

# Carbon Removals - on the road to Net Zero

## Restoring Mangrove Forests in Myanmar

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### Växthuset Lind

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Planting and restoring mangrove forests



Beyond climate benefits



Thor Heyerdahl Climate Parks



## Earth's own climate defense

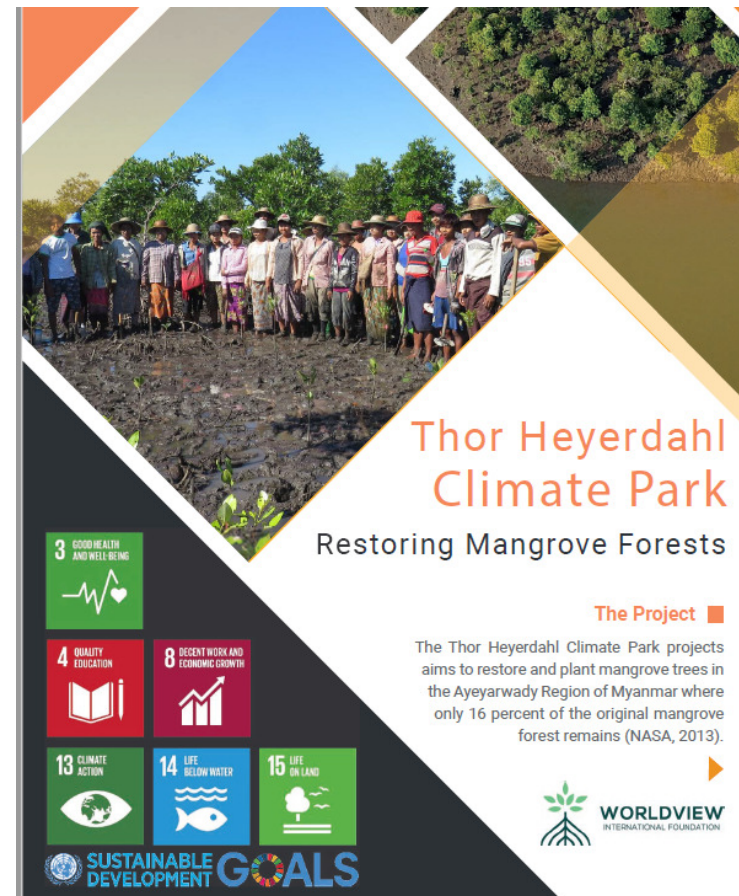
In support of the Paris Climate Agreement and UN Sustainable Development Goals.

Mitigating 250 million tons CO<sub>2</sub> on 100,000 Ha mangrove restoration and supporting 10 million people in vulnerable coastal communities.

Planting mangrove forests combats climate change in the most cost-effective way.

### Videos

- [About the Thor Heyerdahl Climate Park](#)
- [Greta Thunberg on the importance of forests](#)




The poster features a central photograph of a diverse group of people, including men, women, and children, standing in a line in a mangrove restoration site. They are wearing various types of hats and clothing, suggesting a hot climate. The background shows lush green mangrove trees and a body of water. The poster is divided into geometric sections with different colors: orange, grey, blue, and green.

### Thor Heyerdahl Climate Park


Restoring Mangrove Forests

**The Project** ■

The Thor Heyerdahl Climate Park projects aims to restore and plant mangrove trees in the Ayeyarwady Region of Myanmar where only 16 percent of the original mangrove forest remains (NASA, 2013).



The poster includes icons for Sustainable Development Goals 3 (Good Health and Well-being), 4 (Quality Education), 8 (Decent Work and Economic Growth), 13 (Climate Action), 14 (Life Below Water), and 15 (Life on Land). The icons are arranged in a grid: 3 (green), 4 (red), 8 (purple), 13 (green), 14 (blue), and 15 (green).



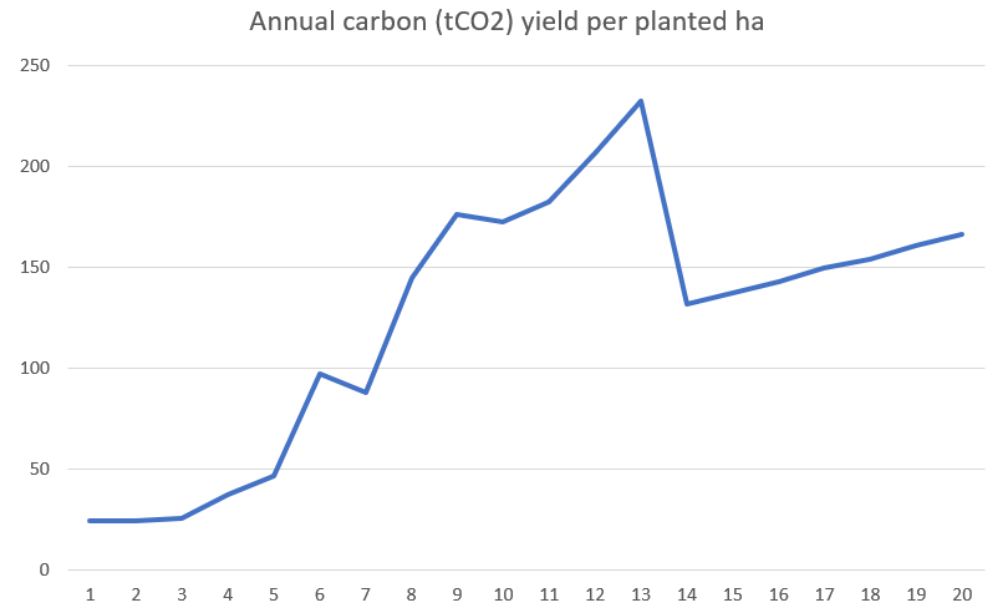
**WORLDVIEW**  
INTERNATIONAL FOUNDATION

**SUSTAINABLE DEVELOPMENT GOALS**

## Earth's own climate defense

Planting new forests binds CO<sub>2</sub> from the atmosphere through photosynthesis and thereby contributes to mitigating climate change. One new mangrove tree binds approx. 1 tCO<sub>2</sub> over a twenty-year period.

The destruction of mangrove forests in tropical coastal areas is an ecological disaster for the people who live there, and it is therefore critical that the destruction is halted and that the ecosystems are restored and managed in a sustainable way.





1 tCO<sub>2</sub> accumulated over 20 years




1 tCO<sub>2</sub> over avg. 5 years



## Customer: cost per tCO<sub>2</sub>



= Kr 10.-



× Kr 10,- x 5 = **Kr 50/tCO<sub>2</sub>**

## Växthuset Lind with 2020 emissions – total 286 Co2e ca 10 trees pr tCO2e

286 tCO<sub>2</sub>



2500 planted trees (1 ha)



kr 30 000.-



This one-year compensation  
would bind

**2 500 tCO<sub>2</sub>**

in the atmosphere over a  
period of 20 years

## For each carbon credit issued through the VERRA-register

45%

Is earmarked for the sustainable community development in Myanmar

45%

Is surrendered on behalf of Customers as they are issued (once per year)


10%

Administration and verification cost





Planting of degraded mangrove forests has numerous positive impacts on the climate, the environment, and on local socio-economic conditions:

- Mangrove forests are breeding grounds for fish populations, which **strengthens the livelihood of local communities**.
  - Mangrove forests **foster biodiversity** and are crucial habitats for otherwise threatened and endangered animal and plant species.
  - Mangrove forests **protect coastal areas** (and thereby protect people and animals) against storms and cyclones, and can also provide protection against tsunamis.
  - Planting mangrove forests **create local jobs** both directly through breeding and planting, but also indirectly by strengthening the livelihoods of local communities.
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# The process of building the Thor Heyerdahl Climate Park

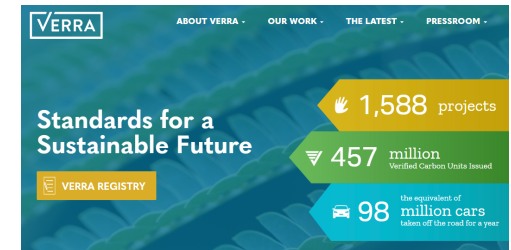
## 3 years research

in cooperation with Pathein and Myeik Universities completed 42 research documents



## Sustainable development

With emphasis on women empowerment in MaGyi community



## 3 years test planting

of three million trees on 720 Ha. Recorded highest achievement 93% survival rate of mangrove trees (avg. global rate under 50%)



## Verified Carbon Standards (VCS)

Project approved according VERRA VCS standard in 2018

## The process of building the Thor Heyerdahl Climate Parks

Established mangrove gene bank

for 64 true mangrove species and mangrove associates stored in Svalbard Globale Frøhvelv



Increase of sea food after planting

Up to 100 sustainable jobs created in aquaculture and more harvest for the fishing fleet



Biodiversity

Wild elephants and other endangered species returning to the forest. Protection of sea grass meadows, coral reefs, endangered dugongs and sea turtles



Bee honey production

and other livelihoods from sustainable forests management

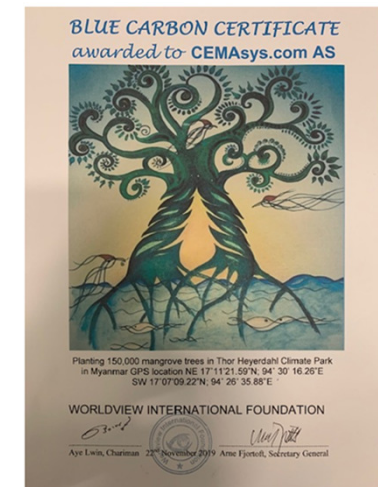
## First step completed 2100 Ha restored - Parts of the restored area



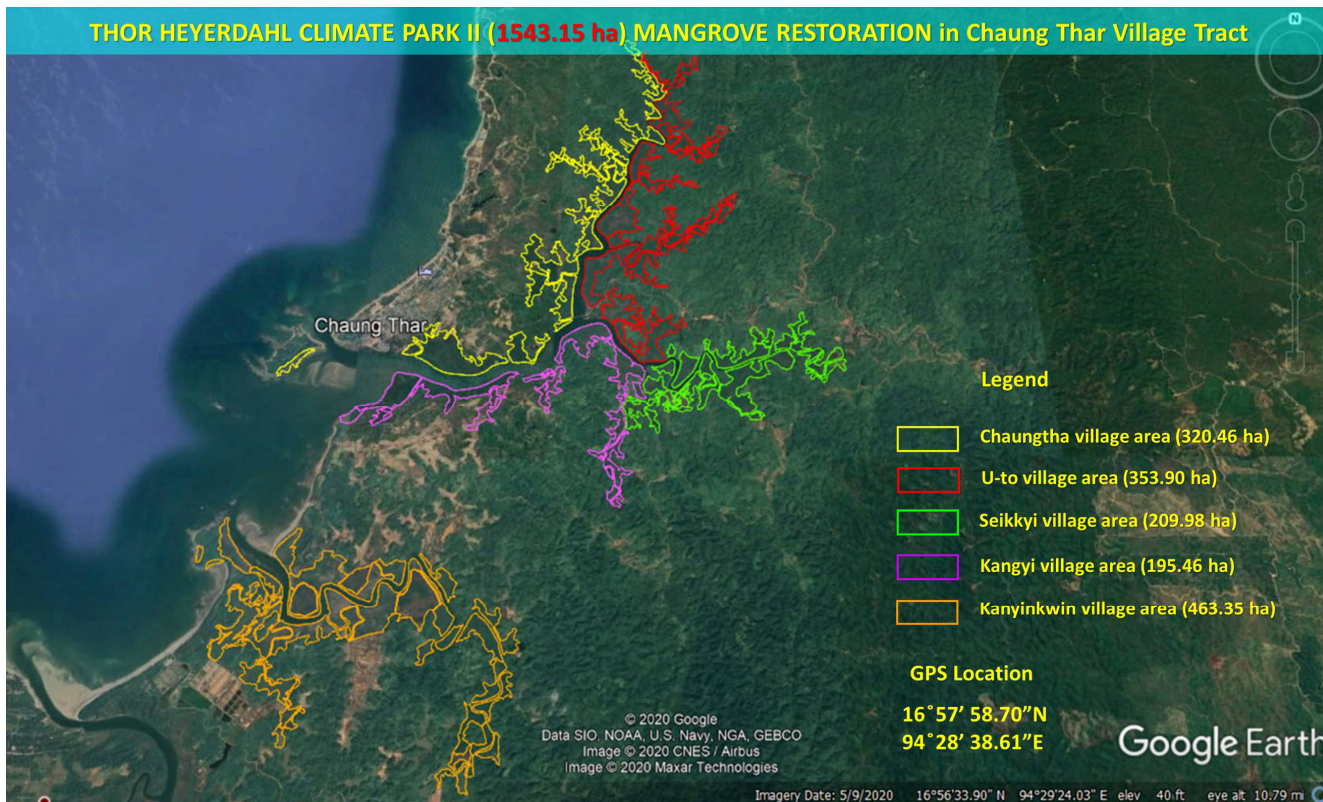
CEMAsys Climate Park – a part of the Thor Heyerdahl Climate Parks

CEMAsys.com

## 60 ha with 150.000 trees planted Fall 2019



## NEXT: Thor Heyerdahl Climate Parks II – New area dedicated for CEMAsys' Customers





**Ambitious goals - Significant climate benefits at low cost**

- Large areas made available for planting of mangrove forest
- 100,000 Ha with 400 million trees
- Mitigating 250 million tCO<sub>2</sub>
- Sustainable development in areas with 10 million people
- 100% increase of income among the poorest in partner communities
- Future potentials in several countries to plant over 1 billion mangrove trees by working together to meet urgent global needs.





CEMA<sup>sys</sup>.com

