Sustainable Development Goals

Huck

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Article-by-Article Commentary

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by

Winfried Huck

Assistant Editor

Jennifer Maaß

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Preface

The initial idea to write this book arose after the unanimously taken resolution of the United Nations General Assembly in September 2015, which formulated a Global Agenda with 17 goals and 169 sub-goals, unparalleled to date in form and scope. After publishing some papers and giving presentations, amongst others, in Cagliari, Cologne, Frankfurt, Havana, Mumbai, Naples, Pune, I submitted a proposal to the publishing house C.H. Beck, Munich, to write a legal commentary on precisely this resolution. However, my proposal was forwarded to Nomos Publishing House, Baden-Baden, who quickly took up the idea, and took the lead in coordinating C.H. Beck and Hart, despite the fact that a legal commentary with the focus set on a non-binding resolution could well be a hard-selling and therefore difficult product from a publisher's point of view. Nevertheless, when outlining the exposé in 2018/2019, the overwhelming impact within the legal matrix was highlighted and the concept could solidify.

The idea of such a book then gained weight from the questions that Duncan French and Louis J. Kotzé quite precisely formulated in the introduction to their book 'Sustainable Development Goals – Law, Theory and Implementation' (2018), addressing, amongst others, the question: 'How are such Goals […] interpreted and implemented going forward, both at the international and domestic levels, in legislative, policy and importantly, judicial fora?'

I was fortunate to deepen my ideas and preparations for this book during my research stay at the Lauterpacht Centre for International Law (LCIL) at the University of Cambridge between May and July 2019. There I met many brilliant colleagues who inspired me personally greatly and who also spurred on my work on this book. In particular, I would like to acknowledge in an alphabetical order: Eyal Benvenisti, John Barker, Mihaela Barnes, Muin Boase, Marie-Claire Cordonier Segger, Gerard Conway, Markus Gehring, Joanna Gomula, Nartnirun Junngam, Avidan Kent, Paul Komba, Natalie Nunn, Hu Ren, Pablo Salas, Michele Saporiti and Isabel Staudinger. The unique atmosphere took the concept of this book steps further. Joanna Gomula opened the door initially to the LCIL, she was so kind to invite me to participate on a workshop on ASEAN in 2017, and she supported the idea of returning, for which I am deeply grateful.

Furthermore, in this academic but also personal context, I would like to mention the following colleagues in an alphabetical order who have motivated me, sometimes unconsciously, in my endeavours to achieve the outcome of this book: Daniele Amoroso, Paolo Farah, Stephen Hardy, Massimo Iovane, Markus Krajewski, Fulvio Palombino, Alicia Elias Roberts, Adriana di Stefano, Valentina Vadi and Giovanni Zarra. My gratitude is also owed to my home institution, the Ostfalia University of Applied Sciences, Wolfenbuettel, and all the people who supported me in granting a sabbatical to begin research at Cambridge University.

With the publication of this book, I reveal my immodest aim to present a manageable version of the SDGs for legal practice, which makes it possible to bring together the Global Agenda 2030 and the SDGs framed by it, with their respective legal context on different levels. The aim is to link international, European and national legal practice, to examine facts for their sustainability and to prepare the legal foundations of the Global Agenda 2030 in such a way that they become legally manageable and applicable in practice. This book, which begins with a general introduction, explains theory and practice and is generally dedicated to the practice that may accrue from the gradually yet vigorously growing implications and impacts of the SDGs on policies and areas of public and private law.

The more general exposition underlying the introduction could serve as a more universal basis for the interpretation and applicability of the SDGs in different frameworks of a broader legal array. To facilitate understanding of the interpretive approach in the second section, I provide here only a brief insight to illustrate the working method. Deemed useful,

the focus is on a systematic approach that provides additional content for each objective of the SDGs, framed by the following structure:

- Background and Origin
- Scope and Dimensions
- Interdependences
- Jurisprudential Significance
- Conclusion

To sum it all up, I have attempted to provide a concise, systematic review and analysis with a holistic legal perspective of how and to what extent the SDGs are becoming a legal norm, not through the UN, but rather through the reception of many other international organisations and public and private entities that are applying these SDGs as something earnestly valuable with a binding character that ought to be followed.

Over the past years, I have enjoyed working with many students and research assistants, but rarely have I experienced such enthusiastic motivation as with my team, which was composed of many students and post-graduates, most of whom worked with me for only a short period of time, and yet helped to move this project forward in an extraordinary way. I owe a huge debt of gratitude to my fantastic team, mostly graduates of my own faculty. The joint work started in 2020 and continued throughout 2021 with several people who merit mention.

The following people have contributed to this book in a vast and at the same time most different way, for which I owe them my sincere gratitude and it is the least to name them to acknowledge their excellent work, and I do so in alphabetical order:

- Ahmed Tahar Benmaghnia
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- Sarah Maylin Heß
- Susanna Hesko
- Aria Jalal-Gündüz
- Jennifer Alexandra Katharina Maaß
- Saparya Sood
- Alexander Schulte
- Marc-Anthony Walter

The excellent work of Jennifer Maaß during the entire course of the project should be highlighted. While writing her dissertation at the SWPS University in Warsaw, she, at the same time, remarkably co-led and structured this project. Her outstanding talents in project management, language and legal research, coupled with stunning accuracy, far exceeded my expectations. Without her, this book would most likely not have been ready for print in its current form and content.

I would also like to express my sincere thanks to Dr Wolfgang Lent of C.H. Beck, Munich, for the first encouraging feedback and Dr Matthias Knopik of Nomos Publishing House and the cooperating publishers for their trust in me, and above all, for the productive conversations promoting this publication.

Without any doubt, I have to finally admit that all mistakes in this book are entirely mine.

Comments would be greatly appreciated, and please write to w.huck@ostfalia.de.

Braunschweig, January 2022 *Winfried Huck*

CONTENTS

Goal 14
Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation[1]
14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
14.b Provide access for small-scale artisanal fishers to marine resources and markets
14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"

Word Count related to 'Marine Resources' and 'fishing/fisheries/fishers' and 'Convention on the Law of the Sea': 2
A/RES/70/1 – Transforming our world: the 2030 Agenda for Sustainable Development: 'Marine Resources': 11 'fishing/fisheries/fishers': 14 'Convention on the Law of the Sea': 2
Instruments mentioned in A/RES/70/1 in the section entitled: 'Sustainable Development Goals and targets':

[1] Taking into account ongoing World Trade Organization negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate.

A/RES/69/313 – Addis Ababa Action Agenda of the Third International Conference on Financing for Development adopted on 27 July 2015: 'Marine Resources': 8 'fishing/fisheries/fishers': 10 'Convention on the Law of the Sea': 1
A/RES/66/288 – The future we want (Rio +20 Declaration) adopted on 27 July 2012: 'Marine Resources': 26 'fishing/fisheries/fishers': 37 'Convention on the Law of the Sea': 5
A/RES/55/2 – United Nations Millennium Declaration adopted on 8 September 2000: 'Marine Resources': 0 'fishing/fisheries/fishers': 0 'Convention on the Law of the Sea': 0

Select Bibliography: Aldo E. Chircop, 'The International Maritime Organization' in Donald R. Rothwell, Alex Oude Elferink, Karen Scott and Tim Stephens (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press, Oxford 2015), 416; Donald K. Anton, Robert A. Makgill and Cymie R. Payne, 'Seabed Mining—Advisory Opinion on Responsibility and Liability' (2011) 41 *Environmental Policy and Law*, 60; Smiriti Bahety and Julian Mukiibi, *WTO Fisheries Subsidies Negotiations: Main Issues and Interests of Least Developed Countries* (CUTS International, Geneva 2017); David Le Blanc, Clovis Freire and Marjo Vierros, 'Mapping the linkages between oceans and other Sustainable Development Goals: A preliminary exploration' (2017) 149 *DESA Working Paper* (ST/ESA/2017/DWP/149); Neil Boister, *An Introduction to Transnational Criminal Law* (2nd edition, Oxford University Press, Oxford 2018), 202; Alan Boyle, 'Climate Change, Sustainable Development, and Human Rights' in Markus Kaltenborn, Markus Krajewski and Heike Kuhn, *Sustainable Development Goals and Human Rights* (Springer Nature Switzerland AG, Cham 2019), 174; Fanny Chenillat, Thierry Huck, Christophe Maes, Nicolas Grima and Bruno Blanke, 'Fate of floating plastic debris released along the coasts in a global ocean model' (2021) 165 *Marine Pollution Bulletin*, 1; Thomas Cottier, 'Property Rights, Legal Security and Development' in Thomas Cottier and Krista Nadakavukaren Schefer, *Elgar Encyclopedia of International Economic Law* (Edward Elgar Publishing, Cheltenham/Northampton 2017), 516; Daniela Diz, David Johnson, Michael Riddell, Sian Rees, Jessica Battle, Kristina Gjerde, Sebastian Hennige and J. Murray Roberts, 'Mainstreaming marine biodiversity into the SDGs: The role of other effective area-based conservation measures (SDG 14.5)' (2018) 93 *Marine Policy*, 251; Robert A. Duce, James N. Galloway and Peter S. Liss, 'The impacts of atmospheric deposition to the ocean on marine ecosystems and climate' (2009) 58 *WMO Bulletin*, 61; European Parliament, *The environmental impacts of plastics and micro-plastics use, waste and pollution: EU and national measures* (EU, Brussels 2020); Food and Agricultural Organisation, *The State of the World Fisheries and Aquaculture – Sustainability in Action*, (FAO, Rome 2020); David Freestone, 'Advisory Opinion of the Seabed Disputes Chamber' (2011) 15 *ASIL Insights*; Duncan French, 'From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor – the Seabed Disputes Chamber's 2011Advisory Opinion' (2011) 26 *International Journal of Marine and Coastal Law*, 525; Duncan French, 'The Sofia Guiding Statements on sustainable development principles in the decisions of international tribunals' in Marie-Claire Cordonier Segger and H. E. Judge Christopher Gregory Weeramantry, *Sustainable Development Principles in the Decisions of International*

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A. Background and Origin of SDG 14

1 The ocean as the largest ecosystem of the world holds huge number of biodiversity systems such as 'mangroves, coral reefs and wetlands, pelagic waters, seamounts, submarine ridges and the seafloor itself'[2] and interacts in a complex way with the global climate system.[3] According to the IPCC, all people on Earth depend directly or indirectly on the ocean. The global ocean covers 71 per cent of the Earth's surface and contains about 97 per cent of the Earth's water.[4] The state of the ocean and cryosphere interacts with each aspect of sustainability reflected in the SDGs. For example, fish,

[2] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 185.

[3] United Nations Educational, Scientific and Cultural Organization (UNESCO), *Global Ocean Science Report* (2017), 3; For more detailed information on the interaction between the ocean and the climate system, see Kagan, *Ocean Atmosphere Interaction and Climate Modelling* (1995).

[4] IPCC, 'Summary for Policymakers' *in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019), 5.

as a resource originating from the ocean, is an important factor for the supply of proteins.[5] Furthermore, the oceans also represent a significant resource from an economic perspective.[6]

However, the oceans and their associated ecosystems and resources are under massive threat, since particularly climate change causes manifold and severe impact to the ocean and the cryosphere. To IPCC it is certain that the global ocean has warmed unabated since 1970 and has taken up more than 90 per cent of the excess heat in the climate system.[7] The current observation and further estimation revealing a serious change of the most crucial systems of the Earth. Currently, the global mean sea level (GMSL) is rising with a higher acceleration in recent decades due to increasing rates of ice loss from the Greenland and Antarctic ice sheets.[8] Extreme sea level events that are historically rare (once per century in the recent past) are projected to occur frequently (at least once per year) at many locations by 2050 in all Representative Concentration Pathway (RCP) scenarios, especially in tropical regions.[9] **2**

Over the 21st century, the ocean is projected to transition to unprecedented conditions with increased temperatures, greater upper ocean stratification, further acidification and oxygen decline.[10] Today, climate change, the loss of biodiversity and the state of overfishing play a central role[11] in endangering the food supply of large parts of the population.[12] In addition, increasing pollution of the world's oceans (marine debris) puts at risk a large number of living creatures and thus also significantly interferes with natural ecosystems.[13] **3**

Since humankind has been utilising the ocean, references have been made to the proclamation of sovereign rights to its use, e.g. its navigation and its exploitation of resources. While the *Treaty of Tordesillas*[14] divided the ocean into different legal spheres for the first time in 1494, Grotius' *mare liberum* and the *Peace of Westphalia* in 1648 laid the foundation for the freedom of the seas doctrine and a distinction of the territorial sea and the high seas.[15] Although these developments led to increasing international **4**

[5] Griggs et al., *A Guide to SDG Interactions: From Science to Implementation* (2017), 190; UN, *The role of seafood in global food security*, 3.

[6] In 2015, the ocean's asset value was estimated at US $ 24 trillion: WWF, *Reviving the Ocean Economy – The case for action 2015*, 15.

[7] IPCC, 'Summary for Policymakers' *in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019), 9.

[8] IPCC, 'Summary for Policymakers' *in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019), 10.

[9] IPCC, 'Summary for Policymakers' *in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019), 20.

[10] IPCC, 'Summary for Policymakers' *in IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019), 18.

[11] FAO, *The State of World Fisheries and Aquaculture* (2018), 40.

[12] World Bank, *The Potential of the Blue Economy* (2017), 15; Friess et al., 'SDG 14: Life below Water – Impacts on Mangroves' in *Sustainable Development Goals: Their Impacts on Forests and People* (2019), 445 (461); Overfishing also leads to a significant loss of welfare in the fisheries sector: World Bank, *The Sunken Billions Revisited* (2017), 36.

[13] WWF, *Reviving the Ocean Economy – The case for action 2015* (2015), 23.

[14] Davenport, *European Treaties Bearing on the History of the United States and its Dependencies to 1648* (1917): Treaty of Tordesillas of 7 June 1494, Ratified in Arévalo by King Ferdinand II of Aragon and Queen Isabella I of Castile on 2 July 1494 and in Setúbal by the King of Portugal on 5 September 1494, issued by Pope Alexander VI., bull *Inter Caetera* of 4 May 1493: Agreement between the Portuguese and the Spanish Kingdoms to establish a new boundary line between the two crowns. The line is to run from pole to pole, 370 miles west of the Cape Verde Islands; further reading: Díaz-Trechuelo, Lourdes, 'El Tratado de Tordesillas y su proyección en el Pacífico' (1994) 4 *Revista Española del Pacífico*, 11-22.

[15] See Treves, 'Historical Development of the Law of the Sea' in Rothwell et al. (eds), *The Oxford Handbook of the Law of the Sea* (2015), 3-23.

trade on a broad scale (mostly grounded on colonialism and accompanied with slavery, exploitation and disempowerment[16]), it was not until the 21st century that concerns for the conservation and protection of the marine environment and biospheres were raised.

5 A clear reference to marine protection can be found in the 1972 Stockholm Declaration. During the Stockholm Conference, marine protection was established as a central component of environmental protection, created as a stand-alone principle in a first approach to preventing pollution of the world's oceans.[17]

6 In 1982, the United Nations Convention on the Law of the Sea (UNCLOS)[18] created a comprehensive body of law that, amongst others, includes regulations concerning pollution of the oceans and provides a comprehensive definition of the term 'pollution of the maritime environment' which refers to an

> […] introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities […][19]

7 According to Art. 192 UNCLOS, states also have a general obligation to protect and conserve the marine environment. Overall, Part VII of the Convention contains extensive regulations on the 'protection and conservation of the marine environment'.[20] When interpreting the legal background of SDG 14 in its meaning, two aspects are of particular importance: As with the *mare liberum*, UNCLOS also guarantees an area of freedom of the sea in addition to other zones although the premise assumed at the time of Grotius that the sea and its resources are inexhaustible has clearly been refuted (→ Goal 14 mn. 14 ff.). Moreover, UNCLOS does not confer absolute sovereignty rights in the extended zones, but only endows them with certain defensive rights (e.g. customs, fiscal, immigration or sanitary laws). As a result, the sea is subject to shared use and management in all its areas, albeit to varying degrees. This idea of commonship regarding benefits, burden-sharing and the 'further development of specific areas of the law of the sea'[21] is reflected in the development and formulation of SDG 14.

8 The report 'Our Common Future' (Brundtland Report), published in 1987 by the World Commission on Environment and Development, dealt extensively with oceans and their global significance. According to the report, the oceans represent the 'balance of life'.[22] However, this balance is under serious threat due to several central factors such as overexploitation, pollution, and land-based development.[23] To overcome these perils and enable sustainable development, the report also contains a variety of measures for ocean management.[24]

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[16] See instead of many: Piketty, *Capital and Ideology* (2020).

[17] UN, *Report of the United Nations Conference on the human environment 1972*, Principle 7: 'States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea'.

[18] United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, 10 December 1982, 1833 UNTS, 397 (entered into force on 16 November 1994).

[19] UNCLOS, Art. 1 IV.

[20] UNCLOS, Part VII/, Art. 192-273.

[21] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 185.

[22] Report of the World Commission on Environment and Development: Our Common Future, Part III Chapter 10 I, para. 1.

[23] Report of the World Commission on Environment and Development: Our Common Future, Part III Chapter 10, para. 9.

[24] Report of the World Commission on Environment and Development: Our Common Future, Part III Chapter 10 I, para 2.

In 1992, the protection of the oceans was also extensively included in Agenda 21.[25] **9**
The call for ocean management raised in the Brundtland Report was taken up and further elaborated Such as in the Agenda 21 and the Rio Declaration[26] which already linked the management of coastal and marine areas,[27] articulated the precautionary and the ecosystem approaches, and show a structure that is now echoed in SDG 14.2.[28]

Two years later, the aspects contained in Agenda 21 were taken up again in the 1994 **10**
report of the global conference on the sustainable development of Small Island Developing States (SIDS)[29] and expanded to include a comprehensive action programme. The focus was on SIDS and their particular vulnerability in being ecologically fragile and sensitive to environmental disasters and the effects of climate change such as hurricanes, floods, storms and sea level rise which is even aggravated by their small size, limited resources, and geographic dispersion. The natural isolation from markets and the prevention from economies of scale makes the ocean and coastal environment a strategic and 'valuable development resource' for SIDS.[30]

In 1995, the 'Agreement for the implementation of the provisions of the United **11**
Nations Convention on the Law of the Sea of 10 December 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks' established an approach to the protection of fish stocks.[31] In this context, a first definition of the term 'fish' has been established: 'molluscs and crustaceans except those belonging to sedentary species as defined in article 77 of the Convention.'[32] Within the framework of the Johannesburg Declaration on Sustainable Development in 2002, the special importance of protecting global fish stocks was again emphasised.[33]

In 2012, the UN adopted 'The future we want',[34] a comprehensive concept with **12**
various aspects of sustainability where oceans and seas were given their own section. All previous aspects were integrated and at the same time extensively linked to other aspects of sustainable development. The conservation and sustainable use of the oceans, for example, contributes to 'poverty eradication, sustained economic growth, food security and creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate

[25] United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, Brazil, 3 to 14 June 1992 (Agenda 21), Chapter 17: 'Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources'.

[26] UN, *Report of the United Nations Conference on Environment and Development*, Rio de Janeiro, 3–14 June 1992' (Rio Declaration) (n 2), annex I.

[27] UNCED, Rio de Janeiro, Brazil, 3 to 14 June 1992 (Agenda 21), Chapter 17, Programme Area A: 'Integrated management and sustainable development of coastal and marine areas, including exclusive economic zone'.

[28] Goettsche-Wanli, 'The Role of the United Nations, including its Secretariat in Global Ocean Governance' in Attard and Ong and Kritsiotis, *The IMLI Treatise On Global Ocean Governance: Volume I: UN and Global Ocean Governance* (2018), 13.

[29] A/CONF.167/9.

[30] Rio Declaration, Principle 6; see also Hébié, 'Principle 6, Special Situation of Developing Countries' in Viñuales, *The Rio Declaration of Environment and Development, A Commentary* (2015), 217.

[31] A/CONF.164/37, Art. 2: 'The objective of this Agreement is to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of the Convention'.

[32] A/CONF.164/37, Art. 1 c).

[33] A/CONF.199/20, para. 13.

[34] A/RES/66/288, *The future we want*, 11 September 2012.

change.'[35] Furthermore, the signatory states were urged to implement UNCLOS and the 1995 Fish Stock Agreement in a holistic manner.[36]

13 In the final drafting of the SDGs, two different approaches were discussed: On the one hand, goals related to the ocean should be integrated into various other goals.[37] On the other hand, a stand-alone goal with a reference to the sea should be created.[38] In the end, the second approach prevailed, resulting in the creation of SDG 14. From 2021, the UN Decade of Ocean Research for Sustainable Development will be proclaimed to push for and generate more reliable data on the protection and conservation of the marine environment to keep other SDGs on track[39] (→ Goal 13 mn. 46, 50, Goal 15, Goal 8 mn. 81, Goal 2 mn. 60, Goal 14 mn. 46 ff.).

B. Scope and Dimensions of SDG 14

14 Oceans and seas form a vital part of our ecosystem and their health and survival are crucial to the existence of the planet as we know it. With increasing ocean warming, acidification and marine pollution, the habitat and existence of several species is under threat, and with it the livelihoods of many communities that rely on fisheries for their livelihoods.[40]

15 Indicator 14.1.1 a thus includes an Index of Coastal Eutrophication (ICEP) and 14.1.1 b of plastic debris density. Global fish production is expected to reach 200 Mt by 2029 and 90 per cent of the fish produced is projected to be utilised for human consumption.[41] Further, oceans and seas also absorb large amounts of carbon dioxide and have a direct impact on climate change. Thus, a legal framework that aims at conservation and sustainable use of oceans, seas and marine resources is of utmost importance for the economy as well as for preserving biodiversity and the environment. In this regard, SDG 14 with eight targets aims to lay out a framework of various aspects of the marine ecosystem and related economy that needs attention to ensure the conservation and sustainable use of oceans, seas and marine resources.

[35] A/RES/66/288, *The future we want*, 11 September 2012, para. 158.

[36] A/RES/66/288, para. 158; UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 186.

[37] The following two categories can be found: 'Inclusion in SDGs that relate to a healthy and resilient planet and productive ecosystems, environmental sustainability, respect for planetary boundaries and / or the maintenance of the global commons. (2) Inclusion in SDGs that relate to determinants of human well-being, such as food security and good nutrition.' United Nations General Assembly Open Working Group on Sustainable Development Goals, *Compendium of TST Issues Briefs October 2014*, 187.

[38] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 186.

[39] UNESCO, *(2021-2030) The Science We Need for the Ocean We Want United Nations Decade of Ocean Science for Sustainable Development*.

[40] IPCC, 'Summary for Policymakers' in Pörtner et al. (eds), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (2019); https://www.ipcc.ch/site/assets/uploads/sites/3/2019/11/03_SROCC_SPM_FINAL.pdf.

[41] OECD/FAO, *OECD-FAO Agricultural Outlook 2020-2029*, 188, 190.

I. Sustainable use and Conservation of Oceans, Seas and Marine Resources

The framing legal fabric is set by the law of the seas and the 1982 United Nations Convention on the Law of the Sea (UNCLOS).[42] UNCLOS governs all activities related to the seas and the oceans including conservation and sustainable use of marine resources. The implementation of international law as reflected in UNCLOS is embodied as a specific target under SDG 14 which seeks to protect life under water (SDG 14.c). The oceans present conflicting challenges – on one hand to conserve and protect marine biodiversity and ecosystems, and to protect the interests of those who depend on the use of marine resources for their livelihood on the other. **16**

UNCLOS allows coastal states the right to determine the allowable catch of the living resources in its exclusive economic zone, Art. 61 UNCLOS. It further provides that, **17**

> The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall cooperate to this end.

These obligations under the guise of UNCLOS outline the framework of the targets of SDG 14 which aim to 'conserve and sustainably use the oceans, seas and marine resources for sustainable development'. The concept of sustainability holds a broad-ranging connotation such as 'sustained yield' or 'sustainable development' but can also mean 'ecological sustainability'[43] with an effective potency that is mainly directed to people (→ Intro mn. 28, 35 ff., 61). 'Ecological sustainability' presents another dimension to the concept of 'sustainability', beyond conservation of resources, and protection of biodiversity and can be understood to mean 'the maintenance, in the same place at the same time, of two interactive "things": culturally selected human economic activities and ecosystem health.'[44] This definition offers a solution to the challenges posed by SDG 14 which focusses on conserving the marine ecosystem, while at the same time sustainably using marine resources. The two are contradictory objectives to some extent, compelling an understanding of sustainability that focusses on the dynamic interaction between economic activities and the health of the ecosystem. **18**

> Target 14.2 aims to "sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans." The success of the target is assessed by the "number of countries using ecosystem-based approaches to managing marine areas.[45]

In the ecological context, ecosystem approaches 'consider the connections between living organisms, habitats, physical and chemical conditions within an ecosystem and focus on the importance of ecological integrity, biodiversity and overall ecosystem health'.[46] They 'reduce disaster risks while ensuring continued benefits to people from **19**

[42] UNCLOS, 1982. As of 2021, 168 member states have ratified the convention; see at a regional level Convention for the Conservation of the Biodiversity and the Protection of Priority Wilderness Areas in Central America (1992).

[43] Callicott and Mumford, 'Ecological Sustainability as a Conservation Concept' (1997) 11(1) *Conservation Biology*, 32 (34).

[44] Callicott and Mumford, 'Ecological Sustainability as a Conservation Concept' (1997) 11(1) *Conservation Biology*, 32 (34).

[45] A/RES/71/313, UN Statistical Commission, Indicator 14.2.1.

[46] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.2.1.

ecosystem services' and thus allow for enhancing socio-ecological resilience.[47] This understanding is also reflected in a management context, where ecosystem approaches refer to 'integrated management strategies for socio-ecological systems that consider ecological, social and economic factors and apply principles of sustainable development'.[48] In order to interlink the diverse areas of UNCLOS as fundament of SDG 14 and to ensure an integrated approach to sustainable ocean management, international cooperation and coordination, the Division for Ocean Affairs and the Law of the Sea (DOALOS), a specialized secretariat of the UNGA, provides support at the global level.[49]

20 The meaning and scope of 'conservation' of living resources refers to coastal States having to 'determine the allowable catch of the living resources in its exclusive economic zone', Art. 61. Further, the coastal state must 'ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation […]' and that 'such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global'.

21 SDG 14.5 aims at conserving 'at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information' by 2020. One indicator to the target assesses the 'coverage of protected areas in relation to marine areas'.[50] Marine protected areas (MPAs) are crucial to reduce the decline of biodiversity and ensure conservation, restoration and sustainable use of marine resources.[51] They can be described as a 'defined area within or adjacent to the marine environment which has been reserved by legislation or other effective means' to ensure 'that its marine and / or coastal biodiversity enjoys a higher level of protection than its surrounding'.[52]

22 SDG 14.a emphasises the importance of scientific and evidence-based decision making by focussing on increasing scientific knowledge, developing research capacity and transferring marine technology to facilitate development of developing countries, small island developing States (SIDS) and least developed countries.

II. Threats to Oceans

23 Despite the massive impact of climate change to the ocean and human behaviour threats to the oceans as covered by SDG 14 are among others:

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[47] Takeuchi et al., 'Ecosystem-Based Approaches Toward a Resilient Society in Harmony with Nature' in Renaud et al (eds), *Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice, Advances in Natural and Technological Hazards Research* (2016), 318 f.

[48] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.2.1.

[49] Goettsche-Wanli, 'The Role of the United Nations, including its Secretariat in Global Ocean Governance' in Attard, Ong, Kritsiotis, *The IMLI Treatise On Global Ocean Governance: Volume I: UN and Global Ocean Governance* (2018), 4.

[50] A/RES/71/313, UN Statistical Commission, Indicator 14.5.1.

[51] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.5.1.

[52] OECD, *Marine Protected Areas: Economic, Management and Effective Policy Mixes*, 2017, 13; further reading McNeely, 'Protected Areas, Biodiversity, and the Risks of Climate Change' in Renaud et al. (eds), *Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice, Advances in Natural and Technological Hazards Research, Vol. 42*, 379-400.

1. Marine Pollution

Marine pollution occurs when harmful effects result from the entry into the ocean of chemicals, particles, industrial, agricultural and residential waste, noise, or the spread of invasive organisms. 80 per cent of marine pollution comes from land. Air pollution and atmospheric alteration are also a contributing factor by carrying off iron, carbonic acid, nitrogen, silicon, sulphur, pesticides or dust particles into the ocean.[53] **24**

Under the auspices of the International Maritime Organization (IMO),[54] the protection of the environment started with the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 ('London Convention'), which was one of the first global conventions to protect the marine environment from human activities. Despite this and other agreements aiming to protect the marine environment, such as MARPOL Annex V (Regulations for the Prevention of Pollution from Ship-generated Waste), 13 countries were documented to have disposed or dumped nuclear / radioactive waste in the sea between 1946 and 1993. The waste materials included both liquids and solids in various containers, as well as reactor vessels with and without spent or damaged nuclear fuel.[55] **25**

One of the earliest anti-dumping laws was Australia's Beaches, Fishing Grounds and Sea Routes Protection Act 1932, which prohibited the discharge of 'garbage, rubbish, ashes or organic refuse' from 'any vessel in Australian waters' without prior written permission from the federal government which also required permission for scuttling.[56] **26**

Marine Pollution is addressed by an abundance of international legal instruments and provisions.[57] SDG 14.1 aims to 'prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution' by 2025. According to Art. 194 UNCLOS, a state is required to take 'all measures […] that are necessary to prevent, reduce and control pollution of the marine environmental from any source.' The two indicators to the SDG 14.1 are the index to coastal eutrophication[58]; and plastic debris density.[59] There are two levels of data proposed to measure the two indicators with SDG 14.1. Level 1 is 'globally available data from earth observations and modelling', and level 2 is 'national data which will be collected from countries'.[60] Eutrophication as mentioned above is defined by the European Commission as 'the enrichment of water by nutrients, especially compounds of nitrogen and / or phosphorus, causing an accelerated growth of algae and higher forms of plant life to pro- **27**

[53] Duce and Galloway and Liss, 'The impacts of atmospheric deposition to the ocean on marine ecosystems and climate' (2009) 58(1) *WMO Bulletin*, 61-6.

[54] Further reading on the purposes and functions of the IMO: Chircop, 'The International Maritime Organization' in Rothwell et al. (eds), *The Oxford Handbook of the Law of the Sea* (2015), 416 ff.

[55] IAEA-TECDOC-1105, *Inventory of radioactive waste disposals at sea 1999*, Vienna, 14 (Table V.); IAEA-TECDOC-1776, *Inventory of Radioactive Material Resulting from Historical Dumping, Accidents and Losses at Sea for the Purposes of the London Convention 1972 and London Protocol 1996*.

[56] https://www.legislation.gov.au/Details/C1932A00073.

[57] UNEP, *Marine Litter Legislation: A Toolkit for Policymakers*, 2016, 6; Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean; see e.g. UNEP/GPA/IGR.3/5, Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (2011); Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution (1978) and its Protocol concerning Marine Pollution resulting from Exploration and Exploitation of the Continental Shelf (1989); International Maritime Organization, International Convention for the Prevention of Pollution from Ships (MARPOL) (1973) and its Protocol of 1978; International Maritime Organization, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) (1972) and its Protocol of 1996.

[58] UN Statistical Commission, A/RES/71/313, Indicator 14.1.1 a.

[59] UN Statistical Commission, A/RES/71/313, Indicator 14.1.1 b.

[60] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.1.1.

duce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned'.[61] The definition of Eutrophication from the UN is as follows: 'excess nutrient loading into coastal environments from anthropogenic sources, resulting in excessive growth of plants, algae and phytoplankton'.[62]

28 The gravity of this problematic widespread occurrence is revealed by the US Environmental Protection Agency (EPA), that 'nutrient pollution is one of America's most widespread, costly and challenging environmental problems, and is caused by excess nitrogen and phosphorus in the air and water.'[63]

29 Eutrophication is a big concern for the environment with the potential to cause extreme damage to marine ecosystems. Marine litter, also called marine debris, is 'any persistent, manufactured, or processed solid material that is discarded, disposed of or abandoned in the marine and coastal environment'.[64] Coastal zone is the 'exclusive economic zone' (EEZ) which extends up to 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.[65]

2. Marine Debris

30 The Marine Debris Program of the US National Oceanic and Atmospheric Administration (NOAA) and the United Nations Environment Programme (UNEP) jointly developed a global agenda specifically developed for and aiming at the prevention, reduction and management of marine debris. Known as the Honolulu Strategy,[66] it is a non-legally binding framework for a 'comprehensive and global collaborative effort to reduce the ecological, human health, and economic impacts of marine debris worldwide' to align further efforts such as the Hawaii Marine Debris Action Plan to cope with the 'complex cultural and multi-sectoral problem'.[67]

31 Marine Debris consists at least of '[p]lastic and other solid waste from land-based and at-sea sources, lost cargo, ALDFG, and abandoned or derelict vessels'.[68] The littering with marine debris detrimentally and directly affect 'coastal and marine species and habitats' due to entanglement or ingestion which causes restricted movement, starvation, suffocation, laceration (subsequent) infection and / or mortality. Marine debris is likely to also alter, degrade or destruct habitats through physical interference a result of which is the immediate and chronic threat to aquatic and terrestrial food webs. Especially polychlorinated biphenyls (PCBs), persistent organic pollutants such as dichlorodiphenyltrichloroethane (DDT), polycyclic aromatic hydrocarbons, and aliphatic hydrocarbons remain permanently in the oceans and cannot be dissolved or extracted

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[61] Directive 91/271/EEC, Art. 2.

[62] https://unstats.un.org/sdgs/metadata/files/Metadata-14-01-01.pdf.

[63] https://www.epa.gov/nutrientpollution/issue.

[64] UNEP, *Marine Litter: A Global Challenge*, 2009, 13; UNEP, *Marine Litter Legislation: A Toolkit for Policymakers*, 2016, 2.

[65] UNCLOS, Art. 57; The baselines as initial point of measuring are to be determined in accordance with UNCLOS, see e.g. Arts. 5, 7, 14, 47.

[66] NOAA and UNEP, *The Honolulu Strategy, A Global Framework for Prevention and Management of Marine Debris* (2016), https://wedocs.unep.org/bitstream/handle/20.500.11822/10670/Honolulu%20strategy.pdf?sequence=1&isAllowed=y.

[67] NOAA and UNEP, *The Honolulu Strategy, A Global Framework for Prevention and Management of Marine Debris* (2016), 4.

[68] NOAA and UNEP, *The Honolulu Strategy, A Global Framework for Prevention and Management of Marine Debris* (2016), 4.

with technical means (yet). This permanent form of alteration also impacts 'economic health, human health and safety, and social values.'[69]

The non-binding character of the Honolulu Strategy calls for the accompaniment of further, in particular positive-legally anchored 'national, municipal, industrial or international organisational activities and is therefore restricted to the will of participating states and stakeholders.'[70] 32

3. Ocean Acidification

Like climate change, ocean acidification is caused due to absorption of carbon dioxide or other emissions. Ocean acidification has a profound impact on marine biodiversity and threatens the extinction of many species.[71] SDG 14.3 aims at tackling this issue.[72] Ocean acidification is the 'reduction in the pH of the ocean over an extended period, typically of decades or longer, which is caused primarily by the uptake of carbon dioxide from the atmosphere'.[73] SDG 14.3 aims to 'minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels'. 33

The indicator to SDG 14.3 measures the 'average marine acidity (pH) measured at agreed suite of representative sampling stations'[74] and is based on observations that constrain the ocean carbon system and which are required to describe the variability in ocean acidity. The carbon system in this context mainly refers to the four measurable parameters: pH (the concentration of hydrogen ions on a logarithmic scale), DIC (CT; total dissolved inorganic carbon), pCO_2 (carbon dioxide partial pressure), and TA (AT, total alkalinity). Average, as used here, is the equally weighed annual mean.[75] 34

With ocean acidification, a serious by-product of greenhouse gas emissions is addressed under SDG 14.3. However, several other issues such as sea-level rise, ocean warming and salinity, which have a significant impact on ecosystems and fall into the scope of SDG 14 have not found place in the priorities under SDG 14.[76] 35

III. Protecting the Economy Surrounding Oceans

1. Sustainable Fisheries

One of the main objectives of UNCLOS has been to conserve and manage fisheries for sustainable use. UNCLOS provides coastal states with the rights and obligations to sustainably use the fisheries in their EEZ, Art. 58 UNCLOS. EEZs contain 90 per cent of the world's fisheries.[77] Art. 6 of the 1995 Agreement for the Implementation of the Provisions of the UNCLOS relating to the Conservation and Management of Straddling Fish 36

[69] NOAA and UNEP, *The Honolulu Strategy, A Global Framework for Prevention and Management of Marine Debris* (2016), 4-10; see also European Parliament, *The environmental impacts of plastics and micro-plastics use, waste and pollution: EU and national measures* (2020), 4-54.

[70] European Parliament, *The environmental impacts of plastics and micro-plastics use, waste and pollution: EU and national measures* (2020), 29.

[71] Sakashita, 'Curbing CO2 Pollution: Using Existing Laws To Address Ocean Acidification' in Abate (ed), *Climate Change Impacts on Ocean and Coastal Law: U.S. and International Perspectives* (2015), 28 ff.

[72] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.3.1.

[73] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.3.1.

[74] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.3.1.

[75] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.3.1.

[76] Blanc and Freire and Vierros, 'Mapping the linkages between oceans and other Sustainable Development Goals: A preliminary exploration' (2017) 149 *DESA Working Paper*, 5.

[77] Food and Agricultural Organisation (FAO), *The State of the World Fisheries and Aquaculture. Sustainability in Action*, 2020, 94.

Stocks and Highly Migratory Fish Stocks (United Nations Fish Stock Agreement, 'UNFSA') provides for a precautionary approach to conserve, manage and exploit straddling fish stocks and highly migratory[78] fish stocks. Further, states are also required to give access to and share scientific information to enable reliance on scientific advice for developing, adopting and implementing measures to promote fishery conservation and management.[79] In addition, the UNGA resolution also encourages states to 'apply the precautionary approach and an ecosystem approach in adopting and implementing conservation and management measures addressing, inter alia, by-catch, pollution, overfishing, and protecting habitats of specific concern, taking into account existing guidelines developed by the Food and Agriculture Organization of the United Nations'.[80]

37 SDG 14.4 covers similar objectives and aims at effective regulation of harvesting and bringing an end to overfishing, illegal, unreported and unregulated fishing and destructive fishing practices. With SDG 14.4 'science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics' shall be implemented by 2020. Indicator 14.4.1 measures the 'proportion of fish stocks within biological sustainable levels'.[81] A fish stock is considered to be biologically sustainable if 'its abundance is at [level] or greater than the level that can produce the maximum sustainable yield'.[82] Further, 'maximum sustainable yield' is defined as 'the greatest amount of catch that can be harvested continuously from a stock under constant and current environmental conditions (e.g. habitat, water conditions, species composition and interactions, and anything that could affect birth, growth, or death rates of the stock) without affecting the long-term productivity of the stock.'[83] Even though the indicator is in conformity with the requirements under UNCLOS,[84] UNFSA[85] and the FAO Code of Conduct for Responsible Fisheries (1995),[86] measuring the sustainable level of fish stock as one that can produce sustainable yield, can be said to be more consumption-oriented rather than (ecological) conservation oriented.

38 In relation to illegal, unregulated and unreported (IUU) fishing, the FAO Agreement on Port State Measures of 2009 (PSMA) is significant as it is the first binding international agreement that specifically addresses this menace. The agreement is built on disincentivising port vessels from engaging in IUU fishing by using port-state mea-

[78] See also Convention on the Conservation of Migratory Species of Wild Animals (Convention on Migratory Species (CMS)) (1979); Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD Guidelines) (2004), Principles 3 and 10.

[79] A/CONF.164/37, *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (1995), Art. 6; see also A/RES/61/105, *Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments*, para. 6.

[80] FAO, *Code of Conduct for Responsible Fisheries* (1995); FAO and Committee on World Food Security, *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* (2012); FAO, *Voluntary Guidelines for Flag State Performance* (2015); FAO, *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication* (2018).

[81] UN Statistical Commission, A/RES/71/313, Indicator 14.4.1.

[82] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.4.1.

[83] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.4.1.

[84] UNCLOS, Arts. 61(3), 119(1).

[85] A/CONF.164/37, *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (1995), Art. 5(b).

[86] FAO, *Code of Conduct for Responsible Fisheries* (1995), Art. 7.2.1.

sures[87] (not allowing *inter alia* unauthorised vessels or vessels engaging in IUU fishing from using ports and landing their catches), and thereby preventing the products from such activities from reaching the national and international markets. The PSMA has adopted the definition of IUU fishing from the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.[88] The PSMA entered into force in 2016 and has 68 States Parties. The definition of IUU fishing provided by the FAO is very broad. In brief, IUU fishing exists when 'fishing violates the laws and regulations that apply to fisheries in territorial waters, exclusive economic zones, or high sea fisheries.'[89]

39 One of the major agreements that support the prevention of illegal fishing lies in the important role of flags of vessels. It is important to ensure that a State prevent a 're-flagging', Art. 5 and to strengthen its control over its vessels to ensure compliance with international conservation and management measures. The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement), aims to enhance the role of flag States and ensure compliance with international measures.[90]

40 The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement) entered into force on 11 December 2001.

41 The UN Fish Stocks Agreement aims to ensure the long-term conservation and sustainable use of straddling and highly migratory fish stocks within the framework of UNCLOS. The Agreement also spells out the duties of flag States including those related to registration and records of vessels, authorisations, MCS and compliance and enforcement.[91]

42 The several international agreements are accompanied by additional Regional Mechanism serving to combat IUU fishing.[92] However, the US estimated that China, Russia, Mexico, Vietnam, and Indonesia are to be relatively substantial exporters of marine-capture IUU imports to the US.[93]

2. Subsidies contributing to illegal, unreported and unregulated fishing

43 As another aspect affecting sustainable fisheries, subsidies contribute to overcapacity and overfishing or contribute to illegal, unreported and unregulated fishing. SDG 14.6 attempts to prohibit and / or eliminate such subsidies and to also make special and differential treatment for developing and least developed countries an integral part of the WTO fisheries subsidies negotiation. The only indicator to SDG 14.6 assesses progress by the extent to which international instruments aimed at combating illegal, unreported and unregulated fishing such as UNCLOS, UNFSA, The International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), The 2009 FAO Agreement on Port State Measures to Prevent, Deter and Eliminate

[87] FAO, *Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing* (adopted 22 November 2009, entered into force 5 June 2016), Art. 2.

[88] FAO, *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, para 3.

[89] Boister, *An Introduction to Transnational Criminal Law* (2nd Edition, 2018), 202.

[90] Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (The Compliance Agreement) (Rome 1995).

[91] http://www.fao.org/iuu-fishing/international-framework/un-fish-stocks-agreement/en/.

[92] http://www.fao.org/iuu-fishing/regional-mechanisms/en/.

[93] Report of the United States International Trade Commission, *Seafood Obtained via Illegal, Unreported, and Unregulated Fishing: U.S. Imports and Economic Impact on U.S. Commercial Fisheries* (2021), 11.

Illegal, Unreported and Unregulated Fishing (PSMA), The FAO Voluntary Guidelines for Flag State Performance (VG-FSP) and The FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement) are implemented by a state.[94] While SDG 14.6 seems to be specifically about subsidies, the indicator that measures the achievement of SDG 14.6 is broader in scope and assesses the conformity to international instruments in general, and thus, the indicator overlaps with SDG 14.4.

3. Small Scale Fishers

44 Fisheries are the source of livelihood for many impoverished and indigent communities around the world. Small scale fisheries employ more than 90 per cent of people working in fisheries[95] of whom approximately 97 per cent live in developing countries.[96] They are characterised by 'a dynamic and evolving subsector of fisheries employing labour-intensive harvesting, processing and distribution technologies to exploit marine and inland water fishery resources'.[97] SDG 14.b addresses the threat posed to the livelihoods of small small-scale artisanal fishers by strained marine resources by aiming to provide them access to marine resources and markets in line with Rio+20 outcome document which states,

> We commit to observe the need to ensure access to fisheries and the importance of access to markets, by subsistence, small-scale and artisanal fisherfolk and women fish workers, as well as indigenous peoples and their communities, particularly in developing countries, especially small island developing States.[98]

45 Indicator 14.b.1 assesses 'progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries'. Access right for small-scale fisheries require an enabling environment which comprises 'appropriate legal, regulatory and policy frameworks; specific initiatives to support small-scale fisheries; and related institutional mechanisms which allow for the participation of small-scale fisheries organisations in relevant processes.'[99]

C. Interdependences of SDG 14

46 The oceans contribute to poverty alleviation by providing sustainable livelihoods and decent work, while at the same time being critical to global food security and human health. Moreover, oceans function as the primary regulator of the global climate and an important sink for greenhouse gases as well supplying humanity with water and the oxygen we breathe.[100] As noted above, climate change is causing a variety of impacts on the ocean that relate to all the SDGs.

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[94] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.6.1.

[95] See also A/RES/73/165, *United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas*, 21 January 2019, Arts. 13, 17 and 20.

[96] FAO, *The State of the World Fisheries and Aquaculture. Sustainability in Action*, 2020, 133.

[97] FAO, *A research agenda for small-scale fisheries*, 2004, 3.

[98] A/RES/66/288, *The future we want,* para. 175.

[99] UN Statistics Division, SDG Indicators: Metadata Repository, Indicator 14.b.1.

[100] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 182 f.; OECD, *OECD Review of Fisheries 2020* (2020).

The ongoing alteration of oceans which harms low-lying islands and coasts (LLIC) already today, including SIDS and least developed countries.[101] Disproportionately higher risks are expected in the course of the 21st century. The relationship with SIDS underlines the wide range of relationships to SDGs 2, 5, 6, 7, 12, 13, 14, 15 and 17 and in the case of tourism to SDG 8 as well.[102] **47**

The first two years of the SARS-CoV-2 pandemic have led to an enormous increase in plastic waste. Hygiene regulations and the falling price of petroleum and the plastics made from it threaten to reverse progress already made in the prevention and recycling of plastics, revealing a currently amplified link to SDG 12 (SDG 12.3, 12.4, 12.5).[103] **48**

Through fisheries and marine aquacultures, shipping and shipbuilding, ports, tourism, oil, gas, mining and maritime transport industries as well as through actions of restoration of marine and coastal ecosystems creates workplaces (SDG 8.3, SDG 8.4) and thus contributes to eradicate poverty (SDG 1.5, SDG 1.b),[104] as 80 per cent of global trade volume is seaborne.[105] Other net benefits of achieving SDG 14.2 would include improved revenue from tourism (SDG 8.9, SDG 12.b),[106] enhanced biodiversity and fish stocks, and increased potential for income from blue carbon markets and coastal habitats protect homes, communities and businesses from extreme climate-related events such as coastal flooding and storms, which contributes to reduce the vulnerability of poor people (SDG 1.5) and the associated economic impacts (SDG 1.1, SDG 1.2).[107] **49**

Fish as a key driver for providing food security and meeting nutritional needs in many developing and developed countries (SDG 2.1, SDG 2.2, SDG 2.4)[108] accompanied by effective regulation to end overfishing, IUU and destructive fishing practices and prohibiting or eliminating certain forms of (fisheries) subsidies which contributes to overcapacity and overfishing (SDG 14.4, SDG 14.6) directly contributes to achieving safe nutrition (SDG 2.1) and ending malnutrition in all its forms (SDG 2.2). **50**

However, SDG 14 could also adversely affect the targets of SDG 8, as taking measurements, to protect, restore and promote marine and coastal ecosystems might entail restrictions for economic activities and therefore limit its opportunities for economic growth and job creation (and vice versa).[109] It should be also mentioned, that tourism may provide a substantial opportunity, especially for SIDS, for economic growth but may at the same time be harmed by several forms of mass tourism that may cause lasting damage to the ecosystem of the sea and coastal areas (→ Goal 8 mn. 81). **51**

Since coasts and coastal zones are highly attractive for human settlement and urban development, often driven by the economic opportunities and natural resources **52**

[101] See Cordonier Segger and Weeramantry, 'Introduction' in Cordonier Segger and Weeramantry, *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1999-2012* (2017), 2.

[102] https://www.ipcc.ch/srocc/chapter/cross-chapter-box-9-integrative-cross-chapter-box-on-low-lying-islands-and-coasts/.

[103] https://www.ecowatch.com/coronavirus-plastic-waste-2645831072.html; Martens and Ellmers and Pokorny on behalf of Global Policy Watch, COVID-19 and the SDGs, The impact of the coronavirus pandemic on the global sustainability agenda, 6 f.

[104] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 182; Griggs et al., *A Guide to SDG Interactions: From Science to Implementation* (2017), 180; insights on shaping decent work in the fisheries sector in the future: FAO, *Joining forces to shape the fishery sector of tomorrow, Promoting safety and decent work in fisheries through the application of international standards* (2020).

[105] UNCTAD, *Review Of Maritime Transport 2018*, 23.

[106] UNEP/CMS/Resolution 12.23, Convention on Migratory Species, Sustainable Tourism and Migratory Species.

[107] Griggs et al., *A Guide to SDG Interactions: From Science to Implementation* (2017), 185.

[108] FAO, *The State Of World Fisheries and Aquaculture 2020*, 67.

[109] Griggs et al., *A Guide to SDG Interactions: From Science to Implementation* (2017), 192.

provided, a direct relationship between ocean sustainability and sustainable cities and communities reveals.[110] Therefore, achieving targets under SDG 14 has influence on coastal cities and communities, such as by preventing and significantly reducing marine pollution of all kinds, in particular from land-based activities (SDG 14.1) would improve adequate, safe and affordable housing and basic services and upgrade slums (SDG 11.1), enhance inclusive and sustainable urbanisation processes (SDG 11.3) and reduce the adverse per capita environmental impact of cities (SDG 11.6) (→ Goal 11 mn. 49, 54).

53 As mentioned above, drastically reducing marine pollution and stop the unsustainable practice of illegal, unreported and unregulated fishing (SDGs 14.1, 14.4 and 14.7) which impacts significantly on life below water as well as on life on land,[111] is mandatory to sustainably preserve and conserve the ocean's biodiversity, and therefore strongly synergises with achieving the sustainable management and efficient use of natural resources (SDG 12.2), reducing food waste (SDG 12.3), achieving the environmentally sound management of chemicals and all wastes throughout their life cycle (SDG 12.4) and promoting to reduce waste generation through prevention, reduction, recycling and reuse (SDG 12.5) and encouraging companies to adopt sustainable practises (SDG 12.6).

54 Oceans and their biodiversity are affected by climate change and thus, achieving goals of SDG 14 is highly synergistic with SDG 13, as among others, strengthening the resilience of ocean and coastal ecosystems, and restoring their health and protect the ocean from further unsustainable practices will greatly contribute to achieve SDG 13 (→ Goal 13 mn. 46, 50). 'Life under water is essential to life on land.'[112] The ocean holds a large part of CO_2. Its health and capacity naturally determine the formation and shaping of terrestrial habitats.

55 Referring to Sánchez Castillo-Winckels, SDG 14 is strongly intertwined with SDG 16 since it is 'highly relevant to ocean stability […], for it aims at building transparent, accountable and effective institutions at all levels.'[113] Moreover, the encouraged public access to information and participation in decision-making as a way of strengthening institutions at all levels supports the implementation of SDG 14 and resembles upon SDG 4, SDG 6, SDG 9 and SDG 12 as well as SDG 7 and SDG 17. Together with SDGs 6, SDG 13 and SDG 15, SDG 14 builds the biosphere basis for all other SDGs.[114]

D. Jurisprudential Significance of SDG 14

56 SDG 14 adds various concepts such as the ecosystem approach, the development approach, and as natural capital or man-made capital. The concepts supported are

[110] 65 per cent of all megacities worldwide are located in coastal areas, and as a result coastal areas generally show higher population densities, growth and urbanisation trends than inland areas; Griggs et al., *A Guide to SDG Interactions: From Science to Implementation* (2017), 181.

[111] http://www.unesco.org/new/en/natural-sciences/ioc-oceans/focus-areas/rio-20-ocean/blueprint-for-the-future-we-want/marine-pollution/facts-and-figures-on-marine-pollution/; https://www.sciencedirect.com/topics/earth-and-planetary-sciences/marine-pollution; see on the specific matter of plastic debris: Chenillat et al., 'Fate of floating plastic debris released along the coasts in a global ocean model' (2021) 165 *Marine Pollution Bulletin*; Mucientes and Queiroz, 'Presence of plastic debris and retained fishing hooks in oceanic sharks' (2019) 143 *Marine Pollution Bulletin*, 6-11; Grant et al., 'Seabird breeding islands as sinks for marine plastic debris' (2021) 276 *Environmental Pollution*.

[112] https://www.un.org/press/en/2020/sea2122.doc.htm.

[113] Sánchez Castillo-Winckels, 'How the Sustainable Development Goals promote a new conception of ocean commons governance' (2017) in French and Kotzé (eds), *Sustainable Development Goals, Law, Theory and Implementation*, 117.

[114] Sánchez Castillo-Winckels, 'How the Sustainable Development Goals promote a new conception of ocean commons governance' (2017) in French and Kotzé (eds), *Sustainable Development Goals, Law, Theory and Implementation*, 117.

complemented by the 'do no harm' principle which is anchored in the expression of sustainable management and the restoration of fish stocks, applying equitable burden sharing and benefit sharing, e.g. for Small Island Developing States (SIDS). Under UNCLOS, SDG 14 becomes legally applicable mainly through the jurisdiction of the associated body of judicial control, ITLOS. With its scope over maritime occurrence covering more than 70 per cent of the planet, UNCLOS clarifies 'a State's freedom of navigation and fishing'[115] through the classification of zones that are either subject to state sovereignty (internal waters, 12 nautical miles territorial sea), subject only to limited or shared jurisdiction (max. 24 nautical miles contiguous zone, continental shelf, and 200 nautical miles, EEZ) or are assigned to the seabed of the high seas (the Area[116]), which is seen as common heritage of humankind.[117] The Area as subject to the principle of joint and cooperative exploitation is protected by specific legal regimes such as regulating fishing on the high seas or deep seabed mining. By implementing international law as reflected in UNCLOS, the conservation and sustainable use of oceans and their resources shall be achieved (SDG 14.c).[118] Thus, international water law and international law have a limiting effect on the exercise and acquisition of property rights.[119] Further background of legal interpretation and limitation is set by the international law principle of CBDR, the precautionary principle, the principle of prevention, the ecosystems approach, and the participatory approach. These principles mainly unfold effects on State-to-State legal relations, e.g. when international treaties or other (protective) instruments are developed and must be considered when interpreting UNCLOS.[120] Since UNCLOS indicates which areas (zones) are beyond the jurisdiction of a coastal State, it follows that no single State has overall competence for the protection and preservation of the marine environment. Rather, these areas are deemed 'the global commons' which allow access for every State.[121] This forms context to the question who actually is the (duty) addressee of SDG 14.1, SDG 14.2 and SDG 14.3 and how the burden of conserving and sustainably using the ocean are to be understood and shared. In particular, the principles of precaution and prevention, manifested in a huge amount of marine-protecting instruments and frameworks,[122] reveal the inseparable

[115] Schäli, 'Trade, Environment and the Law of the Sea' in Cottier and Nadakavukaren Schefer, *Elgar Encyclopedia of International Economic Law* (2017), 632.

[116] To be understood as the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction, Art. 1(1) UNCLOS.

[117] The Common heritage of mankind include 'the Area' and its resources, Art. 136 UNCLOS; see also UNGA resolution 2749 (XXV) of 17 December 1970, para. 1; other expressions include: 'common heritage of humankind' or 'global environmental commons which is needed for human survival' or 'ocean global commons', see Schrijver, 'Advancements in principles of international law' in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1992–2012* (2017), 105; Independent Group of Scientists appointed by the Secretary-General, *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development* (2019), 95; Sánchez Castillo-Winckels, 'How the Sustainable Development Goals promote a new conception of ocean commons governance' in French and Kotzé (eds), *Sustainable Development Goals, Law, Theory and Implementation* (2017), 117.

[118] Sánchez Castillo-Winckels, 'How the Sustainable Development Goals promote a new conception of ocean commons governance' in French and Kotzé (eds), *Sustainable Development Goals, Law, Theory and Implementation*, 132.

[119] Cottier, Property Rights, Legal Security and Development' in Cottier and Nadakavukaren Schefer, *Elgar Encyclopedia of International Economic Law* (2017), 516.

[120] Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (2017), 26.

[121] Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (2017), 17 ff.

[122] See e.g. 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil Thereof; 1977 Con-

intertemporal dimension[123] which was given explicit expression with the means of SDG 14.c.

57 In addition to these specific regimes, the commercial use of the ocean, such as the exploitation of fish stocks for trade, transport or energy opens up the sphere of application of world trade law. Further international legal instruments that shape the interpretation of SDG 14 include the 'Straddling Fish Stocks Agreement'[124], the Ramsar Convention[125], the New York Convention[126], and the Helsinki Convention[127] which provide for cooperation and collaboration relating to protection of wetlands, international watercourses or transboundary watercourses'.[128]

58 This legal framework is contrasted with changes in natural conditions such as the increasing marine acidification due to, among other things, increased CO_2 uptake largely attributable to climate change accompanied by ocean temperature rise, the high level of marine pollution from shipping, plastic waste, industrial waste and wastewater, as well as overfishing and the associated destruction of biotopes in the sea. This changing conditions hit coastal regions and SIDS significantly harder due to their geographic location and the ocean being a central element in their culture 'while at the same time being tightly linked to their economies.'[129] Further, not entirely new challenges are becoming more apparent and acute in the not so far future such as environmental or climate refugees and the intertwined[130] phenomenon of sea-level rising (flooding of low-lying islands) or further issues relating to 'the pollution of the oceans, rivers and

vention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques; 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; 1974 Convention for the Prevention of Marine Pollution from Land-Based Sources; 1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft; 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage; 1991 OAU Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (Article 4 (3) (f)), in the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention, Article 2 (2) (a)), and in the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area (Article 3 (1) and (2)), 1992 Convention on Biological Diversity (preamble and Article 3), 1992 United Nations Framework Convention on Climate Change (preamble and Article 3 (3)), and the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change (preamble), 2000 Cartagena Protocol on Biosafety (preamble and Arts. 2, 4), 2001 Convention on Persistent Organic Pollutants (POPs Convention) (preamble and Art. 1).

[123] Both principles and their time-independent, intergenerational character are also subject to judicial discussion; see e.g. in the context of common goods: ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Separate Opinion of Judge Cançado Trindade, 20 April 2010, paras. 89-96.

[124] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

[125] Convention on Wetlands of International Importance, 21 December 1975.

[126] UN Convention on the Law of the Non-navigational Uses of International Watercourses, 21 May 1997.

[127] Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 17 March 1992.

[128] CISDL / UNEP, *SDG 14 on Ensuring Conservation and Sustainable Use of Oceans and Marine Resources: Contributions of International Law, Policy and Governance, Issue Brief 2016*.

[129] UNGA Open Working Group on SDGs, *Compendium of TST Issues Briefs* (2014), 183.

[130] Different forms of pollution affecting different spheres of the Earth lead to marine system harm. This important interlinkage has been recognised and is also reflected in the context of the development of law, see e.g. A/73/10, Report of the International Law Commission, Seventieth session (30 April–1 June and 2 July–10 August 2018), paras. 77 f. (general comment), at preamble: 'Acknowledging that the atmosphere is essential for sustaining life on Earth, human health and welfare, and aquatic and terrestrial ecosystems'.

lakes of this world.'[131] Until now, the ocean has bound about 90 per cent of the heat generated by rising greenhouse gas (GHG) emissions in the Earth's system as well as 30 per cent of carbon emissions.[132] This absorption alters the composition of the ocean and its ecosystems. The resulting impacts on human beings require marine conservation be placed at the centre of efforts.[133] The legal profundity offered by SDG 14 cannot be directly recognised or inferred from its wording. However, SDG 14 includes multiple levels of law that reveal the far-reaching interconnections between environmental law and human rights and not only demand but also enable a holistic legal reasoning.

Human rights agreements were also mentioned during the SDG negotiations as a means to ensure that the designation of marine protected areas (MPAs) does not harm local communities and that the regulation of sea-based economic activities serves to protect the rights of women and children, indigenous peoples, migrants and refugees, and other vulnerable and marginalised groups. According to Knox, SDG 14 could be used to determine 'whether an acceptable balance between environmental protection and economic development has been achieved'.[134] This would allow to derive whether states comply with their international human rights obligations and whether they fulfil their function 'to protect against human rights abuses due to environmental harm.'[135] **59**

I. Jurisdiction on Vision and Objectives

Relevant legal disputes that fall within the sphere of SDG 14 are particularly related to the pollution of the oceans and the resulting acidification with its relevance for climate change, the overfishing and illegal exploitation,[136] the 'unsustainable extraction of marine non-living resources' such as deep sea mining offshore oil and gas drilling'[137] as well as delimiting sovereign rights of states, e.g. due to melting polar ice that opening up new shipping passages and new potential resources, are ongoing issues. **60**

[131] Weeramantry, 'Sustainable justice through international law' in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1992 – 2012* (2017), 111 f.; Behlert, 'A significant opening, On the HRC's groundbreaking first ruling in the case of a 'climate refugee" (2020) *Völkerrechtsblog* (International Law & Legal Thought, 30/01/2020); https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25482&LangID=E.

[132] https://unfccc.int/news/urgent-climate-action-is-needed-to-safeguard-the-world-s-oceans.

[133] Further reading on the multi-layered impacts on human social, cultural and economic conditions: Diz et al., 'Mainstreaming marine biodiversity into the SDGs: The role of other effective area-based conservation measures (SDG 14.5)' (2018) 93 *Marine Policy*, 251-61; Kenny et al., 'Delivering sustainable fisheries through adoption of a risk-based framework as part of an ecosystem approach to fisheries management' (2018) 93 *Marine Policy*, 232-40; Mohammed et al., 'Fiscal reforms for sustainable marine fisheries governance: Delivering the SDGs and ensuring no one is left behind' (2018) 93 *Marine Policy*, 262-70.

[134] Knox, 'Human Rights, Environmental Protection, and the Sustainable Development Goals' (2015) 24 *Wash. L. Rev.*, 517 (529, 533); Ntona and Morgera, 'Connecting SDG 14 with the other Sustainable Development Goals through marine spatial planning' (2018) 93 *Marine Policy*, 214-22.

[135] Ntona and Morgera, 'Connecting SDG 14 with the other Sustainable Development Goals through marine spatial planning' (2018) 93 *Marine Policy*, 214 (215).

[136] Independent Group of Scientists appointed by the Secretary-General, *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development* (2019), 10, 132.

[137] United Nations General Assembly/Open Working Group on Sustainable Development Goals, *Compendium of TST Issues Briefs* (2014), 183.

1. International Jurisdiction

61 The linkage of life to the world's oceans and the need to protect these fragile entities in international cooperation and solidarity can be read from Art. 197 UNCLOS[138] which requires States to 'cooperate on a global and, if appropriate, on a regional basis [to formulate] standards and practices for the protection and preservation of the marine environment'. The protection and preserving of the marine environment as demanded in Art. 192 UNCLOS leads to states' obligations of all parties to UNCLOS but, moreover, is argued to be of *erga omnes* character which 'owes the international community as a whole.'[139] Such reasoning can be found in the *South China Sea Arbitration*[140], where the Tribunal stated that 'the environmental obligations in Part XII [UNCLOS] apply to States irrespective of where the alleged harmful activities took place' and irrespective from the jurisdiction that 'is not dependent on the question of sovereignty over any particular feature, on a prior determination of the status of any maritime feature, on the existence of an entitlement by China or the Philippines to an exclusive economic zone in the area, or on the prior delimitation of any overlapping entitlements'.[141] The general obligation to apply Part XII is to be interpreted in the context of the sovereign right to exploit their [States'] natural resources incorporated in Art. 193 UNCLOS. UNCLOS thus places environmental concerns in the context of a sustainable management of the marine environment and thus also of economic interests. The resulting balance corresponds to the basic principle of the concept of sustainable development.[142]

62 The ITLOS Seabed Disputes Chamber effectively has compulsory jurisdiction over disputes relating to the exploration and exploitation of the international seabed and ocean floor ('the Area').[143] The Seabed Disputes Chamber can acquire jurisdiction not just by virtue of and over the states involved, but also by a range of actors engaged in activities in the Area (e.g. State Parties, the International Seabed Authority, state enterprises, legal or natural persons and prospective contractors). In addition to provisions of UNCLOS and principles of international law not incompatible with it, the Seabed Disputes Chamber can apply the rules, regulations and procedures of the International Seabed Authority, as well as terms of contracts concerning activities in matters relating to them.

63 Unusually, ITLOS also has jurisdiction to order provisional measures under UNCLOS, even when parties have chosen a different forum to resolve their disputes, in the absence of alternative agreement between the parties, and pending the constitution of the parties chosen forum.[144] This provision has been invoked on a number of occasions.[145]

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[138] UNCLOS binds States to comply with all aspects of the legal regime and does not allow reservations to any substantive rules in the Convention and, moreover, reflects customary international law; further reading: Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (2017), 17 ff.

[139] Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (2017), 25.

[140] *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19.

[141] *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, para. 927.

[142] With Agenda 21 (1992), paras. 17.1.-17.136 the international community already demanded the cautious and balanced interpretation.

[143] https://www.itlos.org/en/main/the-tribunal/chambers/.

[144] https://www.itlos.org/en/main/the-tribunal/chambers/.

[145] Harrington and Robb, 'A complex system of international courts and tribunals' in Cordonier Segger and Weeramantry, *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1999 – 2012* (2017), 143.

Concurrent jurisdiction can exist, where a treaty provides a range of options for dispute settlement. UNCLOS, for example, allows parties to choose between the ICJ, various arbitral tribunals and ITLOS in relation to much of the treaty, and thus all of them would potentially have jurisdiction.[146] **64**

In relation to semi-enclosed seas, the Convention further specifies in Art. 123 that States shall endeavour to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment. The importance of cooperation to marine protection and preservation has been recognised by ITLOS frequently.[147] ITLOS regularly bases its argumentation, inter alia, on the case law of the ICJ, which in *Pulp Mills on the River Uruguay*[148] acknowledged that 'by co-operating [...] the States concerned can manage the risks of damage to the environment that might be created by the plans initiated by one or [the] other of them, so as to prevent the damage in question' (→ Goal 6).[149] The ICJ stated further that it was exactly the 'interconnectedness between equitable and reasonable utilization of a shared resource and the balance between economic development and environmental protection that is the essence of sustainable development.'[150] By referring to the *Pulp Mills* case, the ITLOS illustrates that it follows the guidance on how to find equity and reasonableness in the utilisation of shared sources and considers it applicable to marine waters as well (→ Intro mn. 176 ff.). **65**

Judge Cançado Trindade in its Separate Opinion in the *Pulp Mills* case stated that the precautionary principle is indispensably 'interwoven with the ineluctable inter-temporal dimension' which 'is necessarily a long-term one, since the decisions taken by public authorities of today may have an impact on the living conditions of not only present, but also future generations'.[151], amongst others, due to the naturally given uncertainties and complexities as well as limitations in human development.[152] Though this description of **66**

[146] Harrington and Robb, 'A complex system of international courts and tribunals' in Cordonier Segger and Weeramantry, *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1999 – 2012* (2017), 133.

[147] *The MOX Plant Case (Ireland v. United Kingdom)*, Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, para. 82; *Case concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v. Singapore)*, Provisional Measures, Order of 8 October 2003, ITLOS Reports 2003, para. 92; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, ITLOS Reports 2015, para. 140; see also *Merits Hearing, Tr. (Day 4)*, 40-41 [found in: ITLOS, *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, Award (July 12, 2016), http://www.pca-cpa.org, paras. 984 f.]; ITLOS has moreover established a special Chamber for Marine Environmental Disputes.

[148] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010: In this case, the maintenance of a treaty was weighted against harmful environmental interference into a non-marine water body.

[149] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, 14, 49, para. 77; see also *Consequences Arising Out Of Acts Not Prohibited By International Law (Prevention of Transboundary Harm From Hazardous Activities)*, in Report of the International Law Commission on the work of its Fifty-third session (23 April-1 June and 2 July-10 August 2001), UN Doc. GAOR A/56/10 (2001).

[150] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, 14, 49, para. 177.

[151] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, 14, 49, para. 90.

[152] Judge Cançado Trindade argues both with the inadequacy of scientific knowledge (scientific uncertainties) and, respectively, due to the limitations of human knowledge and the even more scarcity of human wisdom, which was already recognised by Socrates (Plato, Apology of Socrates [399 BC], 21b-d; 22a-c; 22 d; 23a-b.). Referring to other philosophers (Erasmus (1465-1536), Rabelais (circa 1488-1553) and Montaigne (1533-1592)), among others, he goes on to say that humankind 'needs to have conscience of one's own limits' and links the universal validity of this statement with the difficulty for humans to recognize risks and uncertainties at all, whether they are human-made or natural phenomena. From this development the precautionary principle and later also the general belief that the cultivation of specialized knowledge was the most adequate path to human safety and even happiness were derived. Human-made destruction and the pressing need of controlling the uses of scientific knowledge led to thinking and acting

sustainable development might be understood from a wide variety of scholars to lie 'in the realm of natural law thinking',[153] the apparent accuracy and description of the real and factual effects of human impact cannot be denied. Rather, this framing clarifies the if-then prerequisite for the deployment of this dimension of sustainability.

67 With the (pending) case of *Nicaragua v Colombia*, violations of sovereign rights and maritime spaces in the Caribbean Sea have been claimed. While these claims are not directly attributable to any of the targets in SDG 14, the decision of the ICJ on the counter claims raised, underscores the limited admissibility of claims that are relevant to sustainable development. The ICJ found a lack of direct legal connection of the counter claims[154] with which Colombia sought to allege a violation of sovereign rights and maritime spaces in the Caribbean Sea. Colombia grounded its claims on Nicaragua's failure to 'prevent [the Nicaraguan] flag or licensed vessels from fishing in Colombia's waters; […] from engaging in predatory and unlawful fishing methods in violation of its international obligations; […] failing to fulfil its international legal obligations with respect to the environment in areas of the Caribbean Sea'.

68 Whereas the first two counterclaims were based on infringements of a duty of due diligence to protect and preserve the marine environment of the south-western Caribbean Sea and to protect the right of the inhabitants to benefit from a healthy, sound and sustainable environment, the third and fourth related to the infringement of customary artisanal fishing rights and international law. The ICJ turned down the first and second counter-claims as being inadmissible as such, thereby not forming part of the current proceedings.[155] The ICJ thus prevented two of the counterclaims on formal grounds, although it recognised 'that Colombia relies on the alleged failure of Nicaragua to protect and preserve the marine environment in the south-western Caribbean Sea' to prevent harmful private vessels flying under the Nicaraguan flag from predatory fishing practices and destroying the marine environment of the south-western Caribbean Sea and, thus, 'preventing the inhabitants […] from benefiting from a healthy, sound and sustainable environment and habitat'.[156] Nevertheless, the ICJ referred to the different 'legal principles relied upon by the parties'. It thus denied a 'direct connection, either in fact or in law'[157] and prevented the observation and judicial review of conduct adverse to SDG 14.4, SDG 14.6 and SDG 14.7.

69 With ITLOS, an intergovernmental organisation which grounded on the mandate of the Third United Nations Conference on the Law of the Sea, a universal mechanism has been established for the judicial review of conflicts in the sphere of UNCLOS. Since 1982, ITLOS has dealt with 29 cases. Yet, few cases can be deemed contributing to SDG 14 specifically or to sustainable development principles in general. A majority of these cases dealt with several associated principles for managing the environmental impacts of human usage of the oceans (including, *inter alia*, the precautionary principle and

with moderation and care (awareness) in the 20th century and gave nascence to 'the formulation of the principles of prevention — to avoid environmental damage — and of precaution, to take action so as to foresee probable and even long-term harmful consequences to the environment, amidst scientific uncertainties' which also opened the door for the recognition of common goods, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgement, ICJ Reports 2010, paras. 67-83.

[153] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgement, ICJ Reports 2010, 14, 49, para. 90.

[154] *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Judgement on 17 March 2016, paras. 34 ff.

[155] *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Order, 15 November 2017; ICJ, *Yearbook, 2017 – 2018, pending cases*, 15.

[156] *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Order, 15 November 2017, para. 37.

[157] *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua v. Colombia)*, Order, 15 November 2017, para. 39.

environmental impact assessments). However, ITLOS has a clear mandate to adjudicate on matters of sustainable development.[158]

One of the most prominent cases is the *Seabed Mining Advisory Opinion*[159] of the Seabed Dispute Chamber[160] which was requested by the International Seabed Authority (ISA) Council following concerns by Nauru about the responsibilities and potential liabilities especially of developing States when sponsoring mining activities in the Area.[161] The *Opinion* addressed questions on the 'legal responsibilities and obligations of States Parties to the Convention with respect to the sponsorship of activities in the Area; extent of liability of a State Party for any failure to comply with the provisions; and what constitutes necessary and appropriate measures that a sponsoring State must take in order to fulfil its responsibilities under the relevant UNCLOS and the 1994 agreement. The Chamber offered observations particularly on the principles of sustainable use of natural resources, the principles of precaution and CBDR, equity and good governance. Although it does not refer to sustainable development, it can be read from the *Opinion* that it homogenously considered and interpreted the International Law Association's (ILA) understanding of sustainable development as set out in the 2002 New Delhi Declaration of Principles of International Law relating to Sustainable Development.[162] It stands out that the Chamber by interpreting the precautionary approach in the context of the Nodules and Sulphides Regulations where this principle has been included 'by express reference to the Rio Declaration'.[163] The opportunity to interpret and give legal meaning to the Rio Declaration is 'highly unusual—if not unique—for a judicial body'. The Chamber linked the precautionary principle not only by its customary nature but also by the 'summation of trends' to be a part of sustainable development through the obligation to fulfil due diligence,[164] thereby referring to the former *Southern Bluefin* **70**

[158] Jaeckel and Stephens, 'The interpretation of sustainable development principles in ITLOS' in in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1992–2012* (2017), 339.

[159] ITLOS, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*, Request for Advisory Opinion Submitted to the Seabed Disputes Chamber, Advisory Opinion, 1 February 2011.

[160] The Seabed Dispute Chamber builds a further forum within ITLOS and is a legally independent body ('a tribunal within a tribunal') which interprets Part XI of UNCLOS and regulations on the exploration and exploitation of minerals at or beneath the international seabed, 'the Area' beyond the limits of national jurisdiction. Such regulations are adopted by the International Seabed Authority (ISA), which administers the Area 'on behalf of mankind as a whole', Jaeckel and Stephens, 'The interpretation of sustainable development principles in ITLOS' in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1992–2012* (2017), 346 f.

[161] Jaeckel and Stephens, 'The interpretation of sustainable development principles in ITLOS' in in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1992 – 2012* (2017), 346 f.

[162] ITLOS, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*, Request for Advisory Opinion Submitted to the Seabed Disputes Chamber, Advisory Opinion, 1 February 2011, paras. 99-150, 170-211, 223-41; see also: French, 'From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor—the Seabed Disputes Chamber's 2011 Advisory Opinion' (2011) 26 *International Journal of Marine and Coastal Law*, 525 (536 ff.); Freestone, 'Advisory Opinion of the Seabed Disputes Chamber' (2011) 15(7) *ASIL Insights*; Anton and Makgill and Payne, 'Seabed Mining—Advisory Opinion on Responsibility and Liability' (2011) 41 *Environmental Policy and Law*, 60-5.

[163] '[T]he Regulations note that States and the Authority "shall apply a precautionary approach, as reflected in Principle 15 of the Rio Declaration"', French, 'From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor—the Seabed Disputes Chamber's 2011 Advisory Opinion' (2011) 26 *International Journal of Marine and Coastal Law*, 525 (548).

[164] ITLOS, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*, Request for Advisory Opinion Submitted to the Seabed Disputes Chamber, Advisory Opinion, 1 February 2011, para. 130.

Tuna cases where the link of precaution and due diligence already had been made, albeit with the connotation of prudence and caution.[165] The *Opinion* even ten years back in time and having been developed before the nascence of the SDGs, gives a precious indication on at least three aspects: (1) it shows how interaction with the Area and with marine spheres beyond jurisdictions should be understood legally against the background of precaution and sustainable development, (2) how it is interwoven in international law in a manner that give rise to rights and responsibility (liability) of different actors, and (3) how international jurisprudence might further develop with relevance not only to the Area[166] but to common heritages of humankind in general.

71 The difficulties associated with the questions of illegal, unregulated and unreported (IUU) fishing (SDG 14.4, SDG 14.6) were addressed by ITLOS in the *Camouco*[167], *Monte Confurco*[168], *Volga*[169] and *Juno Trader*[170] cases which all were prompt release cases. The *Camouco*, *Monte Confurco* and *Volga* cases, which arose from arrests of vessels conducting IUU fishing for Patagonian toothfish in the Southern Ocean near Antarctica. In *Camouco* and *Monte Confurco,* and *Volga*, ITLOS needed to determine if the financial bond and other conditions set by the arresting States were 'reasonable'[171] for the purposes of Arts. 73 (Enforcement of laws and regulations of the coastal State) and 292 (Prompt release of vessels and crews) of UNCLOS. While ostensibly the questions examined are not directly related to the targets of SDG 14, these cases demonstrate the legal issues associated with this SDG. SDG 14, which legally relies on the application of UNCLOS and other regulations within its sphere, can, by logical consequence, hardly stand alone or marginalise areas that are conducive to its implementation and enforcement.

72 The necessary measures, including those of enforcement, to ensure compliance of vessels flying under the flag State can be read from the *SRFC* case where the Tribunal held that

> [t]he flag State, in fulfilment of its obligation to effectively exercise jurisdiction and control in administrative matters under article 94 of the Convention, has the obligation to adopt the necessary administrative measures to ensure that fishing vessels flying its flag are not involved in activities in the exclusive economic zones of the SRFC Member States which undermine the flag State's responsibility under article 192 of the Convention for protecting and preserving the marine environment and conserving the marine living resources which are an integral element of the marine environment. The foregoing obligations are obligations of "due diligence".[172]

2. European Jurisdiction

73 In the EU, the Common Fisheries Policy (CFP) sets the rules on management of the European fishing fleets and conservation of fishing stocks. The CFP aims to mitigate negative impacts and to prevent the degradation of the marine environment. Since its second reform in 2013, the CFP focuses on multispecies multiannual plans which

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[165] *Southern Bluefin Tuna Cases* (*New Zealand v Japan*; *Australia v Japan*), Order of 27 August 1999, para. 77.

[166] See French, 'From the Depths: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor—the Seabed Disputes Chamber's 2011 Advisory Opinion' (2011) 26 *International Journal of Marine and Coastal Law*, 525 (567 f.).

[167] *Camouco (Panama v France)* (prompt release) (2000) 125 ILR 151, (2000) 39 ILM 666.

[168] Monte Confurco (Seychelles v France) (prompt release) (2000) 125 ILR 203.

[169] *Volga (Russian Federation v Australia)* (prompt release) (2003) 42 ILM 159.

[170] *Juno Trader (St Vincent and the Grenadines v Bissau)* (prompt release) (2005) 44 ILM 498.

[171] The criterion of 'reasonableness' was already discussed in the very first case of ITLOS: *M/V Saiga (Saint Vincent and the Grenadines v Guinea)* (prompt release) (1997) 110 ILR 736, Judgment, 4 December 1997, para. 82.

[172] ITLOS, *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion, 2 April 2015, para. 219.

point on the Maximum Sustainable Yield (MSY). The EU coastal and marine policy complements the CFP in the area of protection and clean-up of the coasts. The 7th Environment Action Programme covers, among others, marine waters in order to achieve or maintain good environmental status. Beyond its borders, the EU supports the protection of the marine environment and sustainable fisheries management through the European development policy. The EU agenda on International Ocean Governance focuses on securing safe, secure, and sustainable development of the oceans through better and more effective rules as well as through more effective knowledge and research.[173]

3. Arbitration Proceedings

Harmful fisheries subsidies unbalance the fishing industry, incentivising vessels to catch and remove fish faster than stocks can replenish. Bycatch is a threat to ocean life and is especially damaging to endangered species like some dolphins and sea turtles. **74**

Even though many more fishers are employed by small-scale fisheries than industrial fleets, experts estimate that 81 per cent of governments' fisheries subsidies benefit large industrial fleets. This distorts access to marine resources at the expense of the many artisanal fishers for whom fishing is both a matter of survival and the heart of a rich cultural identity.[174] **75**

With the 11th Ministerial Conference the Ministerial Decision gave rise for a new mandate to negotiate 'an agreement on comprehensive and effective disciplines that prohibit certain forms of fisheries subsidies that contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU-fishing'.[175] **76**

Despite the deadline set with SDG 14.6 and its importance for limiting the harm of fisheries subsidies having been acknowledged by the WTO,[176] the WTO failed to achieve an agreement on fisheries subsidies[177] till the end of 2021. Negotiations on the intended agreement are still ongoing.[178] **77**

Under the guise of UNCLOS States parties have the responsibility to ensure compliance and liability for damage caused by exploitative activities in the Area, Art. 139. In the *South China Sea Arbitration*[179], the Arbitral Tribunal, amongst many other issues, examined the question as to whether the People's Republic of China could be held responsible for armed protecting vessels flying under the Chinese flag during their harmful fisheries' activities in the South China Sea within the EEZ of the Philippines. The Tribunal made clear that 'ensure' constitutes an obligation of conduct for the State. In refer- **78**

[173] https://ec.europa.eu/sustainable-development/goal14_en.

[174] See also A/RES/73/165, United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, 21 January 2019, Arts. 13, 17 and 20.

[175] WT/MIN(17)/64, WT/L/1031, 18 December 2017, Fisheries Subsidies, Ministerial Decision of 13 December 2017. The topics covered by this agreement were: subsidies contributing to illegal, unreported and unregulated (IUU) fishing, transparency, standstill, special and differential treatment, and institutional issues.

[176] https://www.wto.org/english/thewto_e/minist_e/mc11_e/briefing_notes_e/bffish_e.htm.

[177] https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm; further reading on fisheries subsidies harm: Bahety and Mukiibi, *WTO Fisheries Subsidies Negotiations: Main Issues and Interests of Least Developed Countries* (2017).

[178] https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm; https://www.wto.org/english/news_e/news21_e/fish_29oct21_e.htm.

[179] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, Jurisdiction and Admissibility (Oct. 29, 2015); In referring to *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, para. 944.

ring to *Pulp Mills*[180] and the *Seabed Disputes Chamber advisory opinion*[181], the Tribunal underscored that for meeting due diligence requirements 'appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control' must be set by the State.[182]

79 The Tribunal also ruled on the so-called 9-dash line. This internationally non-recognised territorial boundary in the South China Sea, set by the People's Republic of China that extends partly through Philippine sovereign territory, has been condemned by the Tribunal in the *South China Sea Arbitration*.[183] Although the Tribunal did not rule on the issue of sea boundary limitations, the ruling shows that sovereign rights are unequivocally vested in living and non-living resources belonging only to the exclusive economic zone and the continental shelf of the coastal state. Sovereign rights cannot exist simultaneously over the same resources stored in this area. Rather, with particular regard to the 'continental shelf, the rights of other states are limited to laying cables and pipelines and to the rights and freedoms to which they are otherwise entitled in the superjacent waters.'[184] Nor could this be interrupted by the historical rights asserted by China, which the Tribunal also denied.[185] The tribunal declared the effect of exclusive fisheries zones to be 'a matter of customary law'.[186] The 'nine-dash-line' could naturally not be upheld with regard to UNCLOS as a recognised international body of rules, as this line is diametrically opposed to it.[187] This decision significantly nourishes the meaning of SDG 14.b and SDG 14.c in particular and demonstrates both the strength of judicial interpretation of international law as an instrument of protection for sustainably managed environmental systems such as the ocean, but also reveals the link between conflicts driven by original understandings of sovereignty under international law and the act of sustainable action, today borne out of the content of SDG 14.

80 However, the multi-layered and intricate conflict over fishing grounds, oil and gas resources and the control of a major shipping route in the South China Sea still persists and has recently been subject to increasing tensions and military interventions.[188] The power struggle over resources inevitably affects the shaping of sustainable development and implementation of the SDGs.

81 With regard to the conservation and sustainable use of oceans, the DSB decided very clearly on how states can perform or implement protective (environmental) legislation

[180] *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, 14.

[181] Request for an *Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC)*, Advisory Opinion of 2 April 2015, ITLOS Reports 2015, para. 131; quoting *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Reports 2010, 14, at 79, para. 197.

[182] *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, para. 944.

[183] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, Jurisdiction and Admissibility (Oct. 29, 2015); In referring to *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China)*, PCA Case No. 2013-19, Award of 12 July 2016, para. 944.

[184] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, 29 October 2015, para. 244.

[185] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, 29 October 2015.

[186] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, 29 October 2015, para. 257.

[187] *Arbitration Between the Republic of the Philippines and the People's Republic of China*, PCA Case No. 2013-19, 29 October 2015, para. 278.

[188] https://www.reuters.com/world/asia-pacific/philippines-vows-continue-maritime-exercises-south-china-sea-2021-05-02/.

to not interfere with WTO law. In the *US – Shrimp I*[189] case, the US, in referring to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), had set import bans on shrimp that that has not been proven to provide a certain degree of protection from bycatch, particularly of the most endangered sea turtles. India, Malaysia, Pakistan and Thailand did not comply with their regulation and practices to this requirement. The DSB first emphasised the importance and relevance of the 'the objective of sustainable development' as included in the preamble of the WTO agreement and further international instruments such as CITES, UNCLOS, the CBD and Agenda 21. The dispute settlement body recognised that the US measures did comply with the legitimate safeguard purpose of Art. XX(g) GATT 1994.[190] Nevertheless, it underlined that

> this measure has been applied by the U. S. in a manner which constitutes arbitrary and unjustifiable discrimination between Members of the WTO, contrary to the requirements of the chapeau of Art. XX. […] WTO Members are free to adopt their own policies aimed at protecting the environment as long as, in so doing, they fulfill *(sic!)* their obligations and respect the rights of other Members under the WTO Agreement

In particular, the DSB argued that it did not meet the test of Art. XX GATT 1994 and was therefore not justified. With this decision, the DSB in principle granted scope for unilaterally enacted legislation with extraterritorial reach that even implements sustainable development requirements or, with regard to the SDGs currently in place, serves precisely their protective purpose. In any case, international legal instruments, including *soft law*, are permissible in order to interpret WTO law.[191] **82**

An indication on how due diligence is to be understood when preventing 'illegal, unreported and unregulated fishing and destructive fishing practices' (SDG 14.4) was shown in the *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* in 2015.[192] ITLOS moreover clarified that the duty of proper acting when sustainably using the ocean and its resources (SDG 14.c) addresses the flag states and the involved international organisations as well. These rights bearers are obliged to fulfil their 'due diligence' **83**

> to ensure that vessels flying their flag do not engage in IUU fishing activities, and that the flag state may be held liable if that obligation of due diligence is breached. In addition, the Tribunal clarified that where fisheries competence has been transferred from a state to an international organization, it is the organization, not the flag state, that may face liability for a failure to have taken adequate measures to prevent IUU fishing.[193]

Finally, the Tribunal confirmed that coastal states have a duty to consult and cooperate[194] with each other in the sustainable management of shared stocks[195] and highly mi- **84**

[189] WT/DS58/AB/R, *United States — Import Prohibition of Certain Shrimp and Shrimp Products (US – Shrimp I)*, AB Report, 15 June 2001.

[190] WT/DS58/AB/R, *United States — Import Prohibition of Certain Shrimp and Shrimp Products (US – Shrimp I)*, AB Report, 15 June 2001, para. 132.

[191] Gehring and Genest, 'Disputes on sustainable development in the WTO regime' in Cordonier Segger and Weeramantry, *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1999 – 2012* (2017), 357 (364 f.).

[192] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* (Request for Advisory Opinion submitted to the Tribunal), Advisory Opinion of 2 April 2015.

[193] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* (Request for Advisory Opinion submitted to the Tribunal), Advisory Opinion of 2 April 2015, para. 114.

[194] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* (Request for Advisory Opinion submitted to the Tribunal), Advisory Opinion of 2 April 2015, para. 199.

[195] 'Shared stocks' are 'stocks occurring within the exclusive economic zones of two or more coastal states or both within the exclusive economic zone and in an area beyond and adjacent to it', Art. 2(12)

gratory species. It further clarified that the meaning of sustainable management is to be guided by Art. 61 UNCLOS as 'the basic framework concerning the conservation and management of the living resources in the exclusive economic zone' with the 'conserv[ing] and develop[ing fish stocks] as a viable and sustainable resource' as the ultimate goal.[196] The tribunal also indicated what constitutes sustainable fisheries management:

> The Tribunal is of the view that the term "development of such stocks" used in article 63, paragraph 1, of the Convention suggests that these stocks should be used as fishery resources within the framework of a sustainable fisheries management regime. This may include the exploitation of non-exploited stocks or an increase in the exploitation of under-exploited stocks through the development of responsible fisheries, as well as more effective fisheries management schemes to ensure the long-term sustainability of exploited stocks. This may also include stock restoration, guided by the requirement under article 61 of the Convention [UNCLOS] that a given stock is not endangered by over-exploitation, thus preserving it as a long-term viable resource.

4. Domestic Jurisdiction

85 In domestic jurisdiction some quite progressive decisions can be found that support a clear utterance with the contents of SDG 14, but moreover give meaning and impetus to the UN approach Harmony with Nature. This approach connects self-standing rights for (parts of) nature (Earth-centred law) indispensably with the human right to a healthy environment since human health and well-being depends on much more than wealth. The 2020 Report of the Secretary-General states:

> With the acceleration of climate change and ecosystems being pushed to collapse, the human right to a healthy environment cannot be achieved without securing Nature's own rights first. More precisely, the human right to life is meaningless if the ecosystems that sustain humankind do not have the legal rights to exist. Furthermore, the rights of each sentient being are limited by the rights of all other beings to the extent necessary for the maintenance of the integrity, balance and health of larger ecological communities.[197]

Convention on the Determination of the Minimal Conditions for Access and Exploitation of Marine Resources within the Maritime Areas under Jurisdiction of the Member States of the Sub-Regional Fisheries Commission (SRFC) (MCA Convention).

[196] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* (Request for Advisory Opinion submitted to the Tribunal), Advisory Opinion of 2 April 2015, paras. 189 f.; ITLOS stressed in particular paras. 2, 3 and 4 of Art. 61 UNCLOS:

Conservation of the living resources

2. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall cooperate to this end.

3. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.

4. In taking such measures the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.

[197] A/75/266, *Harmony with Nature, Report of the Secretary-General*, para. 41; A/75/266, *Supplement to SG Report on Harmony with Nature*: This special Supplement complements the Report on Harmony with Nature (A/75/266) and includes over 170 cases and developments in Earth Jurisprudence, advances in law and policy, and initiatives in both formal and informal education, learning and public outreach activities worldwide, during the second half of 2019 and the first half of 2020.

The fact that the systematic linking of the human right to a healthy environment with the concerns of environmental and climate protection, with special consideration of the intergenerational equity concept, is not always judicially assertive was shown by the rejecting decision in *Pandey v. India*. The applicant, citing the UNFCCC and the Paris Agreement, had sought to expand India's climate change legislation to include the 'integrity of all ecosystems, including oceans and the protection of biodiversity'[198] since it otherwise endangers 'the survival and well-being of plants, fish, wildlife, and biodiversity'.[199] The National Green Tribunal did not accept this application for decision as it considered the national 1986 Environment (Protection) Act to be sufficient. International agreements such as the Paris Agreement were not considered to add to the already existing legislation.[200] **86**

However, a decision from the Judicial Committee of the Privy Council[201] from 2017 does point to the fact that jurisdiction takes up extensive references to principles, agreements and even voluntary guidelines as well as (planned) instruments as context for judicial interpretation, which can also be found as cornerstones of the concept of the Global Agenda 2030 and its underlying principle of sustainable development: **87**

> The Polluter Pays Principle (PPP) is now firmly established as a basic principle of international and domestic environmental laws. It is designed to achieve the "internalization of environmental costs", by ensuring that the costs of pollution control and remediation are borne by those who cause the pollution, and thus reflected in the costs of their goods and services, rather than borne by the community at large (see e. g. OECD Council 1972 Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies; Rio Declaration 1992 Principle 16). Most recently, the Principle has been simply expressed in the Draft Global Pact for the Environment, presented by President Macron to the United Nations Assembly on 19 September 2017.[202]

To read a progression of the law in this legal area and to attribute this to SDG 14 and its legal history, must at this point be assigned to the respective jurisdiction as there cannot be established that a clear or common legal orientation already exists. **88**

II. The Enforcement of a 'Right to healthy Oceans, Seas and Marine Resources'

The content of SDG 14 and its embeddedness in UNCLOS and maritime law regimes reveals to a certain extent how a sustainably managed ocean or an ecologically sound marine resource is constituted. UNCLOS and the legal provisions based on it provide a multitude of principles that that lead to certain state obligations such as taking all mea- **89**

[198] National Green Tribunal, Principal Bench, New Delhi, Original Application No. 187/2017, Order of 15 January 2019 (*Pandey v. India*), para. 7.

[199] National Green Tribunal of India, Principal Bench, New Delhi, *Pandey v. India*, Original Application No. 187/2017, para. vii. (b).

[200] National Green Tribunal, Principal Bench, New Delhi, *Pandey v. India*, Order of 15 January 2019, para. 3.

[201] The Judicial Committee of the Privy Council is the court of final appeal for the UK overseas territories and Crown dependencies, and for those Commonwealth countries that have retained the appeal to Her Majesty in Council or, in the case of Republics, to the Judicial Committee.

[202] Decision from the Judicial Committee of the Privy Council), *Fisherman and Friends of the Sea v. The Minister of Planning, Housing and the Environment*, 27 November 2017.

sures necessary to prevent, reduce and control pollution of the marine environment from any source, Art. 194(1) UNCLOS.[203]

90 However, this fundament of law holds in itself a number of ambiguities. It is far from clear how a 'right to healthy oceans, seas and marine resources' relating to the continental shelf beyond 200 nautical miles can be shaped and how the addressees of SDG 14 should or must act beyond this point or how it could even be enforced. Further controversies on the legal treatment are likely to occur or worsening in the Arctic and Antarctic regions,[204] the East and South China Sea where competing claims challenges the work of ITLOS or the Commission on the Limits of the Continental Shelf (Commission). The escalating conflicts, some of which are openly being carried out, underline the limited possibilities of enforcement of a decision by ITLOS and the even minor weight of the recommendations of the Commission. They have no independent power to enforce their respective pronouncements. Although monitoring mechanisms exist, compliance still depends on the voluntary submission of states to the decision or recommendations.[205]

91 Nevertheless, this could open up much more far-reaching possibilities. The Chamber's reference to the obligation to protect the marine environment in areas beyond national jurisdiction as an *erga omnes* obligation implied that each State Party may bring a claim. With this assessment, the Chamber accepted, 'in principle, the existence of an actio popularis for environmental harm to global commons.'[206] The Chamber thus became the first international standard-setting body to acknowledge Art. 48 of the ILC Articles on State Responsibility.[207] The *Seabed Mining Advisory Opinion* has lessened existing doubts about the legal status of Art. 48 and solidified its position in international law. This could prove significant in understanding the ability of international courts to enforce environmental obligations and thus, to enforce goals set by SDG 14.

III. De Facto Influences on Jurisdiction

92 In 2016, UNCTAD obtained a new mandate[208] on oceans and seas at the UNCTAD 14 Conference with which the UN agency should seek to support developing countries, in particular SIDS

> in cooperation with other relevant international organizations and other stakeholders […] in the advancement of Sustainable Development Goal 14 in the design and implementation of regional

[203] See A/RES/72/249, *International legally binding instrument 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 January 2018.

[204] See e.g. Convention on the Regulation of Antarctic Mineral Resource Activities (1988).

[205] Subedi, 'The Role of the Commission on the Limits of the Continental Shelf in the Governance of the Seas and Oceans' (2018) in Attard and Ong and Kritsiotis, *The IMLI Treatise On Global Ocean Governance: Volume I: UN and Global Ocean Governance* (2018), 94 ff.

[206] French, 'The Sofia Guiding Statements on sustainable development principles in the decisions of international tribunals' in Cordonier Segger and Weeramantry (eds), *Sustainable Development Principles in the Decisions of International Courts and Tribunals, 1999 – 2012* (2017), 202.

[207] International Law Commission, *Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries* (2001), Art. 48. Invocation of responsibility by a State other than an injured State, Yearbook of the International Law Commission, 2001, Vol. II, Part Two, Report, Supplement No. 10 (A/56/10).

[208] TD/519/Add.2*, *Nairobi Maafikiano, From decision to action: Moving towards an inclusive and equitable global economic environment for trade and development*, 5 September 2016, para. 100(t).

and/or national economic development strategies for the conservation and sustainable use of oceans and their resources […].[209]

UNCTAD has since translated the mandate into a variety of Oceans Economy and Trade Strategies (OETS)[210] which address, amongst others, maritime and coastal tourism, offshore operations such as oil, gas and wind, port activities and fisheries, waste disposal and transportation. Subsidies that contribute to overcapacity and overfishing, as mentioned in SDG 14.6, are of particular concern. Several members supported a ban on such subsidies that contribute to overfishing and overcapacity of a fleet. However, despite a unanimous agreement on the principle, the lacking internationally agreed definition of 'overfishing' or 'overcapacity' has so far prevented an effective rejection of these subsidies policies since such a definition is determinant for classifying which subsidies are in fact harmful. As yet, no such definition could be agreed due to diverging global approaches, although some initial approaches have been made. Special and differential treatment (SDG 14.6) is also being explicitly developed further, with the aim of extending the transition periods, specifically for developing states or 'for implementing prohibitions regarding unreported unregulated fishing […] in general or for small scale, artisanal and subsistence fishing activities'.[211] The recommended Ocean Economy Classification primarily enables the accurate data collection of 'trade-related and other relevant statistics for the monitoring and analysis of ocean-based sectors, as a whole or by sector, at the national and global levels or from a supply or demand perspective' and thus complements the indicators on SDG 14 and enhances private and governmental standard setting such as policy decisions on the allocation of resources.[212] The found common understanding is likely to result in new standards which will shape the marine-related economy, contributes to SDG 14, and in the (not so far) future may consequently also be reflected in jurisdiction. Further influence is exerted through the FAO which has a crucial role in the promotion of productive and sustainable fisheries and the IMO which is responsible for safety and security for of shipping. **93**

In addition to these institutional influences, the legal framework of SDG 14 implies a clear limitation in the emergence, development and application of further jurisdiction. UNCLOS, for instance, as the main framework to be applied, restricts the possibility of judicial review to those parties (duty and /or rights bearers) which originally belong to the sphere of public law. Solely states can make use of this legal recourse. However, cargo owners and shipping companies as some of the main actors in this legal area are excluded from the authority of UNCLOS.[213] As a frequent issue, the interests of vessel owners, cargo owners and shipping companies differ from that of either the flag **94**

[209] TD/519/Add.2*, *Nairobi Maafikiano, From decision to action: Moving towards an inclusive and equitable global economic environment for trade and development*, 5 September 2016, para. 100(t).

[210] To name but a few: UNCTAD, *Blue BioTrade: Harnessing Marine Trade to Support, Ecological Sustainability and Economic Equity* (2018); UNCTAD, *Advancing Sustainable Development Goal 14: Sustainable fish, seafood value chains, trade and climate* (2019); UNCTAD, *Towards A Harmonized International Trade Classification For The Development Of Sustainable Ocean-Based Economies* (2021).

[211] UNCTAD, *Advancing Sustainable Development Goal 14: Sustainable fish, seafood value chains, trade and climate* (2019), 29 f.

[212] See UNCTAD, *Towards A Harmonized International Trade Classification For The Development Of Sustainable Ocean-Based Economies* (2021), 38 f.; see on effects of indicators and standard setting: Huck, 'The UN Sustainable Development Goals and the Governance of Global Public Goods, The Quest for Legitimacy' (2021) in Iovane et al. (eds), *The Protection of General Interests in Contemporary International Law: A Theoretical and Empirical Inquiry* (2021), 361-82; see on effects of science and business collaborations: Österblom et al., 'Emergence of a global science-business initiative for ocean stewardship' (2017) 114(34) *Proc Natl Acad Sci U S A*, 9038-43.

[213] See Shaughnessy and Tobin, 'Flags of Inconvenience, Freedom and Insecurity on the High Seas' (2018) 5 *Journal of International Law & Policy*, 10.

state (which must not be the same) or from those of the state in which coastal zone they operate. Whereas the maritime crews technically fall into the scope of UNCLOS and other international agreements, private actors (companies or owners) do not which coincides with the fact that they are hardly regulated in this area.

E. Conclusion on SDG 14

95 Carbon emissions from human activities are causing ocean warming, acidification and oxygen loss with some evidence of changes in nutrient cycling and primary production. The warming ocean is affecting marine organisms at multiple trophic levels, impacting fisheries with implications for food production and human communities. Concerns regarding the effectiveness of existing ocean and fisheries governance have already been reported, highlighting the need for timely mitigation and adaptation responses.

96 The implementation is aggravated by the fact that most indicators for SDG 14 targets are classified as 'Tier 3' which is the lowest-ranking SDG indicator and means that 'no internationally established methodology or standards are yet available for the indicator'. Consequently, the overall progress towards SDG 14 and its reflection in the different jurisdictions can hardly be evaluated as valid. Thus, the extent to which governance and monitoring can be deemed successful considering the 'complicated nature of social and economic systems related to the oceans and the complex ecosystems within them' is difficult to ascertain.[214]

97 SDG 14 unfortunately lacks at first glance participatory elements and does not include the forms of management it needs to be implemented, nor does it directly link to gender equality or human rights. In this respect, it falls *prima vista* behind in the degree of connection, specifically to the human rights background of the Agenda 2030 and the other SDGs contained. SDG 14 related questions and their entanglement with inherent challenges, in particular with the impact of climate change as analysed by the IPCC, shows that participatory elements exist but expressed directly. As mentioned in the introduction of this book, the external systematic leads to the prevalence of concepts related to the general agenda of the SDGs. In the text of the Global Agenda 2030 it has been stated that human rights are fundamental for the understanding and the applicability of the SDGs.[215] Here, the concept of the wrapped SDGs with internal and external systemic relationships reveals their inherent core of human rights ant their participatory approach, which is underlined as well in SDG 17. The SDGs cannot be perceived as an isolated content but are interwoven with the concept of sustainable development in its three dimensions and overarched from the inherent 'planetarian' concept as well. As laid down in the very introduction, particularly the Small Island Developing States (SIDS) through the implementation of the SIDS Accelerated Modalities of Action (SAMOA) help create the SIDS Partnership toolbox, (→ reflecting the urgent demands of affected communities (→ Goal 17)).[216]

98 Adverse to implementation is that the protection of marine ecosystems does not provide guidance on how to relate to states or global waters. Obviously, joint state

[214] IIED, Beauchamp and Lucks, *MEL Handbook for SDG 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development* (2019), 13.

[215] A/RES/70/1, preamble, paras. 19, 35.

[216] A/RES/74/3, Political declaration of the high-level meeting to review progress made in addressing the priorities of small island developing States through the implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway, 10 October 2019.

responsibilities (should logically) prevail in the scope of application of SDG 14[217] since otherwise no effective implementation could be realised. The jurisdiction examined, however, show that this responsibility does not always follow despite being demanded by compulsory legal frameworks. The great variety parts of jurisdiction which range from 'areas of the sea and the sea-bed' to 'ships' and 'navigation and fishing' as well as 'the absence of an 'owner'[218] make even more difficult to identify actual obligations without getting lost in context. Furthermore, the possibilities to also subject private actors to judicial control and actually hold them liable are still very limited. It is likely that this will change in the future with increasing climate change. A clearer assessment must therefore be awaited so far.

99 The inadequacies already identified in SDG 6, and in particular the lacking link to the global water cycles, including the cryosphere also make the ecosystem approach, at least the one formulated in SDG 14, appear more than questionable. Watercourses, the high seas and marine ecosystems are naturally interconnected. A separate consideration is therefore neither possible nor purposeful. It is surprising that the actual purpose of SDG 14 is then agreed to be the provision of marine resources for human use – albeit for sustainable use. It becomes particularly clear here that the conservation of ecosystems ultimately serves only human development, and that natural capital ultimately serves only as human capital. This might be in line with the anthropocentric approach inherent in the SDGs and the Global Agenda 2030. Thus, although SDG 14 concerns global commons, the preservation of which is already a pursuit in itself, it degrades it to the level of harnessing it for human needs, regardless of any ownership.

100 If, like Boyle, it is assumed to be true that the SDGs have 'given the concept of sustainable development more concrete content, […] they may also have under-estimated the seriousness of the environmental problems the world continues to generate on a global scale.'[219] SDG 14 would thus be a very evident example of both the principle of sustainable development as a 'development tool' for humankind (and not as a protective tool of a common vision at all costs) and the lack of coherence and balance in the SDGs in their entirety.

101 However, it should be noted that the limited scope of SDG 14 does not exclusively aim at the sustainable maintenance and use of the oceans by means of environmental measures, but that original economic measures also accompany this object of protection.

102 Against this background, it seems more than questionable how SDG 14 can be successfully implemented. The set 2020 deadline for sustainably managing and protecting marine and coastal ecosystems (SDG 14.2), effectively regulating harvesting and over-exploitation of fish stock and yield (SDG 14.4), and restricting fisheries subsidies (SDG 14.6) already expired with SDG 14 not having been satisfactorily achieved. This all the more underscores that the difficulties prevalent in the multilevel legal system also affect the achievement of SDG 14.

103 The existing international agreements have so far failed to stop illegal fishing and its subsidisation. Without a solid legal basis and a clear enforceability of legal norms by appropriately mandated authorities, it will not be possible to get a grip on the numerous problems, also in the wake of climate change. Describing the problems is one thing, establishing rights is another. If the will in the multilateral sphere is not sufficient, the oceans will not get the protection they need, not even in the interest of the people.

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[217] And is demanded from UNCLOS.

[218] Reid, 'Protection of Sites' in Lees and Viñuales, *The Oxford Handbook of Comparative Environmental Law* (2019), 848 f.

[219] Boyle, 'Climate Change, Sustainable Development, and Human Rights' in Kaltenborn and Krajewski and Kuhn (eds), *Sustainable Development Goals and Human Rights* (2020), 174.