



Situating the Evolving Role of Ocean Literacy Research in the Ocean Decade: Case Studies at a Glance

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Abstract

Ten core challenges frame the United Nations Decade of Ocean Science for Sustainable Development. *Restoring society's relationship with the Ocean (Challenge 10)* is foundational to bridging science and policy with society. Although an ever-pressing “challenge,” it is also a once-in-a-generation opportunity to galvanize existing knowledge, resources, and practices toward a common goal: safeguarding the Ocean and all life that depends on it. This chapter discusses the importance of Ocean Literacy research as a driving force behind this transformative endeavour to foster an Ocean-connected society. Beginning with an overview of Ocean Literacy's growing recognition as a societal outcome indicative of greater understanding, value, and care for the Ocean, this chapter positions the concept's increasing uptake within Ocean research, governance, and communications discourse. Next, the chapter discusses the co-development

of an Ocean Literacy research definition, a community of practice, and a research agenda resulting in four initial priorities: measuring Ocean Literacy and impact; the intersection of Ocean Literacy and climate action; linkages between Ocean Literacy and the blue economy; and promoting Ocean Literacy as a policy mechanism. Ensuring equitable, diverse, and inclusive paths forward is a cross-cutting theme for all. Case studies advancing these priority areas are shared, and ideas to further the priority areas through increased engagement and transdisciplinary collaboration across associated and complementary fields are discussed.

Keywords

Ocean Literacy (OL) · Ocean Literacy research (OLR) · Research Agenda · People-Ocean relationships · Co-development · Ocean Decade Challenge 10 alignment

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2.1 Introduction

Launched in January 2021, the UN Decade of Ocean Science for Sustainable Development (2021–2030)—hereafter ‘Ocean Decade’—is framed around ten key challenges. Challenge 10—Restoring society's relationship with the Ocean—is increasingly recognised as being foundational to all other aspects of the Ocean Decade.

Originally framed as ‘Changing humanity’s relationship with the Ocean,’ the revised framing herein draws on the Challenge 10 White Paper (Glithero et al. 2024), reflecting the many ways the Ocean, coasts, and seas are ‘peopled’ spaces (Bennett 2019). This positioning seeks to ‘ensure that the multiple values and services of the Ocean for human wellbeing, culture, and sustainable development are widely understood, that society-Ocean connections are strengthened, and that there is increased motivation, capability, and opportunity for people across all sectors of society to make decisions and behave in ways that ensure a healthy Ocean’ (Glithero et al. 2024, p. 18).

Prior to the launch of the Ocean Decade, there had already been calls for improved inter- and transdisciplinary practice, and for better consideration of the human dimensions of the global Ocean (Claudet et al. 2020). Many concepts have evolved, including but not limited to: marine citizenship, which emphasizes the role of individuals as active participants in protecting the marine environment (Buchan et al. 2023); marine identity, or understanding how and why individual and community identities may be shaped by the Ocean (Buchan et al. 2024; Kelly et al. 2023); the concept of Ocean connectedness, or the sense of belonging to the marine environment that may influence day-to-day experiences, decisions, and values (Capaldi et al. 2014; Howell et al. 2011; Nuojuua et al. 2022); and Ocean empathy or ‘taking the perspective of, and feeling an emotional bond with, Ocean-dependent communities, marine organisms, and marine systems’ (Blythe et al. 2021, p. 1285). These concepts reflect the complementary and transdisciplinary nature of broader social sciences research, drawing insights from traditional fields of, for example, anthropology, sociology, and human geography; as well as applied fields, such as behavioural sciences, political sciences, and environmental governance (McRuer et al. 2024; Spalding and McKinley, 2025). Each of these areas lends itself to (and indeed illustrates the continuing interest in) understanding the complex relationships between people and the Ocean. Importantly, to fully

understand this complexity, there must also be intentional space created to exchange ideas and draw on insights arising between and across disciplines in natural and physical sciences, humanities and arts, business, and communications (Claudet et al. 2020, p. 36); and to be inclusive of multiple ways of knowing from local, place-based, and Indigenous perspectives.

In this chapter we focus on the concept of ‘Ocean Literacy’ which is gaining global attention for its potential to further unify and increase understanding of people-Ocean relationships. Arising from the field of marine education in the early 2000s to encourage understanding of ‘our influence on the Ocean and its influence on us,’ the concept is evolving beyond its original focus on Ocean science knowledge, communication, and decision-making (Cava et al. 2005). Discussed in more detail in other chapters, the current set of Ocean Literacy dimensions reflect several conceptual elements to position Ocean Literacy as multi-faceted and comprehensive, inclusive of knowledge, communication, behaviour, awareness, attitudes, activism, emotions (or ‘emOceans’), access and experience, adaptive capacity, trust and transparency (Brennan et al., 2019; McKinley et al. 2020) as well as Ocean connectedness (Fauville et al. 2024). Each of these dimensions is informed by the many sub-fields in the marine social sciences, as well as traditional and applied fields of study (Fig. 2.1). Within and across these varying fields is wide recognition of the many ways people across geographies and cultures relate to the Ocean. With ongoing transdisciplinary insight, this conceptual model of Ocean Literacy dimensions will necessarily continue to expand to be even more inclusive of this diversity.

The concept of ‘Ocean Literacy’ has faced criticism, especially regarding its transferability outside of its formal education roots with predominant focus on Western science knowledge and English language context (MacNeil et al., 2021). It is also relatively new compared to established areas of marine social sciences. However, Ocean Literacy’s growing presence in global Ocean discourse (as will be highlighted shortly) offers a

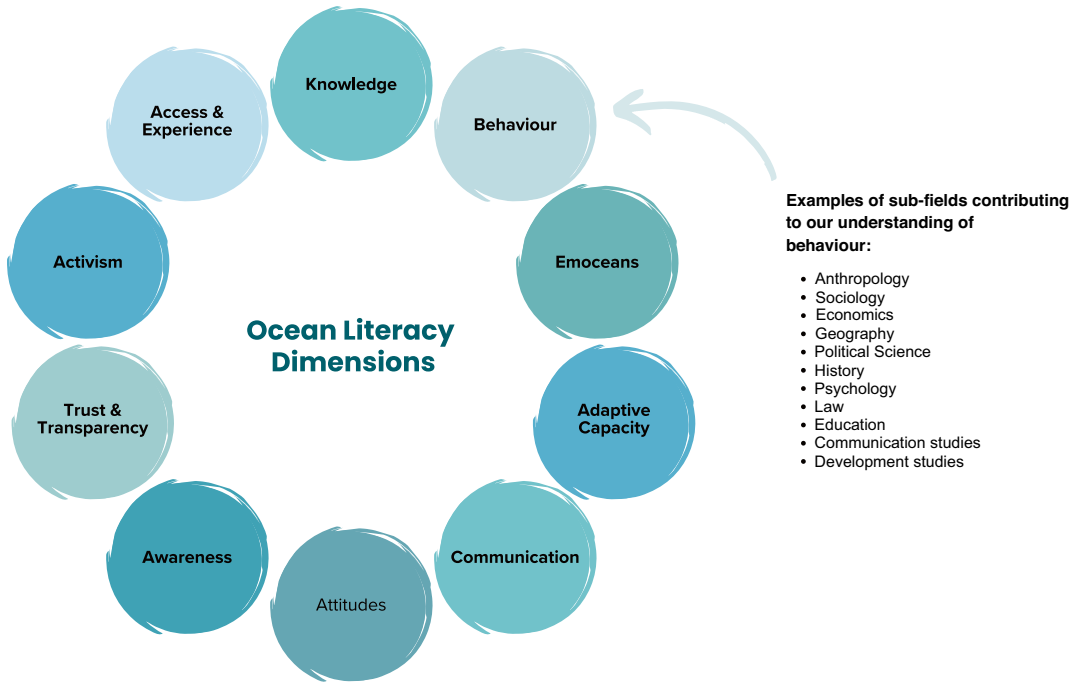


Fig. 2.1 Expanding dimensions of Ocean Literacy and showing examples of sub-fields that contribute to one dimension (adapted from McKinley et al. 2023).

valuable opportunity to unite diverse fields and perspectives to address shared goals and challenges. As the concept of Ocean Literacy rapidly and continuously evolves (Shellock et al. 2024), space must continue to be co-created to continue conversations on conceptual tensions, merits, uses, and impacts. This is especially needed given changing people-Ocean connections in light of increasing environmental and societal challenges, uncertainty, and complexity. That said, we need to be mindful to not lose momentum over a *term*, but to instead find a common framing that accommodates diverse dimensions and drivers of influence (McNeil et al., 2021). In this way, the concept and associated actions toward its realization can best support place-based relevance and uptake in decision-making.

Toward a common framing, Ocean Literacy has recently been positioned through the Challenge 10 White Paper as a *societal outcome*, reflective of a society that better understands, values, and cares for the Ocean (Glithero et al. 2024). This framing necessitates and encourages

contributions across parallel and dovetailing fields of inquiry and consideration of diverse place-based contexts. Ocean Literacy as an outcome is dependent on collective efforts to not only change, but to *restore society's* relationship with the Ocean and all waterways that flow to it (Glithero et al. 2024). This positions the deteriorating state of the Ocean as a people problem, with people-driven solutions; helping to anchor not only Challenge 10, but all Decade Challenges in the importance of *societal* engagement as central to achieving success. This framing has gained traction in global Ocean discourse over recent years, evidenced, for example, in the Venice Declaration (IOC-UNESCO 2024), which has the positional aim to inform Ocean policy discussions and negotiations, such as the 2025 UN Ocean Conference (UNOC3) in Nice, France.

As the concept of Ocean Literacy, and indeed its position within broader Ocean discourse and scholarship advances, there has been a corresponding increase in attention to Ocean Literacy research, or the:

transdisciplinary, cross-sector field of research which explores the diverse dimensions, drivers, influences, and impacts of initiatives aimed at strengthening people-Ocean relationships. It seeks to understand how these aspects may vary in different social, economic, cultural, political, and geographic contexts and is inclusive of diverse voices, actors and ways of engaging with the Ocean (McRuer et al. 2024, p. 11).

Particular attention has focused on the need to better account for and understand the many ways that Ocean Literacy research can help bring to the fore the interdependence of human society and the Ocean. Most recently, a call to advance Ocean Literacy research was included in the Barcelona Statement (May 2024), following the Ocean Decade Conference (IOC-UNESCO 2024). This testament emphasizes the fundamental role of multi-scale and multi-sector collaborations and Ocean Literacy research as key priorities within the Ocean research space. This focus affords more thorough investigation(s) into people-Ocean connections, behaviour change, and diverse cultural engagement across geographies; and aligns with the evolving conceptual underpinnings of Ocean Literacy already discussed.

While research on Ocean Literacy is not necessarily new, it remains relatively emergent. The pace and scale of Ocean Literacy research has begun to increase; take for example the increasing emphasis on public Ocean perceptions research (Glithero and Zandvliet 2021; Jefferson et al. 2021). Despite this traction, gaps in our understanding of the concept and how it can be meaningfully applied remain. For example, historically, Ocean Literacy research has placed emphasis on education and the dimensions of knowledge and awareness (Shellock et al. 2024), with limited recognition of other potential drivers of Ocean Literacy to date. To expand beyond this myopic tendency toward a more comprehensive outlook, the growing community of Ocean Literacy researchers must co-create opportunities for cross-disciplinary and cross-sector collaboration and communication. This approach is essential to deliver a progressive, inclusive, and impact-driven research agenda. Such an agenda must position the need for research that embraces and explores the multi-faceted nature of Ocean

Literacy and seeks to understand the drivers and influencers of its many dimensions. Notably, the agenda must situate research directions within the broad scope of people-Ocean relationships; guided by the overarching question of how can we best affect wide societal change toward pro-Ocean behaviours and people-driven solutions?

2.2 Overview of Advances in Ocean Literacy Research: Community of Practice, Agenda, and Priorities

Opportunity to advance Ocean Literacy research traction arose in July 2021 during the first workshop of the UN Ocean Decade Laboratory series (Fig. 2.2). The first Laboratory invited satellite activities related to the Decade's Societal Outcome #7, 'An Inspiring and Engaging Ocean,' for which a proposal to bring together diverse Ocean Literacy researchers and practitioners across generations, geographies, and cultures was accepted. The proposal aimed to support the co-development of an Ocean Literacy Research Community and agenda for the Ocean Decade.

Between July 2021 and June 2022, a set of three workshops paired with collaborative crowdsourcing methods (i.e., surveys and community mapping through an interactive StoryMap website) were used to engage the growing Community in advancing Ocean Literacy research (see Table 2.1 below).

The participatory, co-development process to operationalize Ocean Literacy research exemplifies how disparate and parallel areas of research and practice can be brought together to co-articulate key pathways, leverage points, and impact opportunities. Additionally, the co-design process itself exemplified these shared building blocks. For example, interaction was fostered between global individuals interested in Ocean Literacy directions, regardless of degree of experience or area of focus. This inclusive and bottom-up approach also supported Community growth by inviting diverse ways of knowing and perspectives across cultures, regions, sectors, and scales typically neglected in Ocean science

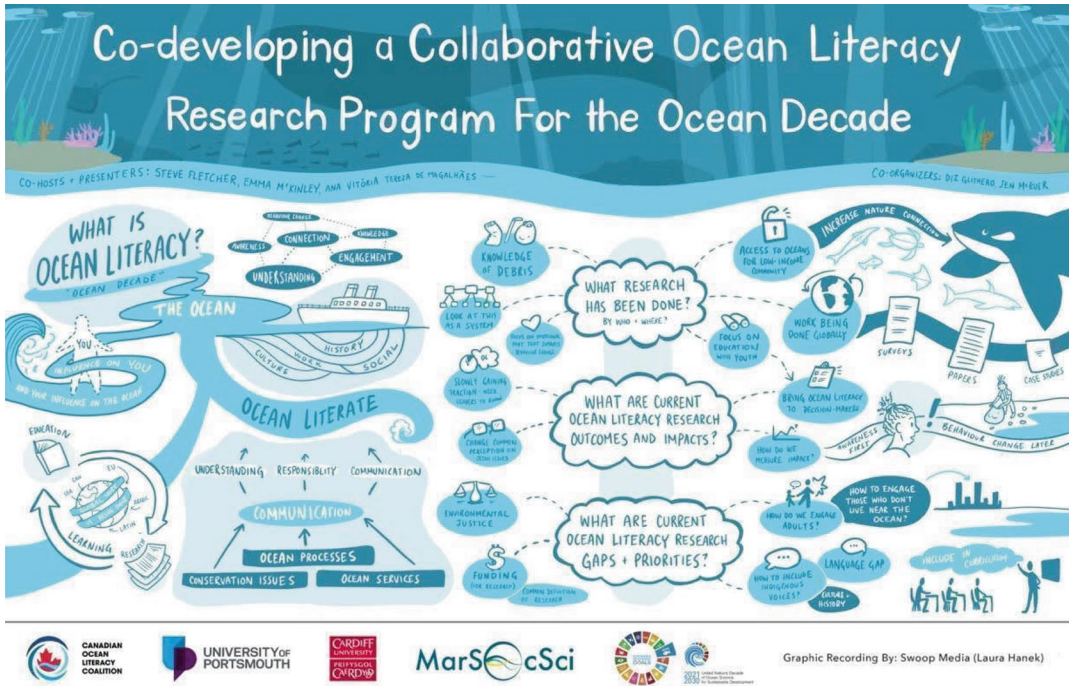


Fig. 2.2 Graphic visualization of the first workshop at the UN Ocean Decade Laboratory series

(Meyer-Gutbrod et al. 2023). This helped to ensure that the aims determined through the research agenda were reflective of diverse interests, needs and experiences. This serves as an example of the collaborative efforts needed to strengthen collective and inclusive Ocean Literacy research trajectories to critically inform decision-making in ways that integrate research insights across Ocean-related policies.

Today, the growing Ocean Literacy research community is composed of over 180 individuals from 41 different countries. The members self-identify among a wide range of identities—geographic, gender, minority group, age, and sectors (e.g., researchers and practitioners from NGO, academia, industry, arts and culture, education, media, and government backgrounds). Crucially, what distinguishes the Ocean Literacy research community from other existing Ocean Literacy groups and initiatives (e.g., National Marine Educators Association, UNESCO’s Ocean Literacy Group of Experts) is its emphasis on *facilitating and advancing research*. To support this Community, a lead coordinating organization

(the Centre for Ocean Literacy Collaboration, formerly the Canadian Ocean Literacy Coalition) and eight collaborating partner organizations/institutions representing a range of global perspectives and experiences, have volunteered time and effort to guide the co-development process. The full list of partners can be found on the dedicated Community website designed to reflect ongoing growth and foster global collaboration and exchange of research (see the resources section). The website also serves to visualize a map of the Community by geographic area and professional expertise, current projects, and foundational cornerstones. Since these initial workshops and the formation of this Community, a working definition of our collective field of research has been co-crafted (see above) alongside a co-developed agenda, inclusive of four initial priority areas to address gaps and opportunities for alignment (visualized in Fig. 2.3 below):

- **Measuring Ocean Literacy.** There is a need to develop Ocean Literacy indicators and measures to better understand the efficacy of

Table 2.1 Importance of Operationalizing Ocean Literacy Research

Operationalizing Ocean Literacy Research

• **Co-identifying emergent needs and priorities:**

Enabling Ocean Literacy research (OLR) allows for the co-identification of new and emergent needs, priorities, and opportunities. By being inclusive of transdisciplinary researchers, policymakers, educators, communicators, and local communities, initiatives are informed by diverse knowledge systems and perspectives across cultures, regions, sectors, and scales. This importantly includes the integration of local and Indigenous knowledge and the intentional inclusion of other underrepresented groups in the Ocean sciences (Meyer-Gutbrod, 2023). In recognizing multiple knowledge systems, it becomes possible to not only pinpoint critical areas that require immediate attention, but also learn from tried and tested approaches, augment previously siloed efforts by avoiding overlap, and build bridges between existing efforts. Collaborative approaches to enabling Ocean Literacy research ensure that research is responsive to current and future Ocean-related issues and relevant to those seeking to address them.

• **Informing existing and novel key initiatives:**

Ocean Literacy research importantly provides the evidence base critically needed to support and enhance existing Ocean initiatives while also informing the development of new ones. For example, research focused on better understanding societal needs, attitudes, values, and perspectives can contribute to more effective and targeted Ocean conservation and communication strategies that are grounded in place-based contexts and are responsive to audience interests and needs. This helps to ensure that initiatives are relevant, appropriate, timely, and effective.

• **Measuring impact to better understand what is working and what is not:** Operationalizing Ocean Literacy research involves systematically measuring and evaluating the outcomes of Ocean Literacy initiatives. This process helps to identify successful strategies and areas needing improvement. By sharing existing measurement tools and understanding what works and what does not, approaches can be refined or new ones developed, resources allocated more efficiently, and positive impact of OLR maximized.

• **Leveraging and fostering transdisciplinary research partnerships:** Co-developing a shared understanding of how Ocean Literacy research can feed into effective practice requires the intentional co-creation of collaborative, transdisciplinary partnerships that can mobilize concerted efforts. For example, early alignment with professional communications strategists to shape research in ways that can meaningfully inform evidence-based and tailored messaging for public, policy, and funding audiences.

Ocean Literacy initiatives in fostering behaviour change across all societal sectors. In addition, Ocean Literacy research should be expanded to include monitoring of the multiple dimensions of Ocean Literacy over time, to assess how people-Ocean relationships are changing and what might be driving those changes.

- **Ocean Literacy Research and Climate Change.** Investigating the human dimensions of climate change, encompassing the social, cultural, economic, health, and governance aspects of the Ocean and its interconnected life-support systems, is needed. Future Ocean Literacy research must address the impacts of climate change on societal relationships with the Ocean and how these changes will affect Ocean Literacy across different communities. It is crucial that Ocean Literacy research incorporates elements of resilience and the dimension of adaptive capacity to better understand and respond to the challenges posed by a changing climate.
- **Ocean Literacy Research and a Sustainable Blue Economy.** Understanding how civil society and businesses connect to and value Ocean spaces is a notable priority. For example, to encourage the business community to better understand the importance of Ocean Literacy as a core component of their corporate strategy and social responsibility. In addition, efforts to raise knowledge and awareness of maritime career opportunities, improve recruitment to Ocean careers, and open possibilities for business diversification are also required.
- **Ocean Literacy Research as a Policy Mechanism.** Given the growing emphasis on the potential role of Ocean Literacy in Ocean decision-making and Ocean action, more research is needed to better understand the role of Ocean Literacy to support the integration of diverse values into the Ocean governance landscape. Furthermore, research to develop recommendations to support the use of Ocean Literacy as a practical policy tool to ensure impact is also urgently required.

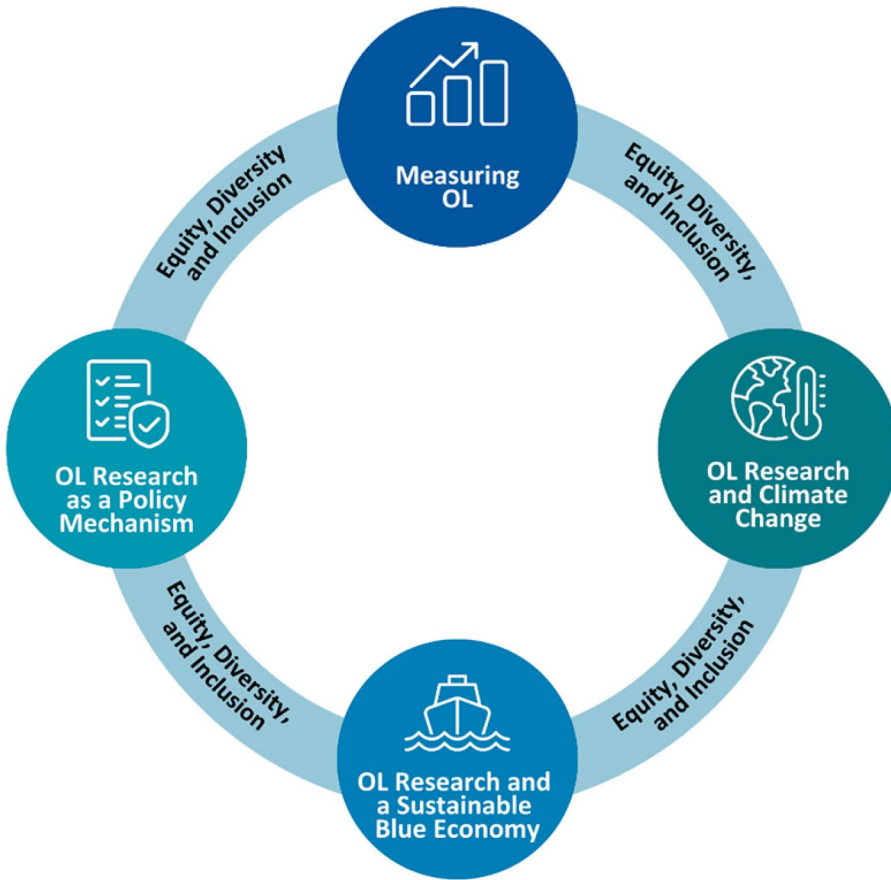


Fig. 2.3 Interconnected Ocean Literacy research priority areas, with the cross-cutting theme of equity, diversity, and inclusion (amended from McRuer et al. 2024).

Across all priority areas, the Ocean Literacy research community co-positioned the overarching theme of equity, diversity, and inclusion, with the caveat that too often this is given lip-service rather than being transparently actioned (McRuer et al. 2024). There are existing examples of Ocean Literacy research aligned with these co-identified themes being carried out by researchers around the world, for example community science research to inform policy, as seen in the Horizon 2020 Innovation Action project, ‘Nautilus.’ Paredes-Coral et al. (2021) have also identified areas of work aligning Ocean Literacy research and the blue economy, such as the Maritime Alliance for fostering the European Blue Economy through a Marine Technology Skilling Strategy (MATES), which seeks to enhance Ocean Literacy within the wider maritime sector. Research focused on the blue econ-

omy continues to be promoted as a key and emergent focal area, including, for example, seafood value chain research aiming to inform blockchain technology to aid consumer decision-making (e.g., Sea2See). Next, we summarize four case studies that align with the priorities set out by the Ocean Literacy research community. The first case study showcases three national studies undertaken to attain a baseline of Ocean Literacy; the second shares an initiative to co-design a shared global tool to assess Ocean Literacy and monitor change over time; the third presents a survey co-created by members of the Ocean Literacy research community to assess climate-related Ocean action and associated best practices; and the final case study shares a dedicated series for global exchange on Ocean Literacy topics, relating to all priority areas.

2.3 Case Studies at a Glance

The following case studies provide insights into various Ocean Literacy research initiatives related to current priority areas. Each case study highlights strategies and outcomes that contribute to a broader understanding of Ocean Literacy as a societal outcome. For further information, please refer to the resources section, where additional context and supporting materials are available.

2.3.1 Case Study #1: National Studies

Case Study #1 addresses the Priority Areas: *Measuring Ocean Literacy and Ocean Literacy Research as a Policy Mechanism*. This case study showcases examples of iterative, peer-reviewed national surveys aligning with the launch of the Ocean Decade, offering unique, yet complementary Ocean Literacy measurements in three different countries: Canada (2020)—place-based focus; United Kingdom (2021 and 2022)—Ocean Literacy dimensions focus; Brazil (2022)—communications focus. These surveys were recently selected for cross-analysis to inform a global Ocean & Society Survey tool to track public Ocean perceptions over time (see Case Study #2.3.2). We first elaborate on the intent and impact of each national study below.

2.3.1.1 Canada

The Canadian Ocean Literacy Survey (COLS) conducted by the Canadian Ocean Literacy Coalition (now the Centre for Ocean Literacy Collaboration) was an instrumental baseline of Ocean perceptions in Canada through a public lens (Glithero and Zandvliet 2021). This was one of the key pieces of research that informed a national Ocean Literacy strategy—the first in the world. Gaining better insight into the unique diversity and regional needs across Canada through the national survey directly informed key place-based priorities, actions, barriers, and gaps to be addressed, and pathways to both implement

and measure progress over time. See more in Chapter 22 of *Ocean Literacy: The Foundation for the Success of the Ocean Decade Volume III: Accelerating Communication, Technology, and Global Initiatives*.

2.3.1.2 The United Kingdom

The England and Wales Ocean Literacy Survey was carried out in 2021 (England and Wales) and 2022 (all UK countries) (DEFRA 2022). The survey was commissioned as part of the project *Understanding Ocean Literacy and Ocean Climate-related Behaviour Change in the UK* led by Defra, in collaboration with the Ocean Conservation Trust, Natural Resources Wales, and Marine Scotland. The survey itself builds on research to better understand the concept of Ocean Literacy, its dimensions, and develop recommendations for UK-wide Ocean Literacy research.

2.3.1.3 Brazil

The Brazilian survey was carried out in 2022 (Fundação Grupo Boticário 2022) seeking to identify how people from all regions of the country perceive their connection with the Ocean. It aimed to be a baseline to track Brazilians' Ocean awareness, knowledge, and relationships to guide oceanic communication and literacy strategies and be an example for other countries to replicate. The survey succeeded in identifying the ways that Brazilian people are willing to adopt new habits and behaviors to support the health of marine environments, and with a communications-focus, the findings were shared widely to inform directions forward.

These nationally representative public assessments build upon preceding efforts to gauge Ocean Literacy among youth in educational settings (Fauville et al. 2019), widening our understanding of people-Ocean relationships across diverse geographical, social, and cultural contexts. For example, national surveys in the Republic of Ireland (Fair Seas, 2022), South Africa (Two Oceans Aquarium, Cardiff University, 2023), and Sweden (Swedish Institute for the Marine Environment, 2023) have since been administered

to capture unique place-based public Ocean perspectives. Moreover, Canada and Brazil have recently completed their second national survey administration (early 2025) to track Ocean Literacy progress over time. Assessments such as these complement and inform the increasing development of National Ocean Literacy Strategies, for example in Canada (2021), Wales (2025) and England (expected 2026).

2.3.2 Case Study #2: Ocean & Society Survey

Case Study #2 pertains to the Priority Area: *Measuring Ocean Literacy*. There is a need to position Ocean Literacy as a mechanism that can drive policy change across different sectors and levels of decision-making. To support this, evidence-based insights are needed. The Ocean & Society Survey is a global instrument collaboratively designed with 20 core partners, launched in 2025 to help fill this need (McRuer et al. 2025). Positioned within the evolving landscape of public Ocean perceptions research, and in alignment with the Ocean Decade Challenge 10, the Ocean & Society Survey strives to identify how public views of, and relationships with the Ocean may be changing over time.

Based on the comparative analysis of the above-mentioned national surveys (Case study #1), the questions included in the Ocean & Society Survey intentionally reflect the evolving concept of Ocean Literacy since its inception—in particular, how it has moved away from a knowledge or information deficit perspective, toward a more holistic approach that takes into account diverse knowledge systems, values, emotional connections, and ways of connecting with the Ocean, coastal, and freshwater environments. The Ocean & Society Survey includes a core set of 30 questions (inclusive of 10 demographic questions) chosen for their representation of Ocean Literacy themes and dimensions, cross-checked by metric measures to align with the goal of capturing diverse people-Ocean connections. Five Survey objectives were co-determined,

including: to strengthen people-Ocean relationships by tracking how people understand, value, and engage with the Ocean; to guide pathways of engagement by identifying behavioural motivations, enablers, and barriers; to generate insights for targeted, audience-specific communications; to demonstrate the value of transdisciplinary partnerships; and to better understand what influences peoples' interests and concerns about the Ocean, alongside the willingness and capacity to take action and make informed decisions.

At the time of writing, the Ocean & Society Survey has been administered in 14 countries, with the aim to involve as many countries as possible by 2030. Comparative analysis over time and across regions aims to identify evidence-based insights to support opportunities for widespread public engagement in Ocean health solutions.

2.3.3 Case Study #3: Climate Change Survey

Case Study #3 reflects the Priority Area of *Ocean Literacy Research and Climate Change*. Members of the Ocean Literacy research community from Canada, Portugal, Spain, and Taiwan have worked to develop a survey to capture opinions on climate change messaging and action. Specifically, it looks to analyze what messaging works best, its efficacy, and what are the main drivers and motivations to carry out climate-related Ocean actions. The United Nations Development Programme has defined climate action as a stepped-up effort to reduce greenhouse gas emissions and strengthen resilience and adaptive capacity to climate-induced impacts, including mitigating climate change; adapting to the impacts of climate change; and, contributing to understanding climate change.

A climate-related Ocean action is, therefore, an action taken for the Ocean that addresses climate change. This is an action that falls under both Sustainable Development Goals 14 (Life below water) and 13 (Climate Action). The survey calls on the experience and suggestions of

those actively involved in research, study, and/or volunteering related to Ocean health, with a goal of better understanding our changing Ocean, its connection with climate, and how the global community can improve engagement for climate-related Ocean actions. The survey was translated into five languages, with the aim to achieve a better (and general) understanding of effective climate change messaging and to share this learning with the Ocean Literacy research community, helping to ensure that Ocean Literacy initiatives strengthen society's relationship with the Ocean in grounded and measurable ways.

2.3.4 Case Study #4: Ocean Literacy Dialogues

Case Study #4 addresses all Priority Areas. The Ocean Literacy Dialogues series is a global collaboration led by the *Ocean Literacy With All* community—an Ocean Decade-endorsed program coordinated by IOC-UNESCO. The aim of the Ocean Literacy Dialogues series is to co-organize public events that enable knowledge exchange across different geographical and socio-cultural contexts, and that catalyze action to achieve the overarching goal of the Ocean Decade.

The 1st Edition of the Ocean Literacy Dialogues series was jointly organized by IOC-UNESCO and the European Commission, specifically in the context of the EU4Ocean Coalition, in Lisbon, Portugal, during the 2022 UN Ocean Conference (June 28th-July 1st). The high-level event marked the beginning of a process to investigate the shared commitments that support Ocean Literacy across the globe.

Between October 10th to 14th, 2022, the 2nd Edition was held in Santos, Brazil, led by the Brazilian Ocean Literacy community with support from IOC-UNESCO. Drawing over 2,500 people from schools, private and governmental sectors, research, journalism, and civil society, the event facilitated discussions on Ocean

engagement, featuring tailored events for various audience interests including formal education, research, media, urban development, culture, and sports.

During the Fifth International Marine Protected Areas Congress (IMPAC5) in Vancouver, Canada, the 3rd Edition took place between February 2nd and 9th, 2023. Led by the Canadian Ocean Literacy Coalition (now the Centre for Ocean Literacy Collaboration), with collaborating partners IOC-UNESCO, Cardiff University, Marine Social Sciences Network, University of Victoria, and the Department of Fisheries and Oceans Canada, this edition focused primarily on Ocean Literacy research, as well as Ocean art and storytelling, and Ocean education.

Tanzania, Africa, held the 4th Edition between November 4th and 5th, 2023, co-hosted by the African Union and Regional Seas with African parties, and in collaboration with IOC-UNESCO, the IOC Sub-Commission for Africa (IOC-AFRICA), as well as UNESCO's Dar es Salaam Field Office. The event focused on blue education and curriculum, with an emphasis on Ocean opportunities, decolonizing narratives, and ecological and traditional knowledge.

The 5th Edition took place during the 2024 Ocean Decade Conference in Barcelona, Spain between April 8th and 9th, 2024. Led by IOC-UNESCO, this edition brought together a diverse community of Ocean Literacy researchers and practitioners. Sessions explored a range of topics, with a significant focus on blue education, as well as discussing OL innovation and trends, cultural connections, community engagement, and an emphasis on the importance of aligning Ocean Literacy research with strategic Ocean communications initiatives.

It is important to note that future editions of the series must continue to broaden beyond the educational lens that has traditionally situated Ocean Literacy, to be reflective and supportive of the evolving nature of the concept and associated research.

2.4 Discussion and Concluding Remarks

At the time of publication, we have entered the second half of the Ocean Decade, a pivotal moment to reflect on our progress across disciplines and sectors, learn from both successes and shortcomings, and leverage collective momentum. Advancing Ocean Literacy research over the remainder of the Decade will require a stronger focus on transdisciplinary collaboration and the integration of diverse knowledge systems and experiences. This is essential to develop innovative, people-driven solutions that can address both current and emerging challenges.

Too often, collaborative research endeavours are hindered by siloed approaches, limited funding leading to competition, unsuccessful proposals, and short-term contracts. By co-establishing a coordinated and dedicated agenda for the Ocean Decade, we can work together with streamlined messaging and targeted joint proposals to help leverage and secure long-term partners and sustained funding for collective initiatives. With the growing number of invested Ocean Literacy research community researchers and practitioners, and guiding Ocean Literacy research agenda priorities on hand, opportunity exists to connect ideas and projects. Using the interactive dashboard on the Community website, international colleagues can connect, learn from one another's work, and begin initiating dialogue and mobilizing initiatives across disciplines, sectors, and regions. Importantly, ongoing tracking and evaluation of Ocean Literacy initiatives is also needed to measure impact and to adapt and improve strategies to address interconnected challenges. Such feedback loops help to ensure continuous progress toward shared goals.

To collectively tackle the challenges facing the Ocean, Ocean Literacy research must be approached with greater urgency and ambition—delivered at the pace and scale necessary to generate real change. Despite growing interest in Ocean Literacy, its incorporation into Ocean policy remains limited. This requires a critical re-evaluation of business-as-usual models, identifying where transformation is needed, and fostering

transitions that better serve both the Ocean and society. For example, while connections between Ocean Literacy research and Sustainable Blue Economy research are emerging, further integration is needed to ground understandings, practices, and policies in place-based perspectives, reflective of diverse cultural and societal contexts. At the same time, clear and actionable pathways for policy impact are paramount. Future Ocean Literacy research can support such efforts by pursuing approaches capable of co-identifying and -investigating emerging priority areas and Ocean Literacy dimensions, as well as strategically communicating and sharing evidence-based insights to support truly integrative and impactful research and practice.

2.4.1 Summary

Key concepts explored in this chapter include:

- The UN Decade of Ocean Science for Sustainable Development focuses on 10 core Challenges, with Challenge 10 centered on people-Ocean relationships.
- Ocean Literacy is being incorporated into research, governance, and communications, on account of its growing recognition as a societal outcome-one that better understands, values, and cares for the Ocean.
- Ocean Literacy research is positioned as a transdisciplinary, cross-sector field of research with the goal of fostering this shared societal outcome.
- The chapter introduces a community-informed Ocean Literacy research agenda for the Ocean Decade, and outlines co-identified priorities of measurement, climate change, the Sustainable Blue Economy, and policy mechanisms, with equity, diversity, and inclusion as a cross-cutting theme.
- The chapter calls for ongoing collaboration to strengthen Ocean Literacy research community efforts in ways that continue to enhance transdisciplinary practice, integrate diverse knowledge systems, and address emerging challenges with innovative, people-driven solutions.

2.4.2 Recommended Resources

The following resources provide further insights and support on this topic:

- Centre for Ocean Literacy Collaboration (formerly Canadian Ocean Literacy Coalition) and collaborating partner organizations/institutions: <https://centreforoceanliteracy.ca>
- Barcelona statement: ‘Inform knowledge drawn from transdisciplinary social science and Ocean Literacy research on people-Ocean connection, behavior change, and cultural engagement that can be integrated into Ocean Decade digital infrastructure and used to map and measure the impact of Ocean Literacy initiatives.’

Case Study #1:

- Canadian Ocean Literacy Survey Highlights Report <https://centreforoceanliteracy.ca/wp-content/uploads/2020/06/COLSurvey-Highlights-Report-FINAL-1.pdf>
- The Ocean Literacy in England and Wales Headlines Finding Report https://oceanconservationtrust.org/wp-content/uploads/15131_ME5239OceanLiteracyHeadlineReport_FINAL.pdf
- The Brazilian Survey: An Ocean Without Mysteries: Brazilians’ Relationship with the Ocean https://fundacaogrupoboticario.org.br/wp-content/uploads/2025/02/An_ocean_without_mysteries.pdf
- Canadian Ocean Literacy Strategy (See also Chapter 22 in Volume 3) https://centreforoceanliteracy.ca/2022/wp-content/uploads/2022/01/Land-Water-Ocean-Us_-A-Canadian-Ocean-Literacy-Strategy_March-2021.pdf
- Wales National Ocean Literacy Strategy https://www.northwaleswildlifetrust.org.uk/sites/default/files/2025-01/Ocean%20Literacy%20Strategy_ENG.pdf

Case Study #2:

- Ocean & Society Survey <https://oceanliteracyresearch.com/ocean-and-society-survey/>

Case Study #3:

- Ocean Literacy and Climate Change Survey <https://oceanliteracyresearch.com/current-olrc-initiatives/>

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Emma McKinley, PhD, is a Senior Research Fellow at Cardiff University. Her research focuses on understanding the complex relationships between society and the sea, taking account of diverse perceptions, attitudes and values held by different communities and audiences, and considers how this insight can be used to support effective Ocean governance. Recent projects include the INTERREG Ireland-Wales funded project, Coastal Communities Adapting Together (CCAT – www.ccatproject.eu), which focuses on understanding public perceptions of climate change, building on models of Ocean Literacy and marine citizenship to explore the notion of climate citizenship; the GCRF Catalyst funded project Transforming Resilience across Food and Water Systems, including an assessment of social, economic and cultural impacts of algal blooms; and, the recently funded SMMR project, Integrating Diverse Values into UK Marine Management, leading work on Ocean Literacy. Emma is the founder of the Marine Social Science Network, a global, interdisciplinary community of marine social science researchers and practitioners, sits on the UK’s National Decade Committee for the UN Ocean Decade, the International Science Advisory Group for MEOPAR and the IOC-UNESCO’s Ocean Literacy Group of Experts.



Diz Glithero, PhD, is the Executive Director of the Centre for Ocean Literacy Collaboration (formerly Canadian Ocean Literacy Coalition), which is administratively based at the Ocean Frontier Institute at Dalhousie University. Diz is an Adjunct Professor in the Marine Affairs Program at Dalhousie University. She led the co-development *Land, Water, Ocean, Us: A Canadian Ocean Literacy Strategy* (March 2021) and co-founded Ocean Week Canada. Internationally, she served as the co-chair and co-author of the Ocean Decade Vision 2030 Challenge 10 Working Group and White Paper—*Restoring Society’s Relationship with the Ocean*. She serves on the Steering Committee of the IOC-UNESCO-led Ocean Decade Coordination Office, *Connecting People and the Ocean*. Diz’s former work as an Adjunct Professor in the Faculty of Education at the University of Ottawa and earlier research focused on environmental sustainability education, civic engagement, and youth agency informs her current Ocean efforts. In 2025, Diz was awarded the King Charles III Coronation Medal for her dedication to Ocean conservation through education and research.

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