SONEVA FOUNDATION

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Hornbill Reintroduction
Myanmar Stoves Campaign
Forest Restoration

Coral Propagation
Soneva Namoona
Action Against Hunger

Oriental Pied Hornbills.

Hornbills (*Bucerotidae*) are a family of bird found in tropical and subtropical Africa, Asia and Melanesisa. They are characterised by a long, down-curved bill which is frequently brightly coloured and sometimes has a casque on the upper mandible.

Hornbills include about 55 living species, 13 of which exist in Thailand. Most hornbill species are found in dense forests. Many Asian hornbills are threatened by hunting and habitat loss from deforestation, as they tend to require primary forest. Hornbills are also threatened by the poaching of chicks for food and for the illegal wildlife trade. Animal traders are willing to pay large sums of money for hornbill chicks. Poaching of chicks is a significant threat in southern Thailand.

Fruit eaters

Hornbills are omnivorous, eating fruit, insects and small animals. They cannot swallow food caught at the tip of the beak as their tongues are too short to manipulate it, so they toss it back to the throat with a jerk of the head.

Loyal couple

Hornbills are monogamous breeders, nesting in cavities in living trees such as *Dipterocarpus* sp. and *Syzygium* sp. Hornbills can live for up to 40 years and have chicks usually between the ages of 10 to 20.

In Thailand, hornbills begin searching for nest sites at the end of the monsoon season, in December or January. The male will locate a possible nest cavity and invite the female to inspect. Once she is satisfied with the choice of nest site, mating occurs nearby. The female usually lays one to three eggs in existing holes or cavities in trees often created by woodpeckers.

Nesting sites may be used in consecutive breeding seasons by the same pair. Before incubation, the females – sometimes assisted by the male – begin to close the entrance to the nest cavity with a wall made of mud, droppings and fruit pulp. When the female is ready to lay her eggs, the entrance is just large enough for her to enter the nest, and after she has done so, the remaining opening is also all but sealed shut. There is only one narrow aperture, big enough for the male to transfer food to the mother and eventually the chicks.

The function of this behaviour is apparently related to protecting the nesting site from rival hornbills. The sealing can be done in just a few hours; at most it takes a few days. Having sealed the nest it takes a further five days for the first egg to be laid. When the chicks and the female are too big to fit in the nest, the mother breaks out of the nest and both parents feed the chicks.

Importance of Hornbills

Hornbills are the farmers of the forest. They are large, fruit-eating birds which live in sub-tropical forests, eating the seeds of bigger trees compared to smaller birds. This is important for improving the biodiversity of the forest and complementing the work of smaller birds. Because of the hornbill's ability to commute over long distances, they are of vital importance for the dispersal of seeds and therefore for plant reproduction.

However, large forested areas are needed to sustain hornbill populations. As a consequence of intense habitat destruction, numbers of many hornbill species in south-east Asia have been dramatically declining.

Hornbills are important for the biodiversity of the forest. In the centre you may spot an artificial nest set up by our team.

Hornbills in Thailand

There are 13 hornbill species living in Thailand. The two main areas for hornbills are Huai Kha Khaeng Wildlife Sanctuary, situated in western Thailand, and Khao Yai National Park in central Thailand.

The Hornbill Research Foundation has some of Thailand's leading experts studying hornbills, including Dr Pilai Poonswad and Dr Vijak Chimchome. It is estimated that there are around 10,000 hornbills in these two areas alone, with Oriental Pied Hornbill and Great Pied Hornbill as the most common. There is also a good number of hornbills in the deep south of Thailand, however, this area has not been studied much.

Hornbill species in Thailand

Oriental Pied Hornbill

Rhinoceros Hornbill
Helmeted Hornbill
Rufous-necked Hornbill
Wrinkled Hornbill
Plain-pouched Hornbill

Great Hornbill
Wreathed Hornbill
(Tickell's) Brown Hornbill
(Austen's) Brown Hornbill
Bushy-crested Hornbill
White-crowned Hornbill

Black Hornbill

Right: Oriental Pied Hornbills.

Left: The enclosure is prepared for the hornbill pair to adapt before their soft release.

Hornbill reintroduction on Koh Kood

Around 40 years ago, hornbills disappeared from Koh Kood. It is said 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.

Artificial nests

The first pair of Oriental Pied Hornbills were brought from the Zoological Parks Organization to Koh Kood in December 2021. Our pair was born in captivity and is around ten years old. The pair will be kept in an enclosure for a couple of months in preparation for their soft release.

Here they will be gradually introduced to eating native fruits. Once released, we expect them to come back to the enclosure to get food for about a month's time before adapting to surviving on their own.

First pair of Oriental Pied Hornbill preparing for soft release.

Artificial nests

Artificial nests built by Soneva Kiri carpenters have been strategically placed at heights of 15-20 metres in trees near the enclosure. The idea is for the pair to settle in one of these and call it its home. The artificial nests are needed as there is a lack of natural cavities in the trees for hornbills to nest. Koh Kood does not have any woodpeckers or bears that normally would create these cavities.

Once the hornbill couple settle in the wild, we will bring over another pair and continue the process. Over time we hope to establish a healthy population of hornbills on Koh Kood.

Artificial nest being installed 20 metres up a tree.

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

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, more than HIV Aids and malaria combined.

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

Each stove saves 2.5 tonnes of wood per year and reduces air pollution by 80% – improving the health and safety of the whole community.

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

In March 2022, 1,388 stoves were distributed, which brings the total for the year to 4,545, benefitting almost 22,000 people. Below you will see the overall impact of the project.

Positive impact

41,290
stoves distributed

192,181
people benefitted

246,605
GS VERs issued

USD 32 million
in social value generated

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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 local tree species, which are planted by the local community.

The first seedballs planted at Matica Sede.

Positive impact

3.7 million trees
to be planted in four years

3,378 ha
to be restored

2.4 million CO2
to be mitigated

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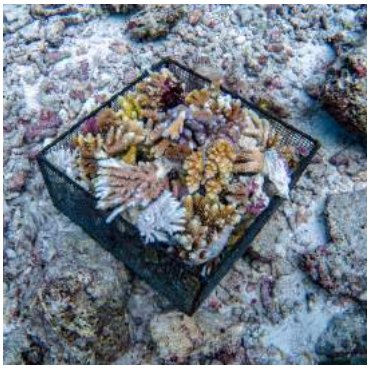
Our divers populate the table structures with corals.

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 March 2022, our implementation partners Coralive.org and Soneva Fushi SCIE:NCE team completed transferring 15,000 coral colonies from a dredging project in central Maldives. This equated to 375,000 coral fragments rescued. The colonies filled up the entire table structures, with excess that will be transplanted directly to the reef.

We expect to harvest 50,000 coral fragments a year from 2022. These will repopulate surrounding reefs, both at Soneva Fushi and our neighbouring islands.



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Maalhos was the first island in the Maldives to turn their former burnsite into a recreational area.

Soneva Namoona provides a blueprint for how all Maldivian islands can phase out single-use plastic, introduce recycling and inspire a new generation of ocean stewards by fostering a love for the ocean.

In 2020, Soneva Namoona helped the island communities of Maalhos, Dharavandhoo and Kihaadhoo to become the first islands in the country to end the practice of open burning. Currently the team is working with eleven islands in the Baa and Noonu Atolls.

In March 2022, Soneva Namoona signed an MOU with the Noonu Atoll Council as the Strategic and Technical Consultant on atoll-wide waste management issues, in the move towards a circular economy.

A water bottling facility – Soneva Water – was set up at Maalhos in November 2018 that serves 80% of the island's households, and all the local guest houses and cafes. As a result, we have eliminated the production of 200,000 plastic bottles.

The team is currently planning to set up two additional water bottling facilities on Kudafari, which will serve as important initiatives to eliminate single-use plastic.

In August 2021, Soneva Namoona launched the Fehi Madharusa (Green School) framework, an environmental education pilot programme in partnership with the Ministry of Education and the National Institute of Education. Seven pilot schools participate with training sessions about introductory topics connected to environmental education, as well as how to adapt existing lessons to include environmental themes.

Soneva Namoona is a Maldivian NGO. The Soneva Foundation co-funds the initiative and is also on the board.

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 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: Shilpi Khatun with her husband Ziarul Islam are producing nutritious food from their vegetable garden.
Right: “I am pleased that we now can afford to send our children to school,” says Shilpi.

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