are involved in the contribution?</p>	<ul style="list-style-type: none"> - The five coordinating members of the Global Mangrove Alliance are IUCN, The Nature Conservancy, World Wildlife Fund, Conservation International, and Wetlands International. - Additional members to date include the Mangrove Action Project, Rare, Blue Ventures, the Wildlife Conservation Society, the Zoological Society of London, the National Audubon Society, Ocean Research and Conservation Association (ORCA), Restore Americas Estuaries, Griffith University, and the Scripps Oceanographic Institution. - The GMA has been officially endorsed by 9 governments: Thailand, Cambodia, Pakistan, Sri Lanka, Viet Nam, Bangladesh, Ecuador, Honduras, and Brazil.
<p>How have stakeholders (e.g., indigenous peoples, local communities, and youth) been consulted in developing the contribution?</p>	<ul style="list-style-type: none"> - The GMA is a model of collaboration by five large organisations, as well as NGOs, governments, industry, local communities and funders towards a common goal of halting mangrove degradation and increasing mangrove cover by 20% by 2030. The targets of the GMA are a product of joint thinking by the five coordinating organisations with institutional expertise from different countries and at different levels of governance, close engagement with country colleagues, and detailed reviews of existing scientific data. The GMA additionally hosts an annual meeting with all members and colleagues to gather feedback and refine targets. The annual workshop in January 2019 brought together over 70 experts from 12 organizations to design a roadmap to meet the Alliance's targets and define strategic targeted priorities for the GMA both globally and regionally related to mangrove science, policy, funding, and partnerships.

	<p>Individual projects developed through the GMA model towards the overarching target are developed at a site-specific scale with input from local communities, governments, and all other relevant stakeholders.</p>
<p>Where the contribution can be put into action?</p>	<ul style="list-style-type: none"> - Increasing mangrove cover by 20% will require changing the way decision makers, industry leaders, managers, and community members value mangroves. To do this, the Alliance will focus on increasing the evidence base for mangroves as an ecosystem-based management tool to enhance climate adaptation and mitigation, biodiversity conservation, and human wellbeing, as well as inform policy and management decisions at local to national scales. The GMA will use its collective strengths and partnerships to address the barriers to large-scale mangrove conservation and restoration through several streams of work, including through: <ul style="list-style-type: none"> Financing: Develop novel and diverse valuation and financing mechanisms that help take mangrove ecosystem conservation and restoration to scale. Strengthening policy: Work with governments to refine and align integrated management plans that address the multijurisdictional nature of mangrove conservation and restoration. Building capacity: Increase technical capacity to integrate mangroves and their ecosystem services into national level mitigation, adaptation, disaster risk reduction and land-use strategies. Proof of Concept: Develop real-world examples of integrating mangroves into national-level management plans, and local scale demonstrations of improved human wellbeing due to mangrove conservation and restoration. Knowledge Sharing: Build awareness among policymakers, financing institutions, the private sector, NGOs and others of the multiple benefits and cost effectiveness of conserving and restoring mangroves for climate change adaptation, mitigation and human well-being.
<p>How the contribution will be delivered? How will different stakeholders be engaged in its implementation? What are the potential transformational impacts?</p>	<ul style="list-style-type: none"> - The Global Mangrove Alliance vision is built from lessons learned through our member's vast collective portfolio of work regarding protecting, restoring, and valuing mangroves, and is updated by the members of the Global Mangrove Alliance on an annual basis. GMA members connect and coordinate isolated initiatives into a global portfolio that leverages and amplifies best practices, and pursue development opportunities to support our work in mangrove conservation and restoration at scale. The Global Mangrove Alliance capitalizes on the diverse strengths and experiences of its members to facilitate understanding and knowledge sharing, coordinate projects on the ground, and connect a wide array of stakeholders as a means of ensuring successful science based conservation and restoration of mangroves at an unprecedented scale towards the target of halting mangrove degradation and increasing mangrove cover by 20% by 2030.

<p>Is this initiative contributing to other CAS workstream (industry transition; energy transition; climate finance and carbon pricing; infrastructure, cities and local action; resilience and adaptation; youth and citizen mobilization; social and political drivers; mitigation strategy)?</p>	<ul style="list-style-type: none"> - Yes: Resilience and adaptation workstream, mitigation strategy workstream.
<p>Examples of experiences to date: how does this contribution build upon this experience? How does the contribution link with different ongoing initiatives?</p>	<ul style="list-style-type: none"> - A list of example initiatives and projects GMA members are working on can be found at http://www.mangrovealliance.org/initiatives/
<p>Mechanisms for funding (with specific emphasis on potential for partnerships).</p>	<ul style="list-style-type: none"> - The GMA is currently funded by in-kind contributions of the coordinating members, as well as project grants for specific streams of work jointly pursued by member organisations. The GMA offers nearly unprecedented possibilities for partnerships between member organizations for both individual projects as well as by the full Alliance. The Alliance has a dedicated fundraising working group that is in the process of developing a Mangrove Funder Group to direct philanthropic funds into a pool that can be used for projects as gaps are identified.
<p>Means of stewardship, metrics for monitoring.</p>	<ul style="list-style-type: none"> - The GMA has dedicated a stream of work to developing monitoring and evaluation tools for assessing mangrove coverage and quality globally as well as monitoring how the Alliance is progressing toward our objectives.
<p>Communication strategy.</p>	<ul style="list-style-type: none"> - The GMA website is available at http://www.mangrovealliance.org/. Twitter is available at https://twitter.com/mangroves for active updates. In addition a quarterly newsletter is distributed to subscribers.
<p>Contact details of proponents (indicating the degree of commitment among the countries and organizations that are named).</p>	<ul style="list-style-type: none"> - The coordinating members of the GMA can be reached as follows: - IUCN: Ali Raza Rizvi, ali.raza@iucn.org - The Nature Conservancy: Emily Landis, elandis@tnc.org - World Wildlife Fund: Lauren Spurrier, lauren.SPURRIER@WWFUS.ORG - Conservation International: Jennifer Howard, jhoward@conservation.org - Wetlands International; Pieter van Eijk, Pieter.vanEijk@wetlands.org