

World Bank Group – WACA
Call for Innovation

'Coastal.Retrofit 2.0™'
Mangrove trees & man-made Barrier Reef in key role

Introduction

'Coastal.Retrofit 2.0™' - Mangrove trees planted on a man-made offshore Barrier Reef for Climate Proof Coastal Protection. An innovative design from The Netherlands for a sustainable **Nature Based Solution** to enhance the resilience of coastal communities in West Africa for many decades to come. These countries are at present being adversely affected by Climate Change, Sea level Rise, Coastal Erosion & Flooding.

Technical design

For easy reference please see the illustration in the enclosed pdf. The **Van den Herik Sliedrecht & Nautilus Coastal-Solutions innovation** is unique, but based on natural-processes developed by ocean-nature itself, e.g. the coastal situation around the Islandstate of Mauritius in the Indian Ocean is our prime example and inspiration: mimicking the superb wave-breaking capabilities & coastline protection services of coral reefs in tropical waters.

Eco-socio benefits

A unique feature of our design is the planting of massive, new offshore wetland areas with the versatile **Mangrove tree**, (50.000 m². to 200.000 m². of new mangrove forest for every kilometre of shore-length) communal owned and managed not only able to reduce and dissipate wave attacks, but also a very effective method to achieve eco-socio benefits including: carbon sequestration (up to 400% faster than land-based tropical rain-forests), earn carbon-credits, re-establish lost coastal-ecosystem and biodiversity, both above and below water, generate nature-based economic benefits and services for coastal dwellers, including: seafoods, building materials, herbal medicines, nutrient recycling, pollution filtering, reducing social injustice and bringing new and rewarding employment, requiring new skills, substantially improving their resilience. In addition our innovation will make a major contribution to lift a large number of the most vulnerable coastal-citizens, women and adolescent girls in particular, out of poverty and 'last-but-not-least' fully climate proof and climate adaptable for decades.

Integrated Coastal Zone Management & Adaptation utilising mangrove trees in a prime role

According to the recent publicly available report (12-2020) from Earth Security Group (ESG) – London, titled: *"Financing the Earth Assets", 'The Case for Mangrove as a Nature-Based Climate Solution'*: **Mangroves** are a vital and indispensable asset for countries and coastal managers to achieve true integrated coastal zone management and **adaptation** and for companies and investors a tool to deliver 'net-zero' carbon commitments, besides being incombustible for wildfires, while halting the runaway extinction of biodiversity, (<https://earthsecurity.org/report>).

Despite all the above described superb properties mangroves have been disappearing worldwide in an alarming rate due to unsustainable urban pressure and investment models in: agriculture, aquaculture and infrastructure that do not recognise their value. The ESG Report® provides the evidence to guide investment decision-makers to embed these values in their investments to achieve greater resilience.

During January 2021 the UNEP organised the worldwide, online **Climate Adaptation Summit 2021 (CAS 2021)** from The Hague – The Netherlands. Thirtytwo worldleaders participated, there were 25 high level program elements, 300 speakers and 18.000 worldwide participants attended the conference platform. The majority of worldleaders, speakers and participants, including institutions such as The World Bank Group, IMF, African Development Bank, UN Global Center on Adaptation (GCA) called for urgent climate action and climate adaptation. The recently published UNEP **'Adaptation Gap Report 2020'**, in part. Chapter 6, *'Nature-Based Solutions for Adaptation'* is an other wake-up call!

CALL for Urgent ACTION & ADAPTATION along your vulnerable coast:

Do not postpone a decision, but immediately involve our Jointventure to design & construct your **'Coastal.Retrofit 2.0™' - Nature Based Mangrove planted Barrier Reef Solution** for a Climate Proof, sustainable Coastal Protection!

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