

## Restoring degraded lands using mangroves: Synergies between mangroves, climate change and sustainable development goals in Myanmar

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Myanmar is ranked globally, as the second most vulnerable country in the world to extreme weather events over the last 20 years. The country has a coastline exceeding 2,832 km and approximately 785,000 ha of mangrove cover. Mangrove forests comprise 4% of Myanmar's tree stock, are being destroyed at an alarming rate. This research was done in the Thor Heyerdahl Climate Park, a 1,800-acre climate park located in Ayeyarwady Region of Myanmar. Objective of the research was to identify the synergies between mangrove restoration and UN sustainable development goals. It was found that 16 of the 17 SDGs are addressed through a sustainably managed mangrove restoration. It also sequestered significant amount of carbon. These mangroves in Myanmar can store up to 732 tons of carbon per hectare. Unless the 785,000 ha of mangroves are placed under a protected scheme, over 500 million tons of carbon would release alone from the soil carbon to the

atmosphere thus contributing towards global warming. Furthermore this analysis found that replanting 2000 hectares of mangroves would sequester over 5.5 million tons of carbon dioxide over a 20 year period. The calculations were based on actual field measurements and IPCC and UNFCCC approved methodologies. Mangroves act as a Green Wall, a Green Foundation, a Green Filter and a Green Habitat and each of this provides immense service against vulnerabilities. Green Wall protects against cyclones, winds and typhoons. Green Foundation protects shorelines from erosion and improves landscape resilience. The Green Filter reduces the saline content of coastal water and lowers damage from salt water intrusion. The Green Habitat provides breeding grounds and sanctuary for rich biodiversity. Therefore it can be concluded that mangroves provide a cost effective yet productive method of climate change mitigation and adaptation.