114 Seascapes in the Azores: from tourist perception to site evaluation

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Introduction

The Archipelago of the Azores has a high potential for tourism differentiation at an international level due to its distinctive and unique characteristics and natural beauty. Seascapes have high biological diversity, ecological and economic connectivity, and aesthetic and cultural value (Atkinson et al., 2011), although seldom subjected to assessments. Additionally, marine geological heritage has been only occasionally exploited by Azorean companies, mostly because there is a lack of data about underwater geodiversity, geological heritage, and its valuation, for recreational purposes. This study (within the project SCAPETOUR - SeaSCAPEs promotion to diversify TOURistic products) aimed to analyze visitors' perception regarding the importance of seascapes features and their value, more specifically: a detailed and full characterization as well as sectorial analyses of selected coastal and underwater trails for tourism and a valuation of seascapes for tourism and conservation purposes, including visitor's perception regarding the seascape features. In the context of species conservation and ecosystem protection, it is important to increase user's and stakeholders' knowledge on the natural value of the assets to promote sustainable use of the ocean and marine life.

Methodology

A methodology was developed based on scientific criteria following Rovere et al. (2011) and Flores-de la Hoya et al. (2018), namely those related to naturalness, adapted to Azores regional context. By including geological assets in the process, it is expected to enhance the geological relevance of local seascapes and to diversify the offer of new contents and products for existing or new underwater trails. A questionnaire and interview-based surveys were designed to assess the stakeholder's perceptions (scuba diving operators, tourists, and local users) regarding marine tourism, and their attributes, in particular on underwater seascapes. The development of the questionnaire for tourists was validated by the stakeholders (e.g., tourism operators). The survey was conducted by personal interviews with 258 tourists, from July to October 2019, in São Miguel Island, just after arrival onshore from a recreational diving activity. Before starting the questionnaire, respondents were provided with an introduction to the activity and gave consent to participate in the study. The questionnaire comprised three sections: demographics and diving level (certification and diving frequency); perception about the diving sites using an established set of criteria (e.g., biodiversity; geodiversity; seascape) to define each site; overall satisfaction about briefing and debriefing. Perceptions of respondents were subsequently rated, using a ten-point Likert scale, from the most negative (score 1) to the most positive (score 10).

Main results

Each diving site was analyzed based on a general score and on individual criteria, highlighting the features that are more valuable at each site (e.g., biodiversity – fish, invertebrates, macroalgae; geodiversity – arches, caves, other geological features). From the total questionnaires, 25 sites in São Miguel Island were mentioned by the tourists, and the top 10 diving sites were identified. Each site was analyzed based on a general score and on individual criteria, highlighting the features that are more valuable at each site (e.g., natural reef, vertical wall). Based on the observation of the values of the

criteria, differences between sites were observed. It was also determined the priority criteria for the attribution of the value of the seascapes by tourists. The preliminary results show that to evaluate a seascape, the geodiversity features are appreciated. The respondents' satisfaction level regarding the information provided during the briefings was mostly sufficient, except for the conservation aspects. More detailed information, about some subjects as invasive species / non-indigenous species, protected species, and protected areas, would be welcome by the respondents. Most were willing to answer the questionnaire and expressed satisfaction to be part of a citizen science activity and showed high interest in being involved in the protection of the environment (litter report, invasive species recording), and in marine litter cleaning actions. It was also frequently mentioned the need for effective protected measures (protected area, marine resource surveillance, fishing regulation).

Field data (e.g., biodiversity, geodiversity, human pressures, and impacts) provided information for on-going MSFD monitoring programs (Descriptors D1, D2, D6, and D10) and environmental status assessments targeting references for GES (Good Environmental Status), also contributed to the sustainability goals Number 4 – Quality Education, and Number 14 – Life below water, with the reported data and divulgation/dissemination action contributing to the management of those touristic areas.

Conclusions

The present study highlights the visitor's perceptions regarding the main features that can be observed in the Azores underwater touristic sites. Based on the results, this will allow defining more suitable underwater routes to increase visitor satisfaction. It also allowed improving the data available for each spot, increasing the visitor's knowledge about Azores natural environment, and also enabling to inform about conservation and protection management measures and actions.

It was acknowledged by the respondents, following Musard et al. (2014) in the context of a global approach to an area, that the integration of geodiversity features would complement the use of biodiversity to evaluate a seascape. The Azores has a high potential for scuba diving activity (Queiroz et al., 2014) but sites are still underrated due to a lack of marine biology & geology information. The use of the selected criteria allows highlighting the most important features of the diving sites.

References

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