JOIN US AT COP26

5 November at 9:30 (Glasgow Time), 10:30 (CET), 14:30 (BST)

The Blue Mangrove Fund: A Climate Adaptation Project Enabled by a Civil Society Embedded CO2 Offset Initiative

#TogetherForOurPlanet |

PROF. JEAN-PASCAL VAN YPERSELE

Climate Scientist, Professor at Université Catholique de Louvain Former IPCC Vice-Chair

Special guest: ZAKIA KHATTABI

ALC: NO.

Federal Minister for Climate, Environment, Sustainable Development and Green Deal of Belgium

KEYNOTE SPEAKERS:

HRH PRINCESS ESMERALDA OF BELGIUM Chair of Friendship Belgium

RUNA KHAN

Founder & Executive Director, Friendship

MYA-ROSE CRAIG

Ornithologist and Environmental Activist

PANELLISTS:

SANDRINE DIXSON -DECLÈVE

Co-President of the Club of Rome, expert on mitigation and adaptation and is an advisor of the EU Commission

DR FARID DAHDOUH-GUEBAS

Systems Ecology and Resource Management Research Unit, Expert of Mangroves, Université Libre de Bruxelles

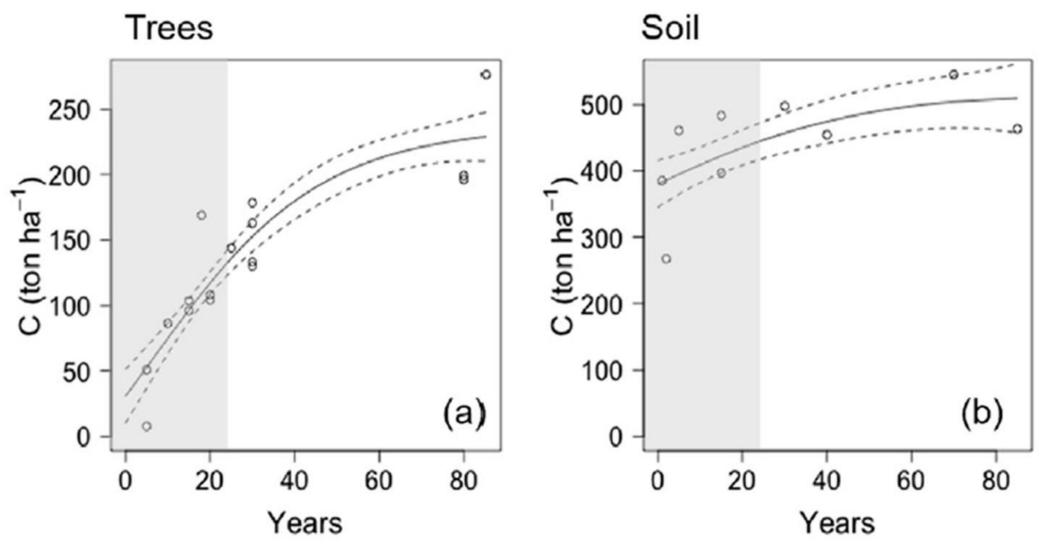
PAOLO

Photographer and Professor at the Université Libre de Bruxelles

KAZI AMDADUL HOQUE

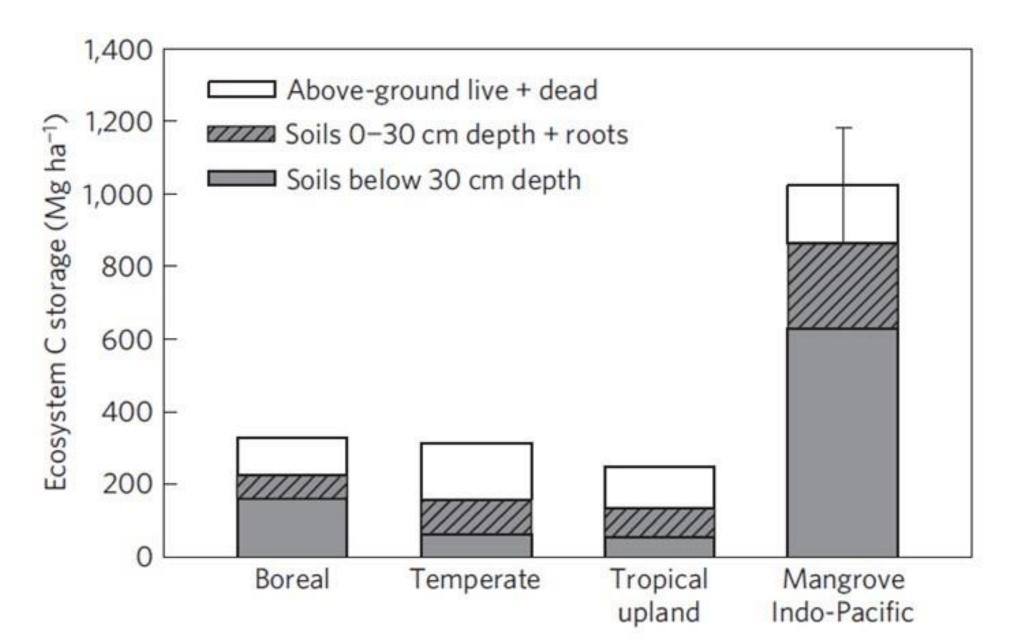
Senior Director-Strategic Planning & Head of Climate Action Friendship

Carbon storage service



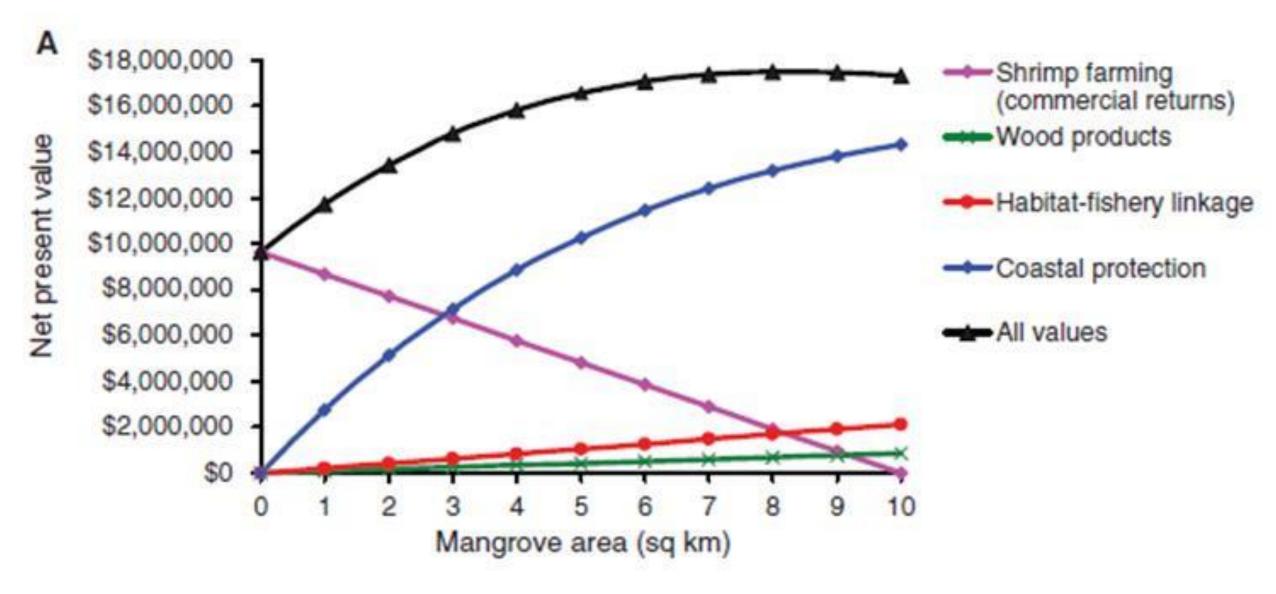
Adame et al. (2018)

Carbon storage service



Donato *et al.* (2011)

Fisheries, Wood and Coastal protection service



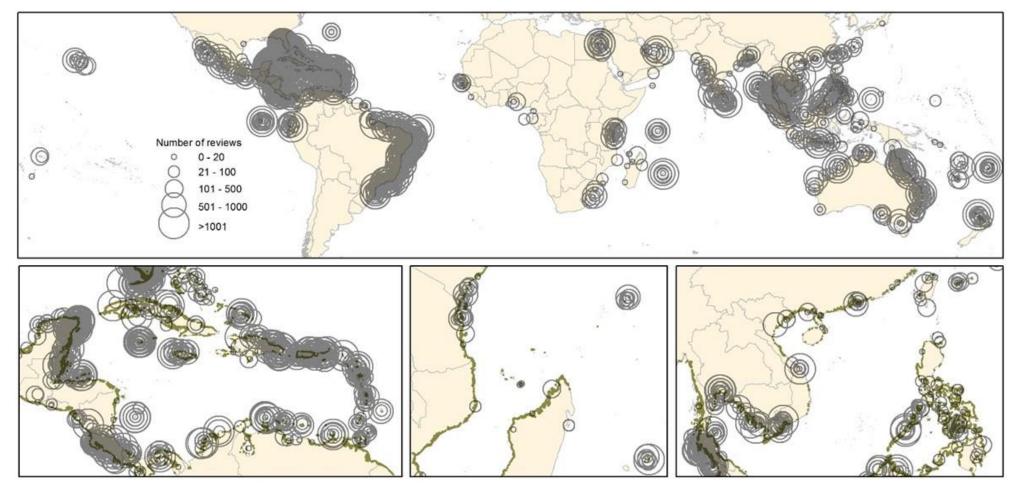
Fisheries service is not new

- Tidal marshes and mangrove are worth 9,990 EUR.ha⁻¹ or 1,600,000,000,000 EUR world-wide (Costanza et al., 1997)
- 1 ha mangrove in DC countries generates 1 to **11.8 tons of fisheries** catch with a market value of 900 to **12.400 EUR** (Rönnbäck, 2001)

• A marginal decline in mangrove area is estimated to cause lagoon and off-shore fisheries economic losses of 14.4 metric tons of shrimp harvest and nearly 140,000 EUR in revenues (Barbier, 2000)

Tourism service

• Tourists enjoy visiting mangrove forests in what has become a **multi-billion-dollar industry**, with over 37,000 TripAdvisor reviews mentioning mangroves across nearly 4,000 mangrove attractions world-wide



Spalding & Parrett (2019)

Public perceptions



0PINION published: 19 November 2020 doi: 10.3389/fmars.2020.603651



Public Perceptions of Mangrove Forests Matter for Their Conservation

Farid Dahdouh-Guebas^{1,2,3*}, Gordon N. Ajonina^{3,4,5}, A. Aldrie Amir^{3,6},

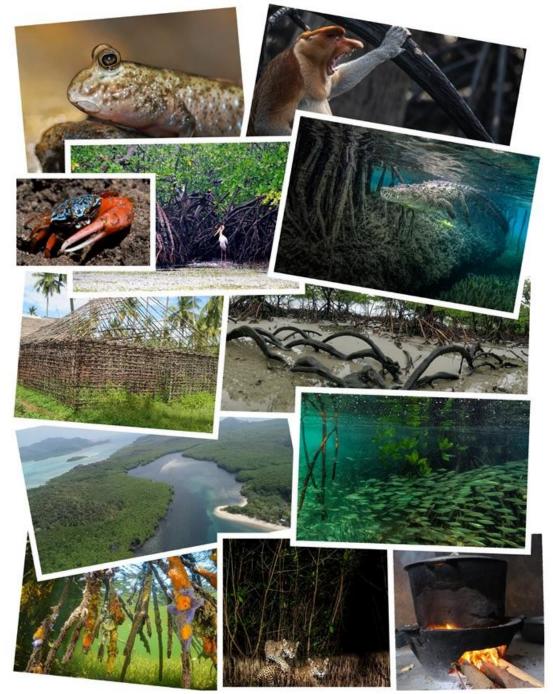
OPEN ACCESS

Edited by: José M. Riascos, University of Antioquia, Colombia Stefano Cannicci^{3,11,12}, Simon M. Cragg^{3,13}, Marilia Cunha-Lignon^{3,14}, David J. Curnick^{3,15}, Carlos M. Duarte¹⁶, Norman C. Duke^{3,17}, Charlie Endsor^{3,15}, Sara Fratini^{3,12}, Ilka C. Feller^{3,18}, François Fromard^{3,19}, Jean Hugé^{1,220}, Mark Huxham^{3,21}, James G. Kairo^{3,22}, Tadashi Kajita^{3,23}, Kandasamy Kathiresan^{3,24}, Nico Koedam^{2,3}, Shing Yip Le^{3,25}, Hsing-Juh Lin^{3,26}, Jock R. Mackenzie²⁷, Mwita M. Mangora^{3,28,29}, Cyril Marchand^{3,30}, Tarik Meziane^{3,31}, Todd E. Minchinton^{3,32}, Nathalie Pettorelli^{3,15}, Jaime Polania^{3,33}, Gianluca Polgar^{3,34}, Meenakshi Poti^{1,2,20}, Jurgenne Primavera^{3,35}, Alfredo Quarto^{3,38}, Stefanie M. Rog³⁷, Behara Satyanarayana^{1,3,39}, Yara Schaeffer-Novelli^{3,39}, Mark Spalding^{3,40,41}, Tom Van der Stocken², Dominic Wodehouse^{3,38}, Jean W. H. Yong^{3,42}, Martin Zimmer^{3,43,44} and Daniel A, Friess^{3,45}

Dominic A. Andradi-Brown^{3,7}, Irfan Aziz^{3,8}, Thorsten Balke^{3,9}, Edward B. Barbier^{3,10},

Reviewed by: Syed Ainul Hussain,

What is written, said, shown, and shared through all sorts of oral, written and visual media in papers, on radio & TV or online eventually affects biological conservation discourses and attitudes



Dahdouh-Guebas et al. (2020)

2007: A world without mangroves ?

A World Without Mangroves?

AT A MEETING OF WORLD MANGROVE EXPERTS HELD LAST YEAR IN Australia, it was unanimously agreed that we face the prospect of a world deprived of the services offered by mangrove ecosystems, perhaps within the next 100 years.

Mangrove forests once covered more than 200,000 km² of sheltered tropical and subtropical coastlines (1). They are disappearing worldwide by 1 to 2% per year, a rate greater than or equal to declines in adjacent coral reefs or tropical rainforests (2–5). Losses are occur-



Emerging from the embrace of a mangrove tree-lined channel in northern Brazil, these pescadores, like coastal fishers worldwide, know that healthy mangroves mean good fishing and a secure livelihood.

tional diversity, particularly in species-poor systems like mangroves, which have low redundancy per se (8). Therefore, any further decline in mangrove area is likely to be followed by accelerated functional losses. Mangroves are already critically endangered or approaching extinction in 26 out of the 120 countries having mangroves (2, 9).

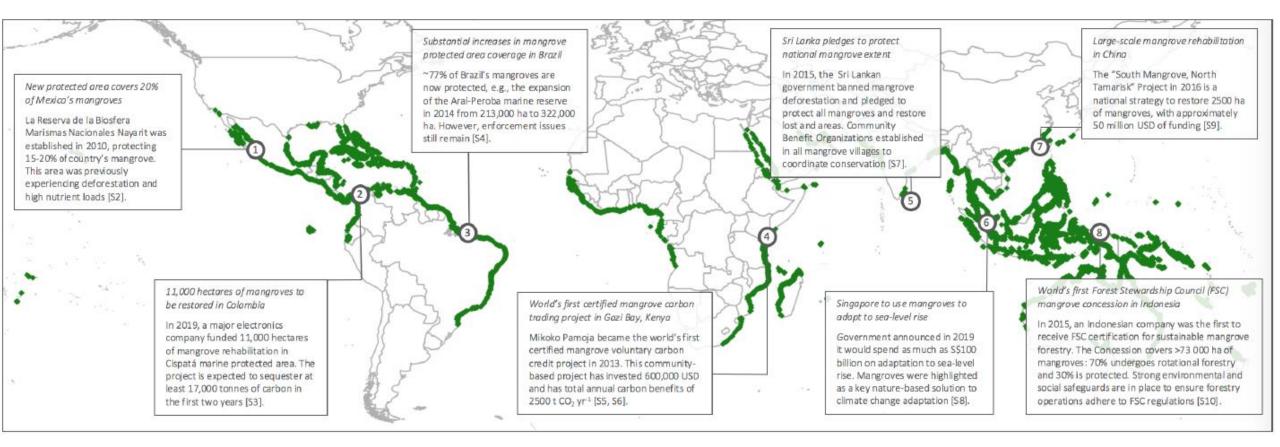
Deforestation of mangrove forests, which have extraordinarly high rates of primary productivity (3), reduces their dual capacity to be both an atmospheric CO₂ sink (10) and an essential source of oceanic carbon. The support that mangrove ecosystems provide for terrestrial as well as marine food webs would be lost, adversely affecting, for example, fisheries (11). The decline further imperils mangrove-dependent

fauna with their complex habitat linkages, as well as physical benefits like the buffering of seagrass beds and coral reefs against the impacts of river-borne siltation, or protection of coastal communities from sea-level rise, storm surges, and tsunamis (12, 13). Human communities living in or near mangroves would lose access to sources of essential food, fibers, timber, chemicals, and medicines (14).

We are greatly concerned that the full implications of mangrove loss for humankind are not fully appreciated. Growing pressures of urban and industrial developments along coastlines, combined with climate change and sealevel rise, urge the need to conserve, protect, and restore tidal wetlands (11, 13). Effective governance structures, socioeconomic risk policies, and education strategies (15) are needed now to enable societies around the world to reverse the trend of mangrove loss and ensure that future generations enjoy the ecosystem services provided by such valuable natural ecosystems.

N. C. DUKE,^{1*} J.-O. MEYNECKE,² S. DITTMANN,³ A. M. ELLISON,⁴ K. ANGER,⁵ U. BERGER,⁶ S. CANNICCI,⁷ K. DIELE,⁸ K. C. EWEL,⁹ C. D. FIELD,¹⁰ N. KOEDAM,¹¹ S. Y. LEE,² C. MARCHAND,¹² I. NORDHAUS,⁸ F. DAHDOUH-GUEBAS¹³

2020: Mangrove conservation success stories and conservation optimism



Contact

<u>Contact:</u> Prof. Dr. Farid DAHDOUH-GUEBAS c/o Université Libre de Bruxelles - ULB

Dept. Organism Biology

Av. F.D. Roosevelt 50, CPi 264/1, B-1050 Brussels, BELGIUM

E-mail: Farid.Dahdouh-Guebas@ulb.be https://serm.ulb.be/ ULB UNIVERSITÉ LIBRE DE BRUXELLES DEISPO VRIJE UNIVERSITEIT BRUSSEL







FRIENDSHIP

TROPIMUNDO.eu ERASMUS MUNDUS JOINT MASTER DEGREE IN TROPICAL BIODIVERSITY AND ECOSYSTEMS









