



# The Sea turtle care center in Moorea



« 15 years of actions to protect the sea turtles of French Polynesia »  
(2004-2019)

With the support of the Pacific Beachcomber Group and the Intercontinental Moorea Resort & Spa





# Table of contents

Te mana o te moana.....	2
The Sea turtle care center in Moorea.....	3
The facilities and the team.....	4
The residents.....	5
Arrivals' origin.....	6
Sea turtles rescued « from the wild ».....	6
Sea turtles rescued following hatching.....	7
Releases of rehabilitated turtles.....	8
Portrayals of our permanent residents, emblems of the Care center.....	9
Portrayals of some iconic residents rescued « from the wild ».....	10
Portrayals of some iconic residents rescued following hatching.....	11
Educate to better protect.....	12
General Public.....	12
School children.....	13
Four nests observed in Moorea.....	14
They talked about us!.....	15
Take the lead!.....	16
Maururu!.....	17
Our sponsors.....	18
Nos partenaires.....	18

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# Te mana o te moana

« Ocean's spirit »

Co-founded in 2004 by Dr. Cécile Gaspar and Richard Bailey (Chairman and CEO of the Pacific Beachcomber Group), the association Te mana o te moana has been acting for the past 15 years for the protection of the Polynesian marine environment through 3 main domains of action:

## SEA TURTLES

Te mana o te moana acts to understand, care for and protect the sea turtles of French Polynesia.

Within the context of its mission, the association created the **Sea turtle care center** in Moorea, conducts a **green sea turtle nesting sites monitoring** on Tetiaroa, and manages the **photo-identification data base TORSOOL** for sea turtles locally.



## EDUCATION

Te mana o te moana creates learning material and proposes educational programs and projects to raise awareness on the protection of the Polynesian marine environment.

The organization **educated more than 90 000 kids** on environmental concerns since 2004.



## ENVIRONMENT

Te mana o te moana develops and facilitate participatory networks for collecting data combining science, nature and culture

Amongst other things, the association created the **eco-sentinels network Hei Moana**, performs a study on the population of **coconut crabs** on Tetiaroa atoll and is the sole **representative of the Reef check network** all over French Polynesia.







# The Sea turtle care center in Moorea



The Sea turtle care center in Moorea was **created in February 2004** by Cécile Gaspar, Doctor and Veterinarian upon request and with the help and financial support of the **Environment Ministry**, as part of a general program for the protection of sea turtles in French Polynesia.

The project immediately obtained the logistical support of the **Moorea Intercontinental Resort & Spa**, belonging to the Pacific Beachcomber Group.

The Care center was then built in a preserved and secured area of the resort lagoon and obtained an **administrative authorization** to care for sick or injured sea turtles. (Order No. 0063 / MDD of 22 November 2006).

The Care center provides optimal conditions to fulfill the following 4 necessary steps:

1. **WELCOMING** of sick, injured, mutilated or weakened sea turtles, found by the local population, diving clubs or administrative officers
2. **DIAGNOSIS** and care for the sea turtles by the veterinarians, care takers and biologists of the Center
3. **TREATMENT** adapted to the identified problems
4. **RELEASE** in the natural environment as soon as the health has improved





# The facilities and the team



The Care center includes a building housing the association's offices, a care room for quarantine and medical care, an educative center in order to welcome school children, as well as a lagoon installed in the channel area.

This lagoon, screened at each end, includes:

- ❖ 5 enclosures called **nurseries** for juveniles or turtles needing intensive care
- ❖ a **resting lagoon** for turtles with a heavy handicap, when the release is not possible in the short term
- ❖ a **rehabilitation lagoon**, the last step before the release in the ocean

This lagoon is 50m long and 8m large, and its depth is less than 2m deep. The natural current, which is significant here, allows a permanent renewal of the water. The good quality of the water is checked every month with a bacterial analysis.

Infrastructure maintenance, education and sea turtle care are provided by a specialized team, consisting of:

- ❖ 1 **veterinarian** responsible for the diagnosis, the provision of care, autopsies and care takers training
- ❖ 2 **marine biologists** supervising the Care center and the scientific projects
- ❖ 1 **educator** in charge of designing educational materials and educational tools
- ❖ 1 **animator** in charge of the delivering educational awareness programs and in charge of coordinating the Care center
- ❖ 1 **communication manager**
- ❖ Several **care-takers** for daily sea turtle monitoring
- ❖ Many **interns** and active **volunteers**







# The residents

Out of the 5 sea turtle species found in French Polynesia, 4 species have been rescued by the Moorea Care center:



Green turtle

*Chelonia mydas*

- 407 hatchlings
- 82 juveniles
- 1 subadult
- 4 adults
- 4 unknown



Hawksbill turtle

*Eretmochelys imbricata*

- 0 hatchling
- 45 juveniles
- 0 subadult
- 2 adults
- 15 unknown



Olive Ridley turtle

*Lepidochelys olivacea*

- 0 hatchling
- 3 juveniles
- 0 subadult
- 2 adults
- 0 unknown



Loggerhead turtle

*Caretta caretta*

- 0 hatchling
- 1 juvenile
- 0 subadult
- 0 adult
- 0 unknown

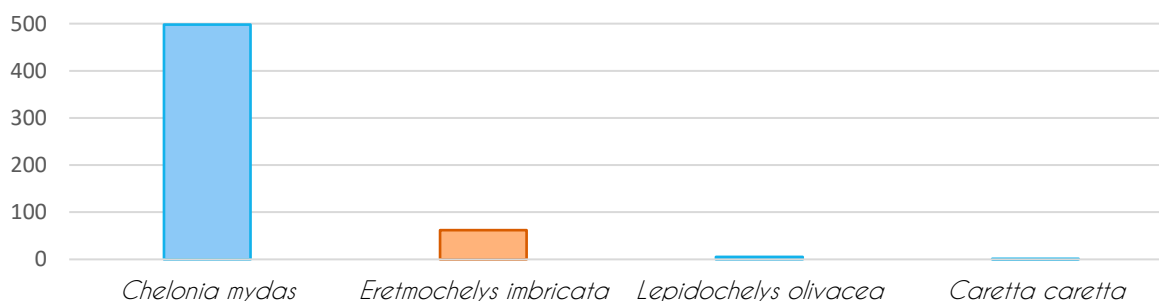


Figure: Number of sea turtles received at the Care center since 2004

However, the vast majority of sea turtle cared for are:

- ❖ **Green turtles** - Te honu aore rā - *Chelonia mydas* with more than 88%
- ❖ **Hawksbill turtles** - Te honu 'āfi'i moa - *Eretmochelys imbricata* with around 11%

They are the two most commonly encountered species in French Polynesia.

Two other species, more rarely observed in the Pacific Ocean, were welcomed to the Center:

- ❖ **Olive ridley turtle** - Te honu 'ōrve - *Lepidochelys olivacea*
- ❖ **Loggerhead turtle** - Te honu 'āfi'i rahi - *Caretta caretta*



# Arrivals' origin

The Care center can receive sea turtles from all over French Polynesia, but **the majority of the turtles arrive from the Society Archipelagos**. There is also another authorized Care center on Bora Bora island. At the Moorea Care center, sea turtles can be rescued from two situations:

## Sea turtles rescued « from the wild »

From its creation in 2004 up to now, the Care center has welcomed **159 sea turtles from the wild: 99 have been released** after care and **56 have died**. Today, 4 of the "wild" turtles are still at the Care center, needing special care (Figure below). Those wild sea turtles are sometimes found with undefined health issues (**38%**), or with the following known causes:



### POACHING

Forbidden in French Polynesia, the hunt and the capture of sea turtles still make a lot of victims.

39% of the injuries are due to poaching

### NATURAL CAUSES

Sea turtles can be naturally injured, especially due to shark predation, diseases, infections, etc.

9% of the injuries are from natural causes



### POLLUTION

Even in French Polynesia, marine pollution can cause serious damages to sea turtles: intestinal obstruction, imprisonment in drift nets or fishing lines or plastic ingestion, etc.

Pollution affected 6% of our residents

### ACCIDENTAL FISHING

Sea turtles can be accidentally caught by non-selective fishing gear (hook, drifting or fixed nets).

This was the case for 4% of our residents



### ILLEGAL CAPTIVITY

Some sea turtles have been held captive illegally by local population, often hatchlings collected at the exit of the nests.

Illegal captivity represents 4% of the arrivals

## Sea turtles rescued following hatching

During the nesting season (from September to April), green sea turtle hatchlings often arrive at the Care center really weak or seized by authorities from all over Polynesia.

Most of them arrive from Tetiaroa atoll where the association set up a nesting monitoring program for green turtles since 2007 with the support of the Direction of the Environment of French Polynesia, The Brando Resort and Tetiaroa Society. During this monitoring, our teams regularly find hatchlings at the bottom of the nests that are either predated, too weak to get out or blocked by coral rubbles or roots.

**The Care center welcomed 407 turtles rescued during hatching:** 247 from Tetiaroa, 55 from Moorea and 105 from other places (Hao, Maupiti, Raraka, Scilly, Fakarava, etc.).

Upon arrival they were all in critical health conditions. Among them, **236 died** (173 from Tetiaroa, 7 from Moorea and 56 from other places), and **162 were released** after intensive care (71 from Tetiaroa, 48 from Moorea and 43 from other places).

At this time, **9 young sea turtles are still looked after at the Care center** by Te mana o te moana's team.



On Tetiaroa atoll, Te mana o te moana in partnership with The Brando resort and Tetiaroa Society, often welcomes celebrities such as Barack Obama, former president of the USA. The biologists on-site can answer questions on the sea turtles conservation and research program conducted by Te mana o te moana.

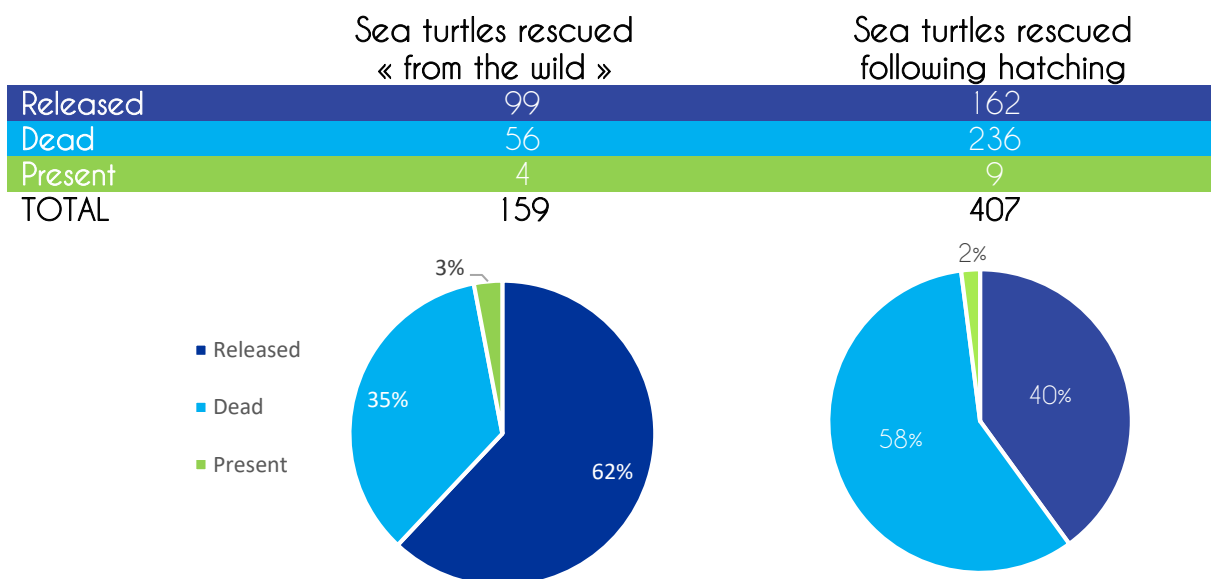


Figure: Ratio of present, dead or released sea turtles rescued from the wild (left) and following hatching (right)





# Releases of rehabilitated turtles

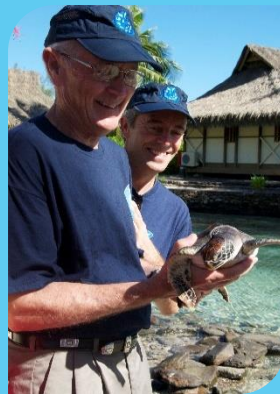
After receiving the necessary care for their rehabilitation, sea turtles who have stayed at the Care center return to the open sea. The release of our residents is always a special moment during which we often invite partners and schools.



**Maud Fontenoy**  
Sailor



**Edouard Fritch**  
President of French  
Polynesia



**Jean François Clervoy  
et Charlie Duke**  
Astronauts



**André**  
Child of Moorea



**Race for Water team**



**Prince Albert II de Monaco**



**Jean-Michel Cousteau**  
Founder of Ocean Future  
Society



**Bertrand Picard**  
Psychiatrist and aeronaut



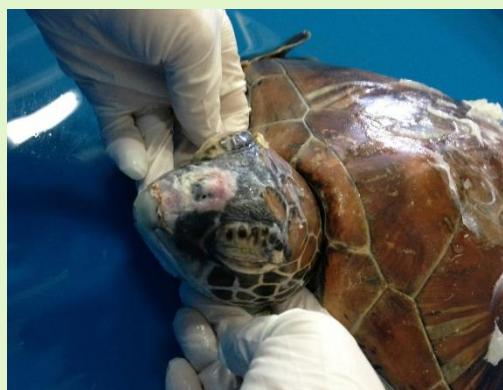
**College students from Pao Pao,**  
Moorea



## Portrayals of our permanent residents, emblems of the Care center

### TORTILLA

Found without energy on the beach in front of *Motu Ahi* in Moorea, this female adult hawksbill turtle is one of the first sea turtle welcomed at the Care center on October 14, 2004. Her superficial wounds are now healed but Tortilla still has a buoyancy issue and neurological disorders, preventing her from feeding herself and swimming properly. Today, Tortilla is in the resting lagoon, a pool created specifically for her well-being. About sixty years old, she will end her days at the Care center.



### TUFFY

Found in the lagoon of Tikehau atoll in 2013, this male juvenile green sea turtle had a speargun arrow on his neck and multiple wounds probably due to shocks against the reef (loss of scales above the beak and the shell). Thanks to the care provided by our team, his health has significantly improved. However, a problem of motricity and orientation still persists today. Its release to the ocean is not yet scheduled.

### MATAPO (which mean « blind » in Tahitian)

This young hawksbill turtle was welcomed to the Care center on May 9, 2009, following a speargun injury in the head that made Matapo completely blind. When it arrived, Matapo was no more than 3 years old and had no appetite. A few months later, after its wounds healed, Matapo regained energy. It is still unable to feed by itself and must be assisted daily. Its release is therefore not planned.







# Portrayals of some iconic residents rescued « from the wild »

## MOANA (which means « ocean » in Tahitian)



Found in Bora Bora on February 4, 2004 in critical condition, this young Green sea turtle was the first resident of the Care Center. Unfortunately, despite intensive care, it didn't survive. Moana has been the key to the creation of the sea turtle Care center.

## PERERAU (which mean « wing » in Tahitian)



Of the four olive ridley turtles received at the Care center, Pererau, a female adult, was brought to the Care center with a general infection with her right front flipper amputated by a fishing line and deep sores on the shell margins due to shark bites. After two years of care, Pererau was able to regain the sea in May 2011 with the team of the show "Echappées belles".

## RAVA (which means « black » in Tahitian)



Discovered by fishermen in 2018 off Moorea, this black turtle floated and had a plastic fishing net wrapped around its left front fin. It was extremely weak. Despite intensive care and an amputation, Rava succumbed to its deep-seated injuries 12 days after arriving at the Care center.

## COSTA LUNA



Before they are able to go back to the ocean, some of our residents need to follow a long rehabilitation at the Care center: this is what happened to Costa Luna, a young green sea turtle injured by a speargun arrow. It arrived in 2006 and was released in 2012 giving a total of 2196 days at the Care center, the longest stay!

## ARITI

Ariti is the only loggerhead turtle welcomed to the Care center. Found floating in the South of Tahiti by a fisherman, Ariti was very weak but did not seem to be injured. Treated for several months and released in May 2013 at Teahupoo. Ariti was equipped with 2 satellite transmitters. This equipment lasted for 2 years. During this time, Ariti travelled on a 13 000 km journey. A record!







# Portrayals of some iconic residents rescued following hatching

## FEFE (which mean « twisted » in Tahitian)

Welcomed in September 2006 from Raraka atoll (Tuamotus Archipelago), Fefe presented a severe genetic deformation of the shell. Preventing it from swimming and eating properly, this young green sea turtle died 2 months after arriving at the Care center.



## HOKULEA

Hokulea is a young green sea turtle found during the 2016-2017 nesting season following the excavation of a nest on the *motu* Horoatera on Tetiaroa atoll. When it arrived at the Care center, it had small wounds all over its body, was very weak and could not swim or feed itself. After 488 days of care, Hokulea had reached an appropriate size, maintained a constant appetite and sufficient energy to be released. It was released on 12 August 2018 by HSH Prince Albert II de Monaco on a private visit to Moorea.

## HIONA (which means « snow» in Tahitian)

Found during a nest excavation on Tetiaroa atoll by our teams, Hiona arrived at the Care center in November 2016. Very weak at its arrival, this young green sea turtle had a significant melanin deficiency (making it much clearer than the other green sea turtles), a strong curved shell, as well as a very pronounced flaking aberration. After 8 months of medical care, Hiona died. The autopsy showed many genetic malformations.



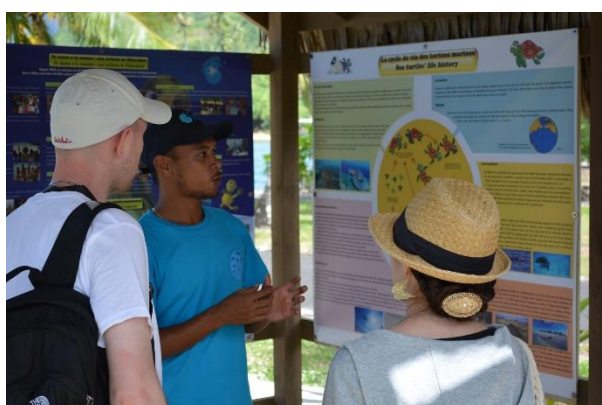


# Educate to better protect

To better inform on the importance of sea turtles protection, the association educates the general public and schools through many actions: educational programs, events organization, educative visits including the discovery of the Care center.

## General Public

The Center is the only sea turtle care center in French Polynesia with a free and open access.



A daily presentation is made to better inform the general public on the different sea turtle species observed in Polynesian water and on the necessity to protect them.

To complete the Care center visit, the informative panels in the *fare honu* ("turtle home" in Tahitian) located on the Center's main beach present key knowledge on sea turtles' biology, anatomy, pathology & care and explains the importance of their protection.

The presentation is also an opportunity to promote the photo identification program



« TORSOOL », a participative science project initiated by Kelonia and Ifremer on Reunion island, that allows for a better understanding of sea turtles population, movements and behaviors. Thanks to the profile pictures of individuals and without invasive handling, sea turtles can be identified. Indeed, the scales on each side of sea turtles' face are unique, like human fingerprints.

The daily presentation is organized from Mondays to Fridays at 10 am and Saturdays at 2 pm. The visit can be canceled or modified depending on

our missions.

The Moorea Sea turtle care center welcomes yearly between 10,000 and 20,000 visitors.



## School children

The association proposes educational programs to schools and summer camps focusing on marine biodiversity. Thanks to it, groups can visit the Care center to discover with our educator and animator the sea turtle residents and learn more about their biology, anatomy and the necessity to protect those emblematic species from our Polynesian ocean.

All educative programs available are adapted to the local context and approved by the "Direction Générale de l'Éducation et des Enseignements" (DGEE) for their adequacy to the current official school programs standards.



Since its creation in September 2004, more than 90,000 children were educated on the protection of the Polynesian marine environment.





## Four nests observed in Moorea

Since 2004, only four nests of green sea turtles were observed on Moorea Island. The first one in 2004 on Temae beach, then in 2014 on the *motu* Fareone and finally in 2017 and 2018 on Temae beach again. Few egg-layings are identified on this island because of the increase of littoral housing which strongly reduces beach access for female sea turtles.

Those unique events allows the organization to raise awareness and inform the population, especially residents in the neighborhood, by doing rounds on the beaches to protect the nests, excavates it and release the hatchlings





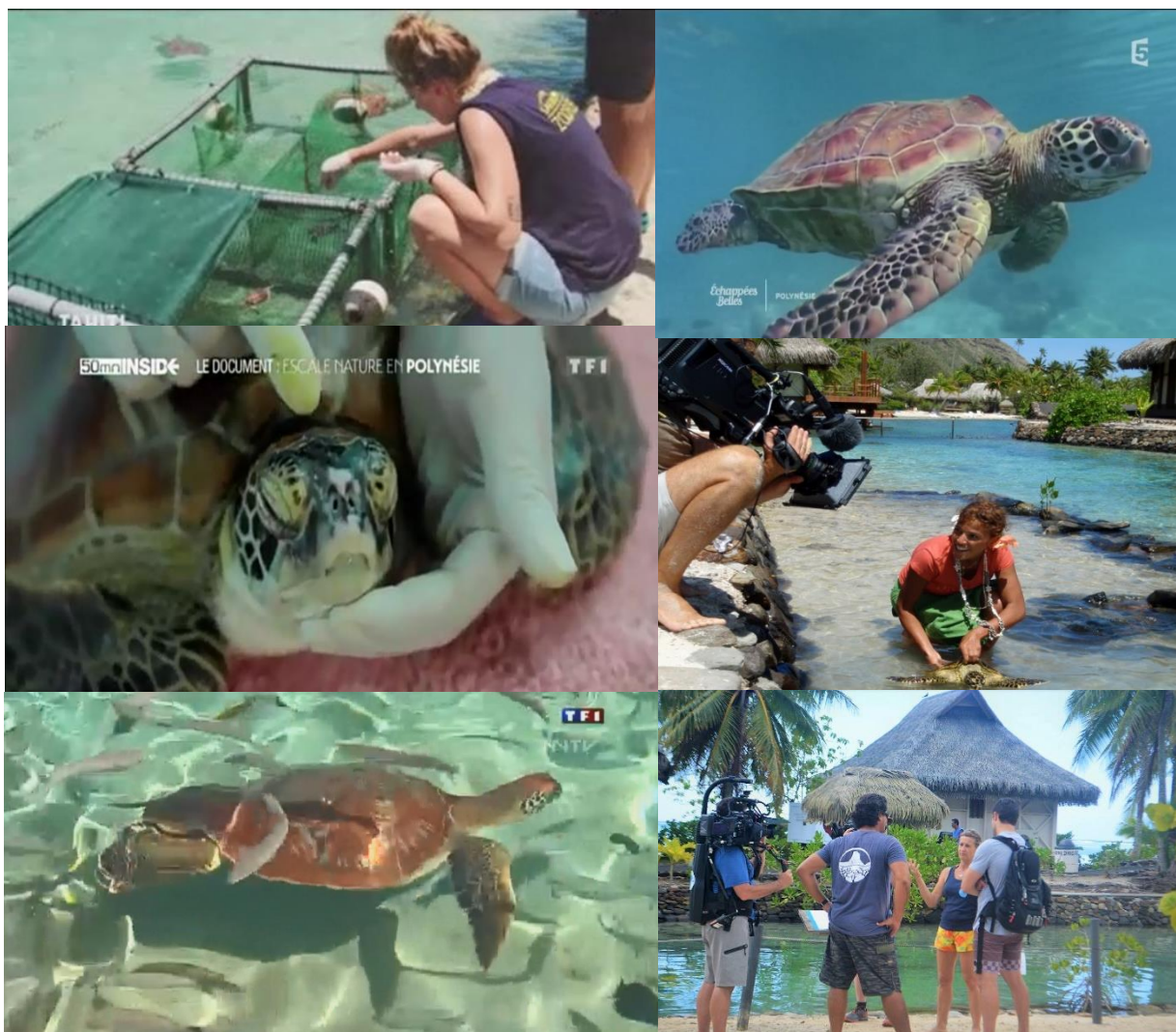
# They talked about us!

Since 2004, the Sea turtle care center in Moorea has been the subject of many press articles:

- ❖ In newspapers and local information magazines: La Dépêche de Tahiti, Les Nouvelles de Tahiti, Tahiti Infos, Tahiti News, etc.
- ❖ On radio and local TV channels: Polynésie 1ère, TNTV, Radio 1, etc.

The Care center also welcomed many shootings for national or international channels and TV shows such as:

- ❖ CBS, King 5, Disney, Animal Planet, ABC Ocean Mysteries, Des racines et des ailes, le 20 heures de TF1, le 20 heures de France 2, Thalassa, Echappées belles, Une saison au zoo, 30 millions d'amis, 50 minutes Inside, Tout s'explique, C'est pas sorcier, ADN, Ushuaia TV, Mission sauvage, Radio France, etc.







# Take the lead!

For each sick or injured sea turtle found anywhere in French Polynesia, please contact the Sea turtle care center in Moorea (24/24 - 7/7)\*.

\* Authorized by ministerial ruling from the Environment Direction of French Polynesia

Te mana o te moana will take charge of the transportation fees.

Thanks to Air Tahiti, the sea turtles are transferred from the islands to the Care center in collaboration with the ferry companies Terevau and Aremiti.

Care center contact:  40 56 40 11 / 87 715 344

## A few advices if you find a turtle:

- ❖ Avoid treating it yourself
- ❖ Do not feed it
- ❖ Place the turtle in a plastic tank for transportation (boat or plane)
- ❖ Close the tank with a grid on top to avoid manipulation of the sea turtle
- ❖ Place a wet towel on the grid to keep the turtle hydrated without suffocation risks
- ❖ Tag the tray: « Centre de soins des tortues marines de Moorea, Hôtel InterContinental Moorea Resort & Spa, tel : 40 56 40 11 - 87 715 344 »





# Maururu!

Many thanks to everybody who made this project possible, namely:

**Dr. Cécile Gaspar**, Founder, Executive Director and Veterinarian of the Care center  
Vie Stabile, Education, Pedagogy & Administration Director

**Magali Lagant**, Sea turtle care center & Educative programs Coordinator

All the marine biologists involved in our actions since the creation of the Care center:  
**Nicolas Leclerc, Matthieu Petit, Alice Carpentier, Yann Follin, Quentin Genet** and  
**Margaux Touron**.

The veterinarians that collaborated with us over the years to provide adapted care to our residents: **Nathalie Lombard, Robert Braun, Soai Baron, Jeanette Wyneken** et **Francis Schneider**.

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Thanks to our donors, partners and all the people who are following us locally and from all over the world!

## « Together, we will go further »

### To continue helping us, find us on:

[www.temanaotemoana.org](http://www.temanaotemoana.org) or [info@temanaotemoana.org](mailto:info@temanaotemoana.org) or on:





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