Let the mangroves grow back on their own

Blue carbon refers to the carbon captured and stored by marine and coastal ecosystems. It plays an important role in combating climate change and provides many ecosystem services, but it can also become a pretext for harmful policies.

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Oyster gathering in the mangrove, Santa Cruz Estuary, Pernambuco, Brazil.

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Irula women catching prawns in the mangroves at Pichavaram, South India.

Since the Kyoto and Paris climate agreements, the carbon credit market has taken off and, with it, massive private investment aimed at protecting and restoring ecosystems capable of sequestering blue carbon (seagrass beds, coral reefs and mangroves).

From this list, mangroves are a subject of particular interest. Firstly, because they are often cited as threatened and in decline. Secondly, because they provide many services to the ecosystem: they limit coastal erosion, protect against typhoons, purify water and act as breeding grounds for fish. Lastly, because these "sea forests" have strong evocative power, easily exploited for communication purposes.

This reality is at the root of the abusive practices observed by scientists. Under the guise of offsetting, carbon sequestration and reforestation, governments are ceding mangroves that previously belonged to local communities to the private sector. These companies plant a single species of mangrove, the one that grows the fastest, so that they can quickly show the impact of their initiatives.

"The results underline the importance of creating mangrove restoration projects aimed at re-establishing the structure and function of this ecosystem by restoring soil and water quality, thereby promoting biodiversity and ecosystem services. In addition, this research highlights the need to recognise the rights and access of local communities to mangrove resources, promoting an approach that respects their traditional uses and contributes to the social and cultural sustainability of these ecosystems."

Claudia M. Agraz Hernández, Autonomous University of Campeche, Mexico

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Mangrove undermined by wave erosion, French Guiana.

But these monospecific forests are nothing like natural mangroves: they lack diversity and therefore do not provide the same ecosystem services... or the same social services, since the planted land is no longer accessible to the people who used to gather oysters, collect dead wood, produce salt, grow rice or walk around and celebrate ritual ceremonies there.

••• Research is pointing to abusive practices associated with "blue carbon" and calling for a better understanding of how mangroves function •••

Scientists are denouncing the negative effects of these mechanisms and calling for a more holistic approach: before thinking about offsetting, we need to do everything we can to reduce greenhouse gas emissions. And if offsets are to be used, they must take local socioeconomic and ecological realities into account.

In the case of mangroves, the best way to restore them is not to replant them, but to recreate the environmental conditions that will enable them to regenerate, for example, by encouraging sediment deposit.

PARTNERS

Amadou Mahtar Mbow University, Senegal

Pernambuco State University, Brazil

Autonomous University of Campeche, Mexico

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Marie-Lise Sabrié

Editorial coordination
Corinne Lavagne
Jasmine Portal-Cabanel

Iconographic research
Daina Rechner

Written by
Viviane Thivent
Marie-Lise Sabrié

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Charlotte Devanz

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Fluent Planet

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Anne Causse

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Christel Bec

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LIST OF SCIENTIFIC CONTRIBUTORS

Evolving environments

El Niño in the spotlight
Jérôme Vialard, physical oceanographer and climatologist, UMR LOCEAN

PIRATA, the observatory in the Tropical Atlantic
Bernard Bourlès, physical oceanographer, UAR IMAGO

Extreme waves and tropical cyclones
Christophe Menkes, climatologist, UMR ENTROPIE
Jérôme Lefèvre, ecologist, UMR ENTROPIE

The variability of upwellings
Vincent Échevin, physical oceanographer, UMR LOCEAN

Mapping the tsunami hazard
Mansour Ioualalen, physicist, UMR Géoazur

Understanding the complexity of Southeast Asia's climate
Marine Herrmann, physical oceanographer, UMR LEGOS

The unsuspected variability of lagoons
Thomas Stieglitz, coastal ecohydrologist, UMR CEREGE

Resilient Mexican mangroves
Johanna Jupin, Geochemist, UMR LOCEAN

An oasis in an ocean desert
Sophie Bonnet, oceanographer and biogeochemist, UMR MIO
Cécile Guieu, biogeochemist, UMR LOV

Resilient coral in New Caledonia
Riccardo Rodolfo-Metalpa, ecophysiologist, UMR ENTROPIE

Sargassum taking over
Julien Jouanno, physical oceanographer, UMR LEGOS

Soot in the water
Xavier Mari, oceanographer and biogeochemist, UMR MIO
Marc Tedetti, oceanographer and biogeochemist, UMR MIO

Plastics: from the rivers to the ocean
Lisa Weiss, physical oceanographer, UMR LEGOS, UMR LOPS

The fate of river water in the ocean
Nadia Ayoub, physical oceanographer, UMR LEGOS

On the trail of ocean plastic
Christophe Maes, physical oceanographer, UMR LOPS

Our friends from the deep
Leandro Nole-Eduardo, ecologist, UMR MARBEC

From micronekton to tuna

Christophe Menkès, climatologist, UMR ENTROPIE
Anne Lebourges-Dhaussy, ecosystem acoustician, UMR LEMAR

The end of the reign of the anchovy?

Arnaud Bertrand, ecologist, UMR MARBEC

Societies facing the ocean

Senegal: the emergence of a resilient fishing industry

Ndickou Gaye, geographer, Cheikh Anta Diop University, Dakar and UMI SOURCE

The future of the Vezo

Francis Veriza, geographer, University of Toliara and UMR Passages

Alexandria, how not to adapt?

Sylvie Fanchette, geographer, UMR CESSMA

Is the sinking of the Mekong Delta inevitable?

Nicolas Gratiot, geophysicist, UMR IGE

Reducing vulnerability in the city of Douala

Raphaël Onguene, physical oceanographer, University of Douala

Food security in Polynesia

Marianna Cavallo, ecologist, UMR LEMAR

The role of women in fishing

Ariadna Burgos, ethnoecologist, UMR PALOC

Nokoué, a lagoon under pressure

Alexis Chaigneau, physical oceanographer, UMR LEGOS
Yves Morel, physical oceanographer, UMR LEGOS
Victor Okpeitcha, physical oceanographer, Prodata SARL
Zacharie Sohou, oceanographer, fisherman and biologist, IRHOB and UAC
Thomas Stieglitz, coastal ecohydrologist, UMR CEREGE

Towards sustainable resources

A plankton model

Olivier Maury, oceanologist, UMR MARBEC

Tropical tuna under surveillance

Daniel Gaertner, biologist, UMR MARBEC

Towards more sustainable baits

Pascal Bach, ecologist, UMR MARBEC

The birds' share
Philippe Cury, oceanographer and biologist, UMR MARBEC

Artisanal fishing on an industrial level
Arnaud Bertrand, ecologist, UMR MARBEC

Food biodiversity
Fany Sardenne, ecologist, UMR LEMAR

Aquaculture for better nutrition
Maria Darias, biologist, UMR MARBEC

Gathering data by sailboat
Éric Machu, biogeochemist, UMR LEGOS

Swimming over underwater habitats
Rodolphe Devillers, geographer, UMR Espace-Dev
Priscilla Dupont, biologist, UMR Espace-Dev

Shining a light on invisible biodiversity
Laurent Vigliola, ecologist, UMR ENTROPIE

Using artificial intelligence to measure biodiversity
Laurent Vigliola, ecologist, UMR ENTROPIE

The AI that thought it was a seabird
Sophie Lanco, ecologist, UMR MARBEC

Bacteria on the back of plastic
Thierry Bouvier, ecologist, UMR MARBEC

Towards home-made electricity?
Pierre-Pol Liebgott, biochemist and ecologist, UMR MIO

The Comoros in need of sand
Gilbert David, geographer, UMR Espace-Dev
Nourddine Mirhani, geographer, University of Comoros

Let the mangroves grow back on their own
Marie-Christine Cormier-Salem, geographer, UMR PALOC

Shared knowledge

The sound of silence
Timothée Brochier, ocean modeller, UMI UMMISCO
Nicolas Puig, anthropologist, UMR Urmis

Changing our approach to corals
Pascale Chabanet, ecologist, UMR ENTROPIE
Lola Massé, biologist, UMR ENTROPIE

Changing estuary water flows
Stéphanie Duvail, geographer, UMR PALOC

Draw me the sea
Élodie Fache, anthropologist, UMR SENS
Stéphanie Carrière, ethnoecologist, UMR SENS,
Catherine Sabinot, anthropologist, UMR Espace-Dev

Towards a sustainable mangrove crab industry in Madagascar
Jennifer Beckensteiner, fisheries expert, UMR AMURE
Marc Léopold, economist, UMR AMURE, UMR ENTROPIE

Managing milky waters
François Colas, physical oceanographer, UMR LOPS
Jonathan Flye-Sainte-Marie, ecologist, UMR LEMAR
Alice Pietri, physical oceanographer, UMR LOCEAN

Marine heatwave alert
Sophie Cravatte, physical oceanographer, UMR LEGOS

A little-known but coveted deep-sea
Valelia Muni Toke, anthropologist, UMR SeDyl
Puerre-Yves Le Meur, anthropologist, UMR Sens

Towards a new ocean governance

The Seychelles: towards a truly sustainable blue economy?
Patrice Guillotreau, economist, UMR MARBEC

Regulations based on local realities
Catherine Sabinot, anthropologist, UMR Espace-Dev
Marc Léopold, economist, UMR AMURE, UMR ENTROPIE

The Mediterranean Sea as a legal entity
Victor David, environmental lawyer, UMR IMBE

Gabon proactive in protecting biodiversity
François Le Loc'h, ecologist, UMR LEMAR

Making assessments for more effective steering
Adrien Comte, economist, UMR LEMAR

AI at the service of marine environmental law
Marie Bonnin, environmental lawyer, UMR LEMAR

Protecting marine areas more effectively
Tarik Dahou, socioanthropologist, UMR PALOC

When science emancipates people
Latifa Pelage, ecologist, UMR MARBEC