

A Common Initiative for Sharks and Rays at St Barth: The First Step for French West Indies?

Una Iniciativa Conjunta para la Protección de Tiburones y Rayas en St Barth: ¿El Primer Paso para las Antillas Francesas?

Une Initiative Commune pour la Protection des Requins et Raies à St Barth: Un Premier Pas pour les Antilles Françaises?

OCÉANE BEAUFORT and SÉBASTIEN GREAX

¹*Association Kap Natirel*

174 Chemin de poterie, Trois-Rivière, Guadeloupe 97114 France.

oceane.beaufort@hotmail.fr

²*Agence Territoriale de l'Environnement*

BP 683 Gustavia, Saint-Barthelemy 97099 France.

sebastien.greaux@agence-environnement.fr

EXTENDED ABSTRACT

With more than 50 species of sharks and rays recorded, the French West Indies (FWI) harbor a significant specific diversity. However, this diversity is fragile with over 35% of species listed on the IUCN Red List and 33% are near-threatened (Beaufort 2017). Yet, there is no local action plan for sharks and rays conservation. For various reasons (large relative abundance compared to other islands of the FWI, shark sanctuaries in the neighboring Dutch islands of Saba, Sint-Maarten and Statia...) the development of conservation measures in St Barth would constitute major headway for the protection of sharks and rays in the FWI.

Located in the lesser Antilles, the 25km² territory of St Barth has undergone a rapid transition from an isolated island to a luxury tourist destination. Within the last 50 years, the island population has increased by 333% and its housing by 633% (Diaz 2003, INSEE 2015). This quick and important development has had evident impacts on the environment. A recent assessment highlighted that the marine ecosystem is reaching worrying thresholds : reefs around the island are in critical condition, the macroalgae cover in the reef systems has increased rapidly and is now over 50% (Jadot 2015).

How is it possible to reconcile tourism which contributes to the economic growth of the island with environment conservation and species protection ?

With funding from European Union's BEST 2.0 Program this project aims at adjusting, developing and promoting conservation measures for elasmobranchs in St Barth. In order to do so different, complementary and inseparable actions are necessary.

The first step is to improve biological, ecological and socio-economic knowledge on elasmobranchs. Where are sharks and rays found? Which species are present ? What are the interactions with humans ? What is the place of sharks/rays in the local culture and local economy ? Answers to these questions will help identify priority areas and priority actions on St Barth. To collect this data, two methods are used : a standardized Baited Remote Underwater Video (BRUV) baseline survey (Cappo et al. 2004) and stakeholders (fishermen, divers and local people) surveys.

Started last January 2018 the project is still on-going but the first results show a high presence of elasmobranchs on BRUV records (at least one elasmobranch on 80% of records) around the coasts of St Barth. Out of the nine species observed, the most common ones are nurse shark (*Ginglymostoma cirratum*), stingray (*Hypanus sp.*) and Caribbean reef shark (*Carcharhinus perezi*). These species have an important value for some countries that have developed tourism on sharks and rays in the Caribbean. In addition, vulnerable stages of life for several species are observed like pregnant females, neonates and juveniles. In the next months complementary analysis will be conducted to identify the major factors that can impact sharks and rays distribution in the waters of St Barth.

Regarding local fisheries, there is very few demand for shark meat. Shark fishing is mainly accidental and mostly concerns nurse sharks bycatch in traps. These bycatches represent a serious ecological and economical issue. First nurse shark fishing are forbidden in St Barth. Then nurse shark unwanted catches are regular (sometimes more than 50 per month for a single fisherman) and can make serious damage on fishing traps. To get the first leads to improve the fishing trap, the adaptations / modifications made by the fishermen themselves have been listed.

The second step is a consultation process with international experts and managers of neighbouring islands because issues on St Barth may be similar across the region. The idea is to discuss the actions already implemented on their territories, get feedbacks and share lessons learned. In addition, the results will be presented during workshops to local actors with a discussion about the measures that could be implemented on the island. This step is important to ensure the proposed measures are appropriate, relevant, feasible, understandable and accepted by the users and general public.

The third component of the project is the communication aspect. In addition to conferences and exhibitions for the public, articles in social media, talks and interventions in schools, a documentary on the project has been produced to present the importance of sharks/rays for their environment but also for St Barth. By sending a positive message about sharks/rays it is hoped that this will raise public awareness for sharks/rays conservation.

Because there is a relatively large population of sharks, species attractive by tourism, and few consumer demand for shark meat, some actions could be developed on the island to promote responsible shark/ray tourism and shark/ray “friendly fishing”. On an island like St Barth, where the image are very important for local economy, this kind of actions could be very effective.

For this project to be successful, the cooperation and the collaboration of all actors is paramount. Indeed voting a regulation is one step, but its effective application is another matter. On a small island like St Barth, if each actors feel involved the implementation of conservation measures could be easier. The next step will be the drafting of the first shark action plan. May be a springboard for others islands in the FWI?

KEYWORDS: Sharks and rays, stakeholders, conservation

ACKNOWLEDGEMENT

OSPAR Commission for Protecting and Conserving the North-East Atlantic, the Italian Agency for Cooperation and Development (IACD) of the Italian Ministry of Foreign Affairs, International Cooperation, through the UN Environment CEP and Gulf and Caribbean Fisheries Institute (GCFI) for their support at the 71st GCFI Annual meeting.

The European Union for the financial support to the project under the BEST 2.0 program.

LITERATURE CITED

- Beaufort, O. 2017. Liste des Espèces de Chondrichthyens (Requins, Raies et Chimères) Identifiées dans les eaux des Antilles Françaises. Association Kap Natirel, Trois-Rivière, Guadeloupe. 8 pp.
- Cappo, M., P. Speare, and G. De'ath. 2004. Comparison of baited remote underwater video stations (BRUVS) and prawn (shrimp) trawls for assessments of fish biodiversity in inter-reefal areas of the Great Barrier Reef Marine Park. *Journal of Experimental Marine Biology and Ecology* **302**:123 - 152.
- Diaz, N. 2003. *Plan de Gestion Marine de Saint Barthélemy*. Réserve Naturelle de Saint Barthélemy. 145 pp.
- INSEE. 2015. Recensement de la Population - Fiche de Synthèse des Populations l'Égales pour la Collectivité d'Outre-mer de Saint-Barthélemy. Paris, France. 8 pp.
- Jadot, C. 2016. *Environmental Conservation in Saint Barthélemy — Current Knowledge and Research Recommendations*. Wildlife Conservation Society, Bronx, New York USA. 125 pp.