

## MYANMAR STOVES CAMPAIGN

Transforming lives through carbon mitigation



003 EDITION

Myanmar Stoves Campaign  
Coral Propagation  
Hornbill Reintroduction

Mangrove Restoration  
Forest Restoration  
Soneva Namoon  
Action Against Hunger





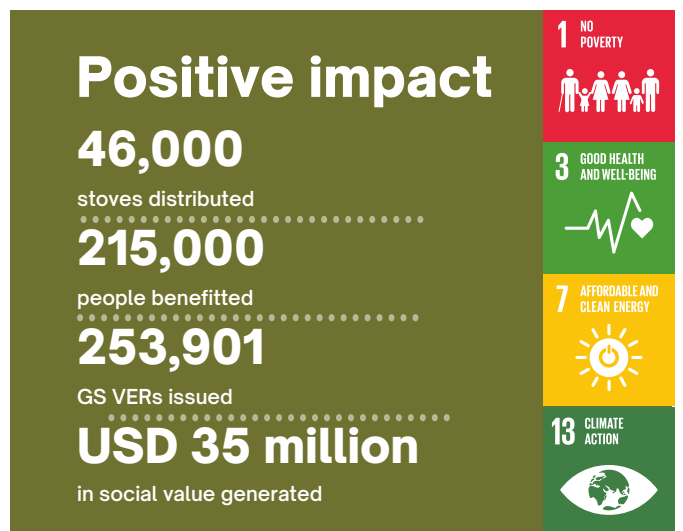
Ma Cho and her mother-in-law Than Than Win prepare the family dinner.

**Myanmar has one of the fastest rates of deforestation in the world, with most of the wood used for domestic cooking.**

The Myanmar Stoves Campaign is a Soneva Foundation programme that distributes fuel efficient cook stoves to thousands of families. It is the first Gold Standard-certified carbon project in Myanmar.

The Myanmar Stoves Campaign has been successfully operating for nine years, together with our implementation partner Mercy Corps Myanmar.

To date, 46,000 stoves have been distributed, benefitting 215,000 people. The infographic, bottom right, depicts the overall impact of the project.







A traditional three-stone open fire generates a lot of smoke.

## Household cooking issues

**Indoor cooking on inefficient stoves is a silent killer. Air pollution from domestic cooking is responsible for the premature deaths of over 4 million people a year worldwide, more than HIV/Aids and malaria combined.**

It is also a disaster for our climate. Up to 20% of global carbon emissions are a result of inefficient cooking on open fires. Consumption of wood for fuel is a major cause of deforestation and Myanmar is the third largest contributor to deforestation globally. As the forests disappear, the price of wood becomes higher, driving more and more families into energy poverty.

Each fuel-efficient stove reduces wood consumption by at least 50% and saves 2.5 tonnes of wood per year. It also reduces air pollution by 80% – improving the health and safety of the whole community.



A woman carrying wood for fuel.



The fuel-efficient stove reduces smoke by 80%. *Page 2*



Lay Nyunt Aung returns with his wood supply for cooking.

## Deforestation

Lay Nyunt Aung returns to his village Baw Di Kone after foraging for firewood for cooking. The effect of deforestation on the landscape is apparent. While some areas are converted to farming after the trees have been cut down, other areas are too barren and the soil too poor to be cultivated.

Rural families in Myanmar spend as much as 40% of their income – or time equivalent – on purchasing or collecting firewood.

Cutting trees for cooking fuel is a major source of deforestation in Myanmar, which is one of the highest contributors to deforestation worldwide. Rapid deforestation affects the micro-climate and leads to increased unpredictability of the weather, further threatening the livelihoods of smallholder farmers.



Lay Nyunt Aung chops branches for firewood.



Firewood brought into Baw Di Kone village.



## How efficient cook stoves work

Families in Myanmar traditionally cook over an open fire using three bricks – known as a three-stone open fire. The Envirofit SuperSaver AI cook stove was one of several designs we trialed with rural families. It was selected for its efficiency, safety and compatibility with traditional cooking methods.

Just three sticks of wood are enough to create enough heat for boiling, which cuts fuel requirements by 50%. The heat is retained in the central section of the stove, making it much more efficient than an open fire or the traditional three-stone stove. Smoke is also contained, providing a much cleaner method of cooking. As the combustion chamber is enclosed, sparks do not escape, greatly reducing the risk of a household fire.

The cook stove reduces wood



The stove reduces wood consumption by 50%.

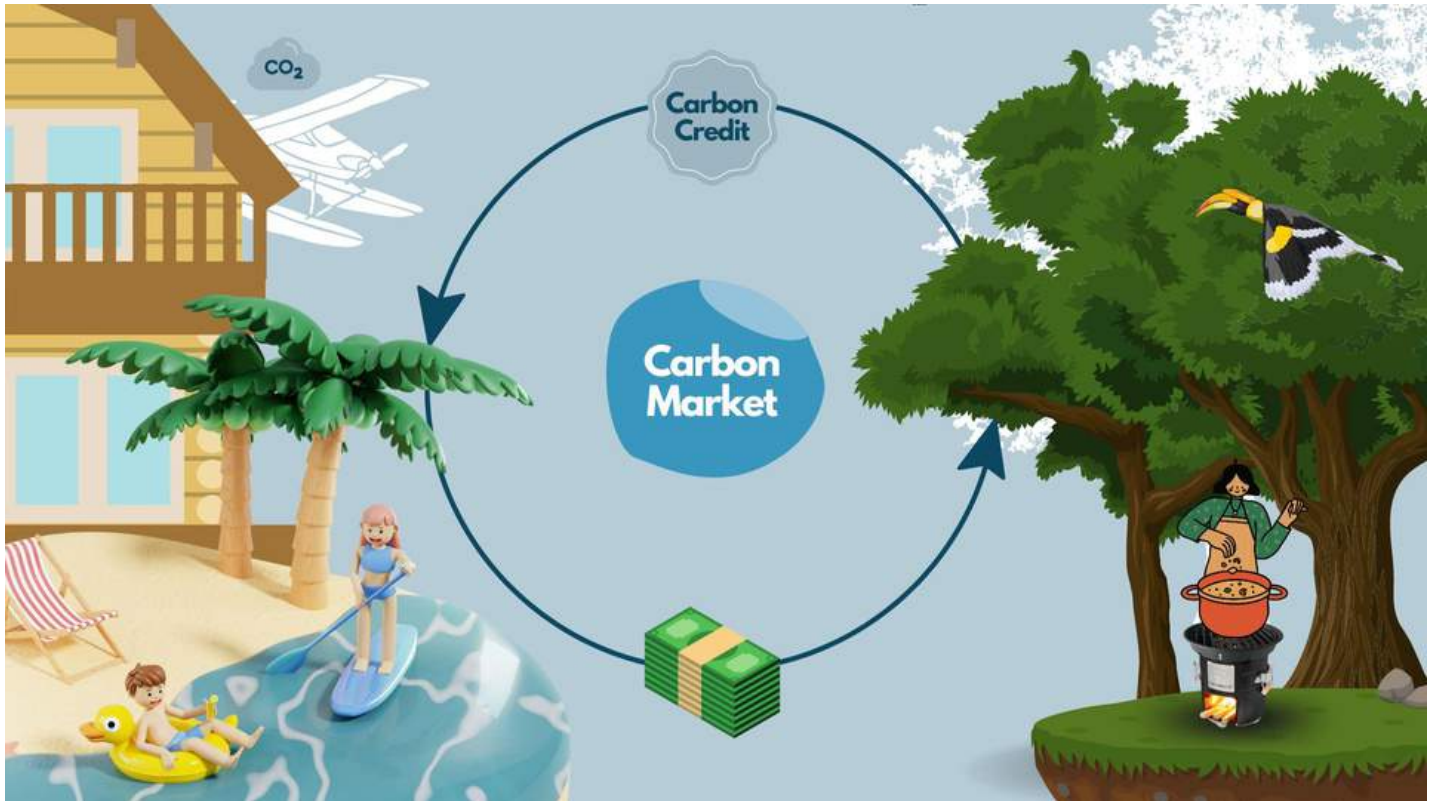
consumption by 50%, air pollution by 80% and CO2 emissions by 60%.

The stoves are sold to end users at an 85% reduction on the retail fee. Each stove comes with a one-year guarantee and service agreement.



Ma Khin Myaing enjoys cooking with the fuel-efficient stove.

## How carbon markets work



**To make it affordable for end users, the bulk of the costs for each fuel-efficient stove is recovered through carbon finance.**

Carbon markets turn emissions reductions into tradeable assets. These credits are generated from emissions reduction projects such as our Myanmar Stoves Campaign. One carbon credit, which is verified by the recognised standard Gold Standard, equals one tonne of CO<sub>2</sub> avoided through the use of the stoves.

The carbon market allows the Soneva Foundation to sell the carbon credits to companies to offset their emissions and reduce their carbon footprint. Selling some of the credits allows the Soneva Foundation to recycle its invested capital into expanding the project, with the result that our carbon abatement projects are self-funding after a time.

The carbon markets allow the Soneva Foundation to take an impact investing approach and have even bigger impacts than if it only funded a project.



## "This cook stove is amazing!"



Wai Moe Aung with his mother, Than Than Win.



Than Than Win says that her new cook stove is amazing.

When you visit Myanmar villages, you will see communities that are far behind on modern development. Access is challenging, particularly in the wet season, due to poor roads. Households' primary income comes from agriculture and families live in simple houses. Most homes do not have electricity.

Traditionally, people cook on open fires using rudimentary stoves in the house. Typically, they spend up to 40% of their income on firewood. Those who have adapted to using our cook stoves report that they are very pleased with both their savings on wood and the 80% reduction in air pollution in their homes.

Than Than Win in Thit Hla Kyin village, one of our first cook stove users, expressed her gratitude towards the stove:

"I think this cook stove is amazing! Buying it was a big investment for us, but I made the right choice buying it. It uses about 60% less wood than our old stove and it cooks much faster. But it is more than just saving wood and money. It is also the simpler, most unexpected things. I have peace of mind. My kitchen is not going to catch fire and I don't need to worry if I need to step away for a moment. I can leave it cooking while I get water or feed the animals."

Than Than Win has hopes for the future:

"I'd like my son to be well educated so he can join the government and help prevent global warming. Because of bad weather, we have lost quite a bit of income."

## Warrior against global warming

Ma Khin Myaing became the first fuel efficient stove owner in her village through the Myanmar Stoves Campaign in 2013. She lives in Baw Di Kone, in the Myanmar's Central Dry Zone. Her husband now supplements his income by selling cook stoves to others, for which he receives a commission.



Ma Khin Myaing,  
our first stove user.

Ma Khin Myaing says: "I used a lot of wood with my previous stove, and it produced more smoke and soot and made my eyes water. This one is different. It uses less wood, and the fire is contained."

Her husband, U Win Myaing, is a vendor for the fuel-efficient cook stoves supplied by the Soneva Foundation.

"I'm glad to be a cook stove vendor as I can see the deforestation around our village. But since some of us have been using the cook stove, I can see it starting to become green again. Now most villagers are planting trees and cutting less. I think in 10 years it will be green again."

He continues: "The cook stove will help save the world by reducing carbon dioxide emissions. As a vendor, I feel like a warrior against global warming. I will do my best, but it is better if we combine our efforts, you and me."



Global warming warrior U Win Myaing.





**Around 40 years ago, hornbills disappeared from Koh Kood, Thailand. It is said that hunting from migrant workers and some locals was the cause.**

The Soneva Foundation is working with the Hornbill Research Foundation to reintroduce hornbills on Koh Kood in Thailand. The Hornbill is an important species for the island as it helps spread the seeds of bigger trees, which improves the biodiversity of the forest.

On May 17, 2022, we opened the enclosure to allow our first oriental pied hornbill pair to enjoy nature in the wild. The female ventured out first and spent the night in the canopy near the enclosure. Her male partner was initially reluctant, but joined her the next day.

In July, we brought a new pair to the island. Unfortunately, the female broke her leg and had to be taken to a veterinarian for treatment. Fortunately, no surgery was required. Her male partner was healthy and was released.

While she has been recovering, we brought across another pair in September. Once her treatment has finished, the injured female will be brought back to Koh Kood to be released as planned.





## CORAL PROPAGATION



**The Maldives is an island nation with an enchanting underwater beauty. Corals play an important role in ocean biodiversity, with 25% of sealife living on the reef.**

In collaboration with Coralive.org and the Soneva Fushi SCIE:NCE team, Soneva Foundation has set up one of the biggest coral nurseries in the world using Mineral Accretion Technology (MAT). Located at the outer edge of the house reef, the coral nursery at Soneva Fushi comprises 432 table structures, arranged in three circular clusters.

In Q3 2022, our implementation partners Coralive.org and the Soneva Fushi SCIE:NCE team completed filling the MAT table structures with coral fragments.

Additional investment in coral spawning and rearing lab and micro-fragmenting tanks have been made, with delivery expected later in 2022.

The yearly output of corals generated and out-planted is expected to be between 100,000 and 150,000 coral fragments.



14 LIFE BELOW WATER



**150,000**

coral fragments per year





**Blue carbon is captured by the world’s oceans, representing more than 55% of the carbon sequestered by plants. Mangroves sequester up to five time more CO2 than trees in terrestrial forests.**

The Soneva Foundation engaged Worldview International Foundation to restore 600 hectares of mangrove forest in Myanmar. 1.5 million mangroves have been planted, completing the site in September 2022.

The project will be registered under VERRA and is expected to generate 860,000 carbon credits.

Mangroves play a key role in maintaining healthy oceans, and are the only forest that grows in salt water, as a buffer between land and sea. This tree filters and cleans run-off and sediments, protects coral reefs and seagrass meadows, as well as providing the highest capacity to mitigate CO2, with permanent storage in the ground. Their ecosystem services are of the highest value for life on our blue planet.




## Positive impact

**1.5 million**  
mangroves to be planted


**600 hectares**  
to be restored

**860,000 tons CO2**  
to be mitigated


**1** NO POVERTY



**13** CLIMATE ACTION



**14** LIFE BELOW WATER







**Deforestation is responsible for around 11% of global carbon emissions. Forests sequester or store carbon mainly in trees and soil, making them a sink. Restoring forests is an important solution to reverse climate change and improve biodiversity.**

The Soneva Foundation supports projects that restore the natural forest by planting a variety of native species. We recently engaged Eden Reforestation Projects to plant 3.7 million trees in Matica Sede, Mozambique, over a period of four years – starting from January 2022.

A key component of the project is to use indigenous tree species, based on the mimbo forest type, which are planted by the local community.

To date, 365,389 trees have already been planted.



The team prepares seedlings at Matica Sede.

**Positive impact**

<p><b>3.7 million trees</b> to be planted in four years</p> <p><b>3,378 hectares</b> to be restored</p> <p><b>2.4 million tons CO2</b> to be mitigated</p>	<p><b>1</b> NO POVERTY</p> 
<p><b>13</b> CLIMATE ACTION</p> 	<p><b>15</b> LIFE ON LAND</p> 



## SONEVA NAMOONA



**Soneva Namoon provides a blueprint for how all Maldivian islands can phase out single-use plastic, introduce recycling and inspire a new generation of ocean stewards.**

Soneva Namoon is a Maldivian NGO, funded by the Soneva Foundation, working to empower zero waste communities. It engages with seven islands in Baa Atoll and one island in Haa Dhaalu and, in the Noonu Atoll, has embarked on an atoll-wide project as a strategic and technical partner on waste management issues (across 13 islands).

A water bottling facility – Soneva Water – in Maalhos, Baa Atoll, provides an alternative to single-use plastic bottled water to households, guesthouses and cafes. Construction of an additional water bottling facility on Kudafari in the Noonu Atoll is currently underway. The water bottling plants are important initiatives to eliminate single-use plastic, accompanied by other

engagements with the same purpose, such as household water-filter trials, reusable nappies and menstrual product awareness workshops and trials, as well as a recently formed, women-led second-hand resale market.

In partnership with the Ministry of Education, Soneva Namoon is currently in the second year of piloting the Fehi Madharusa (Green School) framework, an environmental education programme. Seven pilot schools are participating and co-designing the final version of the programme through their experience and feedback.

In partnership with the Maldives Swimming and Life Saving Skills Training School, Soneva Namoon launched a Shore to Open Water Series, training swimming and water rescue instructors on all Namoon islands, as well as encouraging community activities in and around the ocean.





**Childhood malnutrition is a potentially fatal health condition. The Soneva Foundation works with Action Against Hunger to fight it across the world.**

In 2020, we committed USD 150,000 for a three-year project in southern Bangladesh to strengthen households' capacity for climate adaptive and resilient livelihoods to tackle food insecurity and under-nutrition.

Our implementation partner, Action Against Hunger, is helping communities in rural Bangladesh adapt to climate change. They are teaching families new skills and offering business training, as well as increasing their food production at home using new climate change-resistant farming methods. This dual action plan ensures that families can access nutritious food either from their gardens or with their income.



Left: "It feels good to get fresh vegetables. Now we do not have to depend on others," says Sabuda Begum.  
Right: "My grandson Mahfuz (6) is going to school now, and we can provide for his education," says Sabuda.





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