

# Ocean education, research and conservation : defining a new eco-tourism concept *the case study of te mana o te moana NGO in French Polynesia*



Dr. Cecile Gaspar, co-founder and president te mana o te moana foundation  
PhD , veterinarian, MBA, specialist UICN





# Te mana o te moana

- Non profit foundation founded in 2004
- Member of IUCN as institution and specialists
- Founding member of the World Ocean Network
- Partner with Monaco Oceanographic Institute
- Member of Mission Blue (Sylvia Earle)
- Founding member of World Ocean Network
- Founding member of FP Maritime Cluster

# Te mana o te moana

## Co-founders



**Richard Bailey,**  
CEO Pacific Beachcomber SC  
InterContinental resorts Tahiti and Moorea  
InterContinental Moana Bora Bora  
InterContinental Thalasso and spa Bora Bora  
3 hôtels Maitai (Bora Bora, Rangiroa, Huahine)  
The Brando Resort on Tetiaroa atoll  
Président Paul Gauguin Cruises  
Co-founder of Tetiaroa Society Foundation



**Dr. Cécile Gaspar**  
Veterinary surgeon, PhD, MBA, specialist IUCN  
Co-founder of Tetiaroa Society Foundation



# **A permanent team based in Moorea at the Moorea InterContinental resort and spa and 6 months/year at the Brando on Tetiaroa**

**Over 240 members**

**Over 140 volunteers and  
30 with regular  
involvement**



**Vie Stabile**  
Director and education  
projects coordinator



**Alice Carpentier**  
Marine biologist



**Magali Soria**  
Educator, care taker

**Over 30 master  
internships involved  
since 2004**

**A foundation board with  
13 members**



**Vaiaarii Mau**



**Laëtitia Bisarah**

# Our foundation “godfathers”



**Jean-Michel Cousteau,**  
président of Ocean Futures  
Society

**Jean-François Clervoy**  
French astronaut



**Mehiata Riria,**  
Miss Tahiti 2013



**Maud Fontenoy,**  
French navigator president  
of Fondation Maud  
Fontenoy







# GOALS

## Education...

*Creating awareness for environmental protection for up to 80.000 school children*



## Research

*Research programs on stingrays, coral reefs, sea turtles...*



## Conservation...

*More than 400 turtles received and taken care of in our dedicated clinic since 2004*



# Partners





# Very special partners in tourism



univairmer  
Exiger plus que le voyage





# Some numbers



- Over 400 participations to local or international events in ocean awareness and protection
- 500 press articles
- 150 TV or radio coverages
- 50 présentations in international scientific conferences



# The partnership with Moorea Intercontinental resort: Providing permanent quality office, classroom and fare potee in addition to a sea turtle clinic since 2004





**The Sea Turtle Clinic:  
an example of a crucial  
action of marine  
conservation inside a  
resort property**



- ⦿ Authorized by Environment ministerial order
- ⦿ Only turtles needed cares: sick, wounded or mutilated are received





- ❉ Appropriate treatments and diet, veterinary cares
- ❉ Turtles fully rehabilitated before release decision





Direct on site  
explanation by our  
staff of our veterinary  
care to visitors and  
guests





Free of charge education programs and interaction every day at 2 pm  
Awareness through direct observation of turtles and educational signs





Over 400 turtles received

Over 200 turtles have been tagged and then released



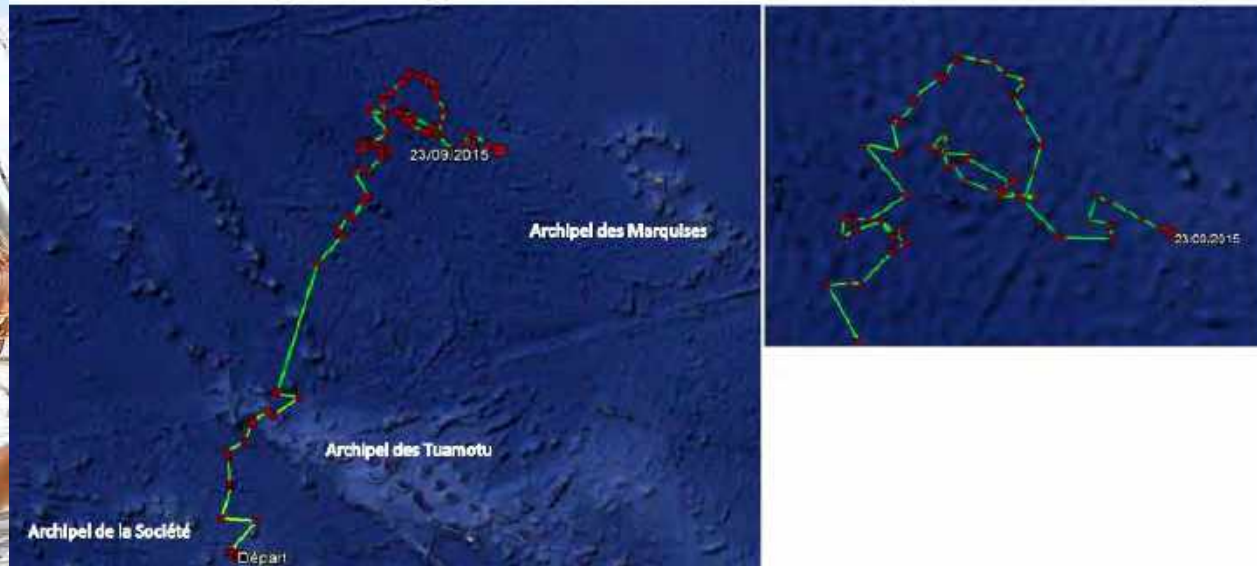


# The release of Tereori green sea turtle by our President Edouard Fritch and its satellite tracking



## Carte du trajet de Tereori

Update as of September 23, 2015  
Movement of juvenile green turtle TEREORI  
Released March 28, 2015 from Moorea island, French Polynesia  
CCL: 59 cm Days transmitting : 179 Distance traveled: 2848 km Mean speed of travel: 15,9 km/day



Crucial partnership and support from the Direction of Environment of French Polynesia

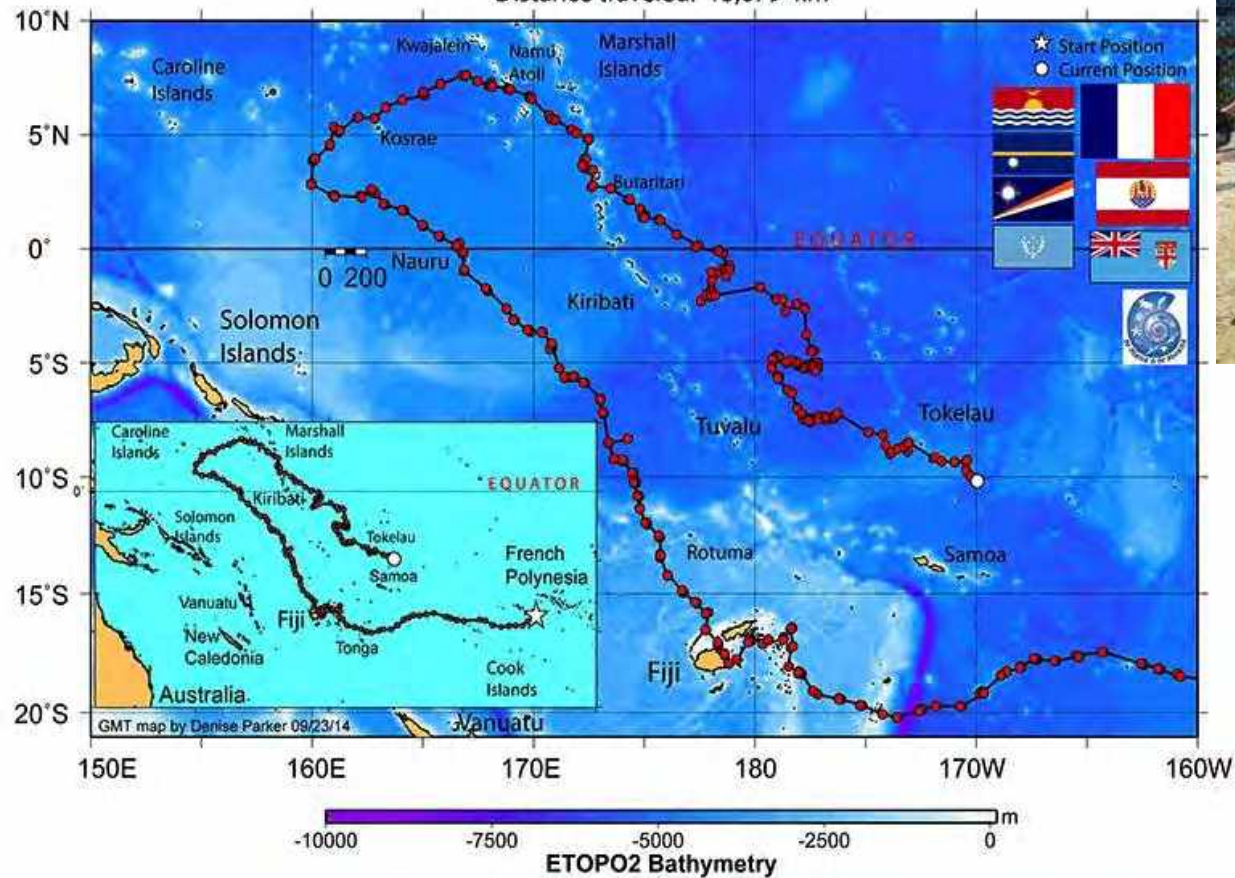


Update as of 23 September 2014: **Returned to the South Pacific**

2013-2014 satellite track of loggerhead, Ariti, rescued by local fisherman and rehabilitated  
Dual TAM-2639 tags ID 42717, 53771 Duty cycles offset - 8 hr on, 120 off CCL: 68.9 cm

Released 24 May 2013 Days transmitting: 487 days

Distance traveled: 13,679 km



Ariti the loggerhead turtle nearly 14,000 km  
in Pacific Ocean crossing the equator



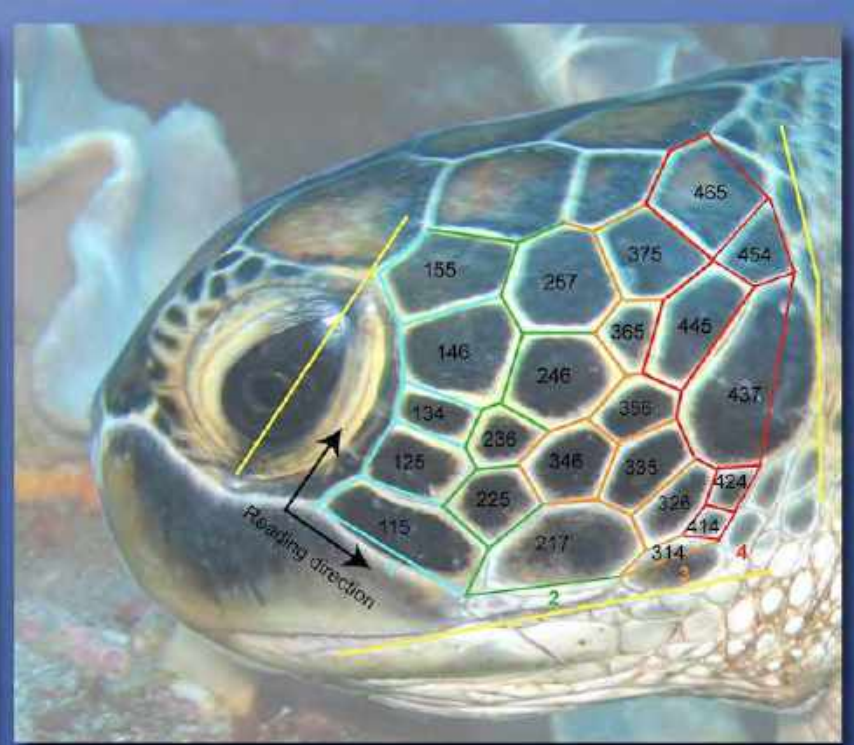


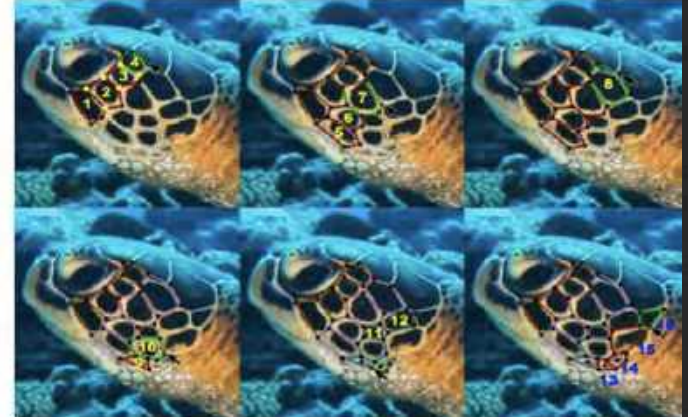
Photo Identification

Photo identification for  
green turtles  
Easy for scuba divers in  
some areas without any  
disturbance on the animal



#### Aide à la photo identification :

Dessinez les contours des écailles les unes après les autres à l'aide de votre souris en cliquant sur les boutons de croquis d'écailles. Suivez l'exemple ci-dessous ou visualisez le didacticiel



#### Quelques définitions :

Contours des écailles = faces ou côtés qui forment l'écaille.  
Côté = jonction entre 2 écailles voisines, Côté entre 1 écaille et le bord du cap, Côté entre 1 écaille et la tête, Côté entre 1 écaille et la première nageoire.  
Un côté peut avoir une forme rectangulaire. Il sera alors traité avec une écaille entre les deux nageoires adjacentes.  
Nageoire = nageoire d'écailles qui se succèdent de l'œil vers le dos. La 1ère nageoire est constituée des écailles immédiatement adjacentes à l'œil (à droite ou à gauche, selon le côté de profil). La rangée suivante sera constituée des écailles immédiatement en contact avec la première nageoire (ce n'est pas un côté ou un sommet en contact). Si une écaille n'est pas en contact avec la première nageoire, elle peut être arrondie.  
Une rangée n'est pas forcément droite, elle peut être arrondie.

#### Tracés des écailles :



# Coral reef transplantation: another example of a crucial action of conservation in a resort





# Research on a marine species: the green sea turtle and its nesting patterns on Tetiaroa atoll another example of a crucial support of a resort



# Carlson Brando turtle conservation on his atoll of Tetiaroa since 1974







Survey started in 2004  
on an atoll with no  
permanent people

Partnership with a  
tourism volunteer  
organisation Planete  
Urgence for 3 years  
« **Volunteer active  
tourism** »



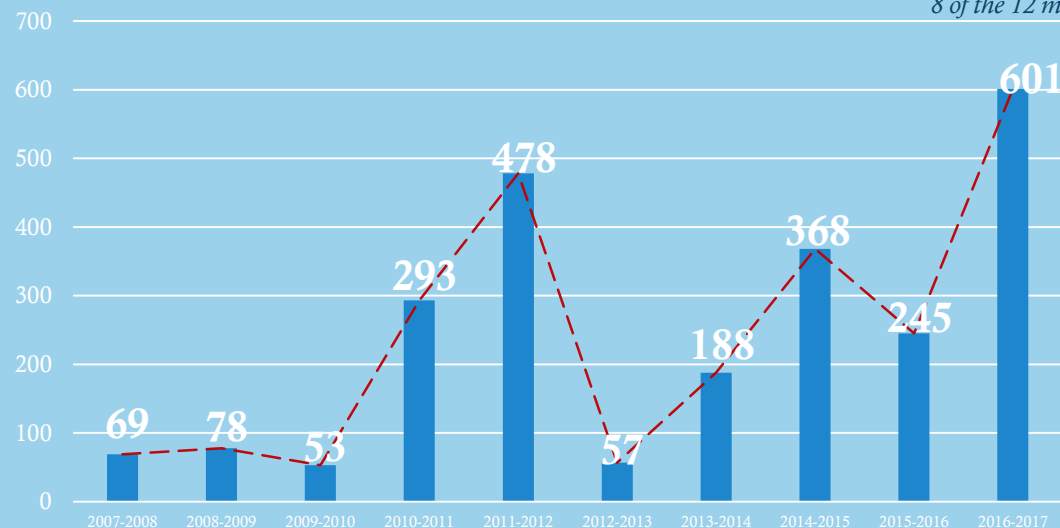
Nearly 100 females  
tagged and identified

# Turtle tracks parameters

- ◆ More than 8000 kilometers of beach survey over 10 years
- ◆ Tracks on 8 of out 12 *motu*
- ◆ 3 main sites (*motu*) on Tiaraunu, Oroatera and Onetahi on 10 km of linear beaches
- ◆ More than 2500 tracks counted in 10 years and over 900 nests with
- ◆ over 70.000 eggs layed in 10 years



Repartition of turtle tracks on  
8 of the 12 *motu* of Tetiaroa atoll -2016/2017

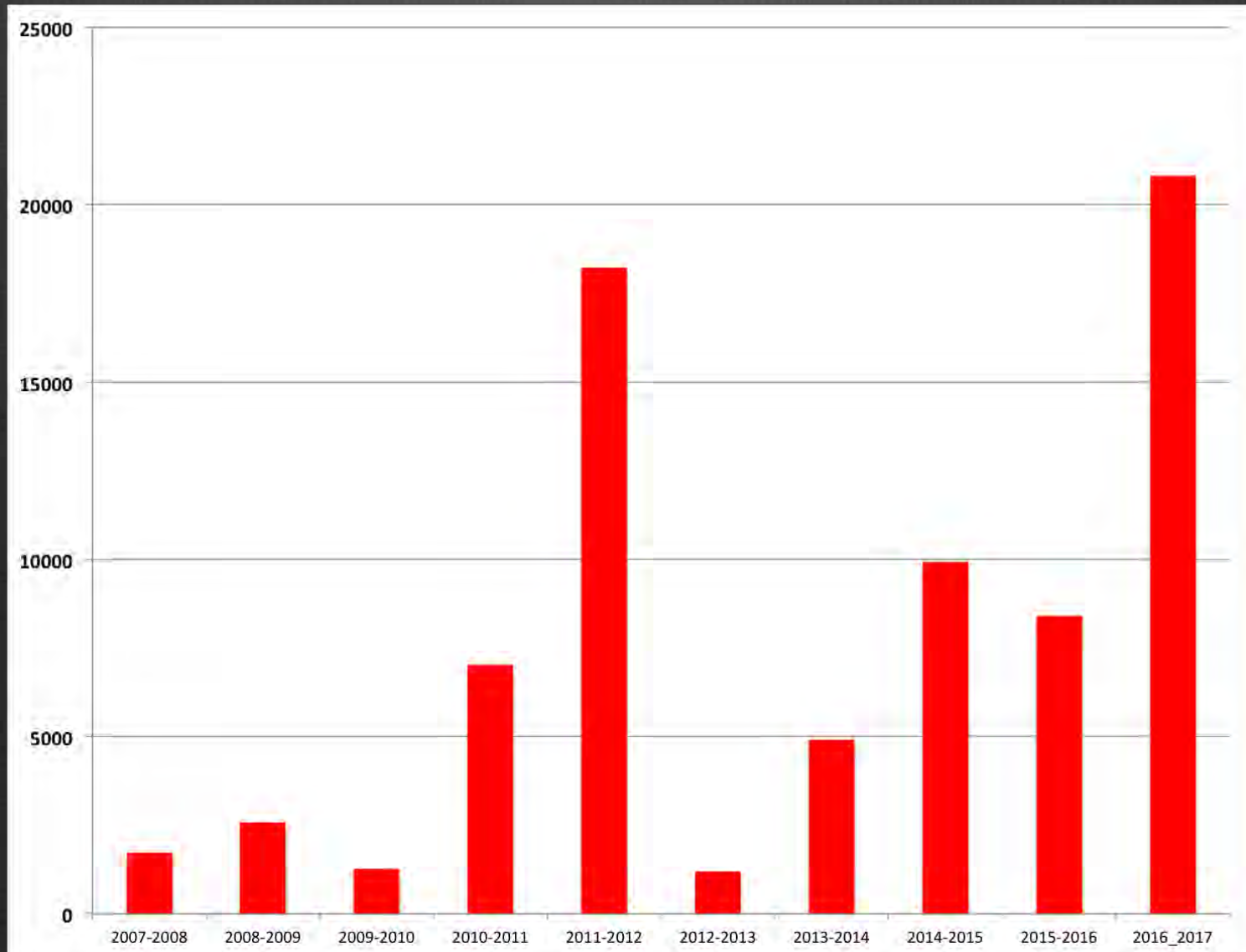


Yearly turtle events on Tetiaroa



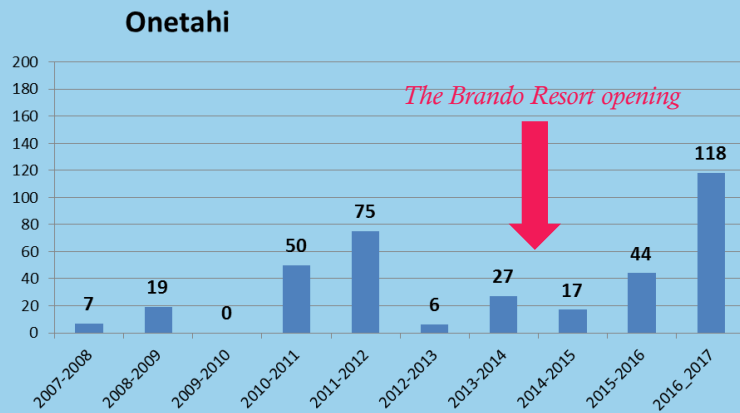


**Minimal numbers of green sea turtle babies that have hatched on  
Tetiaroa beaches per year**  
*Observed live babies or empty eggs excavated*



# The Brando Resort on motu Onetahi

- ◆ Uninhabited from 2004 to 2013
- ◆ Because of the turtle nesting, the villas have been specially pushed far back from the beaches
- ◆ In addition, the resort has set up particular light policies for turtle nesting season
- ◆ ◆ The number of tracks have been multiplied by 7 since the hotel opened. Annual variability is taken into consideration also as well as poacher dissuasion
- ◆ Season 2016-2017: 118 tracks and 64 confirmed nests: over 5000 hatchling born on the resort motu



Number of turtle tracks on Onetahi motu







♦ Curved carapace length: **102.4** cm  
 ♦ Curved carapace width: **93** cm  
 ♦ **10** tracks during 2016-2017 season  
 ♦ **9** confirmed nests + **1** single track with no attempt on a total beach distance of **800** meters from October 24<sup>th</sup> 2016 till February 16<sup>th</sup> 2017  
 ♦ **7** nests have hatched at the time of this report for a total of **584** hatchlings  
 ♦ Average live babies observed per nest : **83.4**

- Legend
- Nesting site, eggs laid  
Showing number of Baby turtles
  - Track only, no nesting attempt

Notes:

- Set to image: Pelade\_2014
- Source: MOOREA, IDEA



Geospatial Parameters:

Coordinate System: UTM WGS 1984  
Datum: WGS 1984  
Units: Degree



**- Remu -**

Working Site:

**Remu**  
Nesting behaviour Season 2016-2017

Project Name:	Duration:
Turtle Monitoring Program: Tetaroa	31 March 2017

Document Name:

20160502T20170611102 Turtle Spawning behaviour - RMT

Document:

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© 2016 Moorea & Moorea



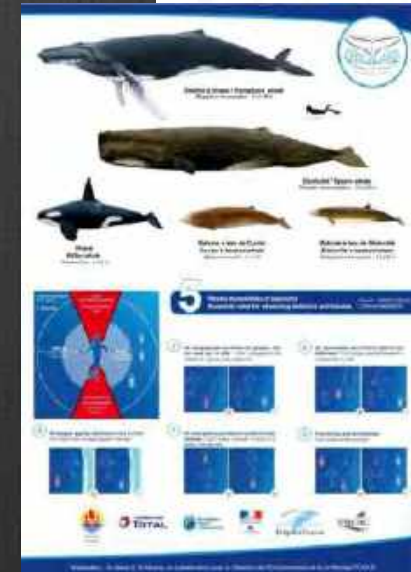
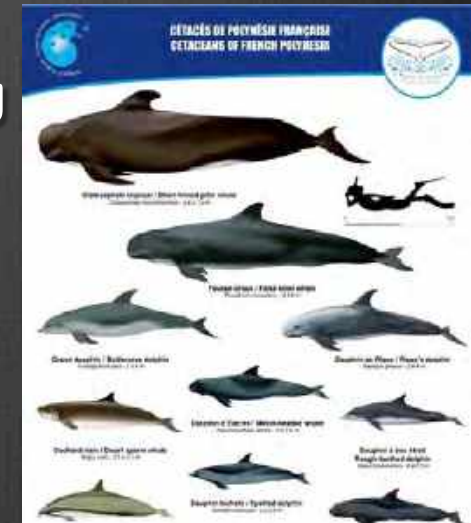
Since 2014, we have the support of the Brando Eco-resort, Tetiaroa Society and prestigious visitors like Barack Obama





# Education on marine life : available material for visitors in order to create new tourism behaviors or help them to make the good excursion decision

## example of dolphin and whale watching



FOR PRIMARY SCHOOLS, grades 3 to 6 (9 to 11 years old)



TOHORĀ, HUMPBAC WHALE  
WHO ARE YOU ?



Observation sheet for cetacean of French Polynesia

Name of observer: \_\_\_\_\_  
Housing address, phone, address: \_\_\_\_\_  
Where you saw a cetacean, a boat or on land? \_\_\_\_\_

OBSERVATION  
Date: \_\_\_\_\_  
Time of the beginning of the observation: \_\_\_\_\_  
Island and division: \_\_\_\_\_

Weather condition  
WIND ☐ None ☐ Moderate ☐ Strong  
OCEAN ☐ Calm ☐ Rough ☐ Very rough  
SKY ☐ Clear ☐ Cloudy ☐ Rainy

ANIMAL IDENTIFICATION  
Number of individuals: \_\_\_\_\_  
Cetacean species: ☐ Bale ☐ Pilo  
Size: ☐ Less than 10m ☐ Between 10 to 20m ☐ More than 20m  
Color: ☐ White ☐ Dark ☐ Grey ☐ Spotted  
Other: \_\_\_\_\_

PLEASE SEND YOUR OBSERVATION BOOKLET TO:  
Direction of the environment of French Polynesia  
dce@directionenvironnement.gouv.fr - BP 15 62 Papeete - 98713 Papeete - Tahiti  
(Phone: 82 12 16 66)  
Fax: \_\_\_\_\_  
To receive a certificate from the Direction de l'Environnement de la Polynésie Française  
directionenvironnement.gouv.fr - BP 1731 Papeete - 98713 Papeete - Phone: 82 14 83  
www.dce.gouv.fr

Circle the shape of the head:

Circle the shape of the dorsal fin:

Circle the shape of the tail:

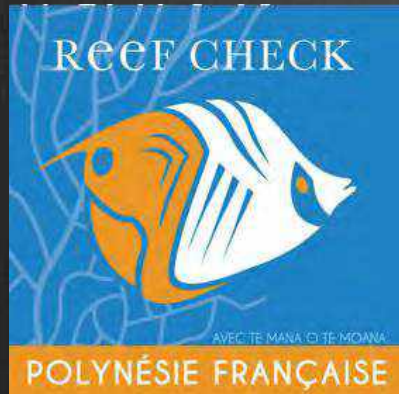
Circle the shape of the cetacean's legs (if placed behind the cetacean):

Draw the animal you observed:

Observez, collectez et participez  
au recensement des cétacés  
[www.observatoirepolynesie.org/cetaces](http://www.observatoirepolynesie.org/cetaces)  
T/F+689 7153 44  
matthieu.temana@gmail.com

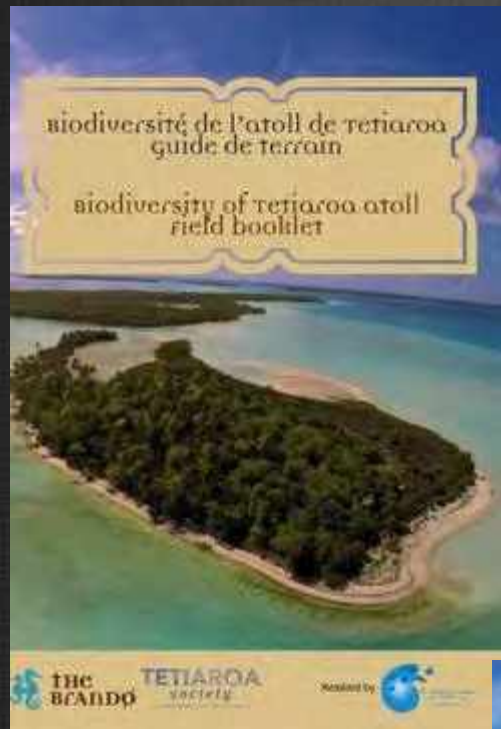


# Developping training and curriculum for naturalists guides and citizen science:example of Coral Reefs and Reef Check



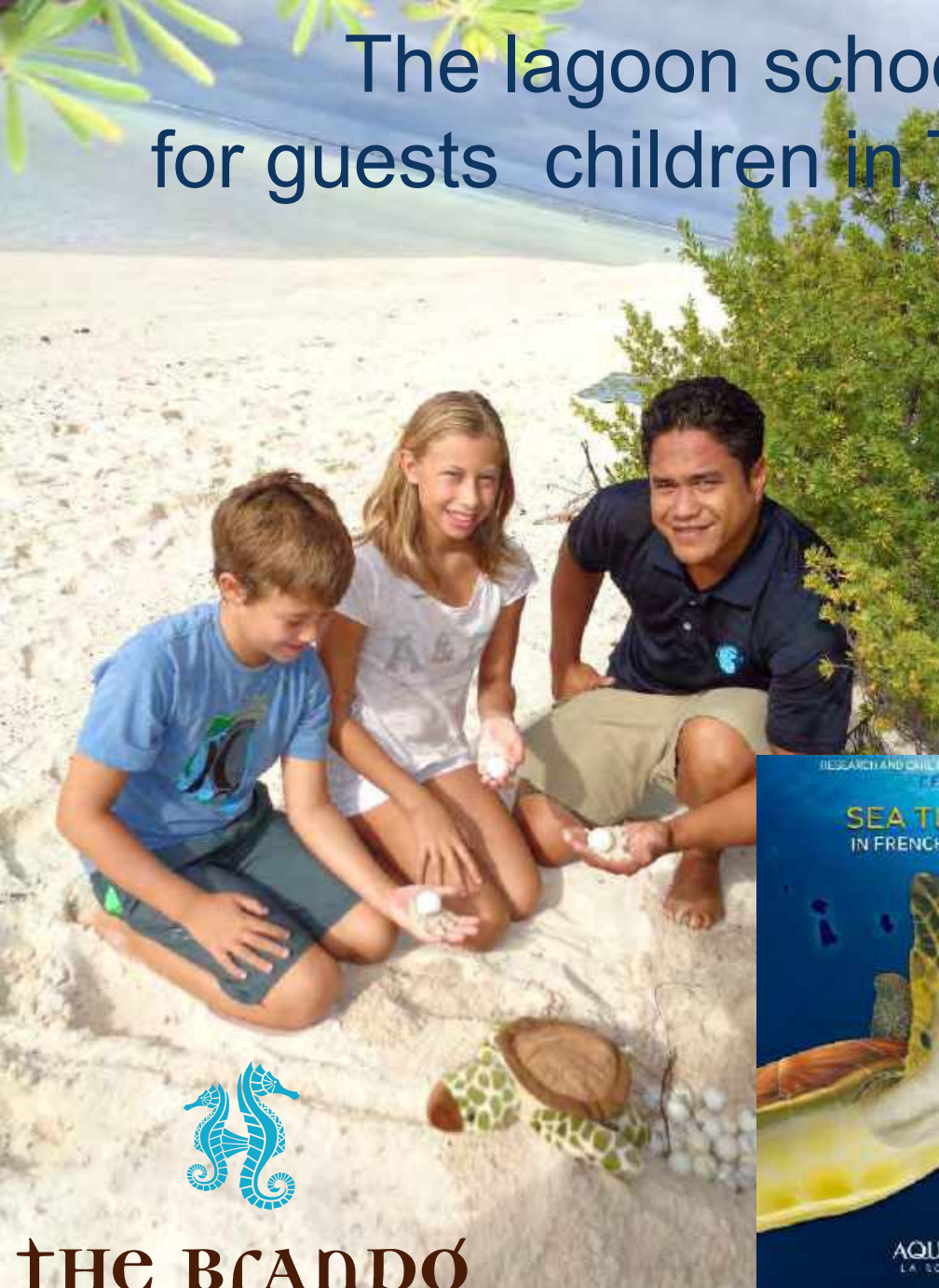


# Training naturalist guides on Tetiaroa for the Brando resort and developping daily naturalist tours on the resort 's request





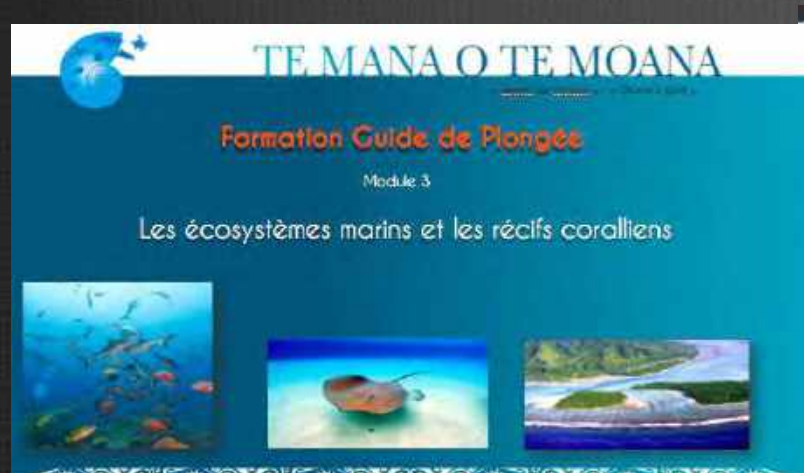
# The lagoon school: for guests children in Tetiaroa



THE BRANDØ



# Developping courses for official « Polynesian lagoon guides » or « Polynesian scuba guides » on the request of Polynesian Ministry of Youth and Sport





# Citizen science : « Hei moana » network with BEST European funding

# Hei Moana

Les Sentinelles de l'Océan



Tortues marines



Récifs coralliens



Mammifères marins





# « Mata ora no Tetiaroa » for local school children: study of The Brando sea water air conditioning SWAC





# Conferences on ocean conservation for scientists, tourists or residents: French Polynesia 's image worldwide





Involving tourists in conservation, research or education programs  
with local NGOs in their destination?  
A new model of eco-tourism to strengthen?

