

# Achieving Blue Economy goals: The need for improved legal frameworks across the Indian Ocean

Erika Techera

## Introduction

The Indian Ocean region includes 28 coastal States and is home to a third of the world's population.<sup>1</sup> The regional economy is growing faster than in other areas of the world, and it is estimated that by 2020 it will account for 20% of global GDP.<sup>2</sup> This region clearly plays a critical role in maritime trade, hosting a quarter of the world's top ports and carrying 25-30% of global shipping.<sup>3</sup> Furthermore, the living and non-living resources are significant natural assets that facilitate economic activities including fishing, tourism and, increasingly, energy from the oceans.<sup>4</sup> The Indian Ocean, for example, is responsible for 16% of global capture fisheries,<sup>5</sup> including 20% of the world's tuna.<sup>6</sup> These features have led to a common focus amongst Indian Ocean States on the economic growth and development potential of the maritime and oceanic environment, and the rapid adoption of strategies focused on the Blue Economy.<sup>7</sup>

Undoubtedly, there is regional potential for 'blue growth' and to derive sustainable wealth from the oceans, but this is not guaranteed. Without efficient and effective management of ocean-based undertakings, there is a risk that intensified activities will result in unsustainable environmental impacts. In identifying ways to address these concerns, it is clear that '[e]conomic development will only be enhanced if strong legal and governance regimes are in place'.<sup>8</sup> Whilst efforts to improve governance have been, and can be, made at the domestic level, regional approaches are also important. Yet the

---

<sup>1</sup> Voyer, M. et al. (2018). Maritime security and the Blue Economy: intersections and interdependencies in the Indian Ocean. *Journal of the Indian Ocean Region* 14 (1), pp28-48.

<sup>2</sup> Wignaraja, G. et al. (2018). *Is the Indian Ocean Economy a New Global Growth Pole?* Colombo: Lakshman Kadirgamar Institute of International Relations and Strategic Studies (LKI). <https://www.lki.lk/publication/is-the-indian-ocean-economy-a-new-global-growth-pole/> [Accessed 1 July 2019].

<sup>3</sup> Llewellyn, L.E. et al. (2016). A roadmap to a sustainable Indian Ocean Blue Economy. *Journal of the Indian Ocean Region*, 12 (1), pp52-66.

<sup>4</sup> Voyer et al. above n.1.

<sup>5</sup> Ibid.

<sup>6</sup> Bergin, A. (2018). Australia's approach to Indian Ocean fisheries: towards closer regional engagement. *Journal of the Indian Ocean Region*, 14 (1), pp100-113.

<sup>7</sup> For example, Govt of Seychelles. (2017). *Seychelles' Blue Economy Strategic Policy Framework and Roadmap: Charting the Future (2018-2030)*.

<https://seymsp.com/wp-content/uploads/2018/05/CommonwealthSecretariat-12pp-RoadMap-Brochure.pdf> [Accessed 1 July 2019];

IORA. 2017. *Blue Economy*. <http://www.iora.int/en/priorities-focus-areas/blue-economy>[Accessed 1 July 2019].

<sup>8</sup> Llewellyn above n.3.

region as a whole has received relatively little legal research attention. This is a particular concern given that individual Indian Ocean countries each have similar goals that are likely to place increasing pressure on the same marine resources. Without a regionally coherent approach to oceans governance, the ecological costs may become unsustainable, given the cumulative nature of the impacts and interconnectedness of ocean areas.

Despite the common interests of many Indian Ocean States, there have not historically been any relevant ‘whole-of-region’ institutions and initiatives. The Indian Ocean Rim Association (IORA) is the only body with membership that spans the Asian and African, island and continental countries. IORA’s membership comprises 21 Indian Ocean States and 7 dialogue partners. Significantly, IORA has recognised the importance of the Blue Economy by including it as one of its priority focus areas,<sup>9</sup> and through its endorsement of two focused Declarations.<sup>10</sup> IORA clearly has a role to play in facilitating collaborative and harmonised approaches, but as yet there are no regional agreements that would legally bind members and provide valuable guidance to States implementing Blue Economy agenda and seeking to improve their marine environmental laws.

Across the Indian Ocean environmental laws have developed in different jurisdictions, at multiple levels and in response to different drivers. Whilst the majority of States have domestic marine environmental legislation, the current legal landscape is fragmented and has weaknesses which must be addressed if ocean-based industries and resource extraction are to be undertaken sustainably. Marine environmental governance in the Indian Ocean must be comprehensive, coherent and cohesive, which will necessitate ‘changes in the legal and institutional structures for enabling a smooth realization of Blue Economy goals’.<sup>11</sup>

This paper explores the focus on Blue Economy goals in the Indian Ocean, examines the role that law can play in supporting them, and highlights key areas for future research. The purpose is two-fold: firstly, to explain why a comprehensive, whole-of-region analysis of Blue Economy prospects, risks and supporting governance arrangements is needed; and secondly, to identify the research that must be undertaken if tangible options for reform are to be identified, to transform the legal landscape to achieve these Blue Economy goals.

---

<sup>9</sup> IORA (2017). above n.7.

<sup>10</sup> IORA. (2015). *Declaration of the Indian Ocean Rim Association on enhancing Blue Economy Cooperation for Sustainable Development in the Indian Ocean Region*; IORA. (2017). *Declaration of the Indian Ocean Rim Association on the Blue Economy in the Indian Ocean Region*: <http://www.iora.int/media/8218/jakarta-declaration-on-blue-economy-final.pdf> [Accessed 1 July 2019].

<sup>11</sup> Mohanty, S.K. et al. (2015). *Prospects of Blue Economy in the Indian Ocean*. India, RIS. [http://www.ris.org.in/sites/default/files/Final\\_Blue\\_Economy\\_Report\\_2015-Website.pdf](http://www.ris.org.in/sites/default/files/Final_Blue_Economy_Report_2015-Website.pdf) [Accessed 1 July 2019]. At p31.

## Blue Economy

The concept of the Blue Economy first emerged at the international level during preparatory processes for the UN Conference on Sustainable Development 2012 (Rio+20),<sup>12</sup> and since then has featured greatly in Indian Ocean policies and goals.<sup>13</sup> Although it has no agreed definition, and has been said to be ‘fluid and opaque’,<sup>14</sup> it broadly encompasses the achievement of economic growth and development based on ocean activities, whilst also providing enhanced social and environmental outcomes. Blue Economy goals across the Indian Ocean commonly involve all these aspects; the development of the ocean space to achieve economic, developmental and socio-cultural benefits.<sup>15</sup> These benefits are important in combatting poverty, addressing broader human security issues and ensuring regional stability. Blue Economy goals must, however, be achieved ‘in a sustainable, stable and inclusive manner’.<sup>16</sup>

Shipping and transport, fisheries and aquaculture, seabed mining, energy from the oceans and tourism are all areas for ‘blue growth’.<sup>17</sup> It is clear, however, that governance arrangements are already under strain in these areas, and intensified ocean activities will place further pressure on the ocean environment and marine resources. It has been said that ‘potential exists within all sectors to improve environmental performance’.<sup>18</sup> If the Indian Ocean region is to successfully pursue Blue Economy goals, and continue strong growth in ways that ensure safe and sustainable ocean development, then efficient and effective marine environmental governance is critical. This will involve governance improvements to ensure more efficient and effective institutions, rules and processes. The necessity for ‘creation or streamlining of the current institutional arrangements governing the access, use and protection of maritime resources’<sup>19</sup> has been acknowledged, and domestic law reform has also been identified as a pressing issue at the national and regional level.<sup>20</sup>

---

<sup>12</sup> World Bank and United Nations Department of Economic and Social Affairs. (2017). *The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries*. Washington DC: World Bank. [https://sustainabledevelopment.un.org/content/documents/15434Blue\\_EconomyJun1.pdf](https://sustainabledevelopment.un.org/content/documents/15434Blue_EconomyJun1.pdf) [Accessed 18 July 2019].

<sup>13</sup> Doyle, T. (2018). Blue Economy and the Indian Ocean Rim. *Journal of the Indian Ocean Region*, 14 (1), pp1-6.

<sup>14</sup> Voyer above n.1, p29.

<sup>15</sup> Subhan, A. (2018). India and Indonesia are growing the Blue Economy. *The Asian Post* (31 May 2018): <https://theasianpost.com/article/india-and-indonesia-are-growing-blue-economy> [Accessed 1 July 2019].

<sup>16</sup> Doyle above n.12.

<sup>17</sup> IORA above n.7; Llewellyn above n.3.

<sup>18</sup> Voyer above n.1, p30.

<sup>19</sup> Mohanty above n.11, p24.

<sup>20</sup> For example, Kelleher, K. (2015). *Building the Blue Economy in the Western Indian Ocean*. Presented at the 8th Conference of Parties Meeting for the Nairobi Convention, June 2015. [https://www.researchgate.net/publication/278785770\\_Building\\_the\\_Blue\\_Economy\\_in\\_the\\_Western\\_Indian\\_Ocean](https://www.researchgate.net/publication/278785770_Building_the_Blue_Economy_in_the_Western_Indian_Ocean) [Accessed 1 July 2019]; Obura, D. et al. (2017). *Reviving the Western Indian Ocean Economy: Actions for a Sustainable Future*. Gland: WWF International; Rahman, M.R. (2017). Blue Economy and Maritime Cooperation in the Bay of Bengal: Role of Bangladesh. *Procedia Engineering*, 194, pp356-61;

## Harmonised laws to support Blue Economy goals

Domestic marine environmental laws are not comprehensive within each State, nor cohesive across the Indian Ocean region. In many jurisdictions, relevant rules are scattered across a range of laws, regulations, policy documents and soft law instruments.<sup>21</sup> This creates unnecessary complexity that can lead to poor implementation and compliance. Differing licensing, assessment and approval regimes, for example, can hamper sustainable growth, and weaker protections in one jurisdiction may result in poor practices there, with transboundary environmental repercussions. Therefore, regional growth will be assisted if marine environmental laws across the Indian Ocean are comprehensive, coherent and cohesive. Nevertheless, and regardless of the underlying common Blue Economy goals, it is not appropriate simply to transplant law from one jurisdiction to another.<sup>22</sup> Each State has a different legal environment, socio-cultural context and politico-legal setting that requires tailored options. These aspects must be fully explored in the context of identifying appropriate law reform options; and yet there is currently little guidance for Indian Ocean States seeking to achieve best practice governance.

The majority of Indian Ocean nations have fisheries regulations, pollutions laws and legislation for the protection of marine habitats and species. To a limited extent some also have laws to approve and regulate seabed mining and directly manage marine-based tourism. In some situations these laws have been motivated by local and national concerns; in other cases the drivers have been international law obligations. What is clear is that the Indian Ocean States have developed and adopted domestic laws for the protection of the marine environment organically. This adds further weight to the need for wide-ranging research that focuses on the legal and governance landscape for marine environmental protection across the entire Indian Ocean.

Regional coherence has been hampered, in part, by the Africa/Asia divide, and in some cases Middle East/Africa/Asia/Pacific divisions, which have resulted in differing collaborations and cooperative agreements, rather than a 'whole-of-region' focus. Adding to the complexity, there is considerable diversity amongst the Indian Ocean States in terms of size, developmental status and, relevantly, legal systems and socio-cultural backgrounds. Geographically, some nations are small island States and others large continental nations, resulting in differing domestic environmental priorities. Furthermore, the region includes developed, developing and least developed countries, which affects priorities for blue growth as well as the availability of resources and capacity to address environmental risks. Significantly, almost every legal system in the world is represented in the region: sharia, common, and civil law (the last of these with

---

IORA above n.10; IORA (2017b). *Jakarta Concord*: <https://dfat.gov.au/about-us/publications/Documents/iora-jakarta-concord.pdf> [Accessed 1 July 2019].

<sup>21</sup> For example, Rahman above n.19.

French, British and Dutch-Roman variations). In addition, many States have Indigenous populations and customary law remains a feature, resulting in legal pluralism. These diversities mean that there is less legal common ground than in areas such as the Pacific, for example, and this has hindered coordinated approaches to oceans governance. With the creation of IORA there now exists a vehicle to take the lead in transforming the regional legal landscape; and the common focus on the Blue Economy has created the imperative to do so. As noted above, however, there is relatively little guidance at present to assist States in moving towards best practice legal governance or law reform options to support Blue Economy goals.

There are a number of relevant international conventions that relate to marine environmental protection including the UN Convention on the Law of the Sea (UNCLOS). Subsequent international law developments in fisheries, biodiversity conservation and seabed mining; and instruments that address incidental pollution from ships, deliberate dumping of waste at sea, and more recently ballast water, have been ratified and implemented by Indian Ocean States to varying extents.<sup>23</sup> Furthermore, IORA has recognised that sustainable development of the Blue Economy must be advanced in accordance with UNCLOS and the UN Sustainable Development Goals (SDGs).<sup>24</sup> Efforts to date, though, have been piecemeal within jurisdictions and, as noted above, no comprehensive regional binding agreements have been adopted.<sup>25</sup> An analysis of ratifications and implementation efforts, as well as how operationalisation can be improved, is essential to ensure sustainable development of the Blue Economy. New approaches, such as marine spatial planning (MSP), clearly offer some opportunities for enhanced governance, but no Indian Ocean States currently have effective MSP laws and this is just one area where regional leadership is needed.

In relation to some activities and risks there is currently no binding international law. Critical areas include land-based marine pollution that has led to marine debris and the pressing issue of plastics in the ocean, and bio-fouling which heightens the risk of introduced invasive species. Although two international conventions prevent dumping of garbage (including plastics) from ships,<sup>26</sup> and regulate the transboundary movement of plastic waste,<sup>27</sup> the only land-based marine pollution instrument remains soft law.<sup>28</sup> In relation to bio-fouling, the only binding law regulates the use of anti-fouling substances,

---

<sup>22</sup> Legrand, P. (1997). The Impossibility of 'Legal Transplants'. *Maastricht Journal of European and Comparative Law*, 4, pp111-124.

<sup>23</sup> Rahman above n.20.

<sup>24</sup> IORA (2015) above n.10.

<sup>25</sup> There are some Regional Fishery Management Agreements (such as the Indian Ocean Tuna Commission) and Regional Seas Agreements (e.g., South Asian Seas Action Plan), as well as organisations such as the Indian Ocean Commission, but these do not cover the whole ocean area nor include broad Indian Ocean membership. For further discussion, see below.

<sup>26</sup> *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 1972 (London Convention).

<sup>27</sup> *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, 1989 (Basel Convention).

<sup>28</sup> *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities*, 1995.

rather than bio-fouling itself.<sup>29</sup> Whilst the International Maritime Organisation has adopted some relevant guidelines, again these are not legally binding.<sup>30</sup> In these areas, there is scope for international hard law to set standards and provide principles as a foundation for the development of both domestic law and harmonised regional agreements across the Indian Ocean. While the diversity of legal systems in the region means that there may be less opportunity for model laws than in other contexts, regional guidance could nonetheless assist in harmonising marine environmental laws. It is clear that legal research is needed to identify potential areas for the development of regional agreements and the role of regional institutions.

There is further potential for regional approaches to oceans governance given the transboundary nature of marine environmental risks, and common Blue Economy goals.<sup>31</sup> There are more than 12 regional organisations covering the Indian Ocean, and each has a different membership and mandate. Some are restricted to African or Asian member nations, some have a specific focus on, for example, economic development. Other bodies, such as Regional Fishery Management Organisations (RFMOs) have a role to play in targeted sectors, and bi-lateral arrangements are appropriate in other circumstances. IORA has the potential to bring coherence to marine environmental protection across the region, given its broad membership and scope, but it has limited authority, formal rules and legal structures. In moving forward, it will be critical to explore to what extent IORA can take the lead on strengthening marine environmental protection for the Indian Ocean, or whether a web of networked regional organisations is a better approach. Regardless, ways must be identified for regional actors to work cooperatively, coherently and effectively to achieve shared goals. In this regard, lessons may be learnt from the Pacific where regional governance is more advanced with longer standing and stronger organisations, and where regional institutions are stronger and some regional treaties have been adopted.<sup>32</sup>

## Indian Ocean research

The Indian Ocean is the third largest ocean in the world, but has received much less research attention than other areas. Existing literature that spans the entire region has

---

<sup>29</sup> *International Convention on the Control of Harmful Anti-Fouling Systems on Ships*, 2001.

<sup>30</sup> *The Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species*.

<sup>31</sup> Mohanty above n.11.

<sup>32</sup> Relevantly institutions include the Pacific Island Forum, and the Pacific Community; and regional treaties include, for example, the Niue Treaty on Fisheries Surveillance and Law Enforcement in the South Pacific Region.

tended to focus on history,<sup>33</sup> geo-politics and power,<sup>34</sup> regionalism<sup>35</sup> or human dimensions.<sup>36</sup> Other literature covers only the African States,<sup>37</sup> Asian issues<sup>38</sup> or parts of the region such as the Western Indian Ocean.<sup>39</sup> Legal literature is rare and limited in scope almost totally to the law of the sea.<sup>40</sup> There is no literature that explores the laws across the entire region in a comprehensive way.

Publications that address ocean issues tend not to address law,<sup>41</sup> and focus on specific topics such as fishing.<sup>42</sup> This is in contrast to the Pacific region where some scholarship does comparatively analyse law and governance across the whole region,<sup>43</sup> and might include transferable options for the Indian Ocean region.<sup>44</sup> Further detailed investigations are clearly needed, including those that expand upon previous scholarship on the region to focus on holistic marine governance in the Indian Ocean. In this way options can be devised to enhance the legal frameworks that underpin industries and

---

<sup>33</sup> For example, Chaudhuri, K.N. (1985). *Trade and Civilisation in the Indian Ocean: An economic history from the rise of Islam until 1750*. Cambridge: Cambridge University Press; McPherson, K. (1997). *The Indian Ocean: A History of People and the Sea*. Oxford: Oxford University Press; Pearson, M.N. (2003). *The Indian Ocean*. London: Taylor & Francis.

<sup>34</sup> Doyle, T. and Seal, G. (2018). *Indian Ocean Futures: New Partnerships, New Alliances, and Academic Diplomacy*. Abingdon: Routledge; Commonwealth of Australia, Department of Foreign Affairs and Trade. (undated). *Australia and the Indian Ocean region*: <https://dfat.gov.au/international-relations/regional-architecture/indian-ocean/Pages/indian-ocean-region.aspx> [Accessed 1 July 2019]; Kaplan, R.D. (2011). *Monsoon: The Indian Ocean and the Future of American Power*. New York: Random House; Raza, S.S. and Khan, A. (2017). *Indian Ocean: Power Politics & the Role of Pakistan*. CreateSpace Independent Publishing Platform; and Walker, M. (2008). 'Indian Ocean Nexus', *The Wilson Quarterly* 21-28. <http://archive.wilsonquarterly.com/essays/indian-ocean-nexus> [Accessed 1 July 2019].

<sup>35</sup> Gupta, M. (2010). *Indian Ocean Region: Maritime Regimes for Regional Cooperation*. New York: Springer; Rumley D. and Doyle, T. (2016). *Indian Ocean Regionalism*. Abingdon: Routledge.

<sup>36</sup> Moorthy, S. and Jamal, A. (2012). *Indian Ocean Studies: Cultural, Social, and Political Perspectives*. Abingdon: Routledge.

<sup>37</sup> Rumley, D. (2015). *The Political Economy of Indian Ocean Maritime Africa*. New Delhi: Pentagon Press; Vrancken, P. and Tsamenyi, M. (2017). *The Law of the Sea: The African Union and its Member States*. Cape Town: Juta.

<sup>38</sup> Brewster, D. (2014). *India's Ocean: The Story of India's Bid for Regional Leadership*. Abingdon: Routledge Security in Asia Pacific Series.

<sup>39</sup> Obura above n.20.

<sup>40</sup> Chandrachud, N. (2014). *Maritime Boundaries in the Indian Ocean: Sri Lanka and the Law of the Sea*. Pannipitiya, Sri Lanka: Stamford Lake; Elferink, A.O. (2015). 'The Indian Ocean and the Law of the Sea: A Work in Progress' in Rothwell, Elferink, Scott & Stephens (eds.) *The Oxford Handbook of the Law of the Sea*. Oxford: Oxford University Press; Oyarce, X.H. (2013). 'Current Ocean Law Issues in the Indian Ocean Region' in Scheiber & Paik (eds) *Regions, Institutions and Law of the Sea*. Leiden: Brill.

<sup>41</sup> Bouchard, C. and Osman, S. (2018). *Indian Ocean Islands: Illustrated Cases on Geopolitics, Ocean and Environment*. Abingdon: Routledge.

<sup>42</sup> Rumley, D. et al (2009). *Fisheries Exploitation in the Indian Ocean: Threats and Opportunities*. Institute of Southeast Asian Studies.

<sup>43</sup> Techera, E.J. (2012). *Marine environmental governance: from international law to local practice*. Abingdon: Routledge.

<sup>44</sup> Techera, E.J. and Troniak, S. (2009). *Marine Protected Areas Policy and Legislation Gap Analysis: Fiji Islands*. Suva: IUCN Regional Office for Oceania; Techera, E. (2010). Legal pluralism, Indigenous people and small island developing states: Achieving good environmental governance in the South Pacific. *Journal of Legal Pluralism and Unofficial Law*, 61, pp171-205; Techera, E.J. (2012). *Marine environmental governance: from international law to local practice*. Abingdon: Routledge; Techera E.J. (2013). 'Climate change, legal governance and the Pacific Islands: an overview' in R.S. Abate and E.A. Kronk (Eds) *Climate Change, Indigenous Peoples and the Search for Legal Remedies*. Oxford: Edward Elgar.

activities focused on Blue Economy goals, and the role that regional institutions can play in achieving good oceans governance can be fully explored.

## Focal areas for future research

Key areas for development with the framework of the Blue Economy include shipping and transport, fisheries, mining and energy from the oceans, and tourism. In response, four areas of law are ripe for consideration, as they are the most critical for the achievement of Blue Economy goals and enhanced ocean protection. Firstly, research is needed to determine marine pollution risks arising from Blue Economy goals, the suitability of current legal frameworks to address these risks, and options to improve the law. Increased shipping brings with it risks of marine pollution from incidental and deliberate dumping of waste, as well as invasive species in ballast water and due to bio-fouling of hulls. Port construction, to facilitate shipping, can degrade the marine environment, destroy habitats and impact upon local fisheries. Growing human populations require waste management planning and facilities, and efforts to address agricultural and industrial run-off. In order to comprehensively address marine pollution issues, all of the sea-based and land-based sources of pollution must be explored, and thereafter the legal frameworks to address them analysed.

Secondly, is the area of fisheries regulation, including activities within and beyond national jurisdictional boundaries. Ensuring sustainable harvests of wild fish, and the management of inshore and offshore aquaculture, will both be critical if food security, livelihood and economic goals are to be achieved without significant environmental impacts. Fishing has a long history in the Indian Ocean region with a number of States relying upon artisanal fisheries for subsistence and livelihoods. Some domestic commercial fisheries also exist, adding to livelihood options, but in the majority of States offshore foreign fishing is economically valuable. This reality has led to all States developing fisheries regulation. Yet again there is little coherence across the region which is a potential impediment to economic development, particularly where licensing regimes and rules are unnecessarily complex or incomplete. The risk of over-fishing is significant where sustainable utilisation is not a strong regulatory feature. There are relevant RFMOs such as the Indian Ocean Tuna Commission (IOTC) and South West Indian Ocean Fisheries Commission (SWIOFC), but they do not cover all species or the whole of the region; and other bodies such as the South Indian Ocean Fisheries Agreement (SIOFA) are nascent. Aquaculture is expanding in the region and will increasingly provide food security as well as economic benefits. Yet few of the States in the region have aquaculture regulations and harmonised laws are needed to ensure sustainable development of this industry.

Thirdly, seabed mining is attracting increasing attention, but few jurisdictions currently have legislation for activities in territorial waters and on the continental shelf. Whilst an



international framework exists in relation to mining of the area beneath the high seas, and the International Seabed Authority continues to lead the development of detailed regulations, this regime does not automatically apply on the continental shelf. Many States have no specific law for approvals, environmental impact assessment (EIA), monitoring and reporting in relation to such activities. The risks include both pollution and habitat degradation. Similarly, oil and gas exploration, and indeed renewable energy projects, can all reap benefits but bring with them risks that require effective marine environmental protection laws.

Lastly, is the area of conservation, encompassing protection of marine species, ecosystems and areas. Tourism development is commonly a Blue Economy goal, and for some States, such as the Maldives, is already the most important economic sector. Coastal tourism provides a development opportunity that relies on a healthy ocean environment, but one that itself poses risks to fragile coastal ecosystems through habitat degradation including increased human and vessel traffic. Therefore, effective environmental conservation laws are critical to ensure sustainable tourism development. Clearly, conservation efforts must be linked to all of the sustainable uses of the marine environment referred to above. Issues such as restoration of critical habitats, conservation of endangered species, and preventing the introduction of alien invasive species, all contribute to broader issues of marine environmental quality and healthy species (such as fish stocks) that may be of commercial value. Conservation is perhaps the most pressing area in need of legal research attention given the scientific evidence of existing and predicted impacts of climate change, and the Indian Ocean States commitments through their Nationally Determined Contributions under the Paris Agreement. Such scientific knowledge must be effectively embedded in oceans governance arrangements.

## Conclusion

The Blue Economy offers many financial, developmental and socio-cultural opportunities for Indian Ocean States, but there are also environmental risks that can undermine the achievement of key goals. The challenges are not limited to individual nations; if multiple States across the Indian Ocean region pursue similar marine activities and expansion plans, the cumulative effects are likely to exceed the carrying capacity of the ocean. In order to achieve Blue Economy goals sustainably, a critical first step must involve an analysis of the opportunities and risks as well as the institutions and laws that address them. Critically important is the need for analysis that spans the entire Indian Ocean legal and governance landscape. This paper has provided a rationale for this analysis, not only to provide a comprehensive picture of the existing legal governance arrangements of relevance to the Blue Economy, but also as a critical first step to identifying law and institutional reform options. This article has outlined a suggested research agenda, with key focal areas to be explored. It remains to be seen how quickly

the legal community will respond, to identify and fill knowledge gaps in time to support the sustainable achievement of Blue Economy goals.

---

*Dr Erika Techera is a Professor of Law in the University of Western Australia (UWA) Law School and Oceans Institute. She is an international and comparative environmental lawyer focusing on the Indo-Pacific region. Her research interests include oceans governance, marine environmental law, wildlife conservation, cultural heritage protection, the history of environmental law and issues at the interface of science, technology and law. She has written and presented over 100 publications and presentations in books and journals, and at conferences around the world. Contact: [erika.techera@uwa.edu.au](mailto:erika.techera@uwa.edu.au); <https://research-repository.uwa.edu.au/en/persons/erika-techera>*