Mangroves and Wetland (Blue Carbon)

Marine habitats have been a sink for a third of our CO2 emissions to date and have reached their saturation point. More than 60% of CO2 captured by marine habitats is stored in soils and sediments which release CO2 back into the atmosphere when disturbed. Without human intervention CO2 stored in soils and sediments can remain stored for thousands of years. One hectare of mangrove forest can sequester approximately 10 tons of CO2 annually with 75% of that stored in the sediment. Seagrass meadows can store more than 90% of sequestered carbon in the sediment where it can be locked away more permanently comparative to plant matter. One hectare of seagrass can sequester approximately 6 tons of CO2 annually.

Mangrove forests and seagrass meadows, like most other marine habitat types, are under threat. Degradation of these habitats can have severe consequences on ecosystem services provided to coastal regions. A hectare of healthy mangrove forest can contribute 1.8 ton of fish annually to local fisheries. Globally mangroves are worth an estimated US$195000 per hectare. The majority, 60-85%, of fish found in mangrove forests and seagrass meadows are commercially important species. Mangroves and seagrass habitats are nurseries for a multitude of fish (including several shark species), turtles, crustaceans, mollusks and other invertebrates. They, therefore, play an important role in coastal marine ecosystem dynamics. Despite their ecosystem services, mangroves are converted into unsustainable aquaculture farms with lifespans of only 10 years, or they are destroyed by coastal development. Aquaculture farms are often left abandoned after their expiry dates and too often these areas are not restored, leaving degraded and vulnerable coastal lands behind. Local communities are left without jobs and without the educational and financial means to restore the lost mangroves.

Mangrove restoration can have a multitude of benefits for local communities and everyone else alive today. Funding mangrove restoration helps local communities thrive by providing jobs in sustainable forest management,

sustainable local fisheries and ecotourism. Women are big players in these activities which indirectly has positive effects on women's rights. More parents can afford to send their children to school and do so for longer periods of time when sustainable economies are in place. Additionally, mangroves can sequester up to four times more CO2 than other forest types. Blue carbon projects are on the rise because of their efficiency in storing carbon. Mangrove trees have faster growth rates than many forests across the globe and immediately sequester CO2 in their soils. You can compensate your individual carbon emissions and reduce your carbon footprint by investing in restoration projects.

Carbon capture is not their only global role. Mangroves are nurseries for many reef fish species. Fish life cycles often include several habitats. The roots of mangroves provide protection to young, small fish from their predators. Once they reach a certain size the young fish can move to coral reefs and fulfill their roles in coral reef ecosystems. Seagrass meadows are an intermediary habitat for many fish making the journey from the safety of the mangroves to the safety of the reef. Seagrass meadows are equally important in supporting coral reef productivity and health. They work together with mangroves in providing habitat for young reef species.

Coral reefs provide an annual global income of US$ 35.8 billion. One hectare of healthy coral reef has an estimated worth of US$ 352 249 per hectare, which is 67% more than the equivalent value of tropical rainforest. More than 500 million people directly rely on coral reefs as an income and food source or for coastal protection. Mangroves are crucial players in maintaining coral reef health and its benefits. More than 25% of reefs have been lost in the last 30 years. Protecting and restoring these essential ecosystems is more important than it has ever been. Mangrove restoration projects are a first step in saving our oceans, our planet, and in reducing our carbon footprints.