

# Shark problematic issues in La Réunion : A sustainable monitoring of the sea territory ?

*Pinel Romain, French, PhD Student, University of La Réunion, romain.pinel@univ-reunion.fr*  
*Thiann-Bo Morel Marie, French, Senior lecturer, University of La Réunion.*

---

## Introduction

Here we will expose our PhD project. The object is to investigate the ecosystem and socio-system co-viability. To that extent, we focus on the monitoring of the coastal territory in La Reunion island, in the west Indian Ocean. In February 2011 began one meaningful environmental conflict in this island : the « shark crisis » (term use by the stakeholder groups). Several shark-human interactions occurred this year and have increased since. The « *ordinary risk* » of unexpected encounter with a squala has been built and became an « *absolute risk* » (Thiann-Bo Morel & Duret, 2013). Since, La Reunion island is known worldwide to be a “sharks island”...

## Research questions related to this proposal communication

To understand the socio-environmental and cultural dynamics in this context, we are working in a pluridisciplinary approach that will stand in our interdisciplinary laboratory, UMR Espace-Dev, and especially with the squad AIMS (*Integrated Approach of Environments and Societies*).

We decide to expose on three major questions :

- 1) Why the risk culture was taking so long to raise ?

Between 1980 and 2000, so that' 10 years before the “shark crisis”, 22 sharks-humans interactions are collecting around the Reunionese's coastal territory. In this context, where sharks always have been present in the Reunionese's seas and the surf was an imported sport, we study the evolution of the public representation of the shark risk. We put a postcolonial reading grid to understand these sport issues.

This questioning refers to two other interrogations :

- 1.a) During the “golden age” of surfing in La Réunion (1970-2000), why are sharks are told to be this absent/quiet ?

- 1.b) What about the native culture/practises about sharks ?

- 2) How is the conflict between the stakeholders structured ? To what extent is questioning the Reserve Natural Marine of La Réunion (RNMR) by the surfer's communities ?

The emphasis is placed on the analysis of actors' systems and territorial action along the west coast. We want to focus on the surfer's representations/opinions of the RNMR and mostly on what they are questioning.

- 3) What about the monitoring of the sharks-humans interactions in the other seas territory ? Is the case of La Réunion a specific one ?

In the UMR Espace-dev, the study of the islands, as laboratory of the complexity of interactions between environments and societies, is one of the transversal thematic. The law

is different between country and societies, but the environmental conflicts are similar in general points.

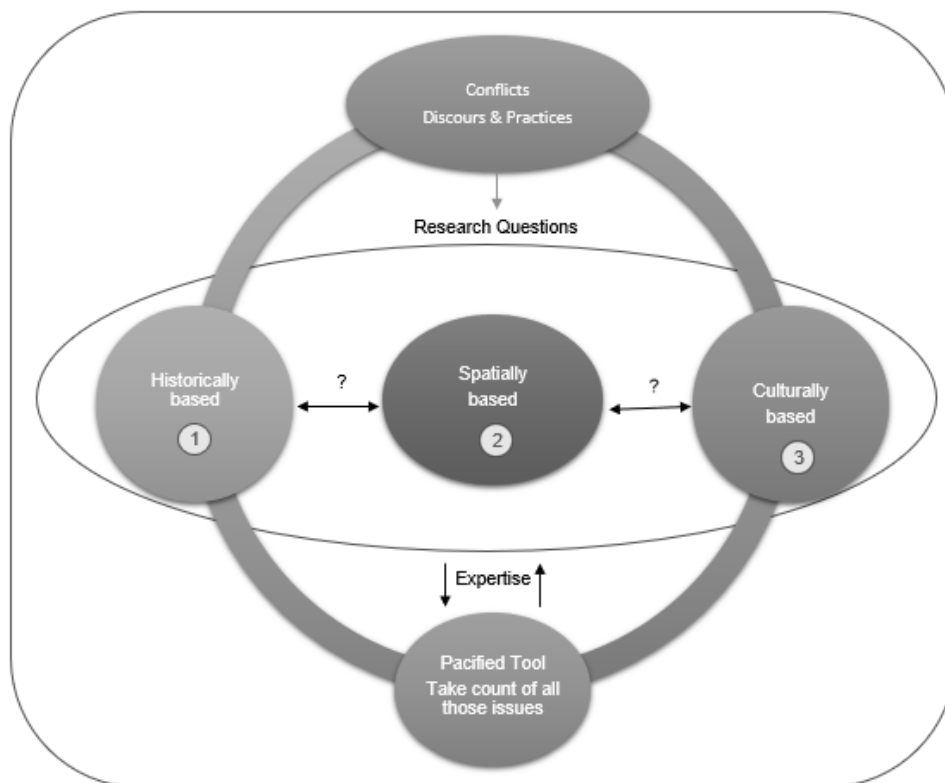
In this research we are betting that :

H1: The territorial development (coastal urbanization), the post-colonial context (assimilationist ideology), the French state global management, especially the economy of scale (2 million € for the risk reduction in 2018), the instrumentalization of the risk management (development of numerous devices), are all systems that interfere with an integral and sustainable monitoring of the shark problematic.

At the opposite, we think that :

H2 : A collaborative monitoring based on the principles of the Research in Participatory Action (RPA) will generate a territorial and environmental mediation vector of a sustainable development.

## 2.a Scheme of the PhD project



In this research, we will question the elements of the stakeholder's discourses in this "crisis".

### Data collection methodology

For the elaboration of a pluridisciplinary approach, we are working with a variety of tools which global purpose is to understand the relationship between the islands society and their

environment. In this way, our data collection is composed of three main stages, to answer at the three questions asked previously :

*a) From digital to symbolic*

This first phase is composed of four steps :

- direct observation of the environment (natural or human), stakeholder in situ surveys
- semi-structured interviews and accounts of life of the stakeholders
- media treatment about the sharks-humans interactions since 1980
- Mapping of the socio-territorial interactions

All these data collecting steps will give us the tools to understand the socio-territorial and cultural dynamics of the Reunioneses's society, about the shark problematic context.

*b) Collaborative monitoring of the sea territory*

This second phase is based on the principles of the RPA (Gonzalez-Laporte, 2014) but also of the Environmental Damage Regulations (EDR) and the Alternative Dispute Resolution (ADR) (Fisher & col, 1991). Along these lines, we want to set up participatory workshops to measure the possible changes or impacts of an environmental mediation in the RNMR.

This step is composed of three approaches :

- The premediation : identification of the nature of the conflicts and determination of the flow
- The mediation : negotiation on the main issues ; preparation of a draft agreement ; review and ratification of the agreement ; establishment of strategies for implementing and monitoring the agreement
- The postmediation : implementation of the agreement ; control, monitoring and surveillance ; reinforcement mechanisms

*c) Design of a participatory database with other territory*

The last part of the project is to collaborate with other institutes, scientists, who are working or want to participate in the realisation of a database regarding sharks-humans interactions. First, we will focus on the Indian Ocean region. Then, as a second step, we want to open the data process collection to other seas (Pacific Ocean, Caribbean seas) and propose a comparative approach between continental territories and islands.

## **Conclusion / Taking home message**

La Réunion and other islands territory are showing us all the complexity to manage protected areas, as the uses (nautical activities or sport into the RMN for example). An environmental participative effort, interactive and collaborative appear to promote a pacified monitoring of the territory. In this process, how can we pacify these antagonistic predisposed interactions ?

## **References**

- Fisher, R. Ury, W. Patton, B.(1991). Getting to yes: Negotiating agreement without giving in. UK. Random House Business Books, p.13-42.
- Gonzalez-Laporte, C. (2014). Recherche-action participative, collaborative, intervention... Quelles explicitations ? [Rapport de recherche]. Labex ITEM, p.4-28.
- Thiann-Bo Morel, M., Duret, P. (2013). Le risque requin, mise en risque de la pratique du surf à la Réunion. Staps, vol. 99, no. 1, p. 24-36.
- Médiation(s) environnementale(s) : quelles pratiques et quelles perspectives en France ? (2000). Concertation, décision et environnement. Séance numéro 1, p. 24-65.