

## **A Team Dedicated To The Quietude Of Cetaceans And Marine Turtles In Reunion: An Action That Adapts To An Evolving Context And Emerging Threats**

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### **Submission:**

Marine wildlife tourism has expanded worldwide. Likewise, whale-watching has rapidly developed in Reunion Island, mainly since 2017, due to a record number of humpback whale sightings during the austral winter breeding season and a large demand for interactions with cetaceans. The activity is now well established and offers tours throughout the year, targeting coastal dolphin populations. Furthermore, as the island faces a rapid demographic and coastal development, nautical activities have increased along the fringing coral reef on the west coast, where sea turtles find feeding and breeding habitats. The number of lethal collisions with vessels has increased since 2019, raising concerns about the protection of the relict population of breeding females of Reunion Island.

Since 2017, a team “Quietude” was committed to monitoring and educating whale watchers to ensure compliance with the local regulations. A total of 1046 hours were spent at sea collecting data on sea turtles, cetaceans and the activities around this megafauna. Monitoring human-animal interactions occurred mainly during the whale seasons in 2017 and 2018 but was carried out year-round since 2019. Other actions include the development of a label, federating whale-watching stakeholders, and creating awareness, information and educative tools for the marine environment. Recently, the team expanded complementary monitoring of nautical activities to study sea turtles’ spatial distribution specifically related to collision risks.

The average humpback whale sighting frequency decreased of 1.17 sightings/hour between the 2017-2018 and the 2019-2021 periods. Vessel compliance ranged from 67.7% to 72.2% between 2017 and 2020, and reached 94.7% in 2021. When whale-watching vessels were present, avoidance responses of whales increased from 14.9% to 22.2% between 2017 and 2018, and decreased from 20.4% to 13.4% in the 2019-2021 period. Regarding spinner dolphin, 86.6% of dolphin-watchers were compliant to the regulations between February 2018 and May 2020. Avoidance responses were higher in cases of non-compliance. Analyzing the impacts of cetacean-watching have supported the implementation of a local binding decree in 2019 and in every succeeding year. “Quietude” federated about local wildlife tour operators around additional best practices based on personal commitment, and supported the on-water structuring of operators for a sustainable cetacean-watching. Monitoring sea turtles’ spatial uses related to nautical activities showed a sighting frequency of 7.74 turtles/hour and 18 boats/hour respectively. In addition, 21% of the boats did not comply with the regulatory speed.

Understanding the evolution of the nautical activities and the interactions between users and marine wildlife is a necessary basis to better estimating the vulnerability of wild animals and to ensure the implementation of effective protection measures. The presence of "Quietude" in main cetacean-watching areas for the last five years has allowed to progressively reduce the daily pressure on the targeted animals, and to improve the communication between tour operators. The team adapts its actions to emerging issues and finds new relevant indicators to consider. Also, the team federates stakeholders around commitments for best practices, and contributes to establishing realistic and satisfying expectations for marine tourism, using a wide range of awareness tools. This five years' feedback demonstrates that a dedicated team makes research and direct field conservation efforts compatible, complementary, and fundamental to ensure the conservation of wild cetaceans.