



Contents lists available at ScienceDirect

Regional Studies in Marine Science

journal homepage: www.elsevier.com/locate/rsma

Are underwater archaeological parks good for fishes? Symbiotic relation between cultural heritage preservation and marine conservation in the Azores

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HIGHLIGHTS

- Azores is a pioneer region in Portugal related with the UAP classification.
- Azorean UAP indicates to be favourable to biodiversity preservation.
- UAP promote underwater tourism and preservation of cultural and natural values.
- Azorean UAP requires monitorization to avoid negative impacts of visitings.

ARTICLE INFO

Article history:

Received 13 April 2017

Received in revised form 28 September 2017

Accepted 6 October 2017

Available online xxx

Keywords:

Underwater archaeological parks

Shipwrecks

Biodiversity

Tourism

Azores

ABSTRACT

The Underwater Archaeological Parks (UAP) of the Azores are a cultural heritage protection initiative and an opportunity to promote fruition between archaeological sites and biodiversity. Respecting UNESCO's "Convention on the Protection of the Underwater Cultural Heritage" principles, the UAPs were classified for the first time in 2005 and are unique in the Portuguese context. Due to the autonomy that this ultra-peripheral European Region has in terms of cultural heritage management, this structure arises from a specific law in 2005 formulated by initiative of the Azores Regional Government. At the same time, the archipelago's marine biodiversity richness has become one of the most attractive elements for tourism in the islands.

The main goal of this paper is to reflect on these two important identity elements of the Azores: on a cultural and environmental level. We try to understand if there is any interaction and symbiotic relation between the UPAs and their growing biodiversity due to the classification. For this purpose, the Angra UAP in Terceira and Dori UAP in S. Miguel will be presented.

In both cases, the cultural element was mandatory for the classification and protection of the sites. This first attempt to combine marine biota data together with archaeological data proposes to create a precedent. In fact, the empirical perception of archaeologists, biologists and divers who visit the parks is that the biodiversity has increased with the protection measures. However, we need elements that are more accurate in order to define that.

The main goal of this paper is to identify the marine species present in Angra for the first time. It will also create a reference for future evaluation regarding the symbiotic relation between the two UAP dimensions. We believe this has a positive effect on the defence of the natural and cultural heritage of the Azores.

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1. Introduction

The Azores (Portugal), nowadays an ultra-peripheral region of the European Union, was in the past one of the most important passages in the North Atlantic navigation routes. During the Early modern age, the geostrategic location of this archipelago was for

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<https://doi.org/10.1016/j.rsma.2017.10.003>

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many sailing ships the last port-of-call before arriving to Europe on the returning voyages. In many cases, this meant the success of trading enterprises by saving ships and cargos from enemies' attacks or from storms and in other situations helping crews in ship repairs due to the effects of the long trips (O'Flanagan, 2008; Garcia, 2016b).

Angra, in Terceira Island, was the most important port of the archipelago, mainly during the 16th–17th centuries. Because of its natural and well-protected bay, the bay of Angra was qualified as the best port-of-call by that time. However, its south-facing position could work like a trap for sailing ships when storms from southern quadrant caught them by surprise and the ships got stuck in the bay. This natural phenomenon led many ships to sink when they were looking for protection or when they were already anchored in the bay. This historical aspect is part of the local oral tradition, which still nowadays refers to the south wind as the “carpenter wind”, because over the centuries storms meant wood thrown to the shoreline of the bay and was historically referred by the 18th century chronicler Priest Cordeiro in *História Insulana* (Cordeiro, 1981).

This historical context became one of the most common reasons for the large number of underwater archaeological sites in Angra, with at least 70 shipwrecks historically recorded and more than 15 identified archaeological sites (Monteiro, 2000; Bettencourt and Carvalho, 2009; Mateus, 2011). The high archaeological potential of this bay and its historical significance as an important port-of-call for supporting the first Global Age voyages were two of the main reasons for the Regional Government of the Azores¹ to classify the bay of Angra in 2005. One of the main intentions of this initiative was to protect the bay from future threats, such as construction and dredging works, but also divers that used to go there and remove artefacts from the bottom. However, at the same time, the Azores Regional Government wanted to promote a connection between the population, both local and visitors, with this cultural heritage, and at the same time accomplish one of the main principles of UNESCO due to the underwater cultural heritage preservation, protection and fruition (Garcia, 2016a). To fulfil this purpose the model of classification of the UAP of Angra foresees the determination of the bay as a protected area and at same time the creation of a mechanism that integrates underwater cultural heritage and natural marine biodiversity.

The UAP of Angra was inspired by some international references, by that time relevant from the methodological point of view and well succeeded in terms of cultural heritage protection. One of those references was the case of the Lake Champlain underwater historical preserve programme, in the USA. This case was based on a clear intention to promote a close connection and fruition between historical cultural heritage through underwater archaeological sites, with the population and the diving tourism. This well succeeded programme inspired some of the rules in Angra, namely the mooring system for boat visitors (Cohn, 2003).

The Mediterranean references were also essential to define the visiting model of Angra, such as the case of Ustica, in Italy. This was the first underwater archaeological itinerary created in Italy, located precisely in a marine reserve area. In Ustica the objective was to join biodiversity fruition with the underwater archaeological vestiges of the roman period by creating an itinerary suggesting the visit (Davidde, 2002), with small information boards indicating what divers are seeing, model followed in Lidador shipwreck in Angra. In spite of this good example of Ustica, the concerns related with biodiversity are not very often reflected by underwater archaeological reserves, which are mainly focused on the heritage

elements as the example of Cayman Islands in the Caribbean Sea or the Yongala shipwreck in Queensland, Australia (e.g. Denton, 2006; Viduca, 2006) were the archaeological site preservation and protection is the exclusive focus.

For sport divers, this activity could mean an exploratory experience “meaning fulfilment from the acts of learning and personal growth, and they are motivated to dive because this special interest promotes positive experiences, which may lead to the good life” (Kler and Tribe, 2012). In fact, one of the most common requests for sport diving in the Azores is the quality of the biodiversity and the spirit of adventure. A shipwreck can be attractive because of these aspects and at the same time promoted by its well-preserved marine biota. This discussion is not very common between archaeologists and biologists and this paper is an attempt to create a theoretical precedent of a multidisciplinary approach between these two perspectives (Bentz et al., 2012). Davidde on her paper “Underwater archaeological parks: a new perspective and challenge for conservation – The Italian panorama” (Davidde, 2002), proposes a classification of four different types of archaeological parks. The “Underwater eco-archaeological or underwater nature-archaeological parks and reserves”, is the only one where biodiversity is considered and the importance of environmental preservation is integrated on the global initiative, considering both cultural and environmental levels. Considering this reference, this paper intends to contribute to this integrated perspective because, in our point of view, cultural and natural environment are interconnected since the formation of the archaeological site to the present situation and they cannot be dissociated. In the Anchors field, for example, one of the visiting sites of the UAP of Angra, more than 42 anchors lay down on the sea bottom, making this place one of the most challenging of the whole park. During the 16th–18th centuries, this site, just close to the Monte Brazil volcano wall, was the main anchoring place, mainly for the larger trading ships. Many of those anchors were left behind after desperate manoeuvres to release the ships (Chouzenoux, 2010, 2012). The site is difficult to interpret because the anchors are now very discrete, but for divers this is a mysterious place where biodiversity, natural geomorphology of the volcano and archaeological vestiges blend together, and much richer now because of the increasing biodiversity due to a fishing ban. The fishing ban inside the limits of the Underwater Archaeological Park of Angra, after 2005 imposed by the Regional law (RAA, 2005) created a local dynamic and an image linked to sustainable fruition of cultural heritage and biodiversity (Garcia, 2016a). However, this aspect has its setbacks during this process and we will also try to reflect on them.

From another point of view, the economic benefits of this kind of initiatives also needs to be considered. For Tuan: “The economic benefits accruing from the preservation of cultural heritage are primarily received by visitors and non-visitors” (Tuan and Navrud, 2009). This idea can only be successfully transmitted as a real possibility for local communities if it is well promoted and if cultural heritage agents have the possibility to discuss it with media, through public clarification and in close cooperation with tourist agents, including the dive centres. In Angra, in order to promote this idea in the best possible way, a considerable amount of money was invested together with the efforts of the cultural technicians. This was considered a good contribution to the immediate increase of tourism and divers on the island, but it stopped after a few years. On the other hand, the success of the UAP of Angra initiative and the effects of the rules and fishing ban influenced the diver's community of S. Miguel Island, who saw in this initiative a way to safeguard and protect the shipwreck Dori, sunk in 1964, in S. Miguel Island, close to Ponta Delgada, from fishing. This shipwreck was in fact a Liberty-ship, a class of ships of the American merchant navy during World War II. Fig. 1 shows a record from the USA military archives, from 1943, where we can see the original name of the

¹ DRaC (Direcção Regional da Cultura) was the institution designated for the classification procedures and the author of the law project is the first author of this paper, Ana Catarina Garcia together with the DRaC lawyer Alódia Costa e Silva.

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