



# Combining Local Ecological Knowledge and Ciguatera Analysis to Rule Lionfish Toxicity and Edibility and Catalyze Infestation Control

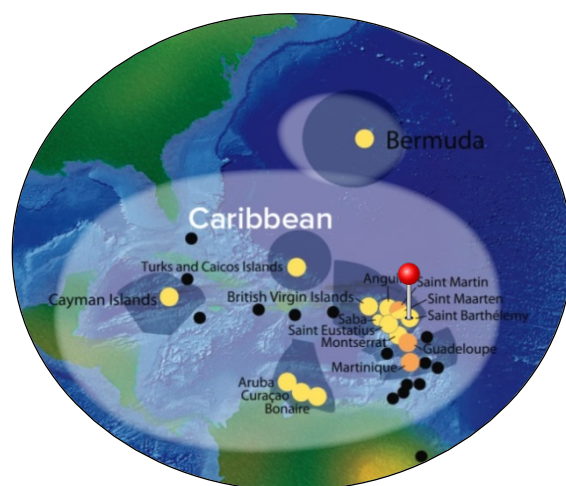
**Targeted territory:** Saint-Barthélemy

**Total project budget:** 115,989 Euros

**BEST 2.0 grant awarded:** 100,000 Euros

**Duration:** April 2017 – September 2018 (18 months)

**Lead organisation:** Agence Territoriale de l'Environnement de Saint-Barthélemy (ATE)



AGENCE TERRITORIALE  
DE L'ENVIRONNEMENT  
ST BARTHÉLEMY



## Background:

Since 2011, when it was first sighted in Saint-Barthélemy's waters, the lionfish (*Pterois volitans*) has proliferated and now constitutes one of the foremost threats to local marine biodiversity, fisheries, and reef health and equilibrium. ATE aims to develop a long-term strategy for lionfish control that integrates various methods to promote lionfish capture, conservation of lionfish predators and sightings communication. Elsewhere in the Caribbean, the most effective approach to lionfish population control is to promote its consumption, but Saint-Barthélemy's lionfish strategy cannot currently promote consumption, as a previous ciguatera analysis showed that about 50% of lionfish contained

ciguatoxins. However, this analysis was not based on a representative sample size nor designed in accordance with local ecological knowledge; local fishermen in Saint-Barthélemy eat lionfish when it is caught in certain areas, at certain depths, and when the fish does not exceed a certain size. This local ecological knowledge has never been scientifically tested, but no cases of ciguatera intoxication from lionfish have ever been reported in Saint-Barthélemy.

### Description of the Project:

The main objective of the project is to determine whether Saint-Barthélemy's strategy to control lionfish populations can, in some cases or at some point, consider the promotion of the consumption of lionfish meat. Chemical toxicity analysis will be undertaken on a sample of lionfish from Saint-Barthélemy's waters to test whether local fishers theory that lionfish meat does not present any risk to the consumer if it caught in the right areas, at the right depth, and if the fish is the right size can be scientifically verified. The results of this analysis will be used to propose relevant modifications to the regulation regarding the sale and consumption of lionfish and to inform the preparation of the long-term lionfish control strategy.



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### Intended results:

- A definitive assessment as to whether lionfish can be safely consumed in Saint-Barthélemy, and if so under what conditions based on a scientific analysis.
- The regulation regarding the sale and consumption of lionfish is revised accordingly.
- A long-term lionfish control strategy is developed taking into account the outcomes of the assessment.

### CONTACT

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