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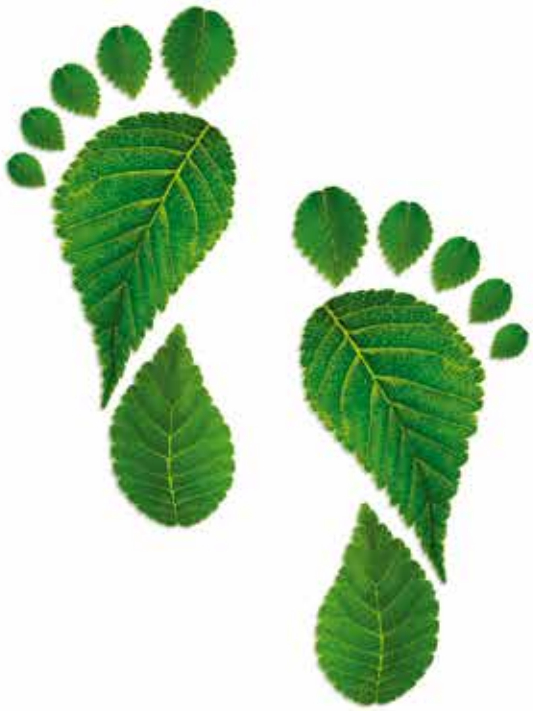

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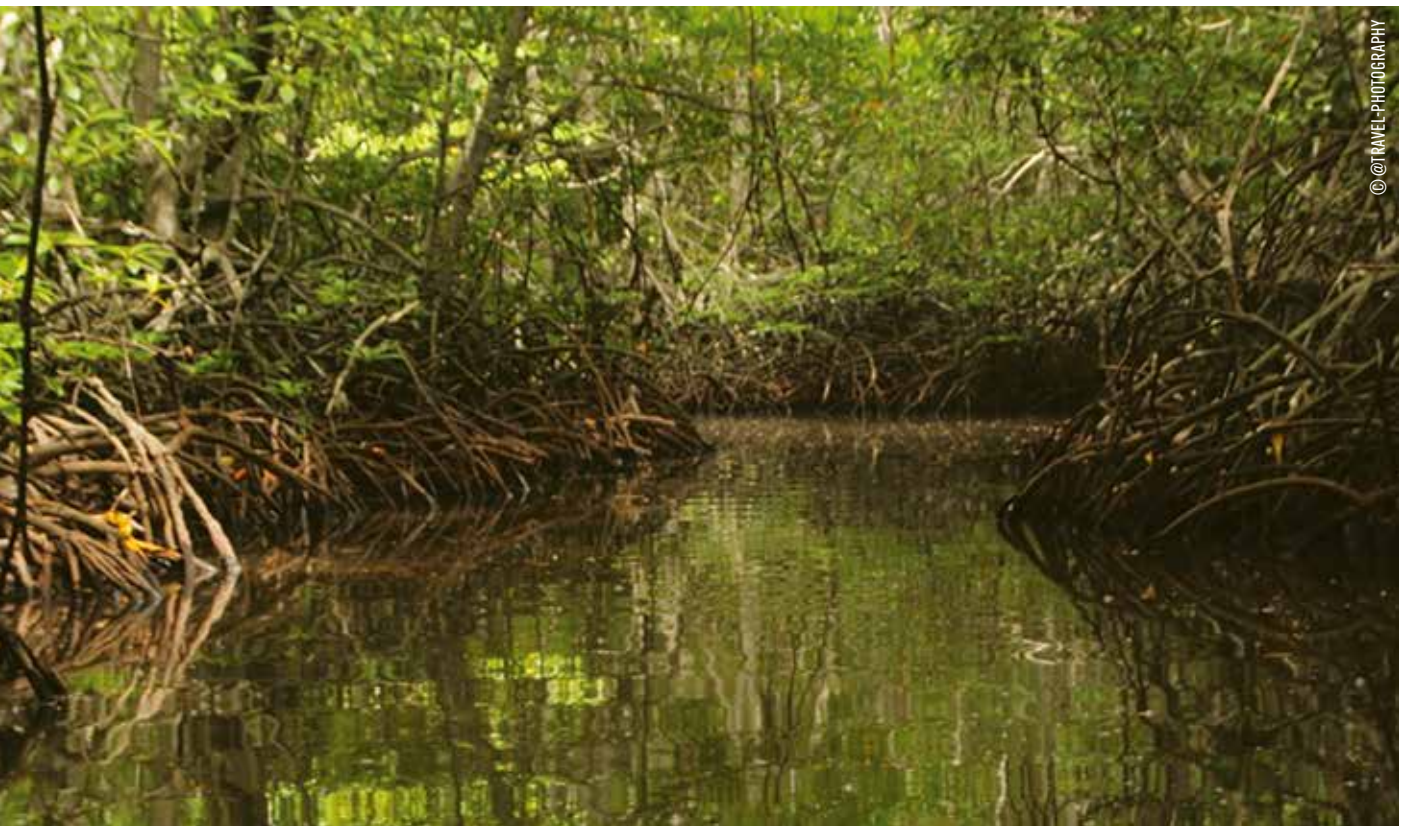

Mangroves are a natural carbon storehouse

Three reasons why 2023 could be the year of blue carbon

Blue carbon is vital in addressing the three interconnected planetary crises of climate change, biodiversity loss, and pollution

Martin Koehring *

This year could be the year of blue carbon. Three key factors will drive this trend: a new appreciation of nature-based solutions to climate change; the need for high-quality carbon credits (following a recent backlash); and the momentum created by the new UN global biodiversity framework.

"Blue carbon" refers to marine natural capital that serves as formidable carbon sinks, such as mangroves, seagrass and tidal marshes. These are usually many times more effective than their terrestrial counterparts. For example, mangrove forests can store up to five times more carbon than tropical forests. Meanwhile, seagrass meadows account for around 10% of the ocean's capacity to store carbon, despite comprising only 0.2% of the sea floor.

A new appreciation of nature-based solutions

The global target of limiting the rise in global temperatures to 1.5 degrees Celsius above pre-industrial levels is barely alive. Worryingly, there is a major investment gap in climate solutions: only around 16% of climate finance needs are currently being met, according to

research by The Rockefeller Foundation. One way to bridge this gap is investing in cost-effective nature-based solutions (NBS). For example, data provided by the WRI Ross Center for Sustainable Cities show that NBS for infrastructure are estimated to be 50% cheaper than traditional human-made infrastructure, while providing 28% added value, such as decarbonization of the built environment, climate resilience and job creation. Ocean-based NBS are particularly well-placed as an investment to address climate change given their co-benefits (in addition to climate mitigation), which include climate adaptation (e.g., vital storm and flood defence services), regenerating biodiversity, providing a nursery and food source for marine life, and cleaning the ocean by absorbing polluting nutrients.

Marine natural capital will also be increasingly in the spotlight in the context of carbon offsetting. The race to net zero is about reducing greenhouse-gas emissions as much as possible towards this goal. Any remaining emissions need to be countered with carbon-negative solutions, both nature-based (e.g., planting trees) and technological (e.g., direct air capture). The voluntary carbon markets are one market-based solution to accelerate these opportunities. The World Bank and other organizations have recently stepped up their focus on "results-based climate finance", based on verified emissions reductions through carbon credits.

The need for high-quality carbon credits

However, investigative journalists have recently uncovered major flaws in the quality of many of the certified carbon credits. Many of these have turned out to be "phantom credits" that do not represent genuine carbon reductions. This is a major setback at a time when organizations such as the 'We Mean Business Coalition' and the 'Voluntary Carbon Markets Integrity Initiative (VCMI)' have moved towards better regulation and standards for carbon credits.

Seagrass is a key climate ally

The silver lining is that this backlash could lead to an intensifying search for high-quality carbon credits, especially those based on marine natural capital. Given the co-benefits described above, there is a real opportunity now to accelerate the creation of high-quality blue carbon credits in response to the recent backlash.

A new global biodiversity framework

The third reason why the blue carbon revolution is imminent stems from recent momentum behind a new global biodiversity framework. The deal agreed at the UN's COP15 biodiversity talks in Montreal at the end of last year included major protections for the ocean. Crucially, countries agreed to protect at least 30% of coastal and marine areas by 2030 ("30 by 30"). Although the deal is not legally binding, it sets the stage for significant progress on protecting marine natural capital.

In essence, it means that countries now have climate and biodiversity targets that are aligning to harness the power of blue carbon. On top of that, the urgent need to address ocean pollution, highlighted by Economist Impact's 'Back to Blue' initiative, creates an additional incentive to invest in blue carbon. As discussed above, blue carbon systems are powerful solutions for removing harmful pollutants from waters around them.

Building a sustainable ocean economy

Blue carbon should play an integral part in building a sustainable ocean economy. The World Ocean Initiative believes that a sustainable blue economy is needed to ensure the world can harness the ocean's ability to address the three interconnected planetary crises of climate change, biodiversity loss, and pollution. The ocean's capacity to help meet all 17 UN Sustainable Development Goals has been vastly under-appreciated so far. The ocean covers more than 70% of the surface of our planet. Its natural capital is valued at $24 trillion. Microorganisms in the ocean produce half the oxygen we breathe. For all these reasons, the time has come for a revolution in blue investment, including a full appreciation of the benefits of blue carbon.

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