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## Humpback Whales in the Western Indian Ocean

Guest Editor Olivier Adam

# Western Indian Ocean JOURNAL OF Marine Science

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# Editorial Note

Humpback whales are well known especially for their very long migration routes and also because of the songs that males emit during the breeding season. In 1971, in their famous article published in the journal 'Science', Payne and McVay describe these songs as "a series of surprisingly beautiful sounds"! Since 1971, more acoustic data have been collected and more knowledge generated; we now know that the song 'leitmotiv' is different from one geographic area to another, and from one year to the next. We also now know how they produce these sounds from their respiratory system.

In the last two decades, different techniques have been deployed to observe humpback whales in all the oceans. Not only have passive acoustic monitoring techniques been used, but also visual observations, electronic devices, and genetics. The objectives of these studies have been to better understand whale activities, behaviors, and also the underwater environment in which they live, and the potential effects of anthropogenic activities on their societies. This has involved many different research teams, with their own skills, methods and programmes. Results have been published in the scientific literature and presented at different international conferences.

However, three things have recently become apparent: Firstly, the study of humpback whales is a wide subject requiring people with complementary skills. It was apparent that it was necessary to bring these people together to discuss this species of whale for several reasons: a) because it would highlight the major results obtained thus far; b) because it would be interesting to share experiences (especially on the data and methods used, but also on common challenges); c) to co-design future projects and identify priorities; and d) because it would provide an opportunity to start new collaborations.

Secondly, before 2015, no international scientific conference or workshop existed with regular annual sessions especially dedicated to this species of Mysticeti whales. In order to address this, we initiated the creation of the Humpback Whale World Congress (HWWC, <http://www.hwwc.mg/>). The first session was held in Madagascar in 2015 and the second in La Réunion Island in 2017. Our idea was to bring together researchers and technicians from universities, research institutes, government organizations, and industry, dealing with all aspects of the biology, ethology, genetics, ecology, acoustics, signal processing, pattern recognition, mathematics, and computer sciences applied to the study of the humpback whales and their environment, and the potential effects of anthropogenic activities on the species. The goal of the HWWC is to provide a forum for exchange of new results obtained from the latest advances in instrumentation and methods.

Thirdly, during the BaoBaB project I led from 2012 to 2014, it became apparent that the extensive movement of humpback whales, even during the breeding season (with more than 100 km being covered per day), resulted in the same individuals being observed from the east coast of Africa to the Mascarene Islands. Because of this remarkable characteristic of this baleen whale species, it was obvious that we needed to encourage collaboration at a regional level, and we envisaged a consortium of people who work collaboratively on the Southwestern Indian Ocean humpback whale population.

During the international HWWC we were very pleased by the quality of the work shared by different teams, and the strong motivation to exchange information and work together. For this reason, we requested some colleagues to describe their projects in full papers, to put them together, and publish this unique special issue.

I would like to thank all the authors and co-authors, all the persons who contributed to this special issue, and more strongly the Cetamada Team who currently does such amazing work on these humpback whales!

Enjoy reading!

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# From universal to local law: prospects for the protection of whales in the western Indian Ocean through the Whale Route project

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## Abstract

Whales are highly mobile animals, travelling long distances between breeding and feeding sites. They do not confine themselves to a specific area, crossing the waters and jurisdictions of multiple nations as well as areas beyond national jurisdiction. As a result, the conservation and management of these marine species is very challenging, requiring inter-institutional coordination, international and regional agreements. As an emblematic migratory species, whales are the subject of many international agreements, with a universal vocation, dedicated to their conservation and management. These include the Convention on International Trade in Endangered Species, and importantly, the International Convention for the Regulation of Whaling. A sanctuary was established in 1979 by the International Whaling Commission in the western Indian Ocean to implement and reinforce this latter universal convention at the regional level. However, these legal instruments do not guarantee the full protection of whales and their habitats from direct and indirect impacts of human activities such as pollution, ship strikes, overfishing, entanglement in fishing gear, disturbance, or even climate change. Consequently, a project for humpback whales, the whale route has emerged in the western Indian Ocean. This project is intended to protect humpback whales from many anthropogenic disturbances, to encourage their conservation, and to raise environmental awareness through sustainable tourism and outreach activities. The project requires the establishment of a road map to obtain the best possible marine protected areas for cetaceans through appropriate regional cooperation and governance arrangements in the western Indian Ocean. Indeed, because of the migratory pattern of whales, it is necessary to coordinate initiatives between many stakeholders such as States and Territories in this region, and also international organizations, transnational networks, public and private actors. This article aims to analyse the challenges and prospects of a regional protected area to contribute to the conservation of humpback whales. It also highlights the cooperation and the coordination required in the western Indian Ocean to resolve governance issues.

**Keywords:** whale route, sanctuary, marine protected area, whaling, global law, universal law, regional law, local law, transnational law, charter, label, governance, actors, agreements.

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## Introduction

Threats to whales occur in a vast area through which they migrate, both in the high seas and within the exclusive economic zones of coastal states in the northern and southern hemisphere. Therefore, measures to protect whales must operate at the same scale involving universal protection which does not have political borders.

The protection of whales reveals a multitude of legal and institutional frameworks, or “regimes”, which together form an international convention for the

protection of the environment. This includes institutions, secondary legislation, and sometimes the development of financial mechanisms (Maljean-Dubois, 2017). Using this kind of mechanism, certain uses such as trade (Convention on International Trade in Endangered Species of Wild Fauna and Flora), and whaling (International Convention for the Regulation of Whaling or “Whaling Convention”), which devastated whale populations due to the development of new technologies, were controlled, and sanctuaries were created to ensure protection of these great mammals.

These regimes are supplemented by soft law, generating non-binding obligations, often developed in the context of local characteristics. This applies, for example, to whale-watching charters, or labels awarded to companies for responsible whale watching activities. This variety of hard and soft laws which include global and local measures results in inconsistent and discontinuous protection. Indeed, the protection of whales varies according to their location during their migration, and to the disturbances they face, as many uses are not subject to global regulations (such as noise pollution, or vessel speed causing ship strikes). Thus, the protection of whales reflects a fragmented situation with regulations that do not adequately provide protection from anthropomorphic activities.

Given that the protection of whales is a global issue, a holistic approach is required, including special legal provisions at the international, regional and national level in the Indian Ocean. In this respect, the various theories of global law are useful (Frydman, 2012; Delmas-Marty, 2013) because they suggest approaching the law through a multiscale way with a variable normative intensity (Thierbierge, 2009).

The example of a whale route fits within these new approaches to law. A whale route project is currently under development in the western Indian Ocean (western Indian Ocean), led by the Council of Reunion Island. The objective of this route is to protect whales during their migration in the region through specific regulations while considering the variety of existing laws at various levels. To ensure some consistency in the level of protection afforded to whales, and given their long migration route through many exclusive economic zones (EEZs), collaboration between the States of the region is essential. The main countries involved in the whale route are France (for Reunion Island and Mayotte), Mauritius, Madagascar, Seychelles, Comoros, but countries from the East Coast of Africa are also concerned with whale migration, and could be part of the project. It is therefore a large-scale project, similar to the journey undertaken by these mammals each year.

The large scale nature and challenging context of whale migrations needs to be approached and understood at a regional level in the Indian Ocean. The protection of cetaceans by this whale route concept is part of this approach and incorporates not only a top-down approach (from global to regional law - I), but also a bottom-up approach (from local to trans-national law - II).

Against this background, the goal of this paper is to critically assess whether the legal framework for creating and implementing the whale route can be considered a global law project.

### **From universal to regional law in the Indian Ocean**

As a consequence of whaling, whale populations have been severely depleted, resulting in international conventions to protect them. Whaling itself, being the biggest threat, has been regulated through a universal convention (A), which has particular requirements for regional law for the protection of whales in the Indian Ocean (B).

#### **Development of universal law against whaling**

Whaling, whose first signs date back to the Neolithic (Lee & Robineau, 2004), has been so devastating for whales that many species are endangered (International Union for Conservation of Nature, Red List of threatened species, 2017). It was only with the conclusion of the International Convention for the Regulation of Whaling (ICRW) that whaling has been regulated.

The International Whaling Commission (IWC), set up under the International Convention for the Regulation of Whaling signed in 1946, is the multilateral inter-governmental body charged with the conservation of whales and the management of whaling. The purpose of the Commission, which is comprised of 89 representatives and a scientific committee, is to “establish a system of international regulation for the whale fisheries to ensure proper and effective conservation and development of whale stocks” (Whaling Convention, 1946) through catch limits, restrictions on hunting methods, and designation of whale sanctuaries. In other words, the IWC regulates whaling in order to increase stocks and thus to enhance whale catches. It appears that the Commission has a dual mandate; on the one hand, managing fisheries, and on the other hand, conserving whale species. These objectives are inherently linked as whaling will depend on healthy whale stocks.

In 1982, as several whale stocks has been decimated, the IWC adopted a moratorium on commercial whaling, which entered into force in 1986. Henceforth, whaling for commercial purposes was forbidden for Member States bound by the regulation. However, despite the ban, whaling remains legal in some cases:

A government can lodge a reservation to the moratorium, as Norway and Iceland did, to keep on whaling.

Indeed, the possibility of making a reservation to the moratorium was possible at the time of its adoption, but Iceland accepted the prohibition and then withdraws from the Convention to re-adhere it in 2002 by making a reservation to the moratorium, which can be legally questionable.

Aboriginal subsistence whaling, as it does not seek profit or excessive catches, is allowed despite the moratorium, as long as hunted whale populations stocks remain at a healthy level.

Whaling is also legal for scientific research purposes. The Convention does not define “scientific research”, but it gives responsibility to Member State governments to issue permits to kill whales for this purpose. This exception to the ban has been widely used for decades by the government of Japan, but in 2014, in a historical decision, the International Court of Justice (ICJ) ordered Japan to end its research program (JARPA II) deciding that it was not for scientific purposes (ICJ, 2014). Since then, after following the Court’s ruling which was limited to JARPA II, the Japanese government started a new 12-year research programme called “New Scientific Whale Research Program in the Antarctic Ocean” (NEWREP-A).

Each contracting government has to report to the IWC each time a permit is issued (Article VIII (3) of Whaling Convention), but the Commission does not regulate permits for scientific purposes, which can explain why this case (the Whaling case) was brought before the ICJ by anti-whaling nations to end the Japanese programme.

In addition to these exceptions allowing whaling, it appears that the moratorium is becoming increasingly weak. Indeed, to overturn the ban, a three-quarters majority vote by the commissioners is required and pro-whaling members have increased during recent years within the IWC, sometimes under political and financial pressure. It is alleged that Japan used its overseas development aid to convince developing countries to join the Commission in order to vote for the resumption of commercial whaling (Dippel, 2015).

To sum up, the ICRW was adopted to reduce whaling on overexploited stocks and to rebuild depleted stocks. The moratorium is not sufficient, on its own, to protect whales from whaling. Indeed, some countries still conduct whaling in defiance of the moratorium. Moreover, this pause in commercial whaling is fragile

considering the increasing number of pro-whaling nations. The creation of whale sanctuaries could be a solution to this threat. This would be an example of regionalisation of a universal convention.

#### **Manifestation of universal law in regional law**

While the moratorium on whaling does provide protection for whales, it is not infallible and not permanent. Therefore, to strengthen the protection of whales in the western Indian Ocean, a whale sanctuary has been created by implementing the Whaling Convention directly in regional law. The IWC designated a whale sanctuary in 1979 (Paragraph 7 (b) of the Schedule of the Whaling Convention) where commercial whaling is forbidden, regardless of the status of whale stocks and of whether the moratorium is in force or not. It covers the whole of the South Indian Ocean. The sanctuary has been regularly revised since 2002 and, at its 54<sup>th</sup> annual meeting, the IWC agreed to continue this prohibition of commercial whaling in this specific area without setting a time for a further revision. This decision is a positive move for the Indian Ocean, given the proliferation of pro-whaling nations. A three-quarters majority of votes by IWC members is needed to overturn such decisions.

When the sanctuary was created, the Member States made no reservations. Thus, from a legal point of view, commercial whaling is prohibited by all Member States. However, the exception of scientific whaling does not seem to take into account the establishment of a sanctuary. When the ICJ condemned Japan, it was not because their scientific whaling programme was taking place in the Southern sanctuary, but because the Japanese scientific programme was not considered as such.

This second Southern sanctuary, created in 1994, appears more vulnerable than the South Indian Ocean sanctuary. This is because if the moratorium is lifted, sanctuaries will remain areas where commercial whaling is prohibited, but there is a legal loophole that can weaken this prohibition. In international law, governments can lodge an objection to circumvent a provision. This was the position taken by the government of Japan, which lodged an objection to the prohibition of commercial whaling in the Southern sanctuary for one species, the Minke whale (Whaling Convention, 1946). This means that, despite the moratorium, Japanese fishermen can kill minke whales for commercial purposes in this sanctuary. Japan did not object to any other baleen or toothed whale species, so their former scientific programme, JARPA II, could not be legal

since Humpback and fin whales were also targeted (in addition to minke whales) in this programme implemented in the Southern Ocean sanctuary.

Consequently, if the moratorium is lifted, sanctuaries would still protect whales from commercial whaling, except if a government lodged an objection to the prohibition. This is why anti-whaling nations are campaigning for more protected areas. However, creating a new sanctuary is not easy; a proposal for a sanctuary in the South Atlantic Ocean has recently been rejected as it did not achieve the three-quarters majority of votes required. Pro-whaling nations pointed out that there is already a moratorium on commercial whaling so this protected area would be unnecessary. However, as already highlighted, the moratorium does not guarantee protection.

The creation of a sanctuary in the Indian Ocean, decided almost forty years ago, is therefore an opportunity. It is an example of the development of a regional law resulting from a convention with universal reach. This means that regional specificities, such as the high abundance of whales in this area, can influence the creation of a regional law. Regional law would in this case be more protective than the universal law. Nevertheless, this sanctuary whose role is limited as long as the moratorium remains in force (as it prohibits commercial whaling too), represents increased legal protection justified by the need to protect humpback whales in the area. Even if humpback whales are not threatened by commercial whaling in the sanctuary, they are subject to other threats that need to be regulated. Making use of existing rules at the local level to create a regional law would be an appropriate approach for the creation of a whale route in the western Indian Ocean.

### **From local to regional law**

Facing universal law, and sometimes thanks to it, new norms are emerging at the local level, as in the Reunion Island. These norms could be extended to the western Indian Ocean region for the creation of a whale route.

### **Emergence of local norms**

Local law refers to rules that are restricted to limited areas or territories like Reunion Island. This law is characterized by being more specific than national law, and also by the emergence of new instruments, whose legal value is sometimes debated, but which nevertheless serve a particular purpose.

For example, in Reunion, as in Madagascar, a whale watching charter has been developed to ensure the protection of these large mammals. As such, operators involved in whale watching must respect several rules. These include: boats keeping a certain distance from cetaceans; not pursuing or cutting off whales; and reducing speed in their presence.

In order to reward good practice, an eco-label for the responsible Observation of Cetaceans in Reunion (O2CR) has been developed locally by public and private actors. The objective is to consolidate the charter and include whale watching as a contributor to sustainable development.

The objective of the charter is to better organise and regulate the whale watching industry, and include whale watching as a contributor to sustainable development. Nevertheless, the legal value of this charter is debatable, which impacts on the powers of sanction and punishment in the event of non-compliance.

In order to determine the extent to which the charter is binding, its scope, and thus its legal enforceability, it is necessary to identify its origin (Frydman & Lewkowicz, 2012). Indeed, the origin is critical for understanding the legal value of these rules and their place in the hierarchy of norms. The origin acts as a “pedigree”, or a “certificate of origin” (Frydman & Lewkowicz, 2012).

The whale watching charter for marine mammals in Reunion was developed by a local non-governmental organization devoted to the study and awareness of cetaceans. The charter does not require formal accession by sea users, and contains simple “general and specific recommendations” without providing for sanctions in the event of non-compliance. It is a non-binding instrument relying on moral and ethical standards rather than a legal one. It would thus belong to soft law. The origin and the non-binding nature of the rules in the charter do not guarantee its effectiveness. According to Maljean-Dubois & Richard (2004), the charter will be considered as effective if it is implemented in practice by a group of people (brigade), but also if it has the capacity to encourage and eventually convince users to behave respectfully.

The charter is generally respected and is effective in Reunion, based rather on a sense of nationalism rather than a legal origin (Dworkin, 1977 in Frydman, 2012). The charter is a good example demonstrating

that binding force is not always linked to effectiveness.

The charter was developed by non-state actors, to protect themselves from potential injuries during whale watching and, of course, to protect whales. The success of the charter relies on the environmental awareness of users, particularly around the risks of an inappropriate approach and its consequences. A bad approach can be dangerous for boaters as well as for whales and their calves, and is also likely to lead to the whales leaving the area, to the detriment of observers. In addition, a group (brigade) “Quiétude” (“Peacefulness” in English) is in charge of enforcing the charter by reminding the users about the rules of good conduct. This brigade is an indispensable component for the effectiveness of the charter through ensuring compliance. This brigade relies on the fear of users of being shamed for non-compliance to ensure the effectiveness of the charter. Although this brigade embodies a certain authority to enforce the charter, it does not have any power to impose sanctions. Moreover, as a “soft” instrument of law, the charter does not have binding legal value. However, the charter supports the hard legal instruments that exist, whose content is rather vague. The Environmental Code (article L411-1) and the Ministerial Decree of the 1<sup>st</sup> of July 2011 which prohibits the intentional disturbance, including the pursuit or harassment of animals such as mysticetes, in their natural environment (Decree, 2011), are considered as hard law, but have poorly regulations. For instance, there is no definition of harassment included. While the charter has no legal value, it is more specific in terms of harassment and navigation, making the hard law more consistent and coherent. Behaviour that is contrary to the charter can therefore always be sanctioned on this legal basis by the competent authorities, including the French Maritime Directorate of the southern Indian Ocean, Ecoguards of Reunion’s Natural Marine Reserve, Coast Guard officers, the Indian Ocean Brigade, and the Gendarmerie). However, in general, the soft law contained in the Charter is useful to the situation in Reunion in that it effectively satisfies a need and provides some consistency to more general objectives stemming from both domestic and “traditional” international law, even without having a hard legal basis.

This local law developed in Reunion dedicated to the protection of whales is an interesting legal scheme that could be extended to the western Indian Ocean. As an instrument of soft law, this charter would be based on voluntary participation and compliance, and would gradually introduce and integrate rules for

responsible whale watching. States would also have the freedom to adapt their domestic law to support the recommendations of the charter if they so wish.

The charter could then form the basis of an agreement between the western Indian Ocean countries (in the form of a treaty) or could result from an infra-state agreement. In this sense, an agreement could be concluded between the relevant administrative authorities or public bodies in the different countries, as in the case of the “Sister Sanctuary Agreement” established in French Antilles. In this way, local law could form the basis of the proposed whale route, and would be a first step towards the progressive, consistent and cooperative protection of whales migrating in this region.

#### **From local to transnational law: towards the conclusion of an agreement for the whale route**

The creation of the whale route could be achieved through the development of a local law at a transnational level through a multilateral or bilateral agreement and, regardless of the selected model, this route will need its own specific governance).

#### *Implementation of local law at the transnational level through a multilateral agreement*

Because of their long migrations, humpback whales can be observed in large parts of the western Indian Ocean and on the coasts of many countries. Regional co-operation between different territories is needed to protect them from the threats they face. The Convention on Migratory Species could play a major role in the development of regulated areas for whales in the western Indian Ocean.

The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, is an environmental treaty under the aegis of the United Nations Environment Programme, established in 1979, and entered into force in 1983 (CMS, 1983). It aims to conserve migratory species and their habitats, consequently its area of coverage is universal, from territorial waters, EEZ, to the high seas. As a framework convention, its key function is the creation of regional agreements to protect migratory species and their habitats in a large area. Agreements created under the CMS that are dedicated to cetaceans include the Agreement on the Conservation of Cetaceans of the Black Seas, Mediterranean and Contiguous Atlantic Area (ACCOBAMS) and the Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic,

Irish and North Seas (ASCOBANS). ACCOBAMS was the first agreement binding the countries of that region to work together for the conservation of cetaceans (ACCOBAMS, 2001).

ACCOBAMS has twenty-four parties, and aims to reduce threats to cetaceans in a very large area by adopting resolutions. A whale watcher certificate has been created to reward and ensure sustainable tourism, an education programme has been published to create awareness of the cetacean species inhabiting the agreement area, and an application has been developed to help avoid ship strikes by real-time plotting of cetaceans (REPCET). Considering the threat posed by ship strikes, the French decree of the 8<sup>th</sup> of March 2017 (Decree, 2017) forms part of the hierarchy of French norms according to a classical normative approach (Kelsen pyramid) and is therefore based in hard law. This decree requires the mandatory use of the REPCET application in the PELAGOS sanctuary, a large area dedicated to the preservation of cetaceans in the Mediterranean that was established by a tripartite agreement between France, Monaco, and Italy (PELAGOS, 2002). Currently, only vessels flying the French flag are legally required to use REPCET as the other member states have yet to adapt their national legislation accordingly. Nevertheless, many Italian companies have decided to voluntarily equip their vessels with REPCET for use in the PELAGOS sanctuary.

No decree provides for the application of this system for French within the area of the ACCOBAMS agreement, as REPCET has to first demonstrate its effectiveness in the Pelagos sanctuary, which is a smaller area. The ACCOBAMS agreement is an interesting legal framework to protect whales, but it suffers from poor commitment from member states. Whilst the agreement may provide whale protection measures, it is the States which will have to implement them. International environmental law is often characterized by its ineffectiveness because of the softness of norms which is often linked to the insufficient priority given to environmental as compared to commercial issues. In environmental agreements, the commitment of the States is mainly limited to objectives to be achieved rather than to obligations to protect the environment. Many environmental agreements allow States great flexibility to design and implement protection measures without any obligations to produce results. As a consequence, international regulations are not always implemented (Petit, 2011).

The creation of a multilateral agreement in the Indian Ocean could suffer from a lack of commitment by States. However, countries may be incentivised by the economic benefits generated by whale watching tourism associated with such a sanctuary. In addition to the international links that the whale route will create, the tourist economy could expand considerably in the area by enhancing this natural heritage. This could include the establishment of a common regional charter for the responsible approach and observation of whales, or the creation of a common label awarded to companies for responsible whale watching. It is believed that it is legally feasible to provide for regional cooperation with the aim of improving the protection of whales, and associated ecotourism. "Strict" regulations, such as the adoption of specific rules on fishing types allowed in the area, or the adoption of anti-collision measures, which can sometimes be costly and constraining, could be more difficult to apply as illustrated by the use of REPCET in the ACCOBAMS sanctuary.

International cooperation through the medium of a multilateral agreement could therefore be an approach to consider for the whale route. Private actors such as non-governmental organisations or whale watching companies, and even transnational networks and fora, for instance the Humpback Whale World Congress (held in Reunion in 2017) or the Symposium of the Western Indian Ocean Marine Science Association, could be appropriate to promote international cooperation. Using a bottom-up approach, a locally-developed mechanism such as the whale watching charter of Reunion Island, could be adapted and made available for regional use in the western Indian Ocean through a soft law agreement such as a memorandum of understanding between countries. This cooperative approach would lead to coherent and directed protection of whales between States, with individual countries choosing to develop a legal basis for the charter if they so wish.

The difficulties experienced with implementing anti-collision measures for all members of ACCOBAMS illustrates the challenges of implementing a multilateral agreement with soft law. The cause of this ineffectiveness may be financial, but it can also be linked to the fear of losing sovereign rights.

A more gradual approach through bilateral agreements could also be considered to determine the most appropriate and effective mechanism to protect whales in the western Indian Ocean.

### *Development of regional cooperation through bilateral agreements*

If regional cooperation through a multilateral agreement for the western Indian Ocean whale route appears too ambitious or constraining for the countries of the region, cooperation through bilateral agreements may be appropriate.

The contracting Parties would then be two States, which would establish protection objectives in a delimited area. Since the EEZ are adjacent between the islands of the western Indian Ocean, this would enable regulation of a large area without interfering with the principle of freedom of the high seas, according to article 87 of the United Nations Convention of the Law of the Sea (UNCLOS, 1982).

Because of their large adjacent EEZs, an agreement between Reunion and Madagascar would cover and regulate, for example, a large strategic area where numerous activities are taking place and where maritime traffic is abundant.

The whale route could be influenced by a protection mechanism developed in the French West Indies for the AGOA sanctuary. This is a protected area set up under the Cartagena Convention, more commonly called “SPAW” (Specially Protected Areas and Wildlife) which aims to ensure the favourable conservation status of marine mammals by protecting them and their habitats from direct or indirect negative impacts of human activities. The sanctuary was created in 2012 and currently covers the entire EEZ of the French West Indies. The declaration on the creation of the AGOA sanctuary expressly foresees cooperation between protected marine areas frequented by the same animals, such as humpback whales, which move into the waters of the sanctuary during the winter, but are also present in the northwest or northeast Atlantic in summer. “Sister agreements” have allowed decentralized cooperation between different marine areas frequented by whales to be developed to ensure consistent protection for whales during their migration. For example, AGOA has been officially “twinned” with the Stellwagen Bank National Marine Sanctuary since 2011 (United States of America), the Saguenay-St. Lawrence Marine Park (Canada) since 2015, and the Yarari Sanctuary (Netherlands) since 2017. A “sister sanctuary agreement” has been concluded between the United States National Oceanic and Atmospheric Administration’s Stellwagen sanctuary and the former French Marine Protected Area Agency to protect humpback whales and to provide “new avenues

for collaborative education, scientific and management efforts, including joint research and monitoring programs” (Special Agreement for the implementation of the Memorandum of Understanding, 2011).

This bottom-up approach by which States collaborate indirectly through legally constituted national administrative entities may be easier to implement. The “sister agreement” is established between two administrative authorities in different countries, which can help to avoid the potential procedural difficulties relating to the conclusion of an international agreement.

Applying a bottom-up approach and developing local law for use at an international level for the creation of a whale route could be an interesting option for the western Indian Ocean. However, marine areas dedicated to the protection of whales or large marine protected areas would have to exist within the waters under the jurisdiction of at least two countries to consider the development of a “sister agreement”.

Whether the collaborative agreement chosen is part of a universal whale protection approach or based on local law, the whale route will have to be the subject to an appropriate governance system.

### *The Governance of the whale route*

Several “platforms” or “fora” exist through which the whale route concept can be taken forward. These fora would provide the opportunity for discussion between relevant stakeholders and for decisions to be made to protect the whales in a delimited area.

The Convention for the Protection, Management and Development of the Marine and Coastal Environment of East Africa (Nairobi Convention, 1985) could function in this role. As a platform for discussing issues related to the marine and coastal environment in the western Indian Ocean, the Convention is also a legal and institutional forum that provides a framework for bringing the countries of the region together. The Convention coordinates the various strategies to protect the marine environment and in particular promotes the creation of a marine protected area network in its Article 10: “The Contracting Parties shall, individually or jointly, take all appropriate measures to protect and preserve rare or fragile ecosystems as well as rare, depleted, threatened or endangered species of wild fauna and flora and their habitats in the Convention area”.

Also, a “Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region” signed

in 1985 and entered into force in 1996, highlights the need for cooperation between Member States of the western Indian Ocean in order to coordinate their efforts to protect migratory species whose natural range extends over their territories, such as humpback whales. This direct reference to humpback whales provide a clear legal framework for the whale route that could be used in an appropriate governance system.

On the basis that the environment is increasingly perceived as having a common value for all mankind, the United Nations Educational, Scientific and Cultural Organization (UNESCO) could also potentially provide a forum for the governance of the whale route. The objective of working within the UNESCO system would be for the whale route to become designated as a World Heritage Site, provided the criteria drawn up by the UN agency are met for this inscription. Within UNESCO, the Intergovernmental Oceanographic Commission could play a major role in the governance of the whale route. States of the western Indian Ocean region, potentially involved in the whale route project, are also members of this Commission, whose objective is to promote international cooperation and to coordinate programmes in marine research, services, conservation and protection of the coastal and marine environments to understand and effectively manage the resources of the ocean and coastal areas. This institution could host meetings between state and non-state actors from many countries in the area which are involved in the implementation of the whale route in order to encourage inter-state cooperation for common and consistent decision-making.

This role could also be played by the Indian Ocean Commission, established by the 1984 Victoria Agreement, which has five island states in the southwest Indian Ocean as members. The Commission coordinates various programmes demonstrating its involvement in the protection of the marine environment. For instance, the Indian Ocean Commission's Marine Protected Area Network Programme is implemented by the World Wildlife Fund of Madagascar and the Western Indian Ocean Programme Office, and aims to contribute to the preservation of biodiversity and marine resources in the southwestern Indian Ocean eco-region through a network of well-managed Marine Protected Areas.

Like it does with this programme, the Commission could facilitate activities related to the whale route by providing institutional support and hosting experts to discuss and reach decisions. For example,

non-governmental organizations operating in countries involved in the whale route project, and specialised brigades (cf. "Quiétude"), could then, at the local level, act as intermediaries for the implementation of new norms and standards. The Commission could also play a key role in financial support through the contribution of the European Union. The European Union which has observer status since October 2017, is the main donor of the Commission, and is particularly involved in the development of the island states in the western Indian Ocean. Because of this, the influence of the European Union in the Indian Ocean basin is significant (Tabau, 2017).

Transnational networks and fora such as the International Humpback Whale World Congress held in July 2017 in Reunion Island, and whose next meeting will take place in 2020, could also play a role in the governance of the whale route, mainly on a technical level. This is an opportunity for actors, scientists, politicians and researchers to meet each other on a regular basis during these congresses to discuss and come up with regulations to protect whales. In addition to the whale charter of Reunion Island, which was extended to include dolphins and turtles during this 2017 Congress, a common charter for western Indian Ocean States could introduced and discussed during the next Congress in 2020, in the context of the whale route.

In addition to governance platforms, actors have a decisive role to play in the implementation of the route. States, of course, must cooperate and commit themselves in a multilateral or bilateral agreement according to the chosen model. Since Reunion is not a state, but an overseas department and region of France, sub-state authorities could intervene in an international agreement, as allowed by the Letchimy law (French Law, 2016). As such, the Regional Council can negotiate an international convention with a neighbouring foreign state and then sign it with the authorization of the State provided that this treaty respects the international commitments of France (Tabau, 2018).

Private actors also have a significant role to play in assisting decision-makers. Experts, researchers and associations provide essential information on whale protection. For example, the work of scientists can guide the delimitation of the area to be protected according to the distribution range of the whales. They can also assist with the development of guidelines for approaching whales through information obtained from behavioural studies.

Conventions, international organizations, and transnational networks are all ways of ensuring the effective governance of the whale route, in which public and private actors will play a key role. This range of different possibilities for governance of the whale route demonstrates the existence of many diversified tools. These tools should not be regarded as competing with each other, but complementary, to be adapted to the realities and requirements of international community (Maljean-Dubois, 2017). Thus, a holistic approach to governance appears to be more appropriate than a single option (Maljean-Dubois, 2017).

## Conclusion

Considering the migratory pattern of whales, their conservation and management require associations between existing institutions and agreements at different levels in order to enhance the consistency of the relevant law. However, legal instruments contribute but do not guarantee a full protection of whales and their habitats. Indirect impacts also imply to consider other legal frameworks. Therefore, the project of the “whale route” should take into account this complex legal environment. To develop regional cooperation around this project, it is necessary to use current legal frameworks but also to reveal links between them. These links may be considered from a top down approach (for example, implementation and adaptation at the local level of multilateral agreements) but also from a bottom up dynamic (for example, replication of the whale watching charter applied to Reunion Island coastal area). The latter could be more appropriate for the protection of whales at the regional scale considering the loopholes of the top-down approach. Beside these normative interactions, the governance of the “whale route” has necessarily to be analysed from a global perspective, emphasizing relationships between various actors, institutions, and networks.

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