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The social representation of the mangrove in Mayotte Island



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Introduction

Studies on the interaction between societies and mangroves are quite recent, appearing slowly in the 1980s, and part has been done by natural scientists, noticing the knowledge gap. It partially explains why the social research on the mangroves has seldom used concepts or theories applied by social scientists to other ecosystems such as social representation theory (SRT).

SRT considered that some objects become “social” when they create a system of opinions, beliefs and knowledge socially elaborated and distributed among social groups. They can explain and orient practices and define the identity of an individual or a group, creating a feeling of belonging.

Better understanding the SR of the mangrove by a society helps to understand what can be implemented easily from a management plan and which points would need more discussion and compromise with and between the inhabitants.

Study sites

Mayotte Island (374 km²) is part of the Comoros Archipelago and a French department since 2011, counting 256,000 inhab. (2017). In 2018, mangroves occupied a surface of 725 ha and 26% of the coastline.

DEMBENI MANGROVE



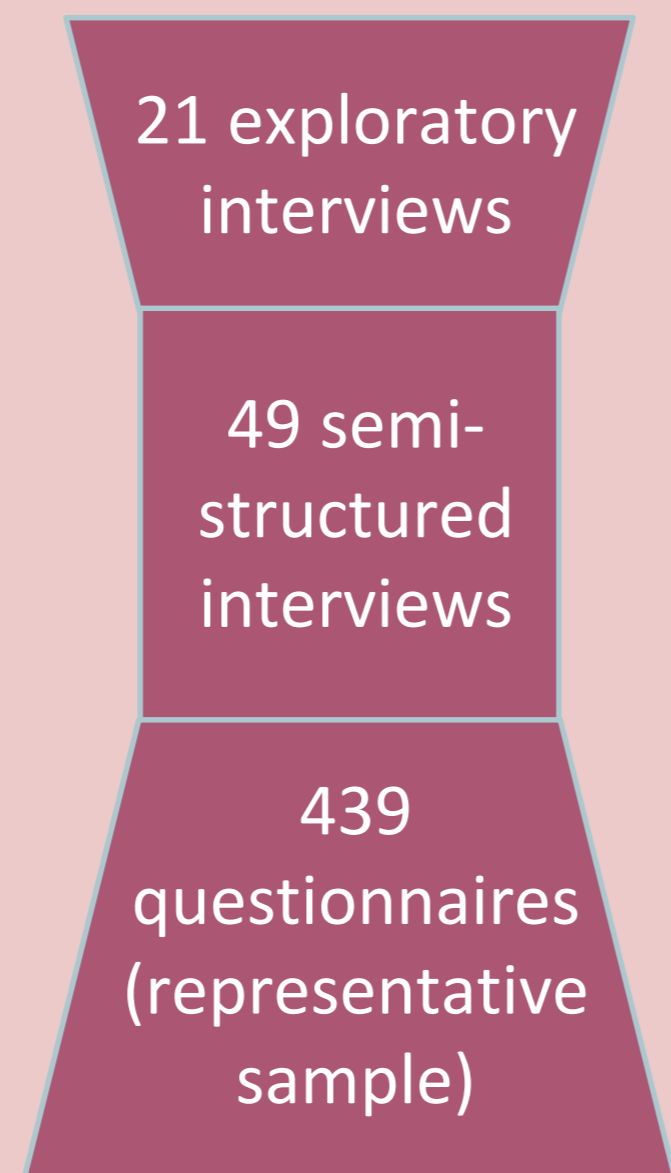
44 ha (stable)
6,770 inhab.

36 ha (stable)
4,180 inhab.

BANDRELE MANGROVE

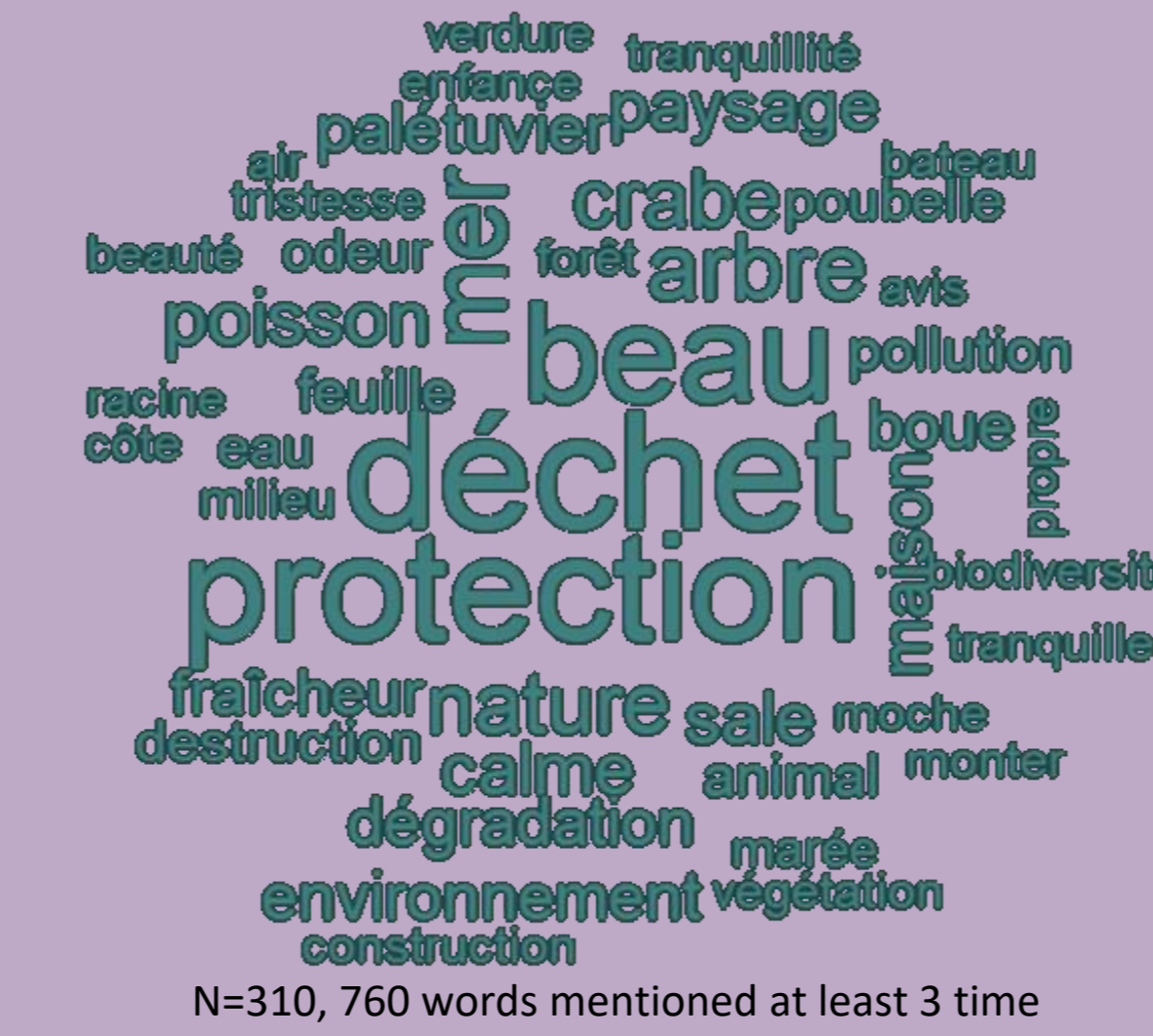


Methodology



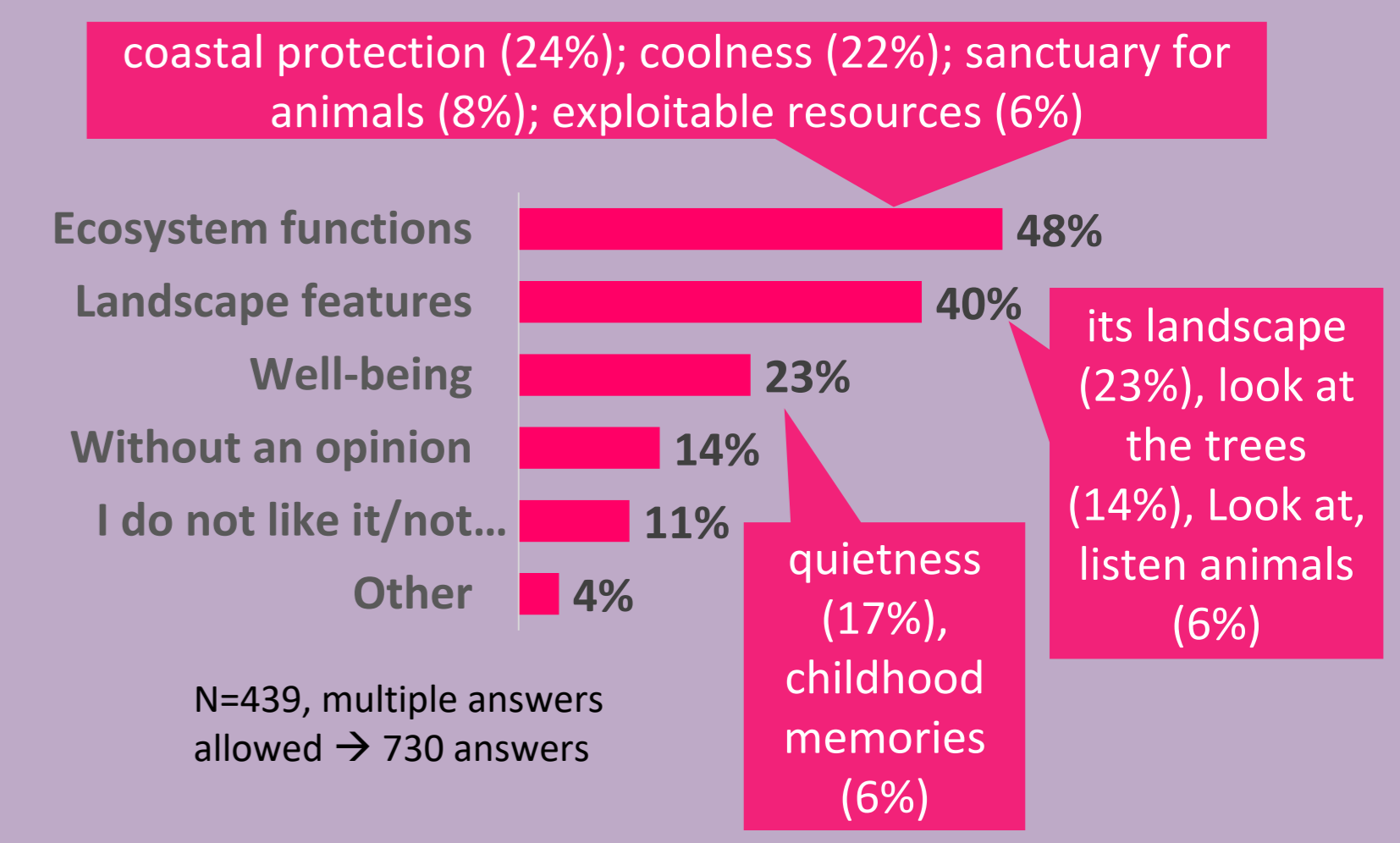
Results

Free listing question on “mangrove”

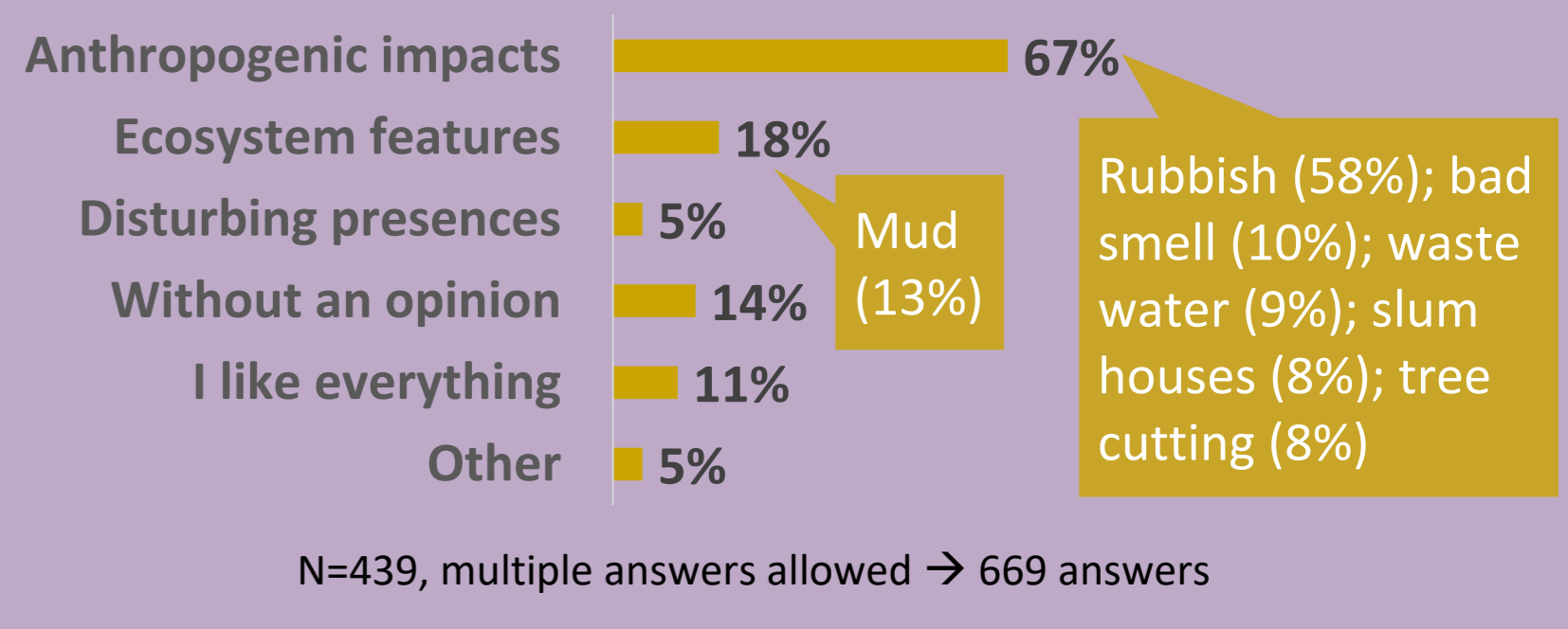


On the free listing question asking for three words linked to the object “mangrove”, 29% did not give any word. For the 310 respondents, the most mentioned words are linked to knowledge describing natural (13% sea, 9% trees, 6% crabs, 5% fish) and anthropogenic (17% rubbish, 4% houses) structures and two are on the mangrove functions (15% protection against sea, 3% coolness). The expressive dimension is illustrated by beautiful (13%), quiet (4%) and dirty (4%). The words beautiful (13%) and landscape (4%) highlight an esthetical value.

“What do you like in the mangrove of your village?”



“What do you not like in the mangrove of your village?”



Conclusive discussion

The social representation of an object can be analyzed considering three dimensions:

- ❖ Cognitive: the mangrove is considered in a positive way regarding the elements structuring the ecosystem and its function, but a strongly visible anthropogenic impact (rubbish) on the ecosystem is also highly mentioned as characterizing the mangrove
- ❖ Normative: the functional value given to the mangrove is strong with both the answers on ecosystem services and the quotation describing the mangrove as a protective person; the esthetical value is present too with inhabitants enjoying the view of the mangrove
- ❖ Expressive: there are both positive emotions, such as the quietness and nice memories procured by the mangrove, and negative ones, such as an aversion because of rubbish, waste water and slum houses

“The mangrove for me is like a big person, a mother who looks after her children. It protects the villages closed to the sea from the strength of waves and treat the inhabitants. It is a pharmacy for new-born babies. The mangrove feeds inhabitants too.”

When respondents were asked what they liked and disliked about the mangrove of their village (see graphs), we can see that ecosystem functions are highly valued by almost half of respondents but there is a higher consensus on what they dislike: the anthropogenic impacts were mentioned by 67% of them, with the main one being rubbish (58%). They mentioned in second the landscape-ecosystem features, showing that some attributes of the mangrove such as trees, animals can be liked and others can be disliked such as mud, crabs and mosquitoes.