

# Rapid assessment of the health status of coral communities in Guadeloupe Island (Lesser Antilles)

## Évaluation rapide de l'état de santé des communautés coralliennes de Guadeloupe (Petites Antilles)

### Evaluación rápida del estado de salud de las formaciones coralinas de la isla de Guadeloupe (Antillas Menores)



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by  
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#### INTRODUCTION

In 2023 and 2024, the National Park of Guadeloupe and «EcoRecif Environnement» collaborated in order to assess the health status of coral communities all around Guadeloupe island. This mapping was based on the deleterious impacts related to the eutrophication of coastal waters and high siltation rate around the island.

#### SAMPLING TECHNIQUES

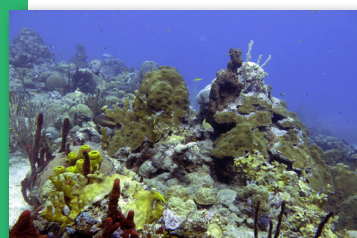
##### VISUAL ESTIMATION METHOD

proposed by Bouchon *et al.* (2004)

focused on

##### MACROALGAE SILTATION

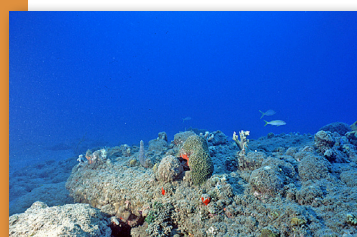
**Class 1:** very good health. The corals show practically no signs of tissue necrosis and the surrounding algal community consists of an algal turf. No signs of siltation are present.



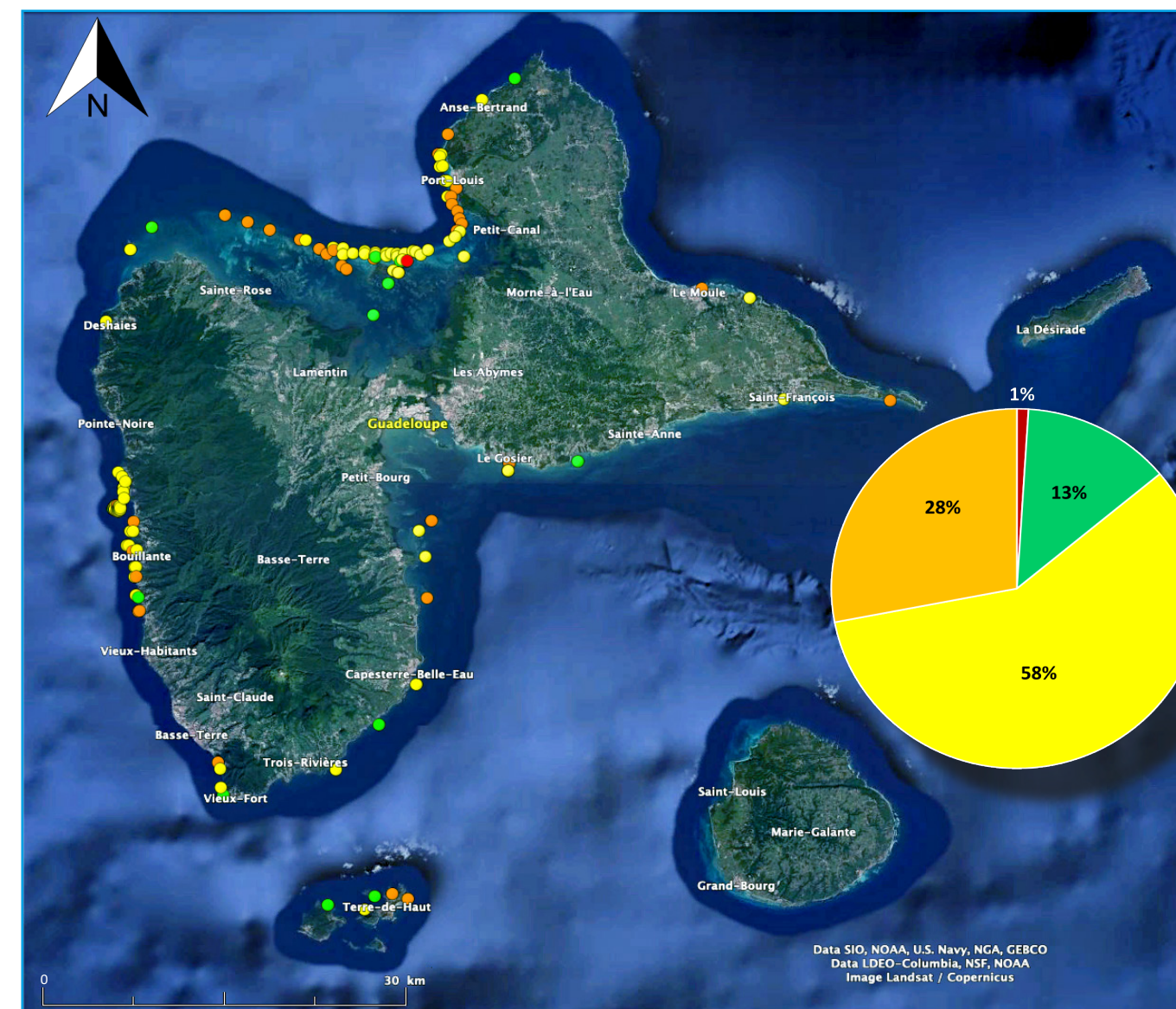
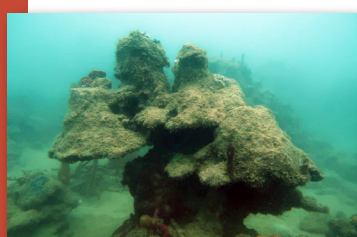
**Class 2:** good health. The corals show few signs of necrosis, macroalgae appear and progressively invade the substrate between the corals which remain unaffected by them, and (or) signs of siltation on the bottom between the corals appear.



**Class 3:** very impacted. Many corals present plaques of dead tissues, the macroalgae start to colonize and cover the corals and (or) a large siltation on the bottom is observable ; the mud also deposits on the corals that have difficulty to get rid of it.



**Class 4:** dead coral community. The majority of the corals are dead and these, as well as all the substrate, are carpeted with macro-algae and (or) are covered with mud.



#### CONCLUSIONS

Even if the study reveals that almost 60% of corals communities are in a « good health », it is quite important to notice that the 2nd class corresponds to reefs already invaded by macroalgae. If we pool the results of sites that were rated in class 2 or worse, there are 87% of the sites impacted by macroalgae. Those results show the consequences of the bad quality of coastal waters in Guadeloupe that suffer of nutrient and organic pollution. If the water quality is not rapidly improved, the health status of coral community in Guadeloupe island will continue to decline.

From 0m



to 20m