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EDITORIAL

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The Outliers: Stories of Success in Implementing Sustainable Development Goal 14

Sarah Lothian and Bianca Haas

Australian National Centre for Ocean Resources and Security, University of Wollongong, Australia

Correspondence: Sarah Lothian (lothians@uow.edu.au)

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Abstract

SDG 14 "life below water" aims to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. As SDG 14 is considered one of the most difficult goals to achieve, for the most part, academic discourse on SDG 14 tends to focus on the negatives. More specifically, the lack of progress, limitations and barriers in achieving its seven targets and three sub-targets. While the study of the challenges in reaching key targets is critical in understanding the myriad of issues facing the world's oceans and seas, this thematic issue provides an important opportunity to explore a key question, namely whether we failing to give due recognition to the important work and innovative approaches being undertaken at a local, regional, and global level to implement SDG 14 and improve the health of our coastal and marine environments? This thematic issue provides a platform for showcasing success stories in implementing SDG 14, thereby departing from the usual focus on the negatives.

Keywords

informal science learning programs; ocean literacy; plastic pollution; Sustainable Development Goals; SGD 14

For decades, concerns have been expressed that our oceans are heading towards an ecological and societal tipping point and are literally in a state of crisis (Hoegh-Guldberg et al., 2013; Richardson et al., 2023; Rockström et al., 2009). The 1972 UN Conference on the Human Environment marked the beginning of a global effort to preserve our natural environment. In deciding to convene the conference, the UN General Assembly emphasised that "new approaches" would be required to address the mounting number of issues facing the global environment, with the oceans identified as a key priority area (UN, 1972a). These "new approaches" came in the form of the Declaration of Principles for the Preservation and Enhancement of the Human Environment, which for the first time set out "common principles to inspire and guide the

peoples of the world" (UN, 1972b) and established a benchmark in international environmental protection (Czybulka, 2017).

Influenced by a "rising tide of environmentalism" (Falk & Elver, 1999), the 1992 UN Conference on Environment and Development (Earth Summit) adopted a further Declaration of Principles along with Agenda 21, a non-binding plan of action (UN, 1992). Chapter 17 of Agenda 21 underlined that the world's oceans, seas, and adjacent coastal areas form "an integrated whole that is an essential component of the global life-support system and a positive asset that presents opportunities for sustainable development" (UN, 1992). Agenda 21 stressed that "new approaches" were required for marine and coastal area management, at the national, regional, and global levels and "brought the concept of sustainable development into common parlance if not making it a household phrase" (Dodds et al., 2012, p. 5).

To mark the Earth Summit's 20th anniversary, more than 100 heads of state and government gathered in Rio de Janeiro for the UN Conference on Sustainable Development (Rio+20) in June 2012 to renew their political commitment to sustainable development and assess the progress of Agenda 21 goals (UN, 2012). Although Agenda 21 had acquired considerable coverage among states, its implementation was uneven (UN, 2012). It was clear that further action would be required to accelerate the sustainable development agenda and close implementation gaps (UN, 2012). The outcome document of Rio+20, entitled The Future We Want called for the development of SDGs, a set of measurable targets aimed at shifting the world onto a more sustainable path (UNDP, n.d.).

Thus, in an effort to change course, the 2030 Agenda for Sustainable Development was adopted by UN member states in 2015, providing a blueprint for peace and prosperity for all people and the planet, both now and into the future (UN, 2015). At the heart of the 2030 Agenda are 17 SDGs, which recognise that "ending poverty and other deprivations must go hand-in-hand with strategies to improve health and education, reduce inequality, and spur economic growth" whilst also combatting climate change impacts and preserving our forests and oceans (UN, n.d., para. 1).

Covering 70% of the Earth's surface, the oceans are the biophysical "engines of our planet" (Marlow, 2018). More than 50% of the world's oxygen is produced by the ocean's phytoplankton, kelp, and algae plankton (IUCN, 2019). As Earth's largest carbon sink (Woodall et al., 2017), the ocean also provides a vital buffer against climate change impacts, absorbing over 25% of anthropogenic CO_2 emissions annually and storing 93% of resultant heat (Gjerde et al., 2019). Aside from providing key ecosystem services, the ocean provides protein for human consumption, energy resources and biomedical products, as well as cultural services through recreation and leisure activities (Lothian, 2022). In addition, it plays a vital role in the traditions, customs, and identity of coastal communities (Lothian, 2022). Having said that, the marine environment faces unprecedented threats and challenges from acidification to pollution, overfishing, and habitat and biodiversity loss, just to name a few.

SDG 14 "life below water" aims to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. As SDG 14 is considered one of the most difficult goals to achieve (Haas, 2023), for the most part, academic discourse on SDG 14 tends to focus on the negatives. More specifically, the lack of progress, limitations, and barriers in achieving its seven targets and three sub-targets (e.g., Andriamahefazafy et al., 2022; Sachs et al., 2022). While the study of the challenges in reaching key

targets is critical in understanding the myriad of issues facing the world's oceans and seas, together as academics, we recognised an important opportunity to explore a key question in this thematic issue, namely whether we are failing to give due recognition to the important work and innovative approaches being undertaken at a local, regional, and global level to implement SDG 14 and improve the health of our coastal and marine environments?

This thematic issue highlights stories of success in implementing SDG 14 from so-called "outliers." Cinner et al. (2016) suggested that the theory and practice of identifying and learning from outliers could assist in combatting the ongoing decline in the world's coral reefs. Outliers being places where marine ecosystems are found to be performing substantially better than expected given the environmental conditions and socioeconomic drivers they are exposed to (Cinner et al., 2016). Furthermore, highlighting bright spots and positive outliers might result in increased translation of scientific knowledge into policy (Cvitanovic & Hobday, 2018).

Expanding upon this idea of outliers, this thematic issue presents success stories in implementing SGD 14 targets, including contributions that detail new approaches and innovative ways of engaging with legal, scientific, and sociological perspectives as well as initiatives, programmes, projects, and plans being undertaken in an effective way to conserve and sustainably use our oceans, seas, and marine resources.

The contribution of Vierros et al. (2024) focuses on SDG 14.1 which aims to prevent and reduce pollution of all kinds by 2025, including marine debris. An estimated 12.7 million tonnes of plastic pollution enters our ocean annually (Vierros et al., 2024), with plastic accounting for 80% of all debris from surface waters to deep-sea sediments (IUCN, 2021). While some ocean problems are amendable to a bilateral or regional solution (Lothian, 2024), the global scale of plastic pollution is a problem no state can combat on its own. Vierros et al. (2024) underscore the importance of the voluntary commitments registered at the 2017 UN Ocean Conference in furthering SDG 14.1 by building global awareness of the plastic pollution crisis and generating momentum for the development of an international treaty to tackle this issue. While global targets in SDG 14 are an important driver for managing plastic pollution, they cannot be implemented effectively without local and national initiatives (Vierros et al., 2024). The authors show the critical link between local actions and global policy by highlighting important efforts being undertaken at a grassroots level, one example being Ecosurf which has resulted in the successful removal of more than 40 tonnes of rubbish from Brazilian beaches. By drawing attention to these bright spots the authors demonstrate how local measures can substantially contribute to the achievement of SGD 14.1 and provide solutions and lessons for the ongoing negotiation and implementation of a plastic pollution treaty.

Turning to the second contribution in this thematic issue. In recent years, there has been a growing call for improved understanding of the complex and diverse relationships between humans and the ocean. This has resulted in a "boom" of marine social science research, often framed through the lens of ocean literacy (McKinley et al., 2024). Acknowledged as a key mechanism for change within the UN Ocean Decade's goals (McKinley et al., 2023), ocean literacy has "captured the imagination and momentum of global ocean policy discourse" (McKinley et al., 2024, p.2). As qualitative and arts-based research approaches have remained on the periphery of ocean research, McKinley et al. (2024) adopt a novel approach to communicate the importance of the oceans in ways that bridge the space among marine social science, arts-based research, and UK coastal communities focusing on performance pieces in Lerwick, Shetland, Scotland, and Portsmouth

as part of the Diverse Marine Values project. By adopting a transdisciplinary approach that is grounded in both applied theatre practices and qualitative methodologies, the authors demonstrate the value of theatre not only as a tool for science communication but also as a research method to explore a range of ocean literacy dimensions and a way of building community and relationships. Based on the case studies, McKinley et al. (2024) provide recommendations for facilitating a shift of arts-based research from an "outlier" to a core component of ocean literacy.

The last contribution to this thematic issue is a commentary by Cvitanovic et al. (2024). This commentary highlights the importance of informal science learning programs, such as marine summer schools for early-career marine scholars (Cvitanovic et al., 2024). Drawing on their experience as organisers and lecturers of the Integrated Marine Biosphere Research ClimEco summer school, Cvitanovic et al. (2024) demonstrate how a well-organised summer school can support the development of "soft skills" such as communication, teamwork, and stakeholder engagement. Given the importance of informal science learning programs for marine early career researchers, the authors provide a list of how to plan and implement a successful summer school (Cvitanovic et al., 2024).

Overall, this thematic issue provides a platform for showcasing success stories in implementing SDG 14, thereby departing from the usual focus on the negatives. By allowing room for optimism, the contributions in this thematic issue highlight the importance of voluntary commitments, leading to increased political momentum and public awareness, the effectiveness of unique transdisciplinary research approaches such as theatre research in increasing ocean literacy, and the use of informal science learning programs, such as marine summer schools, to train the next generation of marine researchers.

Conflict of Interests

The authors declare no conflict of interests.

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About the Authors

Sarah Lothian is a senior lecturer and academic barrister at the Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong. Sarah's research focuses on the protection of biodiversity beyond national jurisdiction (BBNJ) and involves multi-faceted aspects of international law, ocean governance, and marine environmental law. Sarah's teaching portfolio encompasses core areas of the law of the sea and specialised electives that align with her research expertise in marine resources law and biodiversity law.

Bianca Haas is a research fellow at the Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong. Bianca's research focuses on equity concerns within transboundary fisheries, with a special emphasis on tuna fisheries. Bianca is also interested in the potential regime interaction between the agreement for biodiversity beyond national jurisdiction (BBNJ) and regional fisheries management organisations (RFMOs).