



SAL ISLAND  CABO VERDE

Project Biodiversity
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Sea Turtle Nesting Campaign

Preliminary Results 2018



Sea Turtle Nesting Campaign – Preliminary Results 2018

This document contains a summary of the preliminary results of the 2018 nesting campaign in Sal Island. Even though they are preliminary results, the main numbers are very representative of the final figures. All the raw data is now being introduced to digital data bases and will be processed and analysed in the coming future.

Report by “Associação Projeto Biodiversidade”

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Nesting Activity

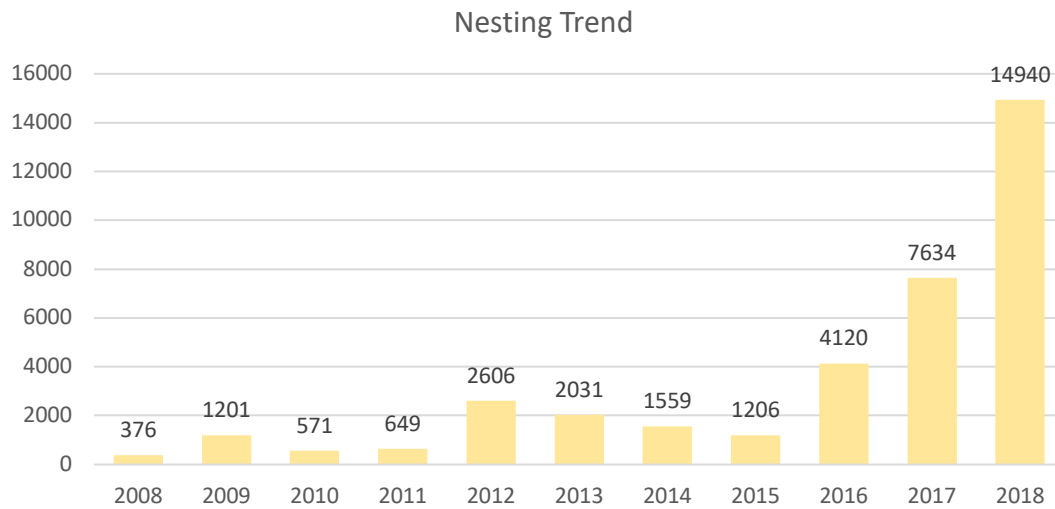
NESTS: 14.940

ATTEMPTS: 22.192

Nº of Nesting Females: 2.939

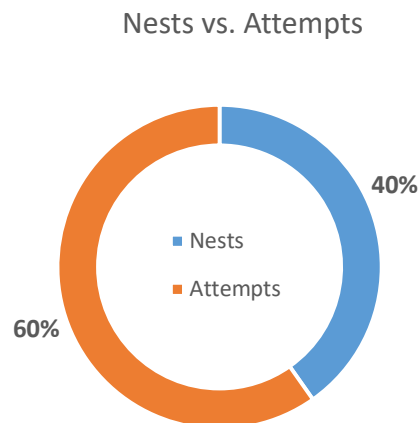
Following the record season of 2017 with 7.634 nests, in 2018 the number of nests almost doubled the previous years' total, with an increase of 96%. It is the third year in a row with an increase of near 100% or more, and it represents an increase of more than 12 times the numbers in the first year of Project Biodiversity (2015).

The number of nesting females in Sal Island in 2018 was estimated to be 2.939. This calculation is considering that each female lays an average of 5 nests per season.



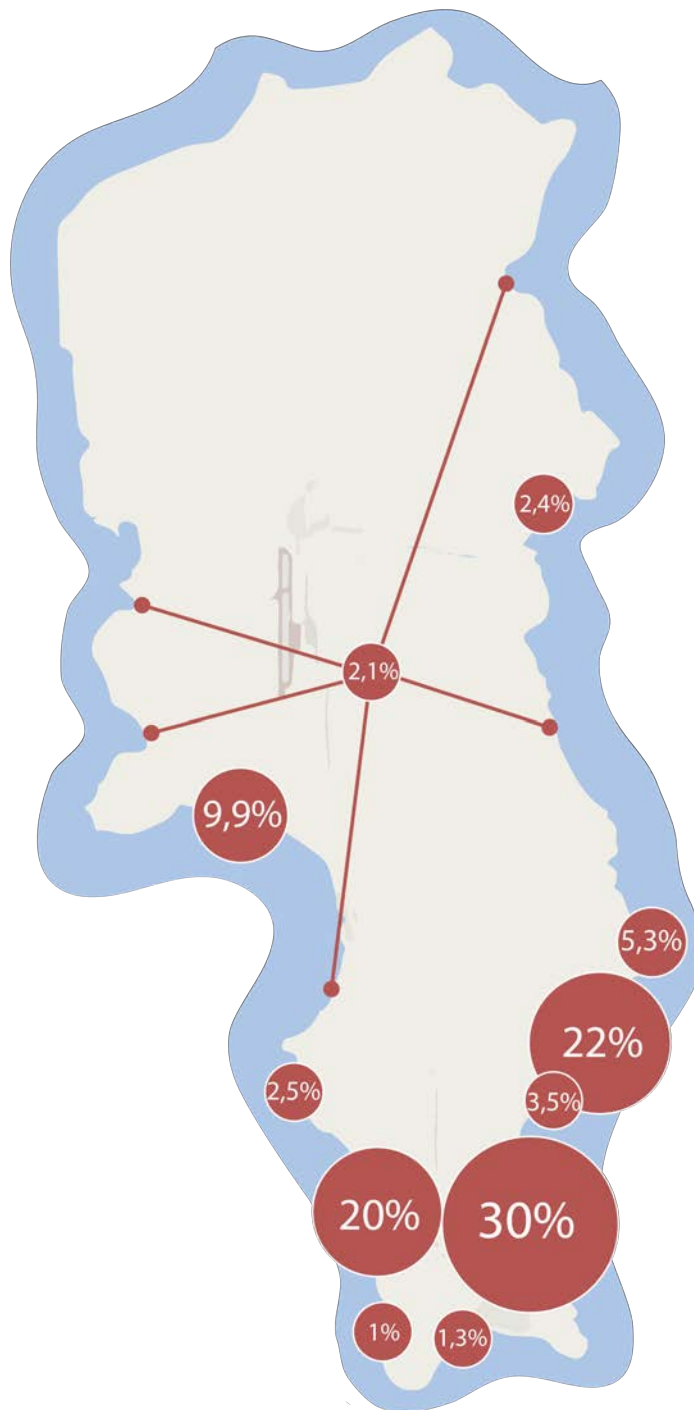
Graphic 1- Nesting trend in Sal Island represented with the total number of nests registered since 2008.

Turtles came out the water in Sal Island a total of **37.132** times. From those, 40% nested successfully and 60% (22.192) were attempts or U-turns.

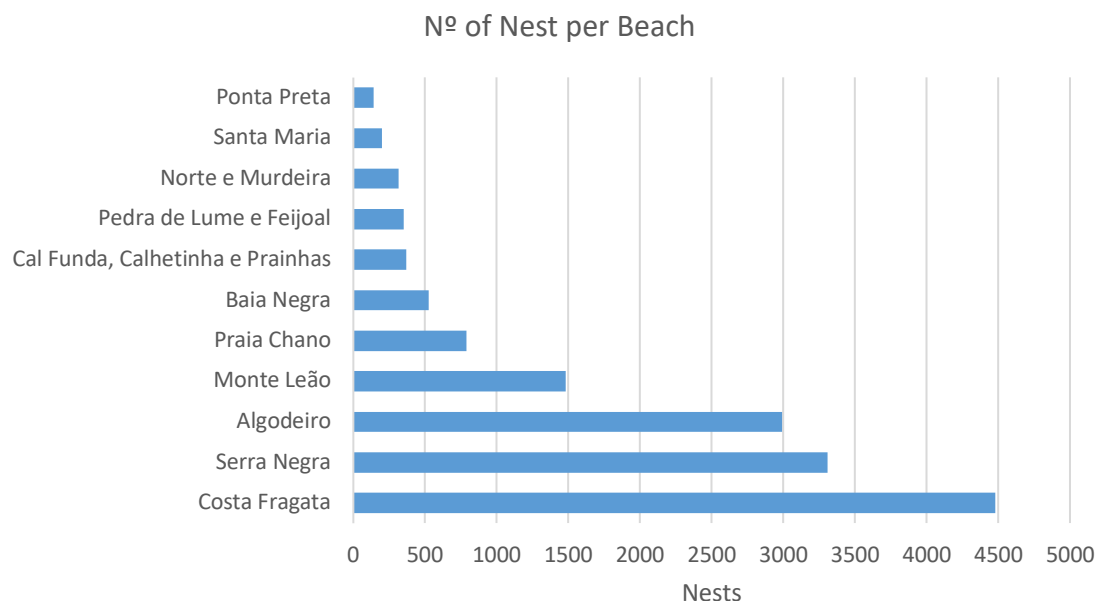


Graphic 2- Relation between nests and attempts. Normally, turtles come out the water 1 or 2 times before laying the eggs.

Following the normal trend from previous nesting seasons, Costa Fragata is still the first beach with the largest number of nests (30%). However, the percentage of nests on this beach has decreased from last year, when it had 41,3% of all nests. This decrease is reflected in the increase of relative nests recorded on the other two main nesting beaches, Serra Negra and Algodoeiro. Yet, the beach with the highest density of nests is Serra Negra with 2,4 nests per meter of beach patrolled.

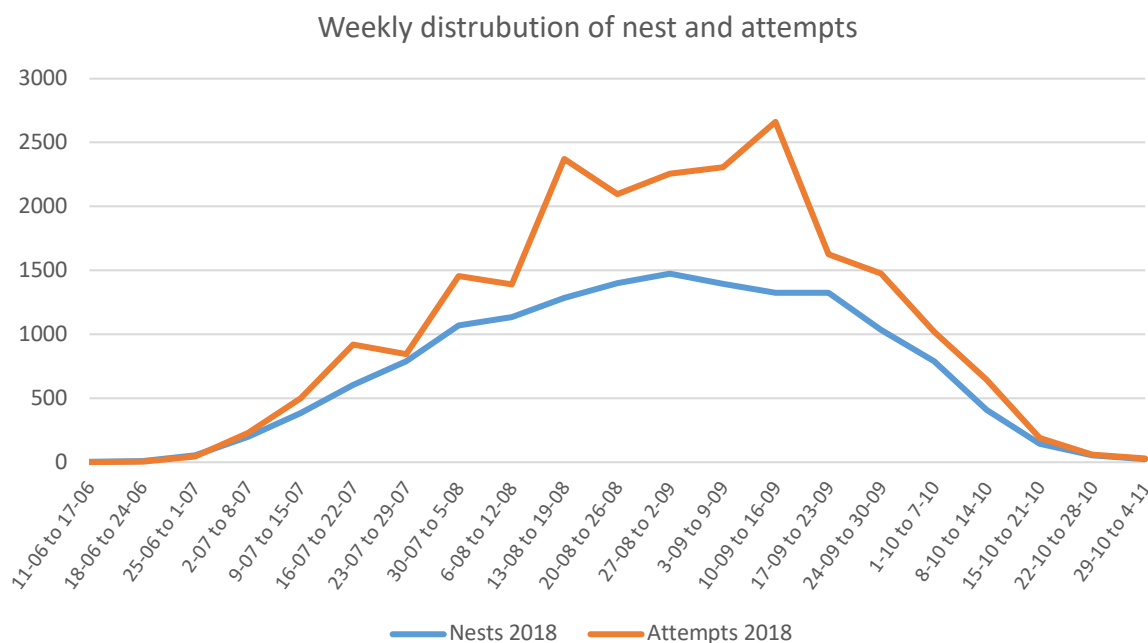


Graphic 3- Distribution of nests within Sal Island. Costa Fragata, Serra Negra and Algodoeiro are by far the main nesting areas for the Loggerheads in Sal.



Graphic 4- List of nesting beaches in order of importance. Costa Fragata (Kite Beach) was the top nesting beach of Sal with 4.475 nests, followed by Serra Negra (3.305) and Algodeiro (2.988).

The first nest recorded this year was on the 10th of May on Costa Fragata. However, it was not until the 11th of June that the season officially began with two nests. Similar to 2017 nesting season, the peak of nesting was between the final week of August and the first week of September (27th of August – 2nd of September).



Graphic 5- Temporal distribution of nests and attempts during the whole season. The week with more nesting activity was again the last one of August and beginning of September (27/08 to 2/09) with 1.475 nest.

Poaching

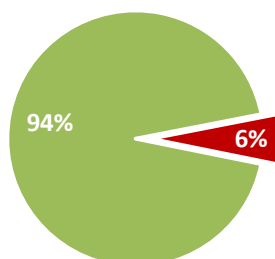
Killed Turtles (recorded): 183

Rescued Turtles: 11

Mortality: 6,2%

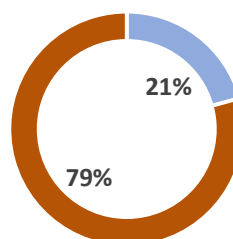
During 2018, a total of 194 turtles were recorded as taken. From those, 183 were victims of poaching. This includes turtles that were found dead, evidences of turtles being taken and information from reliable sources. The mortality (percentage of turtles killed from the total) was clearly lower than 2017, were 18% of all turtles were killed in front of 6% of this past season. However, the number of turtles that have been killed this year in Sal Island is thought to be higher since there exist unrecorded poaching events. The other 11 turtles were rescued from poachers alive and released back to the ocean.

Poaching of Sea Turtles



■ Poached turtles

Location of poaching events



■ Praias protegidas ■ Praias sem vigilância

Graphic 6- The mortality rate from poaching in 2018 was 6%. This means that "only" 6 every 100 turtles were poached. From all turtles recorded killed, 21% were taken from beaches with patrols and 79% from unprotected beaches.

In the night of the 17th of August, one of the members of the patrols from the local community of Pedra de Lume found **five** turtles upside down alive that were taken by poachers. With the help of the national police, the turtles were rescued and released to a nearby beach. This is, to date, the **largest rescue** of sea turtles from poachers in Sal Island.



Image 1 Five turtles found alive after poachers took them from the beach. On the picture they are inside the National Police car before being released.

Nest Protection

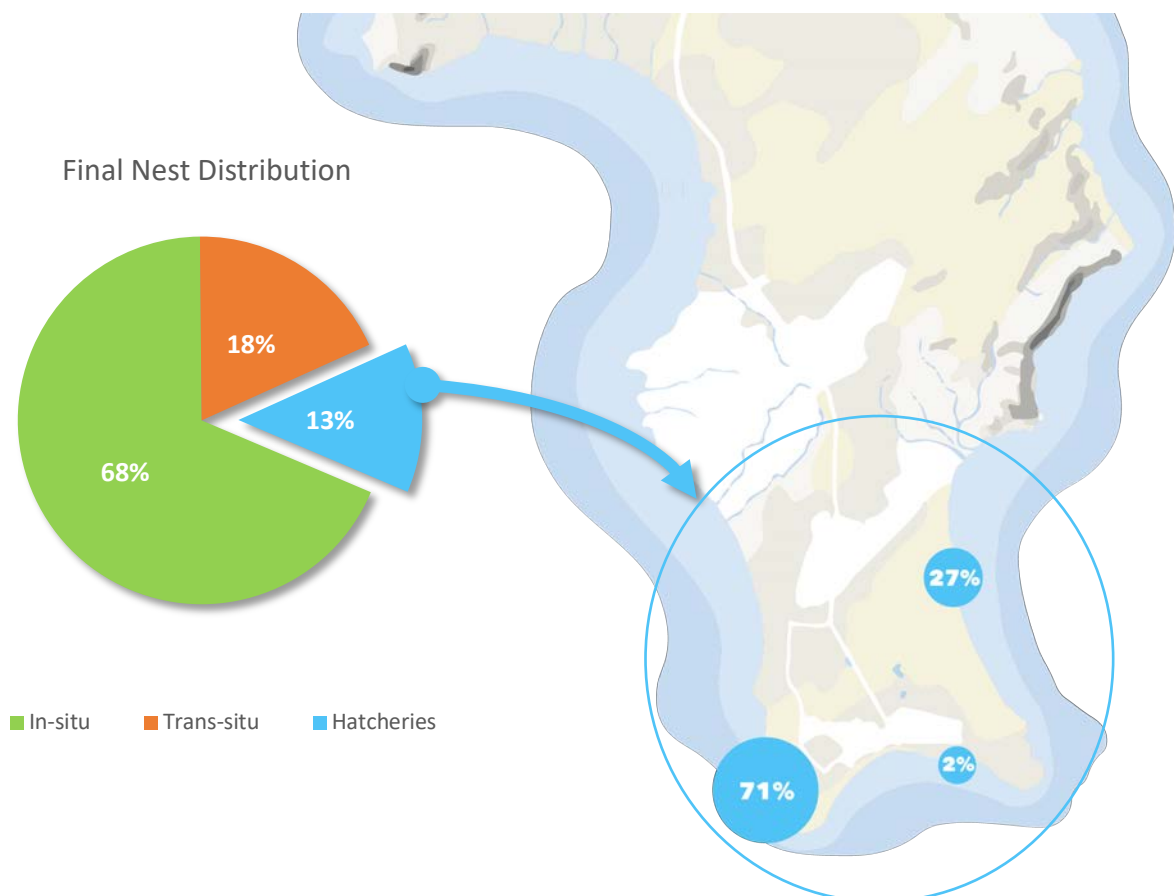
Total of Nests Moved to Hatcheries: 1.958

% of Nests Moved to Hatcheries: 13%

Hatcheries Success: 69,9%

Hatchlings Released: 98.195

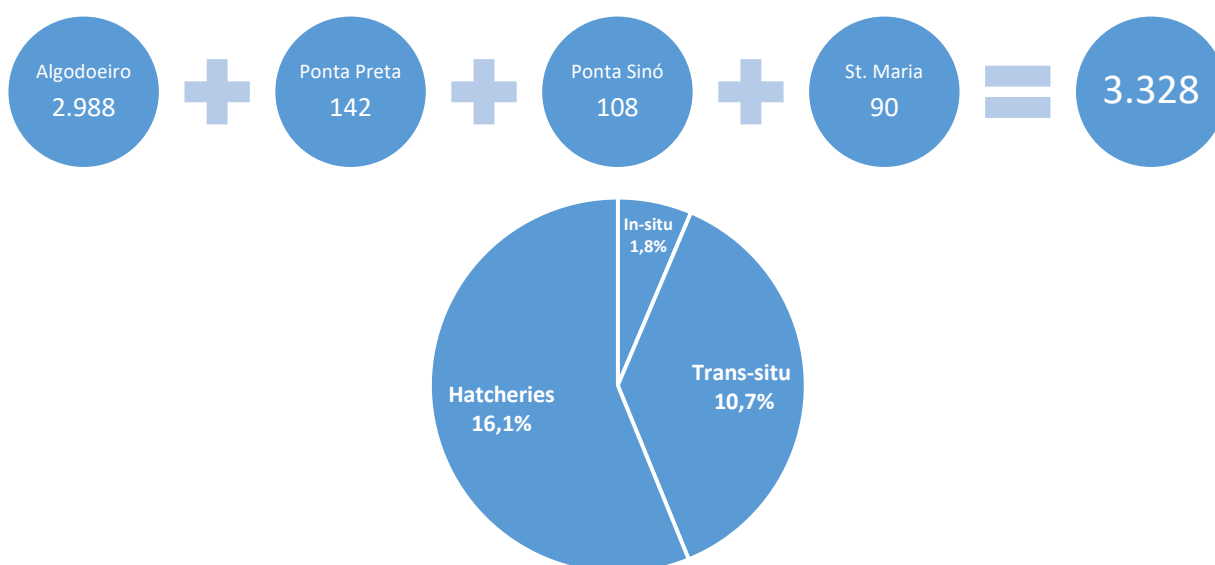
In total this nesting season **1.958 nests** were relocated to the three hatcheries that Project Biodiveristy places at the start of the season. This only represents 13% of the total number of nests on Sal Island. As every year, most of the nests were relocated to the main hatchery at the beach near the Hotel RIU, followed by the hatchery near our main field camp at Kite Beach and only 42 nests incubated in the small urban hatchery of Antonio Sousa. On the other hand, **2.748 nests** were relocated **trans-situ**, meaning that they were placed in a new location on the beach.



Graphic 7- From the 14.940 nests registered on Sal, 13% were relocated to three different hatcheries: 71% to the RIU, 27% to Kite Beach and only 2% to Antonio Sousa. 2.748 nests (18% of the total) were moved to another location in a beach.

However, the number of nests moved to hatcheries should have been higher and should have represented **22,3% of all nests** of Sal Island. The large number of endangered nests that needed to be relocated exceed the load capacity of our hatcheries, and many of them had to be relocated to another beach, Costa Fragata. All the nests from the beaches of Algodoeiro, Ponta Preta, Ponta Sinó and Santa Maria are threatened by the light pollution coming from the hotels and the city of Santa Maria, by predation of stray dogs and by erosion during the high tides. In total, 3.116 nests from those beaches were moved to either one of the hatcheries or trans-situ to Costa Fragata.

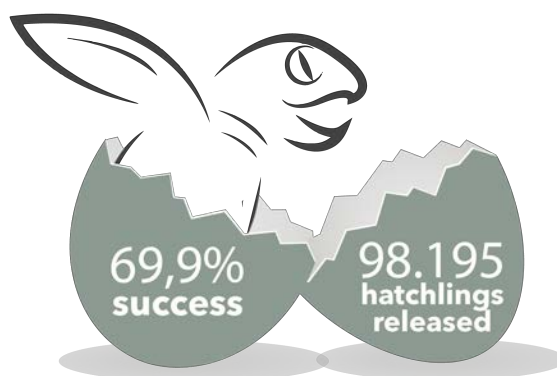
Origin and destination of nests from beaches with none or little survival rate



Graphic 8- In total, 3.328 nests were laid on beaches where they had low or none possibility of success due to human-driven threats. From those nests, 16,1% went to the hatcheries, while 10,7% were relocated to other beaches. Finally, 1,8% were left on the original beaches despite the threats.

212 (1,8%) nests were left in the original location when the team failed to find the nests after the tracks were erased by either other nesting turtles, un-happy morning walkers or tourists doing turtle watching excursions. The final fate of part of these nests is unknown, but it was observed that most of them were predated by dogs or the hatchlings end up going to the hotels and being picked up by beachgoers and hotel staff.

With some nests yet to hatch in the RIU hatchery, **98.195 hatchlings** have been released from all three hatcheries. This is an increase of 27% compared with 2017 nesting season. The success of the nests in the three hatcheries was 69,9%.



Although the number of hatchlings released from the hatcheries is higher than last year, the success of the main hatchery, the one at Ponta Sinó, has dropped. One of the possible reasons is that before the nesting season started the area used was flooded after an unusual high tide. This climatic event had more impact due to the rapid **degradation of the first line of dunes**, that in this case protect the hatchery location from high tides. This degradation is a direct consequence of the non-existent management of the beaches of Sal Island and the impact of increasing tourism.



Figure 1- Sea water passing through the gaps between dunes during a rare high tide. Those gaps are the result of the constant walking of beachgoers from a nearby hotel.

One serious issue has emerged in the recent years with wild/street dogs that, in searching for food, dig out nests of turtles and destroy the production of the next sea turtle generation. In the past years, this threat was reduced to specific locations, mainly the east coast from Algodoeiro until Murdeira. In other nesting beaches, like Serra Negra or Costa Fragata, the occurrence was very low. In 2018 however, the predation of nests left *in-situ* increased in almost all the beaches.

Areas of Intervention

Km of Nesting Beaches Patrolled: 21.4km

In total, **21,4km** of beaches were patrolled daily. From those, around 7km were patrolled every morning to collect data and move nests and the rest 14km were patrolled during the night and the morning. Beaches more isolated on the north of the island (approximately 10,4km) with less nesting activity were surveyed at the beginning and at the end of the season. All told, **31,9km of beaches were surveyed** this season following different strategies.



Image 2- In **green** beaches patrolled every night and/or morning. In **red** beaches without patrol and surveyed during the season. The two field camps (🏕️) and the three hatcheries (🥚) are also visible in the map.

Two field camps were set up for the nesting campaign. The main camp at Costa Fragata beach, thanks to the Mitu & Djo Kite School, ran from the 15th of June until the 20th of October. It had an average of 30 staff in it plus two members of staff of the Kite School. The second camp was in Madama, near Monte Leão, a location with a very high incidence of poaching. Thanks to this camp and the joint patrols with the military, poaching there was greatly reduced.



Almost **93%** of all nests were recorded in patrolled beaches, and **7%** on not-patrolled beaches. It is important to bare in mine that the number of nests is underestimated on both patrolled and not-patrolled beaches. Because of the difficulty of access of the most isolated beaches in the island, surveys there were done during the first month of nesting season (July) and at the end of the nesting season (end of October). The total number of nests on those beaches is an extrapolation of the nesting activity during the first weeks of season and the increase/decrease of nesting activity on other beaches that were patrolled daily.

Field Team

Field Camps: 2

Field Coordinators: 5

Permanent Field Staff: 12 INTL. + 19 NT.

International Volunteers: 75

A total of **19 local guards** and **5 coordinators** (two local + three international) were employed this nesting season. From those, the City Hall of Sal sponsored two guards to patrol the area of Pedra de Lume. Added to this team were **12 international internships** that stayed the whole season. **75 international volunteers** joined the permanent team of field assistants. Volunteers stayed for different durations but were key for the success of the patrols.

On average, during the peak of the season, there were **39 people patrolling** the beaches and five coordinators providing support. Two pick-ups were involved in the transport of the patrols and a quad-bike for emergency responses. A third pick-up was provided by the department of Protected Areas of Sal that, like every year, helps during the campaign in the transport of patrols.



Image 3- Part of the team, with local and international field assistants, a coordinator and short-term international volunteers. After a long night patrol they were rewarded with this beautiful morning nester.

Together with the Project Biodiversity team, we had **8 resident volunteers** participating regularly in the patrols and the military that patrolled during the entire season with the rest of staff. In total, **10 soldiers** joined the patrols in teams of two on the beaches of Calheta Funda, Monte Leão, Madama and Pedra de Lume. Before the season started a workshop was given in the 2º Regiment of the Armed Force of Cape Verde with the participation of over 54 soldiers.



Image 4- Like every year, before the start of the season we give a training session to the military that will participate in the nesting season patrols. After the patrols finish, we meet again to share the preliminary results.

Other Activities

Nha Terra

This year, after the approval of the new decree-law for the protection of sea turtles in Cabo Verde, “Nha Terra” campaign centred its efforts sharing the law to the national and local authorities of all islands. “Nha Terra” is a national campaign that aims to reduce the consumption of sea turtles and their eggs within the population of Cabo Verde. This campaign is organised and coordinated by Project Biodiversity and counts with the participation of the National Directorate of Environment and TAOLA (the national network for the conservation of sea turtles), and the collaboration of several NGOs.

A multidisciplinary workshop was carried out in most of the islands and had the participation of national and local authorities such as local city halls, maritime and national police, the military, municipal fiscals, environmental administrations, tour guide associations and other stakeholders.



Image 5- The director of the department of Natural Resources and Conservation of the National Directorate of Environment, and the chief of the Maritime Police from the capital Praia, gave a workshop in several islands to the authorities.

In Sal Island, the engagement of the local authorities after the publication of the new decree-law was huge. During the nesting season the police detained 5 poachers and they are being prosecuted.

Another of the activities carried out in Sal Island as part of the “Nha Terra” campaign was the first Nha Terra Tournament of Futsal. The tournament had the participation of six teams in the masculine category and XXX feminine.



Mural Painting in Santa Maria

As part of our annual educational programme funded by **TUI Care Foundation**, kids from a support centre helped us repaint a part of a wall in a main street of Santa Maria. After a “brainstorm” of designs that the kids had and with the offer from the City Hall of part of a wall of the municipal sports centre in Santa Maria, a mural was painted with the message “Take Care of It” (Kuida Del in local Creole). Our way to commemorate World Oceans Day.



Image 6- A mural was painted with the help of the design from some kids of Santa Maria. The mural, located in one of the main streets of Santa Maria, tells everybody to “Take Care of It”, referring to the Earth.

Tour Guide Training

Project Biodiversity together with **The Travel Foundation** and the funding from **TUI Care Foundation**, released the Manual for Good Practices in Nature-based Excursions for Cabo Verde. In this manual, tour guides will find basic information about different nature-based excursions in marine and coastal ecosystems, and guidelines to conduct them sustainably. The excursions in this manual are for turtle watching, shark watching, whale watching, bird watching and excursions in dune ecosystems.



Image 7- Cover of the new manual for “Good Practices for Nature-based Excursions”, written by Project Biodiversity with the input of many other partners and produced by The Travel Foundation.

The manual was released with an extensive theoretical and field course for tour-guides from Sal Island for the excursions of turtle watching, shark watching and dunes ecosystems. As part of the course, we produced briefing cards to help tour-guides communicate the guidelines for each excursion to their clients.



Image 8- Briefing cards for Turtle Watching excursions designed and produced by Project Biodiversity and given to the tour-guides that participated in the training.

At the end of the course, a total of 39 tour guides participated in, at least, one module of training. From those, 16 received the certification after completing 2 modules or more. The training in Boa Vista was conducted by our partners from BIOS.CV.



Image 9- Interactive exercise during one of the 3 modules of the course for tour-guides in Sal Island.

Beach Cleanings

In 2018 Project Biodiversity organised **6 beach cleanings** and the second **underwater cleaning** (to commemorate World Oceans Day) with the participation of 338 volunteers, 59 of them being kids. The City Hall of Sal was the main partner, but we had the collaboration of the Army, the dive centres of Santa Maria, the RIU Hotels, the Hotel Morabeza, Hilton Hotel, Palm Beach restaurant, The Beer Company UK, APP and other partners.



Image 10- End of the underwater cleaning in the bay of Santa Maria with most of the rubbish collected. Many dive centres participated during the cleaning, that Project Biodiversity organise every year to commemorate World Oceans Day.

Partners

