

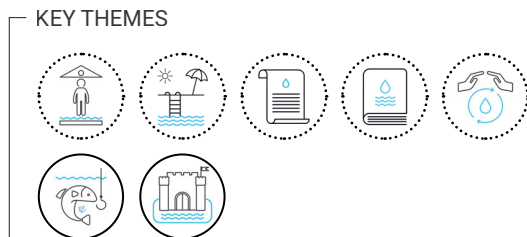


Underwater Cultural Heritage and the Sustainable Development Goals

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Underwater cultural heritage is heritage that is surrounded by water. It can be found in rivers, lakes, oceans and reservoirs, and comprises tangible heritage – wrecks, fishing tools, sunken cities and aircraft – as well as the intangible heritage of many civilizations. However, this heritage is not only part of the past; it can also provide answers to the many challenges that international agendas face today. With its connection to cultural aspects of communities around the world, it offers knowledge that can be helpfully applied to the pursuit of the Sustainable Development Goals of the United Nations Agenda 2030.



< Fig. 1 Ancient fishing practices as part of the tangible and intangible cultural heritage of the oceans (Source: Pixabay, 2018).

Introduction

In 2001 the UNESCO Convention on the Protection of the Underwater Cultural Heritage defined underwater cultural heritage as “all traces of human existence having a cultural, historical or archaeological character, which have been partially or totally under water, periodically or continuously, for at least 100 years” (UNESCO 2001). According to this definition, underwater cultural heritage may include not only shipwrecks, but also sunken cities, venerated sites, ancient harbors, plane wrecks and prehistoric landscapes.

Underwater cultural heritage is an invaluable source of knowledge about individuals and communities. It can ignite political conflicts, since marine exploration, including underwater archaeology, can have national defense implications if it involves military security information, and it can raise concerns about issues pertaining to safety, culture and food security. Underwater cultural heritage also allows for a critical investigation of historic objects, while providing insights about people’s lives in the past. However, underwater cultural heritage consists not only of tangible objects but also the natural environment surrounding them. Often, shipwrecks and sunken airplanes have become artificial reefs for thousands of fish species (fig. 2). The 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO 1972) is an instrument designed to preserve both cultural and natural heritage, although there is an artificial distinction made between these two types of heritage. If underwater cultural heritage is treated as one more element in the ocean, its protection would be guaranteed. This could be of mutual benefit: if underwater cultural heritage is preserved, the natural heritage will also gain protection since there is a close relationship between ecological and ar-

chaeological site management. This characteristic of underwater cultural heritage, the fact that it is an integral heritage (cultural, natural, tangible and intangible) that involves many disciplines – archaeology, biology, oceanography, law – and the possibility of applying knowledge of this kind of heritage to present-day issues makes this heritage an important tool for the Sustainable Development Goals of the 2030 United Nations Agenda. This article will consider how underwater cultural heritage can contribute to some of these goals.

Valuing Underwater Cultural Heritage with the UN Sustainable Development Goals (SDGs)

GOAL 1: No Poverty

The Margullar Project (margullar.com) is an underwater cultural heritage project that connects underwater archaeological work and the preservation and conservation of marine heritage with diving tourism in the participating regions and countries. The idea is to create a tourist product that promotes underwater cultural heritage preservation in the Canary Islands, the Azores, Madeira, Cape Verde and Senegal, while engaging local people in preservation activities and raising public awareness of the importance of underwater cultural heritage. Similarly, the project *Rising from the Depths* (risingfromthedepths.com) works with local groups to fill knowledge gaps about how underwater cultural heritage could contribute to culturally and economically sustainable growth in East Africa.

GOAL 2: Zero Hunger

Ancient fishing practices are part of the tangible and intangible cultural heritage of the oceans (fig. 1). As one of the oldest fish-catching methods, stone tidal weirs can help regenerate ma-



^ Fig. 2 Interlink between natural and cultural heritage underwater (Source: Pixabay, 2017).

rine biodiversity sustainably (Iwabuchi 2022). An eco-friendly form of fishing gear, the weirs are completely submerged during high tide, and emerge into full view at low tide, allowing people to collect fish while sustaining many species of marine life. In addition, catches from tidal weirs play a significant role in community health, as freshly caught fish and other seafood are higher in nutrients than imported, processed food. Indigenous coastal communities, based on their accumulated knowledge of local ecosystems, have adapted the weirs to particular coastal topographies and seascapes. In fact, the Intergovernmental Oceanographic Commission of UNESCO has endorsed a project entitled Indigenous People, Traditional Ecological Knowledge, and Climate Change: The Iconic Underwater Cultural Heritage of Stone Tidal Weirs as an action project as part of the United Nations Dec-

ade of Ocean Science (United Nations n.d.).

GOAL 8: Decent Work and Economic Growth

Today, the ability to enjoy and access underwater cultural heritage is a powerful driving force in tourism: there are six million active divers around the world and more than twenty million snorkelers, many of whom are interested in protecting the natural and cultural heritage of the seas. By involving them in the protection of underwater cultural heritage, divers will become better educated about this legacy and how to protect it (fig. 3), while providing jobs and otherwise benefiting the local economy. In addition, the creation of underwater parks and reserves of underwater cultural heritage encourages interest in visiting designated sites, with a significant increase in tourism (Aguilar 2013). This

option is not only educational for the tourists but regulates the number of visitors, which makes the exploitation of the heritage site more sustainable, offering controlled economic development. These sites offer experiences unavailable with any other form of heritage. Underwater trails can change mindsets and engage emotions. In the case of historic shipwrecks, visitors can experience the tragedy of maritime disaster while surrounded by the natural environment (Scott-Ireton and McKinnon 2015).

GOAL 13: Climate Action

Climate change will not only affect Earth's biodiversity and landscapes, but it will have a large impact on people. It will have economic, political and identity implications and how such changes might affect lifestyles needs to be understood. All heritage is already considered vulnerable to natural disasters and underwater cultural heritage is not an exception. Rising sea levels, warmer waters, ocean acidification and changes in currents will almost certainly affect cultural heritage. Ocean currents may disturb the layer of sediment protecting underwater cultural heritage sites, leading to alteration of the materials and the potential loss of the archaeological record. Although the direct effects of chemical changes (particularly acidification and salinification) are still not well understood, the current rates of metal corrosion and damage to materials may well increase due to climate change-induced fluctuation (Dunkley 2013). Climate change will also increase the depths of oceans and increase the frequency and magnitude of storms, which may further erode or damage heritage. It may also lead to flooding of the cultural heritage that is now on land. In addition to the many other reasons policy makers need to be concerned with climate change, the cultural heritage of many countries that is now above ground may become under-

water cultural heritage in the future.

GOAL 14: Life Below Water

Underwater cultural heritage can potentially contribute to marine pollution. Metal corrosion, toxic materials, or munitions on board wrecked ships and aircraft can damage local areas. The amounts may be relatively small, but the effects are still important (fig. 4). In 2045, sunken wrecks from World War II will become "underwater cultural heritage" according to the 2001 UNESCO Convention for the Protection of the Underwater Cultural Heritage and their situation is complicated: they will be protected, but their structures are aging and their metal plates deteriorating, thus threatening to release their contents into the ocean due to the effects of corrosion (Ireland 2010). On the other hand, some shipwrecks are hosts to incredible biodiversity and most of these are continuously monitored so the data obtained can be important information for understanding how pollution is going to affect the oceans.

Conclusion

Water covers more than three-quarters of the Earth's surface and represents 99 per cent of the living space on the planet by volume (United Nations 2021). Careful management of water heritage is a key feature of a sustainable future. Oceans, lakes and rivers should be seen as similar to library full of books and these books as full of cultural knowledge that can provide answers to the international challenges that communities face today.



^ Fig. 3 Underwater cultural heritage as part of tourism and the diving industry (Source: Pixabay, 2016).



^ Fig. 4 Metal corrosion in underwater cultural heritage (Source: Pixabay, 2016).

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