

## Local perceptions of sea turtles on Bora Bora and Maupiti islands, French Polynesia

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### Abstract

In many Pacific Island cultures, sea turtles are key figures that symbolise longevity, peace and strength. Nevertheless, their existence is now under threat. The qualitative research described in this article was undertaken on the French Polynesian islands of Bora Bora and Maupiti (see Figs. 1 and 2) to inventory local perceptions regarding sea turtles, and to better understand the relationship between them and humans. The information gathered provides a better understanding and assessment of the cultural heritage of sea turtles in French Polynesia. Special emphasis was placed on understanding the perceptions of children and their potential role as “ambassadors of the environment”.

### Introduction

Modern society is becoming increasingly conscious of the fact that natural resources are not limitless. As a result, the protection and conservation of nature have become major social objectives. The Secretariat of the Pacific Regional Environment Programme declared 2006 as the “Year of the Sea Turtle” in the Pacific, and initiated a project with three main objectives: 1) promoting the conservation of sea turtle nesting sites; 2) reinforcing national legislation and laws regarding sea turtles; and 3) encouraging sustainable management of sea turtles by facilitating a long-term partnership between local people and authorities for sea turtle conservation.

Sea turtles are an important component of global biodiversity (CITES 1973). However, because of both deliberate and accidental catching, fishing, and destruction of their feeding, nesting and resting areas and, more recently, pollution, most sea turtle populations have declined dramatically, and many face extinction (see: [www.cites.org](http://www.cites.org)). To cope with this situation, legislation in French Polynesia has protected sea turtles since 1990, through a prohibition on capturing, transporting and trading them and their parts, including eggs. Moreover, since 1973, the Convention on the International Trade in Endangered Species (CITES) of Wild Fauna and Flora has regulated the trade of endangered species, and sea turtles are listed in appendix 1 of this convention (CITES 1973).

According to most interviewees on Bora Bora and Maupiti, the role of sea turtles in the social and cultural life of many coastal populations, and their

importance as a protein source, is well recognised. For most Pacific Islanders, sea turtles are key figures in many cultures and traditions, with the animal symbolising longevity, peace and strength. For example, in Maori mythology, sea turtles were considered sacred, and as the “shadow of gods” from the ocean, their consumption was reserved for the upper class of society. The *rahui* (temporary bans on consumption) invoked by leaders, helped to regulate the consumption of sea turtles.

However, the spiritual significance of turtles has not protected them from heavy exploitation for both subsistence consumption and trade. For hundreds of years, sea turtles have been an integral part of the Pacific’s culinary culture and history; turtle meat is a traditional food, their bones are used for making tools, and their shells are used for decorative or ceremonial purposes. They are called the “queen of foods” on Napuka (Tuamotu Islands) and in Fiji (Conte 1988), and were among the most sought after marine animals in ancient times (Conte 1988). Under the guise of tradition, fishermen today continue to justify their enthusiasm for killing sea turtles (Conte 1988).

Sea turtle population numbers are decreasing due to many factors, the main ones being the increasing human population in Pacific Island nations, coupled with the migratory nature of sea turtles and their low rates of natural reproduction. This has led to their exploitation at rates no longer compatible with their preservation.

Legislation and politics alone do not promote the efficient management and sustainable use of sea

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turtles. They must be complemented and reinforced by local studies that encourage local participation in environmental projects, and which sensitise people to the urgency of the conservation task. As part of such a thrust, the qualitative participatory study described here was conducted together with local people and in the primary schools of Bora Bora and Maupiti islands, in the Society Archipelago of French Polynesia. These two islands are particularly dependent on fishing and have traditionally consumed sea turtles. The choice of these two islands for the study was directed by the Department of Environment, Ministry of Sustainable Development, French Polynesia.

The project ran from 30 April 2006 through 2 June 2006, and had several objectives: 1) to identify the perceptions of local people regarding the cultural place of sea turtles in Polynesian society, the legal context and sanctions relative to sea turtle protection, and the relationship between sea turtles and local populations; 2) to sensitise local populations to the protection of sea turtles; and 3) to formulate recommendations to better protect and conserve sea turtles. A comprehensive study on the perceptions of local people toward sea turtles is essential in order to better integrate conservation plans for endangered species in the Pacific, and because the perceptions of local people in French Polynesia may provide a better understanding of the relationships between humans and sea turtles.

French Polynesia consists of 188 islands grouped into five archipelagos: Society, Austral, Gambier, Tuamotu and Marquesa. The Society Archipelago (Fig. 2) has the most modernised infrastructure, has more than 75% of French Polynesia's population, and has a significant tourism industry.

### The legal context of sea turtle protection

CITES is the core international legislation related to the protection of endangered species. Deliberation 90-83 AT of 13 July 1990 covers three sea turtle species that occur in French Polynesian waters. In practice, this means a general prohibition on the capture, transport, keeping and trading of turtles and turtle parts throughout French Polynesia, regardless of size, season or condition.

Furthermore, sea turtles are protected in French Polynesia through the legislation of the Territorial Assembly (1990). Several pieces of territorial legislation protect turtles. Trading sea turtles was prohibited by deliberation 71-209 of 26 November 1971. Order 1156 CM of 18 October 1991 relates to the special authorisation required to take and keep sea turtles and their eggs for scientific purposes. Order 435 CM of 5 May 1994 relates to raising sea turtles in aquaria for educational or tourism purposes. Order 5139/VP of 27 September 1995, permits the keeping of sea turtles by an Order of the Territorial Government of French Polynesia.

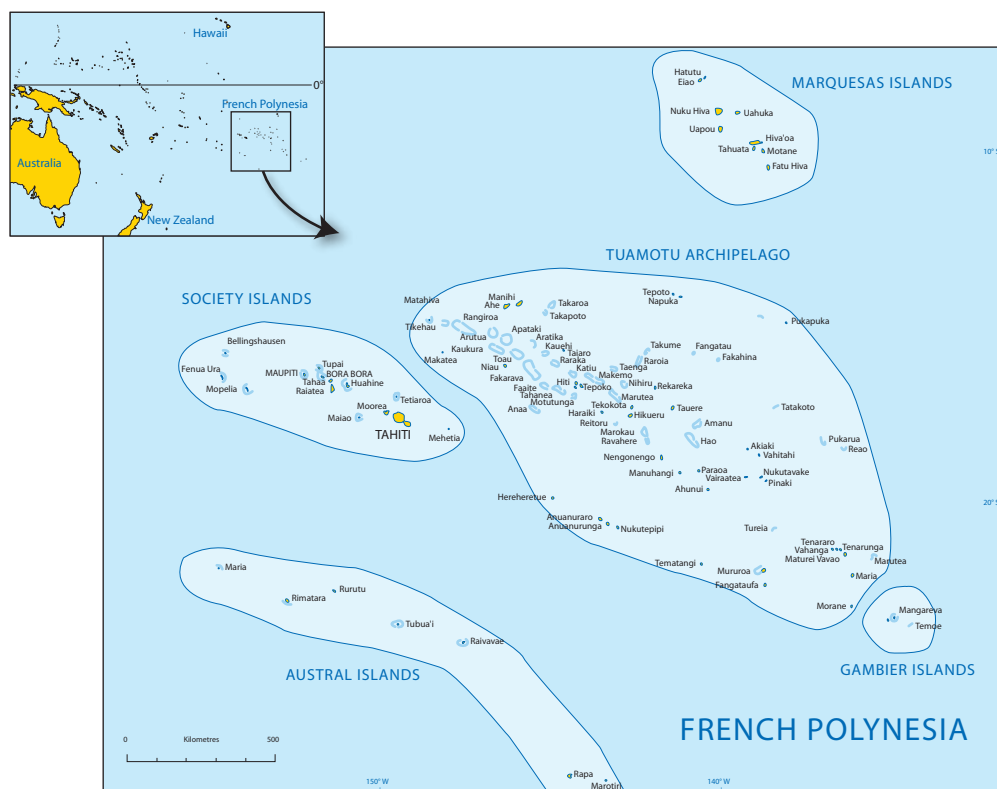


Figure 1. French Polynesia

## Methodology

Adults and children residing on Maupiti and Bora Bora were selected as informants for this study. Two criteria were used to select adult informants. Those who were more than 30 years old were chosen randomly, and according to whether or not their profession was related to or concerned with sea turtles in French Polynesia. Interviews with adults lasted for about an hour. Most informants, however, were children, between the ages of 10 and 16, who were pupils of secondary schools on Bora Bora and Maupiti. On Bora Bora, 50 children participated in the project, and on Maupiti, 160 children.

Various qualitative methods were used to collect data. These included observation (behavioural observation, indirect observation, participant observation), questionnaires, interviews and the CAP (“connaissance, attitude, pratique”) method developed by Decoudras (1997). The CAP method focuses on three concepts — knowledge (what people know), attitude (what people think), and practice (what people do) — to distinguish what people know, think and actually do.

In the schools, the project consisted of an environmental education workshop. Children were asked to draw on paper how they perceive turtles at present, and what they believe the situation of sea turtles will be in the future (Figs 3–6). Children were also asked to write a letter to a turtle as if it were a friend. A drawing competition was organised for each class that participated in the project. The goal of this workshop was, through interactive

activities, to raise awareness of children regarding an endangered species. One secondary school class on Bora Bora was invited to assist with the release of a sea turtle at the Turtle Centre, located in Bora Bora Le Meridien lagoon.

## Cultural dimensions of sea turtles in French Polynesia

The islanders of Bora Bora and Maupiti perceive sea turtles as an important component of their heritage and culture, and even as a symbol of French Polynesia. The sea turtle is perceived by informants as a sacred animal, almost mythic, as well as the “queen of the oceans”, a symbol of fertility and femininity. The sea turtle is also perceived as a friendly, harmless, beautiful and majestic animal. Primary school children regard the sea turtle as a friend who should be loved and cared for. In the past, eating sea turtle meat was reserved for royalty, but has become more popular, especially for important events such as weddings or festive periods (*heiva*). This tradition is still deeply rooted in present-day behaviour, especially among people over 45 years old. Turtle flesh is considered to be one of the best tasting meats.

## The current exploitation of sea turtles

Harvesting sea turtles is strictly illegal both under international law and the Polynesian Environmental Code. However, sea turtle meat remains in high demand, and catching turtles provides an attractive and easy way to earn cash. The meat is sold for between XPF 2,000/kg and XPF 2,500/kg (equivalent to USD 24.5/kg and USD 30.6/kg), more than twice the price of swordfish meat. Turtle meat is usually sold in packets of 5 kg each. Everything except the shell is consumed. In the past, fishermen whose catch included sea turtles were highly respected.

Children are acutely aware of what is happening. During the environmental education workshops, they were asked to draw how they perceived sea turtles now and in the future (Figs 3–6). Several individual responses are described below.

The drawing in Figure 3 was made by Teiki, a 10-year-old child. It shows the difference between the turtle’s present situation

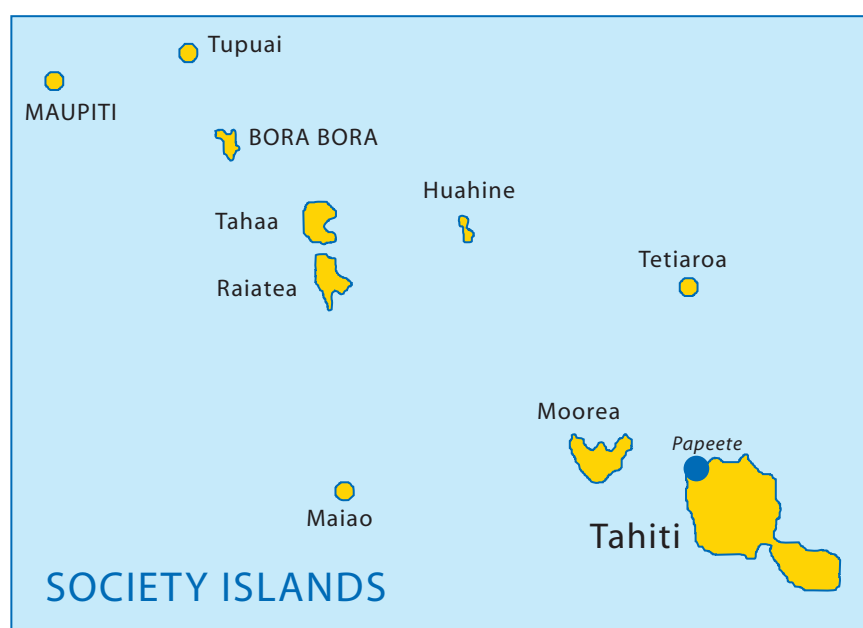


Figure 2. The Society Islands, French Polynesia

(left) and its perceived future (right). According to Teiki, Maupiti Islanders go to the ocean with their speedboats, and then dive to capture turtles by hand. Some say that many fishermen drown while trying to catch a turtle because turtles pull fishermen toward the bottom of the ocean. Teiki says that in the present, “*Il attrape la tortue*” (He catches the turtle), whereas in the future he says “*Il relâche*” (He releases the turtle). According to Teiki, there is hope for sea turtles in the future; he believes that men will no longer capture them, but will set them free.

In Figure 4, 12-year-old Poe Iti indicates very clearly what would happen to sea turtles if nothing was done to protect and conserve them. In the present (left) we

see a picture of several turtles. Poe Iti writes at the bottom “*Il y a de tortue*” (There are turtles), whereas on the right (the future), he shows nothing (i.e. turtles are extinct), and writes “*Il n’y pas plus de tortue*” (There are no more turtles). Awareness and environmental education workshops are, therefore, a basic means of awareness regarding sea turtle protection.

Figure 5, by 11-year-old Moana, demonstrates another perception of the present and future situation of sea turtles. In the present, Maupiti Islanders “*Chasse au tortue*” (fish for turtles). We can see clearly in Moana’s drawing that the fisherman comes with a motorboat and tries to catch the sea turtle underwater with a speargun. In the future,



Figure 3. The perception of the “present and future” situation of sea turtles, as depicted by Teiki, a 10-year-old child from Maupiti



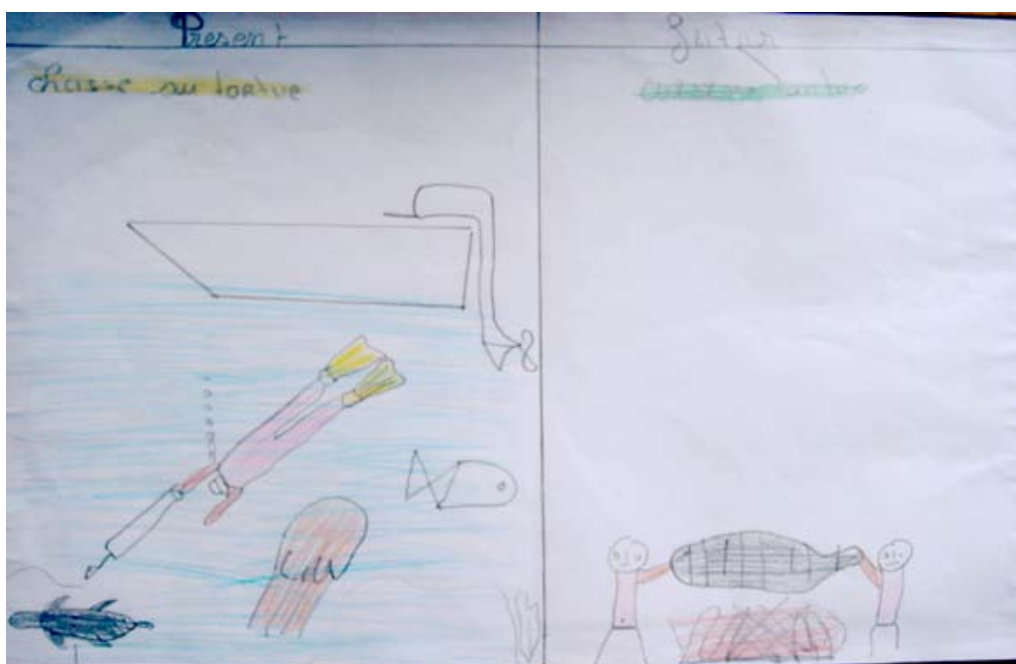
Figure 4. The perception of the “present and future” situation of sea turtles, as depicted by Poe Iti, a 12-year-old boy from Maupiti



men seem to “*Cuisine tortue*” (Cook turtle) with fire. Indeed, according to Moana’s perception, sea turtles will continue to be captured and eaten (i.e. the situation is not going to change).

In Figure 6, 11-year-old Matarii draws our attention to what is actually happening now in French Polynesia. Before, there were plenty of sea turtles. The right hand side of Matarii’s shows that in the

future, however, there will be very few turtles. The turtle at the bottom of the drawing is hiding from the fisherman, saying “*Maintenant je suis tout seul dans la mer*” (I am alone now in the sea). Fishermen use motorboats (the most commonly used boat is the *poti-marara*) and spearguns to capture sea turtles. This drawing is very detailed. Matarii seems to be very knowledgeable about sea turtle behaviour (e.g. it goes toward the bottom to escape capture),



**Figure 5.** The perception of the “present and future” situation of sea turtles, as depicted by Moana, an 11-year-old child from Maupiti



**Figure 6.** The perception of the “before and after” situation of sea turtles, as depicted by Matarii, an 11-year-old child from Bora Bora

and draws in detail the boat and the fishermen's diving and fishing gear. This likely indicates that Matarii has already experienced sea turtle fishing.

### Limits of regulations

Theoretically, the fine imposed on fishermen for taking sea turtles ranges from XPF 200,000–1,000,000 (equivalent of USD 2,450–12,250). However, fines are rarely imposed because authorities hardly ever control nesting sites, or monitor landings. As a consequence, poaching is easy and happens mostly at night, off the islands. This situation begs the question of whether tougher penalties would be effective, because the demand for turtle meat still exists and is rooted in local mores. Existing sanctions are not dissuasive, and fishermen continue to fish because they know the risk is slight. Further, poaching is uncontrollable and unmanageable given the fragmented, insular nature of French Polynesia combined with the lack of authority and strictness in regulating the trade of marine turtles, and the leniency with which the police deal with fishermen.

### Future perspectives

Project interviewees on Bora Bora and Maupiti advocated a return to a quota system of turtles (by island), which is managed and controlled jointly by authorities and local people. However, turtle nesting sites need to be identified and classified. Awareness campaigns are important both in terms of supply and demand. Fishermen should also be sensitised and empowered. Schools play an important role in making children understand endangered species and in raising awareness about the conservation, protection and caring for nature in general.

### Conclusion

This study enabled an inventory of the perceptions of local people on Bora Bora and Maupiti toward sea turtles, which reveals the types of relationships

between these species and humans. The role of children as “ambassadors of the environment” is of great importance. Having identified their perceptions and the importance that they attach to sea turtles, we can better understand and assess the cultural heritage of sea turtles in French Polynesia.

### Acknowledgments

I am deeply grateful to Pierre-Marie Decoudras and to Miri Tatarata, with whom I worked on this project, for their trust and support during my travels in French Polynesia; to Pascal Fouquet, for giving me the opportunity to stay at Le Meridien on Bora Bora; and to the Tautiare Iti family pensions on Maupiti, for having made me feel at home. This study could not have been done without the children and adults of Bora Bora and Maupiti, who trusted me enough to share personal thoughts and beliefs. The collaboration, efficiency and valuable suggestions of the directors and teachers of the primary schools on Bora Bora and Maupiti were fundamental to ensuring the success of the field research. I am deeply indebted to them all. Finally, I would like to thank the Ministry of Sustainable Development – Environment Department (Papeete, Tahiti, French Polynesia) for supporting this project financially.

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Original text: English

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