2023

ANNUAL REPORT

TURTLE FOUNDATION

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CONTENT

TURTLE FOUNDATION

Protecting Sea Turtles and their Habitats

© Perdiansyah

OUR ACHIEVEMENTS 2023

114 NIGHT MISSIONS
were completed by the dog and drone team over a period of 130 days

17 TONS OF GARBAGE
were removed from the beaches of Boa Vista

5,516 GREEN SEA TURTLE NESTS
were protected on the islands of Bilang-Bilangan and Mataha

60 MEN AND WOMEN
were employed as rangers on Boa Vista and in Indonesia

865,200 HATCHLINGS
are estimated to have made their way to the sea with our help

10 WOMEN
participated in our "Women in Conservation" project on Boa Vista

12 PEOPLE
participated in a training for seaweed farming in Banggai

532 SYMBOLIC ADOPTIONS
of endangered sea turtles were purchased

633 PEOPLE
supported us with a donation for the first time in 2023

2 LEATHERBACK TURTLES
were equipped with satellite transmitters for research on their migratory routes on Simeulue

FOREWORD

Dear friends of the Turtle Foundation,

The Berau Archipelago – 31 islands off the east coast of Borneo, Indonesia. Most of this island world, covering an area of 285,549 hectares, was declared a marine protected area in 2016. It sounds remote and exotic. The biodiversity is overwhelming: more than 460 species of coral, over 850 species of fish, and the largest nesting population of green sea turtles (Chelonia mydas) *in the country. When you sail across the clear blue water to one of the small coral islands, with its perfect white sandy beach surrounding a mysterious tropical forest, you feel like you are in a dream. This was how my husband Kevin and I felt when we arrived on Sangalaki Island in the fall of 2000.*

Reisa and Kevin Latorra

But the beautiful picture had its dark sides: sea turtle eggs have been considered a nutritious delicacy since time immemorial, but especially in Berau, turtle nests were ruthlessly exploited for decades. Since green sea turtles do not reach sexual maturity until they are 25 to 35 years old and return to lay their eggs, the decline in the turtle population did not become alarmingly apparent until the 1970s and reached a critical point in the 1990s. Although sea turtles and their eggs were placed under protection in Indonesia in 1990, the local government in Berau continued to auction licenses for the commercial collection of eggs every year.

Shortly before our arrival on Sangalaki, the Turtle Foundation was founded to protect this important nesting population. As the first staff members, Kevin and I were tasked with launching the protection program. We lived in one of the bungalows of the Sangalaki Dive Lodge, and often the sea turtles nested near or even directly under our hut.

Initially, we negotiated with the egg collectors to leave us 20 % of the nests so they could hatch naturally. In addition, we "bought" additional nests by paying the egg collectors the equivalent and then relocating the nests to a hatchery. This was funded by diving guests who "adopted" the nests. We took care of these nests and sent the guests photos of "their babies" when they hatched.

During two trips to Sangalaki, we spent a total of six months on the tiny island, which is only about 17 hectares in size. Fifty years earlier, up to 200 nests per night were laid there with year-round nesting activity – when we arrived, there were only 10–15 nests. Despite the initial resistance of some egg collectors, significant progress was made. By the end of 2001, the local government agreed to protect 100 % of the nests on Sangalaki, finally aligning with national law. Rangers trained by the Turtle Foundation protected the turtles on Sangalaki until 2012, when the local conservation authority took over the protection of the island.

In the following years, the protection measures that had proven so effective on Sangalaki were extended to four other important nesting islands in the archipelago. Despite some setbacks, more than 10 million young green sea turtles have now reached the sea under our care!

It has now been 22 years since Kevin and I were on Sangalaki, but when we close our eyes, we still see the turtles nesting on the beach as they have been doing for millions of years, and the freshly hatched young running to the water in the moonlight. When the idea of founding Turtle Foundation USA came up in 2006 to better tap into the fundraising potential in our country, I was happy to continue to be involved in the organization.

In the 23 years of its existence, the Turtle Foundation has grown to seven organizations, each of which is non-profit and tax-exempt under the laws of its country: Turtle Foundation (TF) Germany (founded in 2000), TF Switzerland (2006), TF USA (2006), TF Cabo Verde (2012; local name Fundação Tartaruga), TF Liechtenstein (2014), TF Indonesia (2018; local name Yayasan Penyu Indonesia), and TF United Kingdom (2019).

In addition, the Friends of Turtle Foundation e. V. has been registered as a non-profit association in Germany since 2016.

With its long-standing conservation projects in Indonesia and Cabo Verde, the Turtle Foundation is committed to preventing the extinction of sea turtles. We are convinced that sustainability in protecting our natural heritage can only be achieved through close and trusting cooperation with the local population.

Only with the support of people like you can we carry out and continue our work in Berau and other conservation projects. We are infinitely grateful to you for this wonderful opportunity to make our small contribution to a great goal!

Reisa Latorra
President of Turtle Foundation USA

In the hatchery

Nest near the bungalow (© Hiltrud Cordes)

PROJECTS 2023
INDONESIA

© Petra Minnasch

OVERVIEW

Our projects in Indonesia, conducted by our sister organization Yayasan Penyu Indonesia, have been able to proceed as planned. The ongoing protection programs at nesting beaches in Berau and Sumatra, which we will report on below, have been expanded. Additionally, we successfully completed a time-limited program in Central Sulawesi, where we trialed the development of seaweed cultivation as an alternative income source to the production of turtleshell products for the first time. The experiences gained here can be applied in other project areas in the future.

Protecting sea turtles on their nesting beaches is an efficient method to prevent immediate threats such as poaching and egg theft. However, other dangers like hunting and bycatch at sea, as well as the so-called captive raising of sea turtles, are not addressed here. What originally might have been a well-intentioned approach to improve the survival chances of sea turtle hatchlings has, in many places, become a torturous captivity for commercial purposes. This refers to “headstarting” facilities, which are becoming more common in Indonesia. To raise awareness about the negative impacts of this practice and to achieve a long-term ban by the responsible authorities, we are focusing on bringing the issue to the agenda in lectures and conferences. The fact is that sea turtles do not need human support during their first months of life, and many animals cannot be released back into the wild due to poor conditions and resulting mutilations. Instead, they are condemned to a lifetime of miserable conditions.

The first successful seaweed harvest on Pulau Tembang, Central Sulawesi

Young olive ridley sea turtle with severe mutilations on its carapace and hind flipper at a “headstarting” facility in West Sumatra (© Hiltrud Cordes)

BERAU

When Turtle Foundation began its work in the Derawan Archipelago 23 years ago, we had no idea how challenging the road ahead would be. Our motivation was to prevent the imminent extinction of this nesting population and the naive belief that ending the egg trade wouldn't be so difficult, given that Indonesia had placed all species of sea turtles under protection in 1990. However, we understood that we would face resistance because the trade in green sea turtle eggs was an extremely lucrative business.

Egg collectors on Sangalaki in the year 2000 portioning out the night's harvest (© Eberhard Meyer)

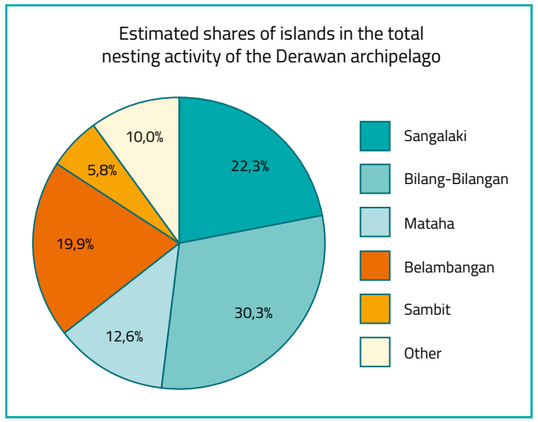
Reflecting on how challenging this journey has actually been and what we have learned and achieved despite it all, we want to summarize in this retrospective.

Located at the intersection of the Pacific and Indian Oceans, in the western part of the famous Coral Triangle, the Derawan Islands in the Berau District are a unique center of marine biodiversity. The coral islands of the archipelago together form the largest nesting area for the endangered green sea turtle in Indonesia. Despite this, what now remains is only a fraction of what was previously a much larger nesting population, mainly due to decades of intense egg exploitation for human consumption.

Today, we know that across the beaches of the entire archipelago, over 15,000 nests are laid annually on average, with approximately 90 % distributed across the five major nesting islands. Although turtles come ashore to lay eggs throughout the year, there are seasonal fluctuations, with a peak season from July to September. Initially, all attention was focused on Sangalaki Island, already famous at that time as a turtle island and diver's paradise.

Through a large-scale collaboration of authorities and conservation organizations to enforce the protection status of sea turtles, commercial egg collection on Sangalaki was discontinued from January 2002, despite strong lobbying resistance. Turtle Foundation established a conservation station on the island, from which the beach was patrolled several times a day, and data on nesting activity were collected.

Our concern was that systematic egg collection, and the resulting lack of offspring would lead to an ageing nesting population, which would soon reach the natural limits of its life expectancy. At the same time, protective efforts would only begin to show results in 25 years, when the first hatchlings reached adulthood and returned to Berau to nest. What if the population collapsed irreversibly?



In fact, these bleak predictions did not come true. The plundering of nesting beaches was apparently not as complete as we had feared. As expected, there has been no sustained upward trend to date, and surprisingly, nesting numbers have remained stable. However, we anticipate that in the coming years, the effects of our conservation efforts will become evident with increasing nest numbers. Furthermore, we have demonstrated that seasonal fluctuations in nest numbers, as well as minor variations between different years, consistently occur synchronously across all nesting islands. The proportional distribution of nests among the islands has remained steady.

Over the following years, the successful conservation model established on Sangalaki was gradually extended to the other nesting islands of the archipelago. This protected the majority of nests within this nesting population, achieving a significant goal. As easily as this is said, the history of turtle conservation in Berau is tumultuous, involving a complex interplay of coalitions, viewpoints, influences, as well as personal and commercial interests. Nevertheless, most of the island protection projects initiated by us are now being continued by local government or non-governmental organizations, although some of these transitions did not occur with our consent.

Since early 2023, we have resumed conservation efforts on Bilang-Bilangan and Mataha in cooperation with the local organization BLB. Initially, we began by renovating ranger stations established in 2008, repairing technical equipment, and conducting conservation work and data collection according to established standards.

The ranger station on Bilang-Bilangan

Our experience in Berau serves as a lesson in the arduous path often required in conservation efforts to preserve our natural heritage from ultimate destruction. The fact that we are still active in Berau after more than two decades and that green sea turtles continue to nest year-round on the Derawan Islands makes our project one of the oldest and most successful sea turtle conservation projects in Indonesia.

© Hiltrud Cordes

SUMATRA

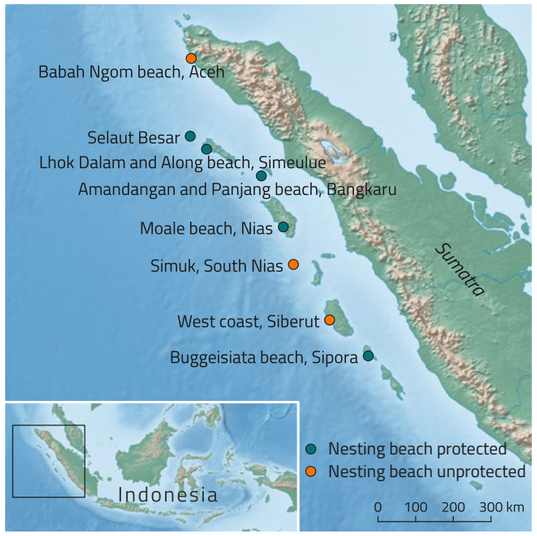
At Buggeisiata Beach on Sipora, a leatherback turtle returns to the sea after nesting (© Joana Nicolau)

The endangered nesting population of leatherback turtles *(Dermochelys coriacea)*, to which our conservation projects in western Sumatra are dedicated, is gaining increasing attention thanks to our activities and publications within the scientific community. Together with our partner organizations EcosystemImpact on Simeulue Island and the Indian Dakshin Foundation, we continue our efforts to bring this significant population in the eastern Indian Ocean into the spotlight, aiming for sustained improvements in conservation measures. In December 2023, we convened on Simeulue to sign an initial resolution for leatherback turtle protection under the banner of EIOLA (Eastern Indian Ocean Leatherback Alliance).

Collapsed bridge on the way to the nesting beach

Currently, there are four beaches in Sumatra where nesting leatherback turtles are protected: in addition to our own project on Sipora, EcosystemImpact maintains a conservation program on Bangkaru Island, and together we implement protection measures at Along Beach on Simeulue and Selaut Besar, an uninhabited island. During the leatherback turtle nesting season 2022/23 (November to March), we counted a total of 78 nests on the beaches we monitor (Sipora: 32, Selaut Besar: 18, Along: 38).

Additionally, on Selaut Besar throughout the year, we counted 679 nests of green sea turtle nests. The doubling of this number compared to the previous year (2022: 321 nests) confirms our suspicion of data oversight in 2022. During the reporting year, we implemented various improvements in personnel structure and general infrastructure. Furthermore, we built a ranger station on Selaut Besar and rented and equipped a house in the village of Langi on Simeulue as a base camp.



Beginning with the 2023 nesting season, we started monitoring another nesting beach on Nias Island to collect data on nesting activity and potential poaching incidents. Initially, we tasked a trusted project scout with regularly visiting Moale Beach on the west side of the island throughout the season to record all occurrences. This action added another "green spot" on the map of leatherback turtle nesting beaches within the Indonesian part of the EIOLA area. However, there are still unprotected nesting beaches where there is reliable information on regular egg laying and unfortunately, incidents of poaching.

In the village of Matuptuman on Sipora Island, we continued our collaboration with the local community. In addition to regular educational sessions on marine ecosystem conservation at the village primary school and the establishment of a community garden for vegetable cultivation, we provided financial support for the repair of a collapsed wooden bridge. This bridge not only connects the village to the nesting beach but also leads to the forest gardens of several families.

The nesting beaches on Simeulue Island are also situated near villages, where even village dogs go on egg hunts at night and plunder nests if people do not beat them to it. For the village of Along, we began experimenting with a new form of cooperation by not directly employing the rangers who protect the nests. Instead, we support the establishment of an association whose members receive ranger training from us. The goal of this approach is to strengthen the sense of responsibility and ownership among villagers. In November, at the start of the 2023 nesting season, the association MAFAL (Mameduli Fenu Along, meaning "Protection of Along's Sea Turtles") began regular monitoring of the beach.

During a project visit in December, we again attached two satellite transmitters to nesting leatherback turtles. This activity aims to study the animals' migration routes in the sea. To inform the villagers of Along, where the turtles were tagged, about our goals and intentions, we hosted an information evening on the beach and suggested naming the two turtles. After lengthy negotiations, it was decided to immortalize two local fairy tale characters in their names: Putri Along and Putri Lele Puti. It is worth noting that both turtles swam southeast towards Australia after completing their nesting season.

Attachment of a satellite transmitter (© Hiltrud Cordes)

Hatchery on Selaut Besar (© Hiltrud Cordes)

BANGGAI

The hawksbill turtle *(Eretmochelys imbricata)* was once widespread in Indonesia, but the beautifully patterned scutes on their carapace, from which the highly coveted turtleshell is derived, proved to be its downfall. After decades of hunting and exporting turtleshell, the species is now critically endangered. Due to its rarity, protecting the hawksbill turtle at its nesting beaches is extremely challenging.

For several years now, we have been trying to find alternative ways to preserve the most beautiful of all sea turtles from extinction. Through media campaigns, we aim to initiate a change in behavior among the target group of potential buyers to gradually halt the demand for turtleshell items. Since hawksbill turtles are primarily hunted at sea in Indonesia, we are also approaching indigenous fisheries communities who continue to catch and kill turtles.

In the Banggai District of Central Sulawesi, we had the opportunity to implement a project with a fishing village. The goal was to create alternative sources of income to replace profits from turtleshell trade. Together with the local organization AlTo (Alliance for Tompotika Conservation), we implemented a program funded by the Critical Ecosystem Partnership Fund (CEPF) in the village of Pulau Tembang, focusing on the cultivation of seaweed.

We had planned a population survey of the local hawksbill turtle population with a group of fishermen. However, despite many hours at sea, during which our team conducted snorkeling and diving expeditions with the fishermen around Pulau Tembang, we only encountered occasional green sea turtles and olive ridley turtles *(Lepidochelys olivacea)*. Unfortunately, we fear that the hawksbill turtle population has been severely depleted due to excessive hunting and widespread destruction of reefs from dynamite fishing.

Kimi participates in a parade of fishing boats (© Hiltrud Cordes)

Despite successful collaboration with the fishermen and the entire village community, we therefore decided not to continue the project. With the expiration of funding from CEPF, we concluded our activities in Banggai at the end of the year.

A young green sea turtle is released back into the wild after data collection (© Joana Nicolau)

OUTLOOK AND PLANNING

In Indonesia, we make a significant contribution to the protection of four different species of sea turtle. In Berau, we operate on two of the country's most important nesting islands for green sea turtles, and in Sumatra, we specifically protect leatherback turtles at currently four different nesting beaches. Both in Berau and Sumatra, we also occasionally encounter hawksbill turtles on the beaches, and in Sumatra, a few olive ridley turtles nest regularly as well.

In addition to our beach protection programs, we pursue two campaigns. One aims to reduce hunting of hawksbill turtles and the trade in turtleshell, while the other educates about the harmful effects of "headstarting" facilities for hatchlings.

Next year, we plan to continue and selectively expand these activities.

In Berau, we intend to relocate our environmental education and community development program to the southern Derawan Archipelago, as the protection of nesting islands Bilang-Bilangan and Mataha has now become the focal point of our efforts here.

In Sumatra, our focus is on consolidating protection measures on Sipora, Nias, and Simeulue. The goal is to ensure uniform standards in data collection methodology at all beaches, whether conducted by permanent rangers of Yayasan Penyu Indonesia, partner organizations, or village group members.

As our project activities in Indonesia expand, it is crucial to also enhance capacity at the headquarters of our sister organization, Yayasan Penyu Indonesia, in Bali. This includes all aspects of project management – from human resources management and supervision to communication and financial monitoring – ensuring they keep pace with development. We aim to achieve this through training programs and the recruitment of additional staff members.

Ranger in the hatchery on Selaut Besar (© Hiltrud Cordes)

Leatherback turtle hatchling

Selaut Besar: the rangers return to the station (© Hiltrud Cordes)

PROJECTS 2023

BOA VISTA (CABO VERDE)

OVERVIEW

During the reporting year, our sister organization, Fundação Tartaruga, which has been managing our project on Boa Vista since its inception in 2012, revised its statutes. The aim was to establish a volunteer board independent of management and thereby align the organizational structure of Fundação Tartaruga with our other organizations. We welcomed Dr Diamantino Barros as the new president, who has been supporting our project with advice and assistance for years. Our long-standing management duo, Euclides "Ukie" Resende and Joana Nicolau, were appointed as management and will continue to lead the project as usual.

The extreme fluctuations in nest numbers on Boa Vista continue to keep us on our toes. Each new season is eagerly awaited because we still lack the indicators to predict how "strong" a season will be. Naturally, these fluctuations pose great challenges to our project logistics and especially to poaching control, as a high density of nests inevitably increases the risk of overlooking poachers. The fact that the number of poached turtles has remained at a very low level of just a few animals per season is one of the great successes of our work.

This achievement enables us to now have the capacity to tackle other problems for the turtles on Boa Vista. We are particularly concerned about the development of tourism, which is accompanied by completely unregulated driving on nesting beaches – even though it occurs inside protected areas. Ironically, the vehicles transporting guests to the nesting beaches for night excursions to see the turtles are destroying the delicate dune system and sometimes driving directly over the nests. As part of a comprehensive multi-year project funded by the BIOPAMA program, we have begun to develop measures to improve this situation. Only through enhanced management of the protected areas can a sustainable solution be found that will permanently ban vehicles from the nesting beaches.

BIOPAMA
From Knowledge to Action for a Protected Planet

From left to right: Euclides "Ukie" Resende, Joana Nicolau, and Diamantino Barros

The problem is obvious: a turtle is digging its nest directly on a vehicle track

PROTECTION MEASURES ON NESTING BEACHES

With the usual mix of calm routine and hectic activity, we began setting up our five beach camps, from where we base our turtle protection patrols, at the end of May/beginning June. Thanks to the professionalism of our logistics team and the diligent hands of all team members, we were able to quickly reactivate the equipment stored in the warehouse in the capital, Sal Rei, and carry out the camp setup smoothly. As planned, beach patrols began in early June.

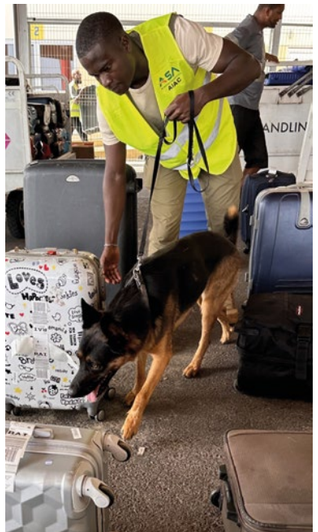
In our core project, protecting 30 km of nesting beach from turtle poachers during the nesting season from early June to late October, we counted 10,539 nests in the 2023 nesting season, about twice as many as the previous year. There was a total of 19 reported poaching incidents on Boa Vista, two of which occurred in the beach sections we monitored. A total of 52 local employees, mainly rangers, were involved in beach protection, supported by 42 national and international volunteers. Together with the management, logistics, dog and drone teams, around 100 people were directly involved in the project.

Curral Velho camp (© Thomas Reischig)

A beach section of about 1.7 km in the north of the island required our special attention this time. This sensitive area could no longer be monitored by the community-based protection project "Projeto Bofareira," which we had supported since 2017, due to disagreements within the group. However, since collaboration with the small village of Bofareira to protect this beach section near the village is a matter of importance to us, we took over the task ourselves by directly hiring rangers from the community. However, the necessary permits were only obtained in August, so patrols started late here.

The combination of conservation dogs and night vision drones in a specially trained deployment team is an innovative approach that we developed in 2018 and have continuously expanded since then. Globally, our dog and drone team is the only project of its kind for the protection of sea turtles. The team of seven permanent employees and one seasonal worker monitored the beaches that have the highest threat from poaching on the island in 114 night missions with night vision drones and binoculars last season, with some of the missions accompanied by police officers.

The team's working dogs are trained to detect people based on specific scent articles as well as smuggled turtle meat in vehicles and luggage. As part of a joint project with partner organizations from other islands aimed at combating the nationwide trade in turtle meat, our dog team conducted two multi-day missions on the neighboring island of Sal in July and October.



Karetta in action during luggage inspection (© Marcel Maierhofer)

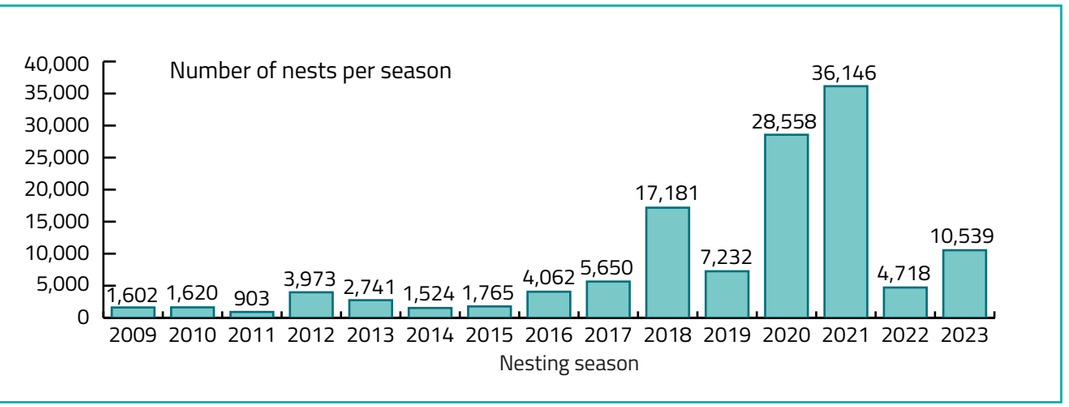
At the ferry port and airport, passengers' luggage was searched for turtle meat, as it is suspected that the poached meat is particularly traded into the country's capital, Praia. Although nothing was found during these missions, such measures serve as an effective deterrent.

Since the start of our project on Boa Vista in 2008, poaching has declined so significantly that it is no longer the main cause of mortality for female turtles on the beaches. Regularly, a considerable number of turtles do not find their way back to the sea after nesting or get stuck in rock crevices. If they are not found in time, it means certain death for them. This affects about two percent of the nesting females, so several hundred turtles are at risk depending on the season's strength.

At Lacacão camp (© Thomas Reischig)

Especially for searching for turtles that have lost their orientation and are heading straight into the desert, drone searches are ideal, as they can cover a much larger area than patrols on foot. Our drone team has now also taken on the task of searching for lost turtles in the hinterland of certain beaches in the mornings during the nesting season. In 2023, we successfully brought a total of 30 lost turtles back to the sea.

Loggerhead turtle hatchlings (© Timo Busch)



COMMUNITY ENGAGEMENT

We have continued and further developed our projects to support the local population as planned. Only by developing concepts together with the residents of the Cabo Verde islands that improve local living conditions, achievements can be made in the long term for the preservation of marine habitats.

SWIMMING COURSE PROJECT

For the third year, we offered swimming courses for children. Our goal is not only to prevent dangers for non-swimmers in the sea but also to spark interest in the ocean habitat. In 2023, we attracted 45 new participants for the courses, and 55 children from previous years participated again. Between May and October, our specially trained team conducted two course blocks: in the first three months, swimming was taught in practical sessions, while the last three months combined practical exercises with environmental education and advanced lessons. A snorkeling trip at the end of the course and participant certificates with turtle motifs rounded off the free program.

From our experience in the first two years, we were able to make some improvements to our course offerings. Firstly, this year we collaborated with the national swimming association to achieve standardized qualifications for all swimming instructors. We will continue this close exchange in 2024. Secondly, we introduced a one-month program for adult non-swimmers that taught basic skills.

Swimming course in the sea

Participants of the "Women in Conservation" project with Karetta and Kelo

EQUAL OPPORTUNITIES FOR WOMEN IN CONSERVATION

A unique project for us this year aimed at strengthening the role of young women in scientific work brought us particular joy. Under the name "Women in Conservation," we invited female students from Cabo Verdean universities to support us in our daily work on Boa Vista. In collaboration with our teams of rangers, camp leaders, and volunteers, the participants created a two-month knowledge exchange between practical work on the loggerhead turtle nesting beaches and modern university education. Specifically, the students taught English, biology, and other subjects in our beach camps. They also conducted lessons for the children of the swimming project to introduce them to both the turtle's habitat and their threats in a playful way. In return, they participated in practical work such as data collection, relocating threatened nests, and cleaning up trash from the nesting beaches. Overall, we draw a very positive conclusion from the 12-month project, as it provided young women with the opportunity to gain practical insights into conservation work.

UPCYCLING WORKSHOP LIXO LIMPO

To set a sign against the alarming extent of waste pollution on nesting beaches, we have taken on the task of focusing on upcycling – the value-added reuse of waste products. For the coming year, we are planning a community-based project called "Lixo Limpo" (Portuguese for "clean trash"), in which useful everyday items will be made from waste such as bottle caps, glass bottles, or washed-up ghost nets. With the upcycling workshop that we are setting up in the island capital, Sal Rei, we intend to create an alternative source of income for the local population and raise awareness of the issue. In preparation for the project, we organized a multi-day research trip through North Rhine-Westphalia, Germany, this year. We invited the mayor of Boa Vista and municipal employees to learn extensively about waste disposal and recycling at the municipal and civil society levels.

Information visit by the delegation from Boa Vista (© Hiltrud Cordes)

Children's visit to Boa Esperança Camp

DATA COLLECTION AND RESEARCH

Continuous data collection and professional evaluation are essential for conservation management. Our new digital data collection with field-ready tablet computers replaced our paper-based system two years ago, allowing us to virtually monitor nesting activities online. During our patrols, we mark turtles with electronic transponders or read existing tags. The results provide valuable insights into the reproductive biology and population dynamics of the turtles. In this nesting season, we newly tagged 1,068 turtles, which likely corresponds to about half of the nesting individuals. In 527 cases, previously-tagged turtles were encountered again.

In the context of sea turtle conservation, "hatcheries" refer to fenced-off beach areas where nests can incubate protected from human or natural threats. In the 2023 nesting season, two hatcheries were in operation again. The Ponta Pesqueira hatchery in the southeast serves to receive rescued nests from the nearby Lacacão beach. There is a huge resort with strong lighting that significantly impacts the turtles' reproductive success. All nests in the hotel's vicinity are immediately transferred to the hatchery. In the 2023 season, this involved 286 nests with a total of 21,086 eggs.

With a hatching rate of about 77 %, over 16,000 hatchlings were released into the sea. The hatchery at Boa Esperança beach in the north was originally established in 2017 to save nests from flooding and to investigate potential excessive predation pressure from ghost crabs. In the 2023 nesting season, 53 nests with a total of 4,226 eggs were brought to this hatchery, and over 2,700 hatchlings were released. The significantly lower hatching rate of about 66 % may be caused by the particularly high concentration of plastic waste in the sand here.

Loggerhead turtle hatchlings in the hatchery (© Timo Busch)

The remains of a poaching victim are documented

Additionally, our dog and drone team has begun a special type of beach cleaning: during the years of intensive hunting of sea turtles, many unpleasant remnants in the form of carcasses and bone piles accumulated on the beaches. We have undertaken the large task of clearing the island's beaches of these macabre remains. So far, 663 more or less complete turtle skeletons have been documented, collected, and taken to the landfill from about 15 km of beach.

OUTLOOK AND PLANNING

The strategic development of our project on Boa Vista in the coming years will increasingly address issues beyond immediate beach protection and wildlife poaching. While our core activities, such as beach camps for monitoring nesting activity and data collection, the dog and drone teams, and community projects, will continue, we also aim to enhance the management of protected areas on Boa Vista. This includes measures to regulate tourist activities, combat plastic pollution on the beaches, and undertake general conservation tasks aimed at protecting the island's sensitive ecosystems from the impacts of climate change and ensuring long-term conservation as nesting grounds for loggerhead turtles.

Another topic we intend to develop in the coming years is the establishment of a rescue and information center for sea turtles on Boa Vista. Our beach patrols frequently encounter stranded turtles entangled in ghost nets or other debris, suffering deep cuts to their necks and limbs.

Some turtles also become lost or trapped in rock crevices, requiring veterinary care. Even during nesting, many turtles are affected by parasite infestations and injuries that could benefit from veterinary treatment to ensure their recovery. Additionally, every year juvenile green sea turtles are found suffering from fibropapillomatosis, a disease caused by a herpes virus that leads to tumor growth, particularly in the head and neck region, potentially resulting in a painful death if left untreated.

Since there are currently no treatment facilities for sea turtles on Boa Vista, we have taken on the task of developing such a facility. In the coming year, we will first finalize and further refine the planning process.

Architect's design of the planned rescue station (© Fritz Keuthen)

Plastic waste in the sea is a deadly threat to sea turtles (© David Salvatori/VWPics/Alamy Stock Photo)

FINANCIAL REPORT

© Natalia Ianina

INTRODUCTION

In the past fiscal year, Turtle Foundation increased the consolidated revenues of all seven sister organizations to 1,299,612 euros, marking a growth of nearly 10 % compared to the previous year.

In 2023, we conducted projects totaling 1,063,526 euros, with project expenditures increasing by 258,875 euros compared to the previous year. This rise was driven by the implementation of new projects and activities in both Indonesia and Boa Vista. Over half of the total expenditures were allocated to the Boa Vista project, while 29 % supported the implementation of four conservation projects in Indonesia.

We place significant emphasis on efficient resource allocation. In 2023, expenditures for public relations, fundraising and donor management amounted to 169,676 euros, while administrative costs totaled 51,205 euros. Overall, a surplus of 11,273 euros was achieved for the year.

All board members of Turtle Foundation serve on a voluntary basis. In our international headquarters in Cologne, Germany, six staff members are employed, supported by two consultants and one volunteer. A total of 101 individuals, including year-round staff and seasonal rangers, contributed to the projects, with 69 based on the Cabo Verdean island of Boa Vista and 32 in Indonesia. Additionally, the Turtle Foundation Friends e.V. and 42 national and international volunteers supported our efforts on Boa Vista.

We are committed to continuously enhancing the skills of our staff. In 2023, Meriussoni Zai from Indonesia and Airton Jesus from Cabo Verde successfully completed a 12-week course in species conservation management. This prestigious training program is conducted by the Durrell Conservation Academy in collaboration with the University of Kent, affiliated with the zoo on the British island of Jersey. The course fees were partially covered by scholarships from the Durrell Wildlife Conservation Trust.

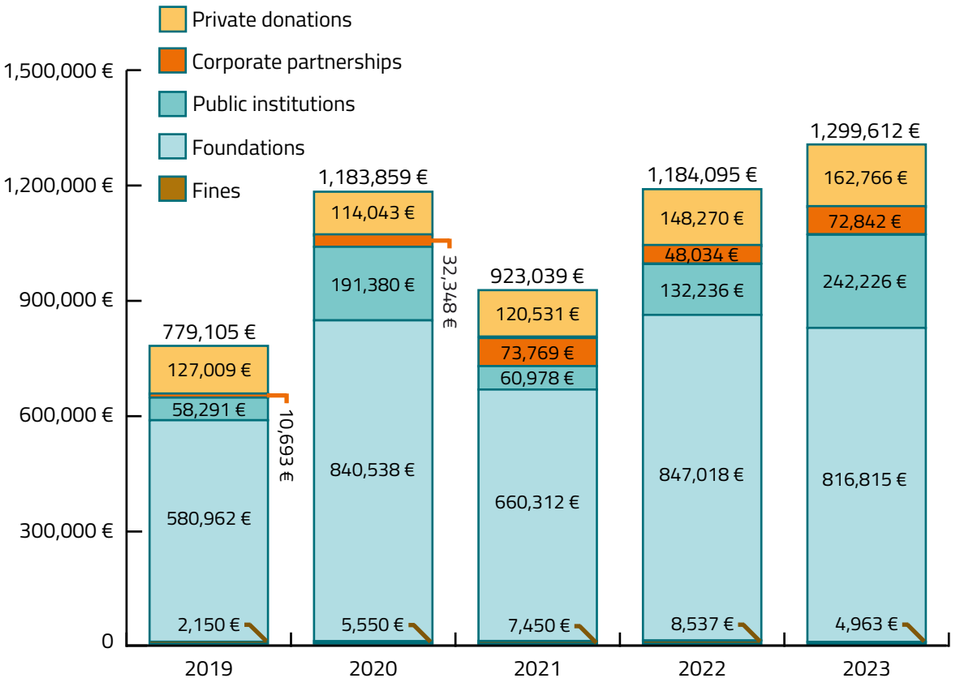
Airton Jesus (back row, 3rd from left) and Meriussoni Zai (front row, 3rd from left) during their training on Jersey

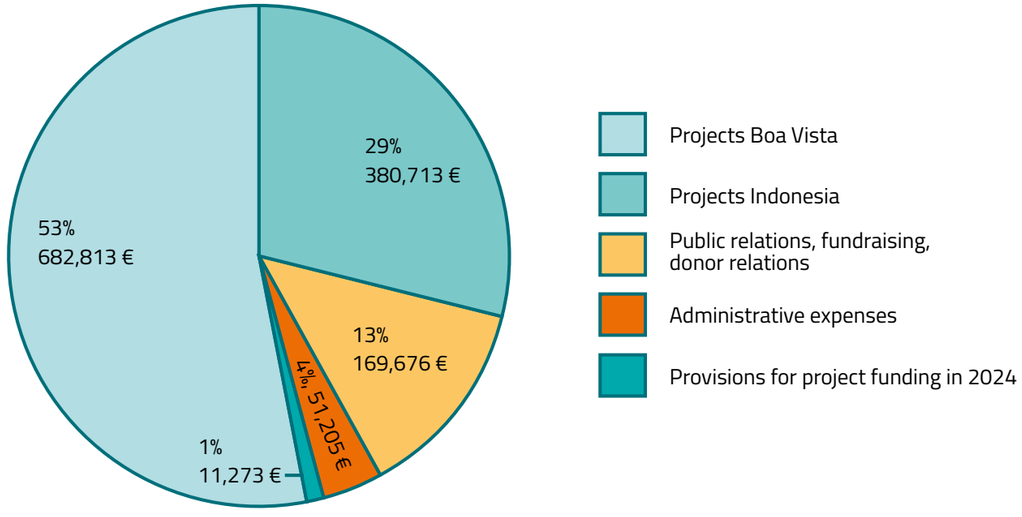
FINANCIAL STATEMENT

EXPENSES 01.01. – 31.12.	EUR 2023	EUR previous year 2022
Cabo Verde		
Coordination and overheads	212,217	121,006
Protection of nesting beaches	254,436	222,400
Special project “Protected Areas” (BIOPAMA)	68,552	0
Civil society engagement and community projects	47,461	49,591
Data collection and research	4,476	4,327
Expenditure for the local Ministry of Environment (special funding)	36,968	46,753
Expenditure on organizational development (special funding)	0	87,732
Project supervision	58,703	51,010
Direct expenditure Cabo Verde	**682,813**	**582,819**
Indonesia		
Bali headquarters	94,951	53,807
Program Berau	57,873	23,013
Program Sipora	20,757	38,049
Program Simeulue	69,497	48,679
Program Banggai	100,104	27,020
Project supervision	37,531	31,264
Direct expenditure Indonesia	**380,713**	**221,832**
Support for third-party projects	**3,932**	**345**
Cologne office		
Public relations, fundraising, donor support	169,676	133,611
Structural costs	48,740	48,423
Web shop expenses	2,465	9,934
Cologne office total	**220,881**	**191,968**
Provision for project funding 2023	**11,273**	**187,131**
TOTAL EXPENDITURE	**1,299,612**	**1,184,095**

INCOME 01.01. – 31.12.	EUR 2023	EUR previous year 2022
Restricted funding and income		
Funding Cabo Verde	686,802	567,566
Corporate donations and sponsoring Cabo Verde	5,700	1,345
Private donations and adoptions Cabo Verde	15,620	14.902
Volunteer contributions Cabo Verde	17,055	26,882
Funding Indonesia	187,341	155,940
Corporate donations and sponsoring Indonesia	58,404	33,246
Private donations and adoptions Indonesia	44,202	40,861
Restricted funding and income total	**1,015,124**	**840,742**
Unrestricted grants and income		
Foundations	184,898	252,878
Private donations	80,390	65,845
Corporate donations and sponsoring	8,738	13,443
Fines	4,963	8,537
Sales of miscellaneous items	5,499	2,650
Unrestricted donations and income total	**284,488**	**343,353**
TOTAL INCOME	**1,299,612**	**1,184,095**

SOURCE OF DONATIONS AND USE OF FUNDS





PUBLICATIONS AND PUBLIC RELATIONS

OWN PUBLICATIONS:

Bartoschek, J. (2023). Conservation Dogs & Drones for the protection of endangered sea turtles in Cabo Verde. PANORAMA Solutions for a Healthy Planet [Website].

Cordes, H., Reischig, T., Zai, M. (2023). Hatcheries, hatchling retention, and headstarting – discussing their conservation value. 2023 Indonesia Sea Turtle Symposium, Jakarta, Indonesia.

Jayuli, M., Nursaid, R., Cordes, H. (2023). Turtleshell trade in Indonesia: Tackling the problem through market surveys and demand reduction campaigns. 2023 Indonesia Sea Turtle Symposium, Jakarta, Indonesia.

Reischig, T., Maierhofer, M., Monteiro, A., Resende, E. & Cordes, H. (2023). Five years of protecting sea turtles with dogs and drones on Boa Vista, Cabo Verde: A review. 41st Annual Symposium of the International Sea Turtle Society, Cartagena, Colombia.

Yeoman, K. (2023). Using the IMET to identify priorities for management in two protected areas in Boa Vista, Cabo Verde. PANORAMA Solutions for a Healthy Planet [Website].

Yeoman, K., Jesus, A., Briers, R. A. & Reischig, T. (2023). Assessing the potential effects of varying levels of marine plastic pollution in the nesting habitat of loggerhead turtles on Boa Vista Island, Cabo Verde. 41st Annual Symposium of the International Sea Turtle Society, Cartagena, Colombia.

From left to right:
Hiltrud Cordes (Turtle Foundation)
and Meriussoni Zai, Muhamad Jayuli,
Jatmiko Wiwoho
(Yayasan Penyu Indonesia)

Zai, M., Cordes, H., Reischig, T. (2023). Closing the knowledge gap: Contributing data from Sumatra about the northeast Indian Ocean leatherback subpopulation. 2023 Indonesia Sea Turtle Symposium, Jakarta, Indonesia.

REPORTING ABOUT US:

Beyond Borders: Exploring Global Conservation and Restoration (4th August 2023): Biodiversity Monitoring and Species Conservation, in: BEST & BIOPAMA Knowledge Sharing Journey [Podcast], Switzerland.

Kuschel, A. (17th March 2023): Trouble Turtles, in: Tauchen 2 go [Podcast], edition 66, Germany.

Smith, C. (27th June 2023): Light pollution: time to flick the switch, in: The Naked Scientists Podcast [Podcast], England.

Turtle Foundation (2023): Partizipation als fester Bestandteil der Artenschutzarbeit, in: MitgliederMagazin Bund Deutscher Tierfreunde, Edition 01/2023, p. 16–19.

Turtle Foundation (2023): Schwimmen lernen für den Schutz bedrohter Meeresschildkröten, in: Mitglieder-Magazin Bund Deutscher Tierfreunde, Edition 03/2023, p. 22–25.

Turtle Foundation (2023): Artenschutzhunde auf Patrouille – tierische Unterstützung im Meeresschildkrötenschutz, in: Marginata, Ausgabe 75, 03/2023, p. 46–50.

Turtle Foundation (2023): Plastikmüll und Wilderei: doppelte Bedrohung für Kap Verdes Meeresschildkröten, in: MitgliederMagazin Bund Deutscher Tierfreunde, Edition 04/2023, p. 22–24.

SOCIAL MEDIA POSTS:

Total number of publications in 2023:
- Instagram: 128 posts
- Facebook: 124 posts
- YouTube: 5 videos

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