



# Ocean management and rights of Nature: The case of the Galapagos in Ecuador and beyond

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## ABSTRACT

The expanded protection zone of Galapagos encircling sea territories of Ecuador, Colombia, Costa Rica and Panama (CMAR<sup>1</sup>) could incorporate a rights of Nature approach,<sup>2</sup> whereby prosecution of trespassers becomes more likely to be successful as cross boundary ecology is recognized in the rights of Nature approach and extra territorial application facilitated with positive effects for ocean governance. In the rights of Nature doctrine, anyone can stand up for Nature regardless of personal interest. The Galapagos sharkfin cases of 2015 and 2019 based on constitutional rights of Nature legislation in Ecuador demonstrate the preventative effect. This can be a first step towards recognizing ocean rights (as a substrand of rights of Nature). There are several options for implementation in CMAR. This fits into a wider buen vivir (good living in harmony with Nature) and development approach. Closing of areas for biodiversity protection has wider ecosystem effects (as Palau demonstrated) causing multiplication of species such as sharks outside the protection zones as well. Current levels of (CMAR and general) ocean protection are highly insufficient. The national Marine Protected Areas (MPAs) are too small in number. Moreover, the areas covered by MPAs do not always have high protection levels. The majority of areas beyond national jurisdiction are thus not protected. Which countries will ratify the new ocean protection regime (BBNJ)<sup>3</sup> remains to be seen.

## 1. Introduction

On June 7 2022, Ecuador, Colombia, Costa Rica, and Panama concluded an agreement for the expansion of the special protection zone of the Galapagos [46,32]. This article argues that if the entire extended Galapagos protected zone, stretching over Ecuador, Colombia, Costa Rica and Panama, is also given a rights of Nature status, as has been done in Ecuador, better protection can be ensured. This could also give opportunities for species to recover their populations within this extremely important highway in the oceans, the Humboldt Current. The specific case of the Galapagos can be an example of how oceans can be better

preserved and managed, and how rights of Nature can strengthen the Sustainable Development Goals (SDGs), specifically SDG14 on oceans.

Since 2008 Ecuador has had a constitution based on the philosophy of Buen Vivir, Good Living - derived from the indigenous Sumak Kawsay - which is understood as living in harmony with Nature. Under the leadership of Bolivia - which also adopted a Vivir Bien constitution in 2009 - harmony with Nature also became a formal UN institution.<sup>4</sup> Buen Vivir is based on the indigenous biocentric ways of living and includes participatory democracy, economic solidarity mechanisms and rights of Nature [2].

The constitution contains a special protection provision for the

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<sup>1</sup> Corredor Marino del Pacifico Este Tropical (CMAR)

<sup>2</sup> Nature with a capital to denote its sacredness in indigenous cosmology

<sup>3</sup> The Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement) was adopted on 19 June 2023 by the Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction convened under the auspices of the United Nations.

<sup>4</sup> UN Harmony With Nature, <http://www.harmonywithnatureun.org/>

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Galapagos Islands. As part of the concept of harmony with Nature, rights of Nature are also enshrined in the constitution. On this basis, numerous law cases were conducted, one of which concerns the Galapagos Islands. Due to this regime, illegal shark fishers could be convicted by the court of fishing in or around the territorial waters. Despite the special protection regime for the Galapagos, this had not been possible earlier. Territorial waters delineation was an impediment to criminal conviction. Within the rights of Nature logics, the court found that the ecosystem, and its right to exist and be restored, extends beyond this limitation. This way sharks could be protected.

Sharks are, as a predator, a keystone species and therefore crucial to the marine ecosystem as a whole [33]. ‘Closing of areas’ for biodiversity conservation, as has been done in the Galapagos, allows local ecosystems to flourish and provide for themselves. This also positively affects the biodiversity of the surrounding areas. This is known as a spillover effect and has been documented in an experiment in Palau that protecting restricted areas has a significant impact on the adjacent regions’ fishing, flora, and fauna [37].

This article will first describe Ecuador’s constitution and rights of Nature. It will then explore the sharkfin court case, then it will briefly go into the Galapagos protection schemes, and efforts to give oceans rights. It will then apply this to the extended protection zone. The second half of the article details why Galapagos and the South Pacific matters, what protection zones are in place and how effective these current approaches are. It will then conclude with why new legal and policy approaches are desirable.

This article is written from the point of view of *postcolonial law and combined with the social science approach of marine ecology management*. Postcolonial law emerged as a response to modernist claims of truth based in reason and empirical knowledge, and shaped around neoliberal economic views of society [3,4,38]. In this modernist view man is above nature instead of part of it. This anthropocentric view of life is counter to the biocentric indigenous view of life. Indigenous views of life were considered backward, unscientific and stuck in metaphysics. This resulted in epistemological injustice whereby indigenous knowledge systems were dismissed and basic philosophical differences were circumvented. The modernist legal view resulted in positivist approaches (rules-based justice) moving away from (metaphysical) natural law. Postcolonial law (such as Third World Lawyers for International Law) criticized this by deconstructing western views of international law, rooted in (neo)colonial practices. The movement for Good Living, Buen Vivir and rights of Nature, amongst others, attempts to reconstruct the law based on indigenous philosophies. This is rooted in a critical realist view of the world which accepts reality as a social construction and thus accepts possibilities of revised legal and economy theory and hence revised ocean governance. It considers law and economy as a social science (hence not factual hard science), uses interdisciplinary multilayered approaches. It looks at power as interwoven with knowledge systems and considers the epistemic injustice of subordinating indigenous knowledge systems to science. Thus it uses indigenous knowledge in its own right. Knowlton and Di Lorenzo [27] also emphasize why social sciences are increasingly important in ocean conservation, including the role of indigenous and local communities.

For a review of rights of nature literature see [5] and for TWAIL, see Special Issues of *International Community Law Review* 2007 9(4) and 2008, 10(4) and more recent publications of [28,34] and [35]. This article focuses on ocean rights, jurisprudence and ocean management.

## 2. Ecuador’s constitution, Buen Vivir and Rights of Nature

Ecuador has a *constitution entirely based on Buen Vivir* or Good

Living, an indigenous concept derived from the Quecha Sumak Kawsay which centers around respect for Mother Earth or Pachamama, a living sacred being. This requires living in harmony with Nature, others and oneself. Because Earth and Nature are sacred, they are addressed in capital letters. Buen Vivir stands for a reconstruction of economy and society: Society and ecology come first which the economy is servicing including recognizing creativity, domestic and reproductive work as important factors as well as employment as giving meaning to one’s life, redistribution of wealth and autonomy in energy and (localized) (food) production. The community includes nature, doing away with artificial separations between ‘development’ and nature, in a celebration of intersubjective being [2,49].

It is important to rethink the separation between development and conservation, separating humans from nature, a paradigm stemming from modernism and enlightenment thinking [49,50]. Gonzalez et al., [21] plead for a redefinition of the old paradigm ‘of equilibrium between conservation and development’ into ‘conservation for development’ and co-management with stakeholders (19–20), calling for a fundamentally different lifestyle to combat the rapidly deteriorating situation of Galapagos. This comes close to a biocentric outlook as an integral part of indigenous concepts such as Sumak Kawsay, though it proved difficult to implement in Ecuador’s Buen Vivir strategies (2013–2017 and 2017–2021) [48]. Galapagos is therefore an unique opportunity to bring Buen Vivir into practice, in a way that is truly in harmony with Nature. This would entail dropping the words development and sustainable, considering humans as (part of) nature and relearning old methods and indigenous wisdom. Gonzalez et al., [21] give some practical examples, though from the perspective of Buen Vivir the new suggested terminology ‘people with nature’ instead of the current ‘people in nature’ is still anthropocentric and somewhat problematic. ‘People and nature’ better describes the current paradigm, and ‘people as nature’ the biocentric paradigm.

Considering humans and Nature as equal warrants an equal footing for both in the law and giving Nature legal standing.

The Ecuadorian constitution of 2008 also includes *three provisions on the rights of Nature*: art 71, 72 and 73. Art. 71 deals with the intrinsic value of Nature and respect for its life cycles. Art. 72 centers around restoration when harm is done. Art. 73 protects endangered species. Both the state and citizens have a duty to respect nature. For example, art 71 states that: ‘The State shall give incentives to natural persons and legal entities and to communities to protect nature and to promote respect for all the elements comprising an ecosystem.’ And art 278.2 stipulates for people: ‘To produce, exchange and consume goods and services with social and environmental responsibility.’ It also states that Nature (ecosystem services) cannot be appropriated (art 74).

Although rights of Nature is not a specific indigenous concept, indigenous peoples have accepted it as a positive step to ensure the respect for Mother Earth in the current day legal systems. In indigenous philosophy gratitude and reciprocity needs to be extended to Nature and the Earth. That Mother Earth has rights is regarded as self-evident. She is not given rights by humans (an incredible arrogance) but she grants the opportunity to live for all living beings. These are equal and co-relate, in intersubjective relations. This is also called biocentrism, in contrast to anthropocentrism in which the human is the subject and all others are ‘objects’. In biocentrism everything is alive and exists interdependently [48,49].

In Ecuador a host of court cases followed after the introduction of the new constitution of 2008; some local and some constitutional court cases. In the early period, under the reign of President Correa, most cases launched by environmental activists failed, but some succeeded. One such case in particular is relevant to the discussion of environmental

protection of the Galapagos and its surrounding sea, which will be discussed below.

The constitution of Ecuador, moreover, contains the following provisions on sustainable development congruent with Buen Vivir or the 'good way of living' in the Galapagos:

'Article 258. The province of Galápagos shall have a special system of government. Its planning and development shall be organized on the basis of strict adherence to the principles of conservation of the natural heritage of the State and the good way of living, pursuant to the law (...).

For the protection of the special district of Galápagos, the rights to internal migration, work or any other activity, whether public or private, which might affect the environment, shall be restricted. With regard to land use development and planning, the Governing Council shall issue policies in coordination with the municipalities and parish boards, which shall carry them out.

People who are permanent residents and are affected by the restriction of rights shall have preferential access to natural resources and environmentally sustainable activities.'

Finally, a rights of Nature approach can also be criticized as anthropocentric, as humans cannot give rights to nature, other than in their own legal system which then incorporates a biocentric element. Fundamentally in Latin America the legal system is one derived from colonization, different from indigenous restorative justice systems. Indigenous people rather speak of gratitude, respect to and mutual exchange with Mother Earth or Nature (capitalized to show reverence) [48]. When one would adhere to a true Buen Vivir approach, rights of Nature are no longer necessary.

### 3. Rights of Nature: the Ecuadorian sharkfin and sea cucumber cases

The Galapagos *sharkfin case*<sup>5</sup> in Ecuador is of particular importance because it was the first time that fishermen were sentenced for illegal fishing, despite the protection regimes in place. In this case, sharks successfully gained legal standing, although a civil case by the conservation sector on behalf of the sharks was denied by the judge. The judge, however, did recognize duties of the state towards the sharks in having a duty to uphold rights of nature, protect and restore nature. Moreover, what made the difference with previous cases was that rights of Nature consider nature as a whole interconnected ecosystem without boundaries. Therefore, strict territorial boundaries were considered less important whereas in previous cases conviction was only possible when proven that the illegal fishing took place within the boundaries of the protected areas. Fishermen would then claim that the shark was caught outside the protected territorial boundary [48]. In other cases, extra-territorial application of the rights of Nature (outside the borders of Ecuador) was not accepted (see the Deep Horizon oil spill case, [48]). This was mainly to prevent Ecuador becoming the court of all world-wide cases on the environment.

The Galapagos sharkfin case was tried in 2015, after it was kept hanging in the Galapagos since 2011 [20]. Because of security concerns cited by the judge, who declared himself incompetent, it was moved to the mainland city of Guayaquil in 2014 [53]. The fishing vessel *Fer Mary* was caught with sharks by the Ecuadorian Coast Guard. A criminal lawsuit was filed against the captain and the crew by the Galapagos Conservation Sector. Thirteen fishermen were sentenced to 1–2 years in prison and an additional eight sentenced in absentia; based on the New Penal Code (COIP) of 2014. They were sentenced on the basis of 'art. 437. F and G, for fishing in a prohibited zone and affecting species that are on the international red list (...)' (p. 27 of the judgment). The *Fer*

<sup>5</sup> No 005–2011-UMA, Galapagos, 2011; Guayaquil case no 0004–2015; sentence no 09171–2015–0004, 9th Tribunal Criminal Court Guayaquil, 2015; Public Prosecutor Galapagos National Park vs Captain of the fisherboat *Fer Mary* and crew members.

*Mary* was ordered to be destroyed and other vessels to be sold by auction (p. 55–59) of the judgment).

The Galapagos conservation sector submitted a legal opinion to the case, as the judge did not allow a (civil) case to be filed by them (despite the constitutional regulation that anyone can represent nature). The legal opinion (Amicus Curia I.F.20–2011 of 26 Sept. 2011) to Penal Court of Galapagos makes a 'Plea in defense of the sharks of the Marine Reserve of Galápagos'. The legal opinion refers to several local ordinances and referred to the applicability of the rights of Nature (art. 71 and 72 of the Constitution)' (Amicus Curiae, p.3), based on the following argument:

'The category of 'Reserva Marina de Galápagos' and the designation of 'Natural Patrimony of Humanity' (2001 UNESCO Convention) have, at least, the following legal effects:

- The duty of the state to protect the national patrimony (art. 3(7) of the Constitution and art. 4 of the UNESCO Convention for the Protection of the cultural and natural World Heritage of 1974).
- The application of the declaration of public interest on the conservation of bio-diversity (art. 400(2) of the Constitution).
- The incontestability of the protected natural region and the legal obligation to maintain it unaltered (art. 397(4) of the Constitution, art. 4 of the Convention for the protection of the cultural and natural World heritage).'

The court followed the opinion and argued that 'The Constitution of the Republic of Ecuador in its articles 71, 72, 73, 83.6, 395.4, 396, 397 final part and 405; establish various regulations, norms and principles that express relation with the rights of Nature or pacha mama; with the duty of the State to establish procedures to obtain the restoration of the damages to nature and the adoption of procedures to mitigate the harmful consequences to protect nature and species. In the same sense, the State has the obligation to adopt measures of precaution and restriction for the activities that may produce extinction of species and the destruction of ecosystems.' (p. 54 of the judgment).

The defense argued amongst others that 'defendants were not occupied with fishing when they were arrested within the Galápagos Reserve' (p. 4 of the judgment), but this argument was defeated. Hence, even if the fish were caught outside the territory of Ecuador, the rights of Nature apply. This is an exceptional extra-territorial application of the rights of Nature considering the surrounding waters as part of one ecosystem.

Hereafter followed other convictions on the basis of delicts against wildlife, such as the *Galapagos Sea Cucumber case*<sup>6</sup> involving illegal transport of sea cucumbers. *The Galapagos sharkfin transport case* of 2019<sup>7</sup> caused a national outcry in Ecuador and ultimately made an entire 300 strong Chinese fleet depart from the Galapagos waters. The ship *Fu Yuan Leng* was confiscated, its 20 crew sentenced to prison and 6 mln USD in reparations paid. Nature and Pachamama were recognized as a victim [15,19,39].

### 4. Galapagos (inter)national protection regimes: giving oceans and Galapagos seas rights?

It has been recognized in ocean governance that multiple national and international regimes enhance the protection: 'The importance of the regional and sub-regional levels of governance is being increasingly recognized in the field of ocean governance. There is a growing

<sup>6</sup> Canton Court of Guayaquil 8 June 2016 and Provincial Court of Guayaquil, 7 October 2016, No. 20331–2015–00232

<sup>7</sup> Tribunal de Casacion de la Corte Nacional de Justicia (Supreme Court of Ecuador) No. 20331–2017–00179 of 22 May 2019 mainly upholding earlier decisions of lower courts and overturning part of decision of Provincial Court of Guayas to return the ship to the owners.

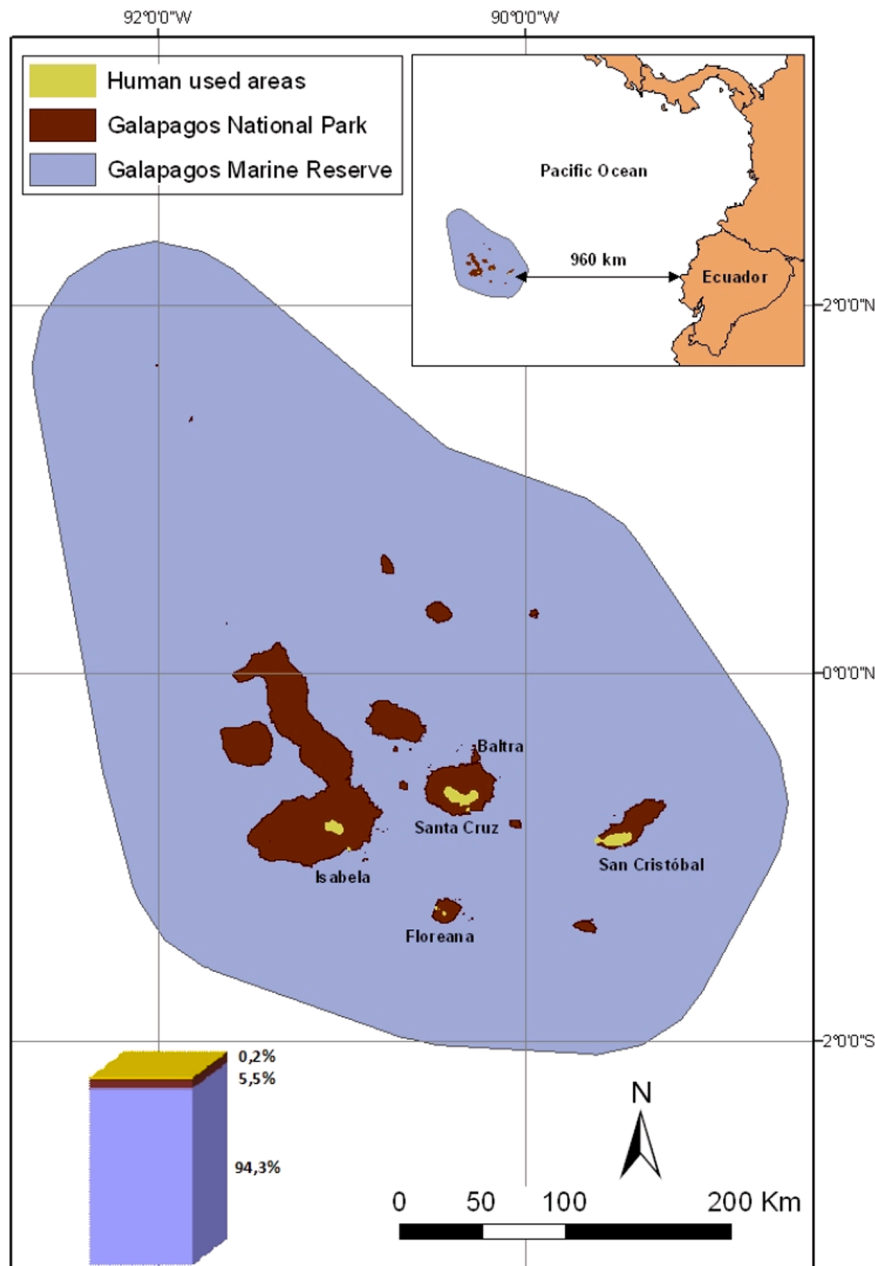


Fig. 1. Marine reserve of Galapagos, Ecuador.  
Reprinted with permission Gonzalez et al. [21].

understanding of the effectiveness of multi-level governance, whereby governance arrangements at any level (local, national, subregional, regional and global) are recognized as equally important' [17].

Galapagos islands and its surrounding seas were accorded special national and international protection. Internationally, in 1976 it was accorded the status of UNESCO Natural Patrimony of Humanity,<sup>8</sup> also known as a (natural) *World Heritage site* (see Fig. 1). In 1984 the islands also became a UNESCO Biosphere Reserve, within the 'Man and the Biosphere' program, stimulating balanced interaction between people and nature.<sup>9</sup> Furthermore, in 2001 it became a Ramsar Site. Threats to the Galapagos are however still existing, the main ones being the

<sup>8</sup> UNESCO World Heritage Centre, Galápagos Islands - <https://whc.unesco.org/en/list/1/>

<sup>9</sup> UNESCO World Heritage Centre, Galápagos Islands - <https://whc.unesco.org/en/list/1/>

introduction of invasive species, increased tourism, demographic growth, illegal fishing and governance issues (especially given the large number of stakeholders with conflicting interests involved in managing the islands), according to UNESCO World Heritage Centre [43] (see Fig. 1).

Nationally, '*the Marine Reserve of Galápagos*' was established in 1998 through the 'Ley Orgánica de Régimen Especial para la Conservación y Desarrollo Sustentable de la Provincia de Galápagos' (i.a. art. 12). According to this law Galapagos Marine Reserve is part of the National Patrimony of Natural Regions of the State (PANE) and as such of the National System of Protected Areas of Ecuador (SNAP). This is also stipulated in art. 106 of the Ley Forestal y de Conservación de Áreas Naturales y Vida Silvestre as well as in art. 405 of the Constitution: La Reserva Marina de Galápagos.

National waters represent an area of coastal water extending out to the limit of the Exclusive Economic Zone (EEZ) at 200 nautical miles

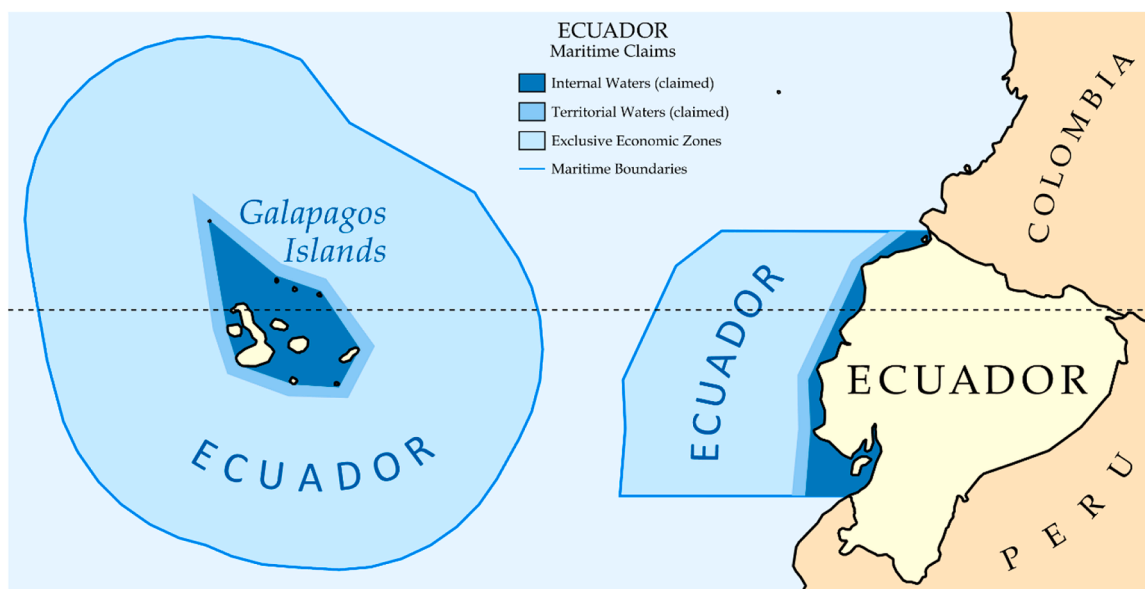


Fig. 2. Ecuador (contested) territorial waters (corresponding with protection zone) and Exclusive Economic Zone.<sup>141</sup>

from the baseline of a Coastal State (Fig. 2). Coastal States have management jurisdiction over these waters, the resources within them and the resources in/under the seabed. 'Marine Areas Beyond National Jurisdiction' (ABNJ) are ocean areas not under the jurisdiction of any country.<sup>10</sup> Several Latin American states have claimed what some other nations regard as excessive EEZs on the basis of the "Mar Presencial" principle<sup>11</sup> on the basis of their population's food demands; in the case of Chile its claim extended far beyond its EEZ [29,45].

At the summit of the Americas, on June 7 2022 Ecuador, Colombia, Costa Rica, and Panama concluded an agreement (Memorandum of Understanding) for the expansion of the special protection zone of the Galapagos, linking the EEZ of the four countries and connecting their Marine Protected Areas [17,29,32,42,46] Fig. 2), including initiating the process of creating a *Transboundary Marine Biosphere Reserve* (UNESCO 2023 and Fig. 3).<sup>12</sup> This initiative was also presented at the COP26 in 2022. The areas extended up to more than 500.000 square kilometers, Ecuador adding 60.000 to the current reserve and Colombia 120.000 sq km ([54]; Galapagos Conservancy 2022<sup>13</sup>). This makes it the largest marine reserve in the world. The corridor seeks to amplify the conservation of the Galapagos, Malpelo, Coiba and Cocos marine

<sup>10</sup> Protected Planet. Undated. Explore the World's Protected Areas. Protectedplanet. Retrieved 4 August 2023 at <https://www.protectedplanet.net/en/thematic-areas/marine-protected-areas#:~:text=Distribution%20of%20marine%20protected%20areas&text=National%20waters%20represent%2039%25%20of,been%20established%20as%20protected%20areas>.

<sup>11</sup> 'The concept and term *Mar Presencial* was devised in 1970 to describe an ocean area that falls under the influence of coastal States in the Southeast Pacific... marked a radical departure from customary and treaty law as it applied to the ocean. Subsequently, its practical application never came to fruition. major law of the sea difficulties persist in relation to excessive maritime claims in the region' (Long and Chaves 2023, 43).

<sup>12</sup> UNESCO. 2023. Colombia, Costa Rica, Ecuador and Panama take the first step towards creating the largest transboundary marine biosphere reserve. UNESCO. Retrieved 7 August 2023 at <https://www.unesco.org/en/articles/colombia-costa-rica-ecuador-and-panama-take-first-step-towards-creating-largest-transboundary-marine>

<sup>13</sup> This addition stems from a decision by Ecuador in January 2022; see Galapagos Conservancy. 2022. Timeline: The Expansion of the Galapagos Marine Reserve | Galapagos Conservancy. Retrieved 7 August at: <https://www.galapagos.org/newsroom/timeline-the-expansion-of-the-galapagos-marine-reserve/>

reserves [32]. The (smaller) so-called 'Marine Corridor of the Eastern Tropical Pacific' = (CMAR) already existed since 2004 (San Jose Declaration) as a non-legally binding regional cooperation mechanism ([17], 5). It extends along the Cocos Ridge, a feeding and migration area for endangered species. The plan for the area contributes to conservation, ocean protection, and protection of the world heritage site, and thus contributes to the SDGs. It is an essential area for fishing, tourism, and marine transport. The new reserve will be divided into two equal areas. In one, fishing will be totally banned, while in the other only fishing without so-called longlines will be allowed [54]. Transboundary marine management across four jurisdictions, however, poses significant challenges [17]. The protection area will also not prevent the Chinese fleet (300 vessels) to anchor nearby Galapagos every year [47]. Problems facing the area include climate change, illegal fishing, marine invasions, pollution, tourism, coastal development partly due to population growth ([17], 2).

Moreover, at the *Biodiversity COP* in Montreal at the end of 2022, a commitment was made to protect 30 % of territorial, ocean and land areas by 2030 (Target 3 of the Kunming-Montreal Global Biodiversity Framework (GBF),<sup>15</sup> which also set a target to live in harmony with Nature by 2050<sup>16</sup> [9]. This is a commitment that dozens of countries had already made earlier. Panama claims to now have fulfilled its promise to protect 30 % of its ocean area by 2030 [16].

Other efforts are made to *protect the oceans through giving them rights*. One can pronounce a general rights of Nature regime or apply them to a specific area, in this case the ocean, hence the name 'Ocean Rights.' Bolivia first promoted this idea, when it had the chairmanship of the G77 +China in 2018 [29] while leading the IGC negotiations of the Agreement under the United Nations Convention on the Law of the Sea (UNCLOS) on *the Conservation and Sustainable Use of Marine*

<sup>15</sup> Convention on Biological Diversity (CBD). 2022. Nations Adopt Four Goals, 23 Targets for 2030 In Landmark UN Biodiversity Agreement. CBD PressRelease COP15, 19 December 2022. Retrieved 4 August 2023 at <https://prod.drupal.infra.cbd.int/sites/default/files/2022-12/221219-CBD-PressRelease-COP15-Final.pdf>

<sup>16</sup> IISD. Global Framework Sets Targets for 2030 to Live in Harmony with Nature by 2050. News. SDG Knowledge Hub. (2022). IISD. Retrieved 7 August 2023 at <https://sdg.iisd.org/news/global-framework-sets-targets-for-2030-to-live-in-harmony-with-nature-by-2050/>



**Fig. 3.** Extension of Marine Protection Zone Galapagos This map shows the Eastern Tropical Pacific Marine Corridor (in yellow), where Costa Rica, Panama, Colombia, and Ecuador plan to create a Marine Biosphere Reserve. The dotted lines show the exclusive economic zones where each country has jurisdiction over marine resources. Source: <http://www.cmarpacifico.org/>.

**Biological Diversity of Areas beyond National Jurisdiction (BBNJ)** Agreement. Another initiative promoted Rights of the Pacific Ocean and a Convention by 2020, specifically important for Small Island Developing States (SIDS), as first promoted by a Statement from the Collective Thinking on the Rights of the Pacific Ocean at a gathering in Auckland, New Zealand on 19 and 20 November 2018 [10–14]. The One Blue Voice campaign is seeking for the adoption of a Universal Declaration of Ocean Rights in 2030 by the UN General Assembly, which is less legally binding than a convention. A core team of experts are creating draft principles for a potential Declaration. The Ocean Race network is trying to gather support with governments across the world.<sup>17</sup> The UN Conference on Oceans in 2025, organised by Costa Rica and France, might well discuss this issue, as France expressed its interest.<sup>18</sup> Harden-Davies et al. [24] also argued for giving oceans rights as do Markiewicz-Stanny and Pyc [31].

The Earth Law Centre made practical proposals in this direction and calls ocean rights (recognizing oceans as legal entity) a way for ‘humans to treat the ocean as a fellow member of the Earth community, rather than a resource for consumption’ ([5], no page numbers). It developed a rights-based framework for Marine Protection Areas [6]: ‘The

Framework recognizes that marine ecosystems:

- own themselves and have intrinsic value apart from human uses; have the right to perform all of their natural functions; and
- have the right to perform all of their have the right to have a voice in decisions that
- may affect their health, including the right to legally defend themselves for damage caused (through human representation).’

It contains rights to life, wellbeing, diversity, water, clean air, equilibrium, restoration and representation.

Issues negotiated in the last round of **BBNJ** revolved around inter alia: Sharing benefits of marine genetic resources; Marine Protected Areas (MPAs) and other conservation management tools; environmental impact assessments; marine technology (transfer and capacity) building; dispute settlement and funding.<sup>19</sup> The agreement was adopted on 19 June 2023<sup>20</sup> (UNGA Resolution A/CONF.232/2023/4).<sup>21</sup> Although

<sup>19</sup> Havaladar, A. and Verdon, C. 2023. “Potential impact of a new treaty protecting biodiversity beyond national jurisdiction (BBNJ),” *Biodiversity Beyond National Jurisdiction Treaty Negotiations: Current Status & Outstanding Issues* | ASIL. 27(2), 31 January 2023, retrieved on 2 August 2023 at <https://www.asil.org/insights/volume/27/issue/2>

<sup>20</sup> Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction | (un.org) <https://www.un.org/bbnj/>

<sup>21</sup> UN General Assembly. 2023. A/CONF.232/2023/4. Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 19 June 2023, UN Documents, retrieved 2 August 2023 at [documents-dds-ny.un.org/doc/UNDOC/LTD/N23/177/28/PDF/N2317728.pdf?OpenElement](https://documents-dds-ny.un.org/doc/UNDOC/LTD/N23/177/28/PDF/N2317728.pdf?OpenElement)

<sup>14</sup> Wikimedia Commons. Maritime Claims of Ecuador. [https://upload.wikimedia.org/wikipedia/commons/6/60/Maritime\\_Claims\\_of\\_Ecuador.svg](https://upload.wikimedia.org/wikipedia/commons/6/60/Maritime_Claims_of_Ecuador.svg)

<sup>17</sup> The Ocean Race. Summits and Policy. *The Ocean Race 2022-23*. <https://www.theoceanrace.com/en/racing-with-purpose/summits-and-policy>

<sup>18</sup> The Ocean Race 2022. French President Macron supports The Ocean Race’s Relay4Nature initiative at the One Ocean Summit. *The Ocean Race 2022-23*. Retrieved 4 August 2023 at <https://www.theoceanrace.com/en/relay4nature/news/12993-French-President-Macron-supports-The-Ocean-Races-Relay4Nature-initiative-at-the-One-Ocean-Summit>

rights and knowledge of indigenous peoples are recognized in the treaty under principles and approaches (art 7 paragraphs (j) and (k), and it aims to protect all life in the seas [7], it does not mention Rights of Nature approaches nor indigenous (and UN) Harmony with Nature concepts – despite calls by i.a Harden-Davies et al. [24]. It rather refers to common heritage of human kind (UNCLOS terminology), ecosystem approaches., integrated management, carbon cycles services of oceans and sustainable use (conventional sustainable development language).

Although the agreement is a great stride forward, it therefore remains to be seen how truly transformative it will be. Countries that are not party to BBNJ cannot be forbidden to, for example fish in the high seas (the largest fleets belonging to China, Taiwan, Japan, Indonesia, Spain and South Korea). With the exception of Japan, these countries, however, signed the agreement and therefore we may expect them to ratify. Countries who ratify the treaty can, moreover, forbid non-signatories to anchor in their harbors (Mr. Molenaar as quoted in [7]). This may have diplomatic consequences.

As long as there is no international court recognizing rights of Nature or rights of the oceans, application of these rights depends on national law and jurisdictions. This also counts for the *Galapagos extended protection zone CMAR*. Prosecution of trespassers of the conservation area will depend on their coastal guard ability to enforce the law and on proof that the trespassing such as fishing took place within the zone of conservation, unless rights of Nature are recognized by the state.

Of the countries that concluded the agreement, other than Ecuador, only Colombia has recognized (limited) area-based rights of Nature: rights of the river Atrato, Colombian Amazon and Pisba highlands [10], but not a general constitutional provision for rights of Nature. Panama passed a law in 2023 granting legal personhood to seaturtles [1,8]. Whether rights of Nature would be recognized for the ocean area is therefore an open question. Costa Rica and Panama would need to legislate a special law.

Whilst devising the special protection regime the countries concerned could consider adding a rights of Nature provision to this regime, which would then apply only to the Galapagos area and would then be recognized by the national courts. This would greatly facilitate the prosecution of illegal fishing and other environmental crimes committed in and around the conservation zone.

Giving rights in itself is not the purpose, however, the real aim is the management and conservation of the ecosystem, preferably whilst essential human needs are also addressed in harmony with Nature. A rights of Nature approach could first of all mean applying this principle to marine genetic resources (genetic properties of marine organisms) whose legal status is unclear and for which no state can exercise sovereignty but that is nevertheless considered to be a property which can be traded rather than a feature essential for ecosystem resilience, with Rights of Nature prompting reciprocity in its use, sharing of its benefits under a proper governance system. Furthermore, rights of Nature could imply a biocentric governance of marine areas, recognizing ecological (cross boundary) connectivity, honoring the precautionary approach, a comprehensive approach looking at ecological, social (equitable) and cultural significance of oceans (human and nature as a whole), as well as knowledge sharing in partnership rather than in intellectual property contexts and including indigenous and local knowledge [24].

## 5. Current ocean and marine ecosystem management: Why Galapagos matters

We will now briefly discuss the different governance systems pertaining to CMAR, the significance of MPAs - with different protection and biodiversity levels - and specifically the significance of Galapagos and CMAR.

Marine protection is governed by the *United Nations Convention on the Law of the Seas (UNCLOS)*. As part of this treaty an instrument on Marine Biological Diversity of Areas beyond National Jurisdiction was concluded in 2023. Before the introduction of the BBNJ Governance

regimes for high seas around Latin America were, especially in the CMAR, a patchwork [17]. The Permanent Commission for the South Pacific (CPPS) (1952 Santiago Declaration) coordinates maritime policies of members Colombia, Ecuador, Peru and Chile. Of the four members only two are party to UNCLOS and its two implementation agreements, namely Chile and Ecuador. Both Panama and Costa Rica work closely with CPPS; Panama through its membership of the Lima Convention of 1981 of which CPPS is the secretariat. CMAR consist yet of another combination: Panama, Ecuador, Colombia and Costa Rica. The Antigua Convention for the North East Pacific (2002)<sup>22</sup> never entered into force due to lack of ratifications [29]. The entire Eastern Tropical Pacific ocean (ETPO) stretching from the gulf of California to the north of Peru is being proposed as a marine corridor by parties of the convention on biological diversity (CBD in 1992); the region counts ten different sub-regional governance arrangements [17,30]. The South Pacific Regional Fisheries Management Organization (SPRFMO) aims to manage the long-term conservation and sustainable use of the fishery resources of the South Pacific Ocean, with the aim of safeguarding the marine ecosystems. The SPRFMO Convention applies to the high seas of the South Pacific, covering about a fourth of the Earth's high seas areas.

The most recent major decision that included the use of MPAs is the United Nations Biodiversity Conference COP15 '30 by 30' decision, where Parties decided to protect 30 % of the oceans worldwide by 2030 [9]. Currently, the global coverage of Marine Protected Areas (MPAs) as shown in Fig. 4, is 8.16 % of which only 1.4 % is in ocean areas beyond national jurisdiction.<sup>23</sup>

*Marine Protected Areas (MPAs)* are conservation instruments designed to safeguard biodiversity, foster healthy and resilient marine ecosystems, rebuild fish populations, mitigate habitat destruction, and deliver socio-economic benefits [23,41]. They are used worldwide through several names, for example, the Marine Strategy Framework Directive in Europe [18]. This is not directly a policy framework for MPAs but does stimulate its use. One of the first states to use MPAs at a large scale was the governmental body of Palau in 2008, when they fully protected 80 % of their Exclusive Economic Zone [37].

However, creating marine reserves does not automatically mean complete protection of biodiversity. Grorud-Colvert et al. [23] distinguishes *four forms of MPAs* dependent on the level of protection in marine reserves worldwide, ranging from minimally protected to fully protected. Only fully protected reserves can restore biodiversity levels as before human activities [23]. Fig. 5 shows the level of protection and, therefore, the effectiveness of MPAs. Whether areas are fully protected or not depends on the activities allowed such as deep sea mining/oil/gas extraction, dredging or dumping of soil, infrastructure, aquaculture activities and fishing, and non-extractive activities, all of which affect the biodiversity of the area.<sup>24</sup> The degree of protection is not always easy to establish: For example, despite concluding an agreement for coordination of (sustainable) national maritime policies and the protection of the marine environment of the Southeast Pacific, in the Permanent Commission for the South Pacific, 'it is reported that some CPPS members have traditionally been reticent about sharing fisheries information including on the activities of illegal, unregulated, and unreported vessels (IUU) in their respective maritime zones. With an eye to mitigating this shortcoming and to reinforcing regional cooperation in fisheries law enforcement, Peru, Chile, Ecuador, Panama and Costa Rica concluded an agreement with Global Fishing Watch to share information on IUU

<sup>22</sup> Signatories are: Mexico, El Salvador, Honduras, Guatemala, Panama, Costa Rica and Colombia.

<sup>23</sup> ProtectedPlanet. Undated. Explore the World's Protected Areas (protectedplanet.net), <https://www.protectedplanet.net/en/thematic-areas/marine-protected-areas#:~:text=Distribution%20of%20marine%20protected%20areas&text=National%20waters%20represent%2039%25%20of,been%20established%20as%20protected%20areas>.

<sup>24</sup> Protected Planet, MPA Guide, <https://mpa-guide.protectedplanet.net/>

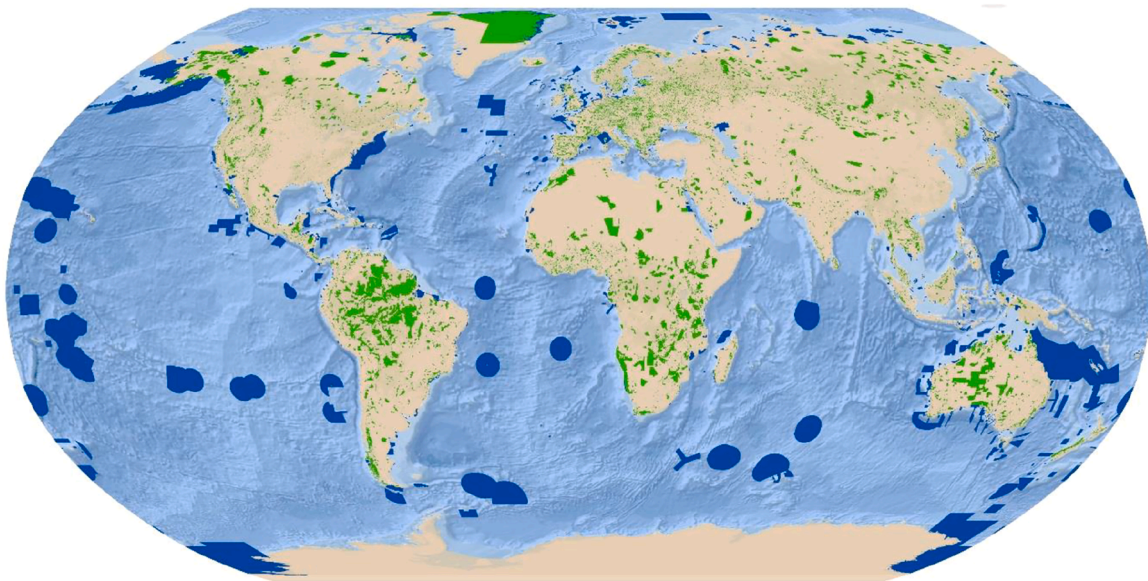


Fig. 4. Protected areas worldwide in May 2019.

Source: UNEP-WCMC and IUCN (2023), Protected Planet: The World Database on Protected Areas (WDPA) and World Database on Other Effective Area-based Conservation Measures (WD-OECM) [Online], June 2023, Cambridge, UK: UNEP-WCMC and IUCN. Available at: [www.protectedplanet.net](http://www.protectedplanet.net).

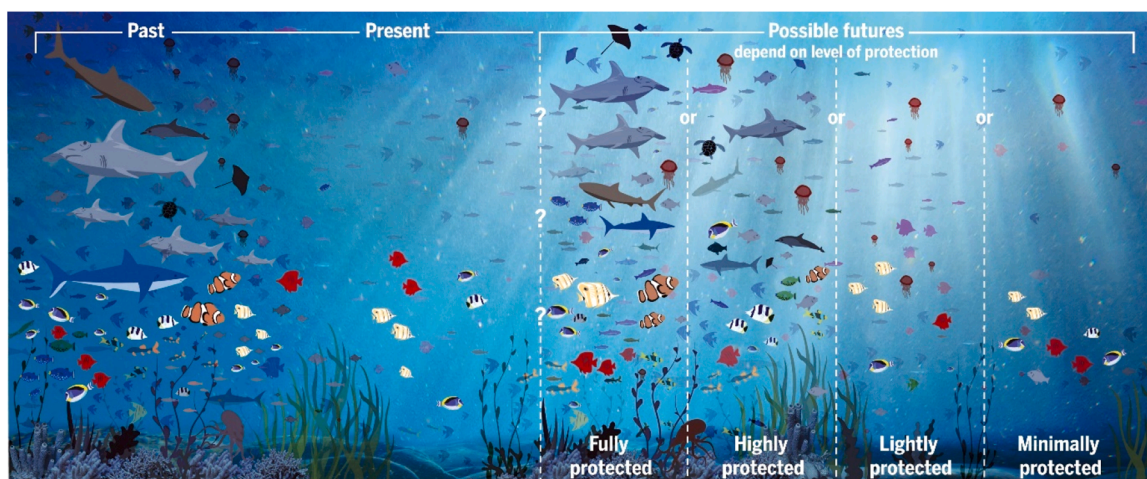


Fig. 5. Protection levels of MPAs.

Source: Gorud-Colvert et al. [23]

vessels in the region' [29].

Furthermore, the overall effectiveness of an MPA in ocean biodiversity protection also depends on the *effects certain species have* outside the protection area. As mentioned in the shark fin case, the Eastern Tropical Pacific Marine Corridor is home to several sharks, of which all migrate in and outside the CMAR (see Fig. 3 and Fig. 6). Based on the experience in the Marine reserve in Palau, species as a whole, also outside the marine reserve, were increased. *Examples within Palau* are the increase in yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*Thunnus obesus*), which have seen a documentable biological spillover from the National Marine Sanctuary in the entire Micronesian region [51]. Based on this, the sharks in the CMAR that are protected within the MPA will also multiply in other areas, theoretically enhancing their overall population and possibly the population of other migratory

species living and moving through the area. Here again, Gorud-Colvert et al. [23] adds to this data by saying: 'Outside their borders, MPAs can also enhance fish stocks through egg and larval export and spillover of juveniles and adults to areas outside the MPA boundaries.' A similar effect is therefore to be expected in Galapagos, especially given the migratory patterns of sharks (Fig. 6).

Moreover, how significant an MPA is and its protection level also depends on the *significance of the area for biodiversity* and biodiversity in marine zones still needs to be fully mapped within the Western Hemisphere. The Eastern Tropical Pacific Marine Corridor (CMAR) where the extended Galapagos zone is located (see Fig. 3 above), has several ecosystems, many of which still need to be fully mapped or discovered with Bathymetry (submarine topography) ranging from shallow waters to some extreme depths. It is therefore a highly

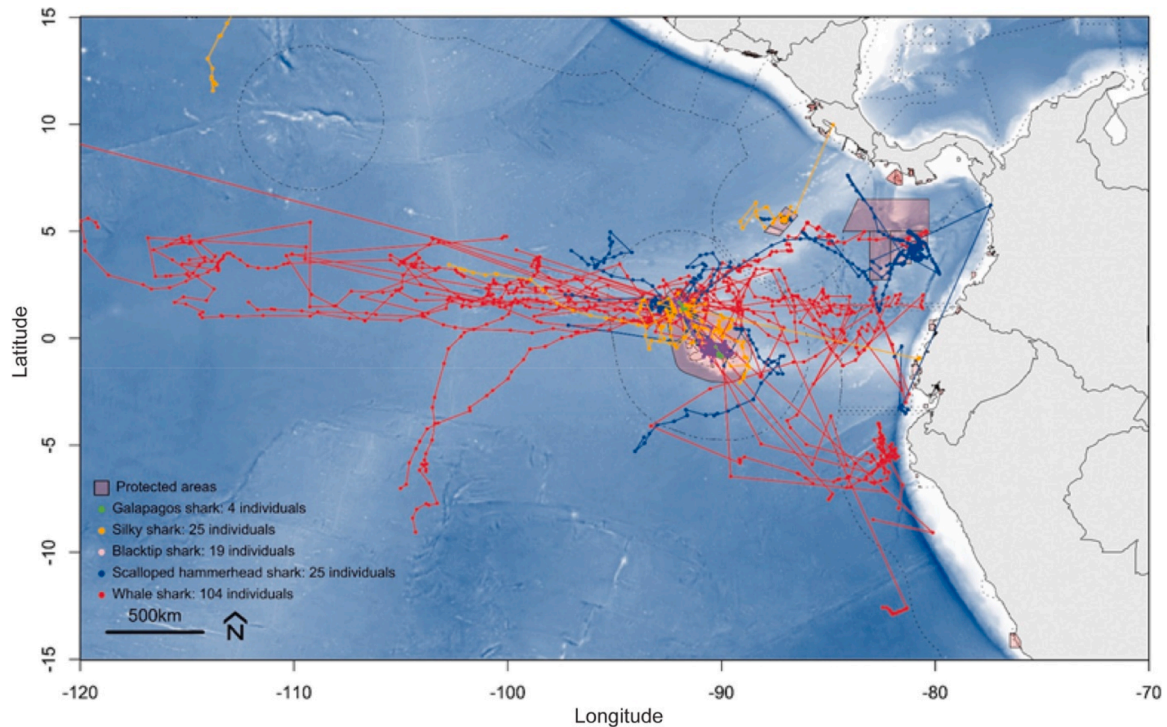


Fig. 6. Migratory patterns of sharks in Galapagos Fig. 1 the migratory patterns of the Galapagos shark, silky shark, blacktip shark, scalloped hammerhead shark, and whale shark [26].

important MPA. Moreover, within the Galapagos protection area, a hydrothermal vent site called the ‘Iguana-Pinguinos hydrothermal vent site’ was found, highly important for species preservation. This ecosystem, first discovered in 1977 on the Galapagos rift, is when mid-ocean ridges are forming new oceanic crusts through volcanic activity. This is because the seawater percolates through fissures in the ocean crust in the vicinity of spreading centres or subduction zones. The cold seawater is heated by hot magma and reemerges to form the vents [22, 36]. Around the Iguana-Pinguinos hydrothermal vent site, they found several eggs belonging to *Bathyraja spinosissima* commonly known as the Pacific white skate. This discovery hints towards deep-sea hatcheries of Chondrichthyans, also known as cartilaginous fishes, including sharks, rays, skates, sawfish (*Elasmobranchii*), and chimaeras (*Holocephali*) [40]. Therefore, this area is significant for the preservation of these species.

Lastly, the degree of ecosystem **interconnectivity between deepsea and shallow waters** is important: There are undiscovered or recently discovered deep sea ecosystems, which are interconnected with already-known ecosystems in more shallow waters. For example, recently, in the Galapagos Marine Reserve (GMR), researchers have found extensive, ancient deep-sea coral reefs, which are the first of their kind to be documented inside an MPA. The first reef discovered was at 400–600 m (1310–1970 feet) depth near the peak of a previously unmapped seamount, a mountain on the seabed in the archipelago’s centre region. Woods Hole Oceanographic Institution [52]. These seamounts could also be part of the recently discovered Trapping Zone Ecosystem discovered by the Nekton mission in the Maldives. According to the Nekton Mission and the University of Oxford these are highly likely to exist in other oceanic islands. Here species that take part in the Vertical Migration, where species migrate from the deep sea to the surface at night and dive back into the deep at dawn, become trapped against the subsea landscape at around 500 m, where they become targeted by large pelagic predators like sharks of tuna. This Ecosystem provides a prime

example of the interconnectivity between shallow-water and deep-water systems, where predators from the shallow waters come down to feed on the microorganisms trapped in shallower depths because of these seamounts [44]. In sub-chapter 6 of chapter 5 of the book *Peaceful Maritime Engagement in East Asia and the Pacific Region* the CMAR is identified as a component of the large marine ecosystem that extends beyond the national jurisdiction together with the maritime zones of the countries within the CMAR [29].

The **BBNJ** offers **additional benefits** for the Galapagos/CMAR by stimulating equal sharing of benefits from marine genetic resources, offering MPAs and other conservation management tools, environmental impact assessments, marine technology and capacity building, and even funding or dispute settlements [25].

Apart from the more obvious benefits the BBNJ provides a legal basis for areas outside the EEZ limits, according to Long and Chaves (2023) [29], supporting the establishment of MPAs. Furthermore, the BBNJ agreement provides provisions to promote international cooperation between states and governmental bodies on different scales, further stimulating the collaboration between RFMO.

Based on these benefits protection of the high seas around Galapagos can be partly achieved through regional fisheries management organizations, like the SPRFMO, that promote binding measures for conservation and sustainable management of highly migratory or straddling fish species. They use management tools like catch limits (quota), technical measures, spatial and/or temporal restrictions, and monitoring, control and surveillance activities to ensure compliance with the rules. These measures can tighten lawful restrictions through governmental bodies that function on higher scales than national ones [29].

## 6. Conclusion

CMAR is highly important in terms of biodiversity and

interconnectivity and, due to its high number of migratory species, its protection may have spillover effects far beyond like Palau demonstrated. In sum, we can say that current levels of (CMAR and general) ocean protection are highly insufficient. The national MPAs are too small in number, and areas covered, do not always have high protection levels. Information shared between (Latin American) countries is currently insufficient. The majority of areas beyond national jurisdiction are not covered. Which countries will ratify the new ocean protection regime (BBNJ) is still to be seen. To remedy this situation Rights for the Oceans would be a great stride forward, as Harden-Davies et al. [24] have argued, although implementation will still depend on (lacking) local marine guard protection capacity and so far political will is lacking.

The second interim option would be to accord rights of Nature to separate protected areas as has been recognized in the Galapagos court case (by virtue of the Ecuadorian constitution) and for several land areas in other countries but not (yet?) for marine areas (see also below). The Marine Corridor of the Eastern Tropical Pacific may be a perfect first trial ground, whereby rights of Nature apply to the CMAR area. It also partly circumvents the problem of countries that may not ratify the new ocean treaty (BBNJ under UNCLOS); their activities harming rights of Nature in the CMAR protection zone (including adjoining areas which may fall into the category of high seas) can be tackled regardless of their BBNJ ratification and regardless of proof whether it took place exactly within the boundaries of the protection zone. (This implies limited jurisdiction over BBNJ non-parties in as far as they have violated national protection jurisdictions through affecting adjoining areas that count as one ecosystem in accordance to the rights of Nature principles).

This option can be implemented in various ways. The states that are part of the Marine Corridor of the Eastern Tropical Pacific conservation regime can:

- implement rights of Nature in their own jurisdiction, fully in their constitution or area based, limited to the mentioned marine corridor; and have national courts decide on cases of illegal, unregulated, unreported fisheries such as in the described Galapagos sharkfin case.
- recognize the jurisdiction of the courts in Ecuador for this corridor, while recognizing that the Galapagos and the Corridor are one ecosystem under the same protection regime. This could be done by concluding an agreement in which countries recognize and abide by a limited extra-territorial jurisdiction of the Ecuadorian courts, including provisions who can bring such a case forward.
- design a specific rights regime for the entire area, along the lines of the Earth Law Framework proposal for MPAs, similar to governance initiatives for land areas such as in New Zealand (Te Urewera Park, Whanganui River, Mount Taranaki), in India (Narmada River) and in Colombia (Colombian Amazon, Pisba Highlands and Atrato River) [10], Peru (river Marañón), Spain (Mar Menor), Uganda (general law) and proposals for ocean rights. While the UNESCO Biosphere status is considered - with its own obligations and governance regime - perhaps this can be included or attached. Although these are all national examples, countries could conclude an agreement for the area by which they opt for a rights of nature approach building on the existing agreement.
- explore options through to the InterAmerican Court for Human Rights, which has recognized the right to a healthy environment 'even in the absence of certainty or evidence about how it affects individual people' and expressed openness to rights of Nature in the *Lhaka Honhat* case and in its 2018 Advisory Opinion.<sup>25</sup>

<sup>25</sup> Tigre, M, 2020. Inter-American Court of Human Rights Recognizes the Right to a Healthy Environment | ASIL 24 (14), June 2. Retrieved 4 August 2023 at <https://www.asil.org/insights/volume/24/issue/14/inter-american-court-human-rights-recognizes-right-healthy-environment>

The first option may meet political opposition as it sets a rights of Nature precedent, and requires establishing new laws and legal procedures in various countries. The second option has the advantage that Ecuadorian courts have experience and jurisprudence on rights of Nature. This would however mean that a party in Ecuador would have to bring the case forward and the government and courts would be willing to accept a limited extraterritorial application of the constitution (which it was unwilling to do for the Gulf of Mexico). (Although art 9 of the constitution stipulates that: 'Foreign persons in Ecuadorian territory shall have the same rights and duties as those of Ecuadorians'). The third option requires a specific governance structure and ultimately jurisdiction of a court. The fourth option requires that national remedies need to be exhausted and will most likely be a very lengthy one as a verdict can take up to 10 years to be delivered. Options are not all mutually exclusive.

Rights of Nature not only rethinks legal options but also the artificial separation between nature and human development in the wider context of *Buen Vivir*. How ocean rights can be implemented on a larger scale for the high seas is twofold: recognizing it as a principle to increase the BBNJ's effectiveness, and secondly considering an international body which adjudicates conflicts in this regard. This can be part of future research and further actions for SDG14.

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## CRedit authorship contribution statement

**Chris deBlok:** Writing – original draft, Conceptualization. **Dorine Eva van Norren:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Formal analysis, Conceptualization.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability

No data was used for the research described in the article.

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