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# Protecting Children's Rights to Development and Culture by Re-Imagining "Ocean Literacies"

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## Abstract

This paper explores the relevance of existing international legal standards on children's human rights to a healthy ocean. In particular, we reflect on the still underestimated importance of a healthy ocean for children's human right to development and cultural rights. Focusing on environmental education, we argue that the concept of ocean literacy should rather be conceptualised as a plurality of "ocean literacies", better to account for multiple ocean knowledges. Ocean literacies in environmental education should be re-imagined to emphasise a systems approach to the ocean, integrating aspects of environmental justice and avoiding the psychological pressure on children to be responsible for the future of the environment. The paper concludes by providing specific recommendations for contextualising and re-imagining ocean literacies in a time where there is an increased global focus on ocean literacy through the UN Ocean Decade.

## Keywords

children's rights – development and cultural rights – environmental education – ocean literacies – environmental justice – UN Ocean Decade

## 1 Introduction

A healthy ocean is fundamental to the lives and longevity of children in all countries across the globe, in securing happy and healthy early years experiences, supporting a child's transition to adulthood and ensuring the fair and equitable inheritance of the ocean for future generations.<sup>1</sup> The ocean produces

<sup>1</sup> In this paper, children are all persons under the age of 18. This paper also considers some references of young people, as defined by the UN as 15–24, with recognition of the importance of realising children's rights, and supporting their rights and evolving capacity into adolescence and adulthood.

half of the oxygen we breathe and provides a vital contribution to climate regulation (Hilmi *et al.*, 2021; Levin, 2021), carbon storage (Luisetti *et al.*, 2019; Atwood *et al.*, 2020), the global water cycle, and the global production of food (Thurber *et al.*, 2014). The ocean contributes to several fundamental aspects of children's lives, protected internationally under the UN Convention on the Rights of the Child (CRC), including, but not limited to the right to life, survival and development, and the right to health (UN, 1990, Arts. 6 and 24).

Children's right to development is intrinsically linked to the right to culture (CRC's Art. 30), where the CRC's preamble recognises the importance of 'taking due account of the importance of the traditions and cultural values of each people for the protection and harmonious development of the child' (UN, 1990). This dimension of children's right to development can be linked to the broader international law concept of sustainable development, which 'cannot be separated from the recognition of individual and collective cultural rights, including spiritual and heritage rights' (UN, 2022: 7). The ocean plays a vital role in the cultural aspects of children's right to development, as emphasised by the UN Special Rapporteur on cultural rights (UN, 2022), and is particularly important in protecting children's access to traditional, Indigenous and local ocean knowledge, and long-standing heritage, spiritual and cultural connections to the ocean.

Alongside the recognition of the importance of the ocean for children's survival, cultural lives and health, there is a growing global recognition of the importance of what is termed "ocean literacy" to advance ocean sustainability (see UNESCO, 2018; IOC, 2020; Claudet, 2021; McKinley *et al.*, 2023). Ocean literacy can simply be defined as 'an understanding of your influence on the ocean, and its influence on you', or understood as a complex and adaptive concept that involves several dimensions such as awareness, access and experiences, emotional connections, and knowledge (McKinley *et al.*, 2023). Ocean literacy is emerging as a promising aspect of global ocean governance, having recently been endorsed as a crucial focus of the UN Decade of Ocean Science for Sustainable Development (2021–2030) (henceforth referred to as the UN Ocean Decade) (see IOC, 2020).

Despite the link between a healthy ocean and children's rights to development and culture, this remains poorly explored in current UN programmes, frameworks and actions. For example, UNESCO's Intergovernmental Oceanographic Commission (IOC/UNESCO) Group of Experts on Ocean Literacy includes only one trained social scientist,<sup>2</sup> and the UNESCO Ocean Literacy Portal only briefly refers to the ocean as 'an important element in

2 On 19 May 2023, UNESCO's Intergovernmental Oceanographic Commission (IOC/UNESCO) assembled a group of ocean literacy experts to run their Ocean Literacy portfolio of

the heritage of many cultures'.<sup>3</sup> Furthermore, the flagship UNESCO ocean literacy toolkit (2018:62) contains substantial self-identified knowledge gaps in the inclusion of art, music, culture, among others beyond “science”, and the absence of Indigenous peoples, traditional knowledge and representation from Small Island Developing States. The Committee on the Rights of the Child (CRC)’s General Comment No. 26 on children’s rights and the environment, with a special focus on climate change (henceforth GC26), confirms the importance of the links between children’s human rights and the ocean (UN, 2023). The GC26, however, only address the dependence of children’s human health on a healthy ocean in the context of marine pollution (UN, 2023, Para 65(f)), and culture is only briefly mentioned in the context of the rights of Indigenous children and children belonging to minority groups (Para 58), and the importance of tailoring education and school curricula to cultural contexts (Para 53). Furthermore, the GC26 does not fully embrace a more systematic understanding of the role of the ocean for the protection of children’s human rights, including at the ocean-climate-biodiversity nexus (the role the ocean plays in slowing climate change by absorption of excess heat, carbon dioxide (CO<sub>2</sub>) and other greenhouse gases from the atmosphere) (Morgera and Shields, 2023). This may be problematic if the GC26 is not interpreted in the light of the knowledge that the ocean plays such a vital role for children’s lives.

Against this background, this paper explores the significance of the negative impacts on children of a degraded ocean, notably with regard to their right to development and cultural rights. The paper then discusses the crucial role of children’s right to environmental education and ocean literacies to support the protection of children’s rights to development and cultural rights in relation to a healthy ocean. The paper conceptualises a refocus on ocean literacies, instead of ocean literacy, with a view to supporting the full realisation of children’s agency, and their right to be heard in ocean-related decision-making (see Shields *et al.*, 2023).

Based on ongoing inter- and transdisciplinary research under the One Ocean Hub that has seen the coming together of various ways of knowing and being with the ocean (see, for example, Boswell and Thornton, 2021; Erwin *et al.*, 2022; Niner *et al.*, 2022; Strand *et al.*, 2022a; Strand *et al.*, 2022b), the paper then develops a series of recommendations to re-imagine ocean literacies as a decolonised and contextually-relevant environmental education tool

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activities, including defining good practices and programmes for member states, see IOC/UNESCO, ‘UNESCO assembles global group of experts on ocean literacy’, *UN Ocean Decade* 2023: <https://oceandecade.org/news/unesco-assembles-global-group-of-experts-on-ocean-literacy/>. Accessed 9 June 2023.

- 3 UNESCO, “The 7 Principles of ocean literacy”, *Ocean Literacy Portal* 2023: <https://oceanliteracy.unesco.org/principles/>. Accessed 9 June 2023.

in supporting the full realisation of children's rights dependent on a healthy ocean by: nurturing a holistic systems understanding of the environment, notably on the ocean-climate-biodiversity nexus; integrating understanding of environmental injustices in the ocean; and fostering understanding of different ocean cultures and considering cognitive justice in education and risks of discrimination.

## 2 The Dependence of Children's Rights on a Healthy Ocean

### 2.1 *The Ocean's Contribution to Children's Development*

The consistent and increasing degradation of the ocean through pollution and over-exploitation, which is exacerbated by global climate change, presents significant health risks (Upadhyay, 2020; Hauser-Davies and Wasnick, 2022). Methylmercury and polychlorinated biphenyls (often referred to as PCBs) are the ocean pollutants whose negative impacts on human health are currently best understood (Landrigan *et al.*, 2020), and there is emerging evidence that organochlorine pesticides such as Chlordecone are having similar effects as land-based pollutants (Méndez-Fernandez *et al.*, 2018; Dromard *et al.*, 2018; Sandre *et al.*, 2019; Dereumeaux *et al.*, 2020). The UN Special Rapporteur on Human Rights and the Environment in 2018 cited the impact of water pollution (together with air pollution) as the cause of 1.5 million deaths of children under the age of five years (UN, 2018). Exposure to toxic pollutants through maternal consumption of contaminated seafood can result in infant mortality, damage *in utero* and can cause congenital anomalies (Rouget *et al.*, 2020), adiposity (Costet *et al.*, 2022) and can affect brain development during vulnerable stages of development (Cordier *et al.*, 2015; 2020). While all children are vulnerable, a disproportionate burden falls on children who face the greatest adversity, in both social and economic contexts (Perera and Nadeau, 2022).

Recognition of the importance of a healthy ocean for children's rights, however, has been lagging behind. This can be concluded from a review of seminal UN reports on children's rights to a healthy environment, which have largely neglected mention of the ocean (UN, 2016; UN, 2018; UN, 2020). Meanwhile, the ocean is becoming more prominent in children's campaigns on climate change, both at the UN Climate Summits and the 2022 UN Ocean Conference.<sup>4</sup>

4 See the One Ocean Hub Roundtable on "Children and Young Peoples' Human Rights to a Healthy Ocean: Their Importance for Climate Change Adaptation and mitigation", Virtual Ocean Pavilion for the Climate Glasgow COP (12 November 2021): <<https://www.youtube.com/watch?v=TVoF8hmSpEE&t=414s>>; and. S Álvarez Peña *et al.*, 'Youths Call for a Deep-Sea Mining Moratorium' (Youth Policy Advisory Council of the Sustainable Ocean Alliance, 22 September 2022).

Awareness of the negative health impacts of ocean degradation on children and young people is growing, together with an increasing understanding of the relevance of children's rights to life, survival, health and food in the context of ocean governance (see Sweeney and Morgera, 2021; Shields *et al.*, 2023).

With this in mind, we focus instead on the less understood link between a healthy ocean and children's right to development to explore the different temporal perspectives that respecting children's human rights can bring to ocean governance. Those temporal dimensions include attention to immediate concerns, such as the impact on children's right to life, survival, health and food, and longer-term effects of ocean degeneration on children's right to development, culture and the inheritance of a healthy ocean in their transitions to adulthood, and for future generations. This consideration should then inform the interpretation of the precautionary approach, that is lack of full scientific certainty should not be used to justify postponing effective and proportionate measures to prevent environmental harm, especially when there are threats of serious or irreversible damage that can have negative impact on human rights (Knox in UN, 2018, para. 33(c)). In other words, threats of serious or irreversible damage should be considered in relation to 'short-, medium- and long-term, combined and irreversible impacts, interactive and cumulative impacts and impacts in the different stages of childhood' and 'consider all factors required for children of all different ages to survive, develop and thrive to their fullest potential' as part of this life-course perspective (UN, 2023, paras 75 and 25). As a result, the application of precaution in decisions on the conservation and use of the ocean should take into account the 'possibility that environmental actions that seem reasonable on a shorter scale can become unreasonable when considering the full harm they will cause to children throughout their childhoods and their lives' (UN, 2022, para. 55).

According to the General Comment No. 5 (CRC, 2005, para. 12), a child's right to development is a 'holistic concept, embracing the child's physical, mental, spiritual, moral, psychological and social development'. In addition, the implementation of the right to development should aspire to achieve 'the optimal development of all children' (CRC, 2005, para. 12). Despite the assertion that development is a holistic and self-standing right, however, the UN Convention's consideration of the right to development thus far has been largely centred around 'caring for the child's future while paying lip service to her life in the present' (Peleg, 2019: 191). Peleg (2013) argues that dominating perceptions of the right to development have considered the right to be psycho-social in nature – a child's right to become an adult – or that the right considers predominantly physical development – in tandem with the right to life and survival. A stronger understanding and emphasised link between a

healthy ocean and aspects of children's psychological, spiritual, mental, moral and social development could therefore assist with a more holistic approach to children's rights to development.

Peleg (2013) highlights that these models of development lack respect for children's agency and ability to express their wishes on aspects of their lives, despite overwhelming evidence which shows that many early-years children can already make sense of their health and well-being, human rights, and their environment (Madden and Liang, 2017). Peleg (2019: 189) instead suggests a 'hybrid conception' of children's right to development, where the child's present and future are recognised, intertwined and equally important. Accordingly, we rely on Peleg's (2013) Approach – which considers aspects of the right to development in international law, the Capability Approach, and the child indicator movement in social science – as a normative framework to analyse children's right to development.

The Capability Approach conceptualises human development as “freedom” (Sen, 1999). A key facet of the approach is considering development as a process that facilitates people's ability to shape their lives in a way which affirms their agency – expanding their capability, increasing their real opportunities and asserting that people should not be bound by choices made by others (Peleg, 2013). Conceptualising children's right to development to include aspects of the Capability framework can offer an “emancipation” of children – where children are freed from the rigidity of psycho-social development (Peleg, 2019: 144). Instead, this approach can promote a holistic respect for children's agency and freedom of information and expression in the present, as well as facilitating their voice and right to be heard in decision-making which informs the future (Peleg, 2013; Peleg, 2019). Peleg's approach to development provides an entry point to allow for a holistic approach to both children's right to development and culture, and their right to a clean, healthy and sustainable environment.

Peleg's holistic approach facilitates space for children's access to information, expression and participation on non-scientific and non-psychosocial aspects of the ocean, and development, respectively. This includes considering the entirety of children's development – including their spiritual, moral and mental development; and the full contributions of the ocean to Indigenous knowledge systems, and as a contributor to prolific mental health concerns, including eco-grief and eco-anxiety, for current and future generations, as the ocean continues to degrade (see Mulalap *et al.*, 2020; Vierros *et al.*, 2020; Fache *et al.*, 2022; Strand *et al.*, 2022a). An example of spiritual development has been emphasised in Strand *et al.* (2022a), where both adults and children emphasised the importance of the ocean as the home of the ancestors in Nguni

tradition and communities. The ocean is sacred and must be kept clean and healthy to respect the ancestors and protect the relationships with people's ancestral lineage (Bernard, 2013; Strand *et al.*, 2022a).

This framework is especially relevant for ocean governance, as an approach which can help to clarify and promote ocean decision-making which creates and facilitates space for children's voices and children's human rights. Children can articulate their "needs and aspirations" that give context to the international objective of "sustainable development" which is conventionally known from the Brundtland Report as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (UN, 1987). Alongside this we have the international definition of "sustainable use" of biological resources, under the UN Convention on Biological Diversity (CBD), as the 'use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations' (UN 1992, Art. 2). Together, these definitions can be interpreted as requiring that States ascertain the needs and aspirations of children, as children are at the intersection of present and future generations (UN 2018, para. 68), and as part of States' obligation to integrate the human rights of children in international discussions on future generations on the environment (UN, 2018, paras. 33(d), 45). On the other hand, the text of the CBD does not explicitly call for and provide for the inclusion of children's rights, perspectives and needs, as articulated by them. Neither does it account for issues of environmental justice and different contextual conceptualisations of what constitutes development, as will be further discussed below in Section 3.

## 2.2 *The Ocean's Contribution to Children's Cultural Rights*

The ocean is imperative for cultural heritage, spiritual and cultural connections, identities, customary rights and interactions with nature and the environment across the globe. For example, in South Africa, the ocean is a place of tangible or intangible cultural heritage, such as traditions, oral histories, cultural practices and ceremonies, places of Indigenous cultural heritage and spiritual significance (Boswell and Thornton, 2021; Strand *et al.*, 2022a). For some Nguni descendant communities, the ocean is seen as the home and resting place of the ancestors (Bernard, 2013). In Ghana, the ocean and its relevance to customary fishing practices and canoe cultures represents important intangible and tangible cultural heritage (Oduro and Ansah, 2021). In Canada, Indigenous people's cultural heritage and systems are closely linked to ocean stewardship and sustainable fish harvest, such as place-based salmon management systems (Vierros *et al.*, 2020). In the Pacific Islands, the ocean cannot be



separated from people's cultural identities and sense of community (Hau'ofa, 1998), and people from the Solomon Islands often identify as "from the sea" (Lysa Wini, 2022).<sup>5</sup> In the Caribbean, the ocean is the golden thread which binds the islands, mainland and a diversity of peoples transplanted as a result of 'discovery' (Lancaster et al., 2022).

Ocean governance and mainstream ocean science, however, generally pay unduly limited attention to culture and cultural heritage (Poe et al., 2013; Gee et al., 2017; Strand et al., 2022a). The 2022 report of the UN Special Rapporteur on Cultural Rights has expressed concern about the low regard for knowledge pluralism, including of small-scale fishers, and the historical stereotyping of Indigenous peoples that hindered their potential contribution to sustainable economic development, in particular their potential contribution through a holistic and integrated environmental ethos (A/77/290). Despite their importance for more integrated and inclusive governance and human rights protection (Febrica and Morgera, 2022), the ocean's contributions to the development-culture nexus are also something that has been paid limited attention from a children's rights perspective. In the UN Committee on the Rights of the Child's General Comment No. 11 (CRC, 2009a) on Indigenous children and their rights under the Convention, for instance, environmental references are focused on traditional lands, not the coast or the ocean.

Equally, the General Comment on the Right to Play and Cultural Rights (General Comment No. 17) (CRC, 2013) highlights the importance of safeguarding children's cultural practices and life but does not specify the importance of the natural environment and the ocean. Cultural connections with the ocean are also relevant for children's rights to learn from nature directly, which rests on their being able to have access to a healthy marine environment for that purpose (and for the State to protect the marine environment) as part of children's rights to develop their own understanding of development in non-material and spiritual ways, including in the light of Indigenous peoples' worldviews, cultures and customary laws.

Beyond the direct benefits and necessities of culture to development, what is defined as development is also influenced by culture. As highlighted by Levitt (2010), focusing specifically on migrants but proving just as relevant when it comes to children's rights, 'Culture permeates all aspects of the development enterprise – as a challenge and an opportunity'. Culture impacts how we envision and conceptualise development, and therefore development goals, 'the

5 One Ocean Hub CLOCS workshop, 20 September 2022: [https://www.youtube.com/watch?v=VNz83dgddE&list=UUUo8PjFK\\_ifnFFbcHG64tw&index=1](https://www.youtube.com/watch?v=VNz83dgddE&list=UUUo8PjFK_ifnFFbcHG64tw&index=1). Accessed 10 December 2022.

policies put in place to achieve them, and how successfully they are achieved' (Levitt, 2010).

Therefore, our earlier argument about the need to protect children's human right to development as agency in the context of ocean governance is connected with the need to protect children's cultural rights dependent on a healthy ocean. This is because children's "needs and aspirations" that give content to the international objectives of "sustainable use" of marine spaces and resources are framed and enriched by cultural, spiritual and recreational connections to the ocean. This in turn leads us to underscore the importance of fully integrating ocean culture heritage and the respect of ocean-related cultural rights in ocean governance, as part and parcel of efforts to protect children's right to development. To that end, the protection of children's rights, including through the CRC and the CRC's General Comments, would benefit from an explicit link between the protection of children's right to development and cultural rights as part of environmental, climate and ocean governance. The connections between culture, the ocean and climate change, particularly for Indigenous peoples and children, have recently been underscored in the Torres Islanders case, where the Human Rights Committee found a violation of States' duties to protect the right to culture due to insufficient action to adapt to climate change (UNHRC, 2022).

### 3 The Implications of the Ocean-Development-Culture Nexus for Children's Right to Education through Ocean Literacies

We now reflect on how the integrated protection of children's rights to development and culture requires the development of appropriate means of implementation of the child's right to environmental education and ocean literacies, as a way to support children's right to participate and be heard in ocean-related, decision-making fora.

The CRC provides for obligations for States to ensure children's participation in decision-making, including policy and law-making processes (UN, 1990, Arts. 12–13), but there has been little implementation and enforcement of this provision nationally and internationally when it comes to ocean decision-making (Doel-Mackaway, 2019). It has been clarified that these are both procedural and substantive rights: to be given a space as a recognised actor, to be able to voice views, to be heard, to have influence on decisions, to be informed of the reasons behind decisions, to have access to justice and to participate in the monitoring of the implementation of decisions (Doel-Mackaway, 2019). While the specific barriers to children's participation in ocean decision-making and

international obligations to remove them are discussed in depth in another paper (see Shields *et al.*, 2023), we focus here on the role of children's right to education and re-imagined ocean literacies to support their genuine participation that contributes to realising children's right to development and culture. This is particularly due to the ocean-development-culture nexus, and the dependence of children's rights to development and culture on a healthy ocean as has been outlined earlier in the paper (see Figure 1).

A key step in protecting and realising children's effective participation through children's rights to education, is the creation of "interpretative

## Ocean-Development-Culture Nexus

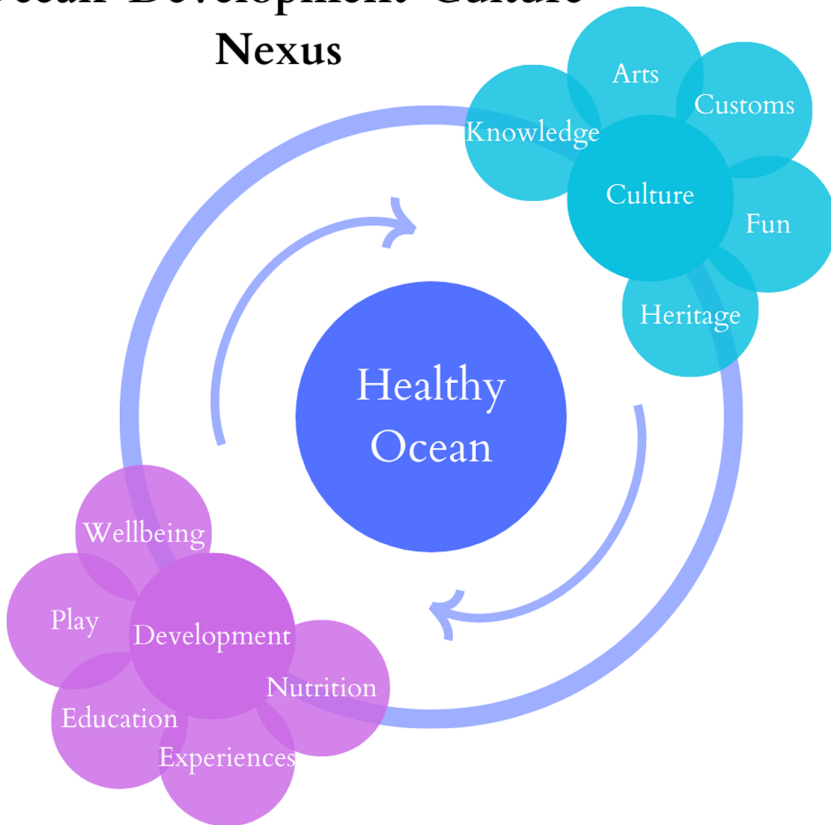


FIGURE 1 Some examples of dimensions of the ocean-development-culture nexus, and the aspects of children's rights to development and culture that are inextricably connected to a healthy ocean. It is important to note that this is in no way an exhaustive list, but rather examples of aspects of development and culture that can be reliant on a healthy ocean.

communities” where children and young people, together with other stakeholders, participate in the interpretation and implementation of human rights (Doel-Mackaway, 2019) (see Section 4.2 below). We argue in the following subsections that those involved in ocean literacy work, programmes and activities can and should take this role, by re-imagining ocean literacies as a decolonised and contextually relevant environmental education tool in supporting the full realisation of children’s rights dependent on a healthy ocean. The reference to ocean literacies, instead of ocean literacy, stems from the recognition that there are several different ways of knowing and understanding the ocean, and the importance of acknowledging this pluriversity in environmental education and children’s rights. Pluriversity refers to the dismissal of universality and the recognition that knowledges are built on and shaped by different cultures, contexts and subjectivities (Mignolo, 2000; Gwaravanda and Ndofirepi, 2021). Further, pluriversity is closely linked to cognitive justice and the call for equal valuation, recognition and validation of various knowledge claims and ocean knowledges. As pointed out by McKinley *et al.* (2023: 6), there is a need to investigate how ‘terminology and dimensions can be modified, re-framed and contextualised for different geographical and socio-cultural contexts’, better to recognise ‘multiple ways of knowing, different cultures and justice and equality issues’.

### 3.1 *The Need for a Holistic Systems Approach to the Environment (including the Ocean) in Ocean Literacies*

Children’s right to education is clearly articulated and supported across contexts, legal frameworks and generations (see General Comment No. 1, CRC, 2001a). However, the role of education in providing critical, nuanced and diverse information about marine and coastal ecosystems, environmental management and climate change is something that is less recognised and understood (McKinley *et al.*, 2023). It is vital to ensure that children have equitable access to necessary information, made adequately accessible through different mediums and languages. However, environmental education initiatives, including the UN Ocean Decade and the implementation of the forthcoming GC26 need to better recognise and promote a holistic systems approach to the environment, which recognises the connectivity and integration of aspects such as biodiversity, climate change and ecosystem health across land-sea interfaces, and acknowledges people and society as part of this environment, instead of removed from it (Virapongse *et al.*, 2016; Strand *et al.*, 2022a).

This holistic systems understanding of the environment (including the ocean), is not new. Mulalap *et al.* (2020) emphasise that communities in the Pacific Region hold traditional ecological knowledge which highlights the

connectivity of species and systems. Chilisa (2019) points out that African Indigenous cultures often acknowledge 'interconnectedness and interdependence of all things'. What is important to examine critically, therefore, is what cultures are influencing our current environmental education – both internationally and nationally – and what actions and understanding this is encouraging. As pointed out by MacNeil *et al.* (2021: 244) working in Canadian contexts, current ocean literacy efforts are inadequate in representing various worldviews and ocean connections, and rather function as a project of naming the global ocean that perpetuate issues of colonialism, power and language. Currently, ocean literacy efforts perpetuate inherent power imbalances in defining and explaining ocean-human relationships by centering European languages and experiences (MacNeil *et al.*, 2021).

Similarly, McKinley *et al.* (2023: 6) call for ocean literacy efforts to better account for 'the breadth, depth, and diversity of varying social, cultural, economic, geographical, and ecological contexts' in which people and communities interact with and connect with the ocean. There needs to be a more holistic approach to environmental and sustainable development education that takes into consideration contextual and experiential differences and overlaps, which would have been useful to be encapsulated under SDG 4.7.<sup>6</sup> By better recognising a holistic systems approach to ocean sustainability, ocean literacies and environmental education provide an opportunity to embrace better various ways of knowing, relating to and defining the ocean. The issues of language, inherent power relations, and plurality of ocean-human relationships should thus be kept in mind when the UNESCO Global Expert group on Ocean Literacy rolls out their projects and programmes, and when the GC26 starts to be operationalised.

As part of this effort, it is also necessary critically to assess which environmental information is provided to children in educational materials. Children – like other human rights holders – are facing the need to assimilate complex information through social media and navigating the minefield of "fake news". For example, our growing understanding of the interplay between the global life cycle of plastics, its origin in fossil fuel extraction, and its negative impacts on the ocean, which in turn affect the capacity of the ocean to regulate the climate (see Lennan, Morgera and Lancaster, 2022; Morgera and Lennan, 2022), is a glaring example of the need to ensure that States 'protect children from misinformation concerning environmental risks' (UN, 2023:70). Furthermore, this navigation of complex information is loaded further with existential realities

<sup>6</sup> This was suggested by Mikiko Otani in the consultation on the right to education in 2022 in preparation for the GC26.

and ecological grief, which is felt hardest by children (Aruta, 2022). Cunsolo *et al.* (2020) make an urgent call for policy makers and educators (among other practitioners) to respond urgently to ecological grief and its associated mental health impacts, as we discuss more below in Section 3.3.

### 3.2 *The Need to integrate Environmental Justice in Ocean Literacies*

The point above about misinformation also serves to highlight the need for education, including ocean literacies, to support the development of critical thinking skills, which are ‘foundational and essential’ life skills for anyone participating in decision making processes (Kelly *et al.*, 2022). We suggest two interlinked ways to contribute to the development of critical skills and speak to the pluriversity of ocean knowledges in ocean literacies.

First, it is necessary for ocean literacies to be contextualised to reflect multiple cultures and nurture skills to engage respectfully with other cultures. The importance of context-specific education is recognised in the CRC, which calls for education to develop respect for children’s ‘cultural identity, language and values’, as well as those of their parents and country or nation (UN, 1990, Art 29.1c). More recently, SDG 4.7 highlights that by 2030 nation states should ‘ensure all learners acquire knowledge and skills needed to promote sustainable development ... and appreciation of cultural diversity and of culture’s contribution to sustainable development’ (UN, 2015). Contextualising education and ocean literacies is essential to ensure that the concept of “sustainable development” is critically examined according to context, in the light of the inter-linkages between children’s right to development and cultural rights, discussed above.

Although it is important to provide opportunities for children to acquire skills and information about the environment which will empower them in their futures, caution should be exercised about conveying growth-led, tech-driven or capital-driven views of development (see Niner *et al.*, 2022). These concerns are echoed in the recent report of the UN Special Rapporteur on the Right to Culture (UN, 2022), which integrated evidence from the One Ocean Hub on the negative impacts on cultural rights, and connected livelihoods and participation rights, arising from blue economy initiatives (A/77/290, para. 68). The different conceptualisations of environmental management, just like human interdependence with nature and the ocean, in different cultures, languages and contexts, can significantly contribute to the development of critical skills that can support children in exercising their right to participate in decisions on the ocean. Ideally, ocean literacies projects, programmes, curricula and content should therefore be ‘given the space and means to be developed

within the target language community, ensuring maximum relevance and community ownership of terms and concepts' (MacNeil *et al.*, 2021: 246).

The second suggestion is to integrate environmental justice research into ocean literacy, with a view to supporting a critical engagement with context, as well as help prevent discrimination in future ocean-related decisions by advancing understanding of historical and current injustices that are often hidden in policy processes and discourses on sustainable development and environmental management. While environmental justice has become commonplace in international debates on climate change and land-based environmental issues, and is referred to in the GC26 (UN, 2023, para 31, 87), it is not mentioned in the UNESCO ocean literacy toolkit (2018), and much remains to be done to integrate environmental justice in ocean research, education and governance. For instance, as highlighted by the UN Environmental Programme (2021) report on impacts of marine litter and plastic pollution, 'vulnerable communities' continue to be negatively and disproportionately affected by their impacts. Several other areas of environmental injustices are relevant for the ocean, and so there is a need to recognise the disproportionate impacts of marine pollution, climate change impacts, ecosystem services decline and marine biodiversity loss, and to ensuring that both formerly and currently marginalised populations and communities that have been and continue to be neglected, silenced and excluded from decision-making on the ocean are recognised and heard (Bennett *et al.*, 2023).

While environmental justice scholarship is traditionally seen as originating in the United States, for many countries in the Global South, environmental injustices are understood as profoundly shaped by colonial administrations, which exploited both human labour and environmental resources to drive rapid industrialisation in the colonial state. In addition, they continue to be sustained by subsequent competing economic interests, often part of global economic processes, that have deepened inequality, including for marginalised people living in vulnerable situations, and Indigenous peoples. Integrating environmental justice research from the Global South in ocean literacies can therefore support understanding of the intertwined global and local power imbalances in environmental protection and management. Beyond the common dimensions of distributive justice (fair and equitable distribution of marine harms and benefits), procedural justice (equal opportunities to meaningfully engage in ocean decision-making), and recognitional justice (equal treatment, valuation and recognition of rights, values, needs and ocean knowledges) (see Bennett *et al.*, 2019; Saunders *et al.*, 2020), we therefore find it helpful also to consider contextual justice as responding to existing socio-economic inequalities and access to justice in ocean decision-making (see Bennett, 2022). Within

the dimension of recognitional justice, we also need to emphasise the importance of cognitive justice, which is further explored below.

Engaging with a broad understanding of environmental justice supports contextualising ocean literacy to protect children's right to development and culture. First, considering these aspects of environmental justice requires recognising that access to education is removed or interrupted for children living in coastal communities vulnerable to rising sea levels, floods and hurricanes, not to mention the psychological barriers these traumatic events have on children's ability to learn. As Atkinson (2022) argues, the hopelessness and despair experienced by children in the classroom frequently undermines their ability to respond in creative and effective ways. Secondly, climate-related impacts further collide with the rights of those children marginalised through deprivation, and specific efforts should be made to ensure that these children have access to information and that they have platforms to share their experiences and views. This means that solely online, English-centred engagement platforms will be limited in their reach to children that are disproportionately affected by environmental degradation, climate change impacts and marine pollution, and more equitable, inclusive and vernacular two-way communication channels should be prioritised.

Furthermore, Capello and Perucca (2016) highlight how the culture-development nexus is defined and shaped by the specific context in which it is located: 'mediated by the endowment of social, ethical, and behavioural values of places'. The ways in which children's culture and cultural life influences their development, and vice versa, are context-dependent and should therefore not be conceptualised as universal principles or indicators in environmental education. We argue that the integration of contextual and recognitional justice in ocean literacies can serve to prevent from perpetuating (even if inadvertently) discriminatory views and practices in ocean conservation and management. This is particularly important as disregard for culture and different knowledge systems has been revealed as a root cause of discrimination in ocean policy, which can also affect children's right to development in its connections with cultural rights.

Finally, a cognitive justice approach (see de Sousa Santos, 2018), recognising that learning is experiential, active and embodied, calls for the 'equal treatment' of all knowledges (Leibowitz, 2017). Subsequently, a cognitive justice approach calls for children approaches to environmental justice to emerge from young people themselves. Children should therefore be actively involved in framing, forming and developing their environmental education, ocean literacies and participation. Currently, much of what is designed for children is didactic and "awareness" focused (see UNICEF, 2018; UNESCO, 2018), whilst



few programmes are created by children for children. Cognitive and epistemic justice work is thus needed to create emergent and contextually robust movements for children.

### 3.3 *The Burden and Psychological Pressure on Children to be Responsible for the Future*

Furthermore, the protection of children's right to environmental education needs to take into account that it is problematic to put the burden of the global environmental crises and the future of our planet on the shoulders of children. Although the improvement of children's understanding of the ocean and climate change through education is key to support their active contribution to the dialogue and decision-making (McCaffrey and Rosenau, 2012), this is in regard to their *opportunity* to participate, and not in regard to their *responsibility* to contribute. Environmental education, including ocean literacies for children, thus needs to explain adults' responsibilities and States' obligations to protect the environment and children's human rights.

Of particular concern is the weight and burden placed on children as "future" custodians of the planet. Often their role is essentialised and reified out of the human population, and as Kulundu (2017) frames it, children and youth groups are often forced into a "ghetto" that either keeps them bound by "future" focused action, or by adult "framed" conceptions of childhood, rather than child-shaped renderings of the world. There needs to be a critique of "future" orientated and focused framings for children's work in environmental policy, as placing the burden of the "future" onto children has shown to cause a huge level of anxiety and eco-grief. This immense responsibility, alongside the existential threat of climate change, the immediate climate-related disasters from direct impacts such as flooding, drought and sea-level rise, and the indirect trauma of staying with the reality of extinction and biodiversity loss, places contemporary children in particularly unique psychological and emotional crises. Kulundu (2017: 425) argues that children and young people, who respond to these crises despite these psychological and physical barriers, have to 'navigate high levels of risk as part of their daily experience, often with limited support'.

Furthermore, while states make policies and decisions without children, children are forced to navigate these volatile spaces as mavericks, learning quickly how to play both sides of the game in order to ensure their own material survival and the health of their community as a whole. Kulundu (2017: 425) encourages educators and policy makers alike to learn from the 'strategic competencies that it takes to do this dance in the service of the common good', yet she cautions that this is not enough. While we need to learn from young

people and children, we need to ‘ask questions about what we should be doing as adult practitioners to support their autonomy and integrity of the work that they are doing in violent contexts’. Kulundu (2017: 425) asks: ‘How can we ethically respond to the levels of courage and risk demonstrated by a young and cunning population? What is our contribution as practitioners?’

These questions cannot be answered by us but can be explored through creating meaningful spaces of engagement with children, in which they have the room and opportunities for self expression, exploration, play, creativity and pathways to implement and conceptualise their own actions. As Kulundu (2018:99) states:

We do not have a shortage of brilliant young people doing work that they feel is important to change the world. What we have is an inadequate language and praxis around the complexity of working in intersectionally resonant ways. We lack an adequate language and praxis around how to strategically forge and dissipate our emancipatory impulses.

The suggestions in this paper seek to challenge our idea of collectivity from the definition of a group of people from the same setting that mobilise themselves around a particular issue to one that highlights a vital knowledge exchange between diverse peoples from the same context who hold and contest very different perspectives around what justice, equity and sustainable development mean.

#### 4 Re-Imagining Ocean Literacies as Way to Realise Children’s Rights to Development and Culture

Beyond the challenge of creating spaces and processes in which children can co-create their own learning responses in environmental education, there is the need to foreground children’s lived realities, and respond with providing children with clear, but dynamic, and contextual information, that supports their decision making in relation to the climate-biodiversity-ocean crisis from their perspective without ignoring different cultures and without adding to their anxiety. Here, we rely on existing guidelines on children’s rights to be heard to clarify how to re-imagine ocean literacies as a two-way learning process. We then reflect on some insights from Hub-led work that could assist in better acknowledging the development-culture nexus in environmental education and ocean literacies.

#### 4.1 *Considering Existing Guidelines on Children's Meaningful Participation to Re-Imagine Ocean Literacies*

As already observed, children have been largely invisible in ocean governance processes. Despite the importance of highlighting the need for intergenerational dialogue and partnership in the context of the ocean, it is equally fundamental to offer guidance to adults and frameworks to incorporate meaningfully children's participation in ocean decision-making (Lundy, 2007).

The UN Committee on the Rights of the Child General Comment No. 12 (CRC, 2009b) on the right to be heard outlines nine basic requirements for participation processes, including that they need to be 'transparent and informative', 'inclusive' and 'child-friendly'. To ensure that these are met, and rather focusing on 'everyone-friendly' processes, relevant information must therefore be available in different languages and modalities. To reach inclusivity, processes must aim for equity and not equality, considering that children in "vulnerable" areas are hit the hardest by ocean degradation and climate change impacts on the marine social-ecological system. Furthermore, General Comment No. 12 (CRC, 2009b) considers that the meaningful participation of children is a process, not an individual, once-off or transactional event. This should also be the case in developing ocean literacies, which means that children need to be continuously involved in the processes, from setting the research questions, establishing the agenda and included in iterative adaptations of both, in how their views will and should inform programmes, projects and education.

The relevance of ocean literacies curricula and programmes will depend on the ways in which the norms that are promoted are met with 'cultural legitimacy' according to the context they are proposed and implemented in (Kaime, 2010). As highlighted by Kaime (2010: 643), cultural legitimacy refers to the ways in which something conforms with 'the accepted principles or rules or standards of a particular culture'. Ocean literacies therefore need to be context-sensitive, adaptable and non-prescriptive, whilst also ensuring they are promoting a holistic approach to children's wellbeing that includes both rights to development and culture.

On the whole, making environmental education and ocean literacies about 'culture and colour' can support 'link[ing] the exploitation of bodies to that of lands' and recognising 'that there are continuities between bodies and ecosystems' to 'realise that to harm one is to harm the other' (Malcolm Ferdinand in Chaillou *et al.*, 2020). A greater recognition of the need for critical justice approaches in ocean literacies, alongside the interdependence of human and ocean health, can elevate and promote a culture of care, perhaps even replacing current cultures of exploitation and heightened focus on extractive blue economies (de Sousa Santos, 2018). This approach to ocean literacies

contributes to seeing humans as ‘interconnected with the ocean’ and therefore ‘recognises societies’ collective duty and reciprocal responsibility to protect and conserve the ocean and puts aside short-term gain to respect and protect future generations of all life and the ocean’s capacity to regenerate and sustain natural cycles’ (Bender *et al.*, 2022). In effect, ocean stewardship and connections to the ocean are already very much a reality for Indigenous peoples and local communities who have been ocean custodians for generations (see, for example, Wong, 2019; Vierros *et al.*, 2020; Boswell and Thornton, 2021; Strand *et al.*, 2022a), as should be better reflected in ocean literacies content such as the UNESCO toolkit (2018) moving forward.

Realising that we form part of our ecosystems, centring humanity as part of our ocean ecosystems, recognising existing ocean cultures and emphasising a culture of care could therefore be ways to better collectively care for our ocean for children and the generations to come. Therefore, considering the implications of cultural contexts, as well as environmental (and cognitive) justice, this paper identifies five additional considerations for ocean literacies that need to be taken into account:

- i) Emphasise equitable participation processes and *vernacular access*, and ensuring children can participate and engage through a *variety of platforms* to share their hopes, fears, knowledge and experiences, supporting their channelling and consideration in specific ocean-related impacts on their rights;
- ii) Encourage programmes created *by children for children*;
- iii) Ensure the push for ocean literacies is context-sensitive, and acknowledge and value pluriversality and *different worldviews*;
- iv) Emphasise ocean literacies that appreciates cultural diversity and recognises *culture’s contribution* to ocean knowledges, ocean governance and sustainable development, which is contextually defined; and
- v) Promote onto-epistemologically grounded ocean literacies and environmental education as ongoing/iterative *two-way critical engagement processes*, where children are involved in feedback processes to see where their own experiences, interests and views are considered in curricula, guidelines and programmes.

Building on the important principles and considerations above, ocean literacies, and the underlying ocean research and knowledge, should be available in *multiple languages* on an international level, and in all official languages on national levels. As highlighted by Mamdani (2018), language is the first obstacle to decolonising education. This also involves translating important traditional, Indigenous and local knowledge of the ocean to be better recognised

in existing ocean research, and developing translation protocols through storytelling (Erwin, 2021) and re-storying practices (art, theatre, dance, music, etc.) that are more readily accessible to children. Similarly, to move towards cognitive justice, we need to ensure vernacular access in environmental education, and make sure *several platforms* and *modalities* are available for children to engage, learn and share their experiences beyond just reading and writing, through stories, images, drama, music, poetry, ceremony and more.

In addition, ocean literacies need to be re-conceptualised as a two-way process, ensuring that children have meaningful ways of sharing their views, concerns and knowledge as outlined above, and that adults learn from them as part of the protection of children's right to environmental education, development and culture. Programmes, curricula and courses *created by children for children* should also be encouraged and promoted, aligned with children's slogans used for COP27, stating, 'Not about us, without us'. In this connection, we wish to draw on Cobb's (1977) anthropological work on children's imagination, demonstrating that children's experience of time and place is drastically different from adult cognition (McGarry, 2014) and can provide innovative thinking for environmental and ocean decision-making. From work in Fiji and New Caledonia (Fache *et al.*, 2022), drawings by children of the sea and 'what you and others do in the sea' highlights understandings of the ocean as beyond separations of land-sea, providing important learnings for a more interconnected and systems understanding of the ocean and earth ecosystems. In South Africa, peers and colleagues from the Creative Education and the Environmental Learning Research Centre worked with the One Ocean Hub's "Our Ocean is Sacred, You Can't Mine Heaven" to write a decolonial story-book about the False Bay coastline history, and subsequent ways in which children of colour experience and occupy ocean space. This has led to the ongoing (and in development) creative pedagogies and curriculum in critical ocean literacy that go beyond scientific notions of climate change and marine biodiversity, but rather are articulated through direct lived embodied experiences of children's relationality and entanglements with ocean ecosystems and their cultural-historical associations.

In sum, we call for re-imagined ocean literacies that better consider children's context-dependent, embodied, cultural, vernacular and self-determined relationships with the ocean, and which embraces aspects of cognitive and environmental justice, pluriversality of ocean knowledges and cultures, holistic systems approaches and meaningful two-way engagement processes through different modalities in regard to their opportunity to participate without installing eco-anxiety (see Figure 2).

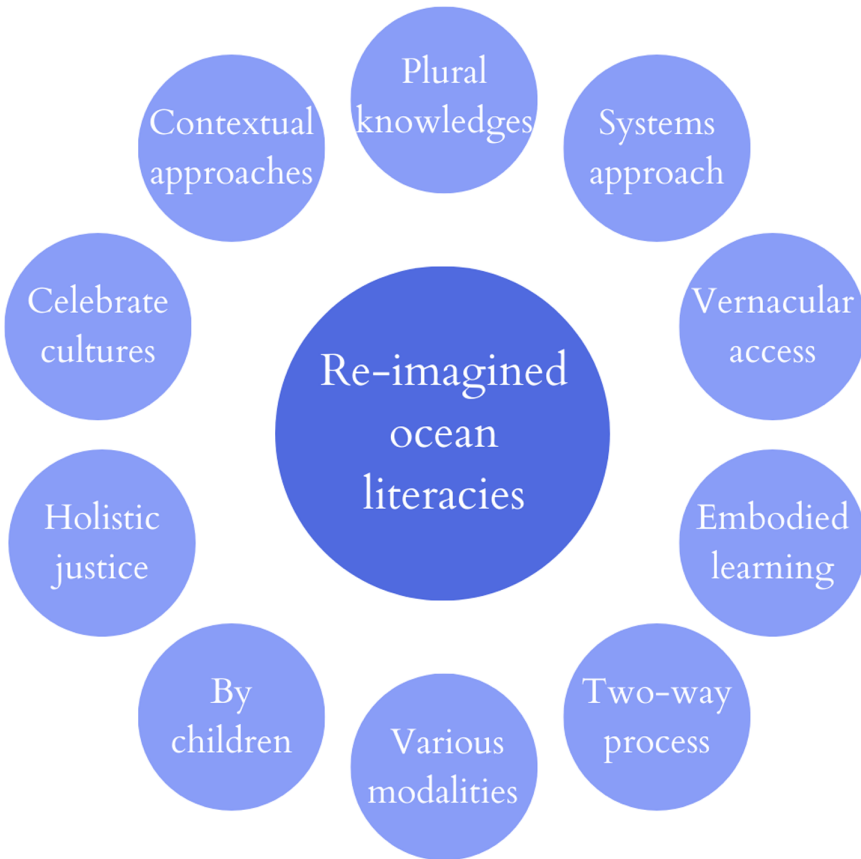


FIGURE 2 Re-imagined ocean literacies should consider various aspects, such as culture's contributions to what is seen as sustainable development, contextual and vernacular access to ocean knowledges and information.

#### 4.2 *Insights from the One Ocean Hub on how Better to Recognise the Culture-Development Nexus in Ocean Literacies*

The One Ocean Hub aims to promote creative and arts-based knowledge co-production processes to increase the inclusivity and equity of research practices. They have used various arts-based research methodologies, such as photography, public storytelling, augmented reality and theatre to assist in highlighting cultural dimensions in ocean relations, interconnectivity and management, elevating marginalised voices including children, and re-imagining how we can conceptualise ocean knowledge (see Lalela uLwandle;<sup>7</sup> Erwin *et al.*, 2022; Strand and Samuel, 2022; Strand *et al.*, 2022a; Strand *et al.*, 2022b).

<sup>7</sup> <https://www.empatheatre.com/lalela-ulwandle>.

For example, Empatheatre (2019), a research-based, theatre-making methodology builds on extensive action-based research in which co-participants and key partners work to identify matters of concern and a pressing central question. In the case of the play, "Lalela uLwandle", focus is on what barriers and constraints exist towards inclusive ocean governance. Through these research explorations a transdisciplinary team and customary knowledge holders iteratively shape the research data which offers new ways of seeing different perspectives around ocean livelihoods, heritages, economies and development, particularly highlighting the ocean-development-culture nexus. Over the course of three years, post-play facilitated dialogues act as tribunals in which audiences can contribute another layer of reflexive data to emerge in relation to the issues of concern, and performances have rolled out to strategic audiences (made up of people with different levels of agency, power and privilege, and sometimes conflicting views) across the country, and internationally (Empatheatre, 2019). These dialogues were used to build testimonies, affidavits and evidence for three court cases in the struggle around blue economy development, and comments for appeals against environmental impact assessments. This extra-legal engagement expands the ways in which art can be used as an instrument for more inclusive ocean decision making and speaks to the opportunities of arts-based co-creation of knowledge for more relevant, holistic and context-sensitive ocean literacies (Erwin *et al.*, 2022).

Furthermore, arts-based participatory research in the form of photography and digital storytelling in South Africa (see Strand *et al.*, 2022b) found that,

by identifying strong cultural, mental health, spiritual and wellbeing connections to the ocean and coast, arts-based methods provided evidence of, as well as means to emotionally connect with, the needs of those whose human rights to health, subsistence and culture are at stake in ocean management.

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Augmented reality research in Namibia explores how people's ocean experiences and ocean connections 'shape and contribute to identities, cultural heritage and livelihoods' (Strand and Samuel, 2022), therefore emphasising the importance of a healthy ocean for children's development-culture nexus that should be better reflected in children's rights and international frameworks such as GC26 and processes by the UN Ocean Decade.

However, it is important to note, as emphasised by James (2021), that arts-based approaches are not 'automatically a practice that is in the interest of the common good and solidarity'. This means that these approaches also need to be

carefully scrutinised and accompanied with elements of analysing power relations, pluriversity of knowledges, context-sensitivity and dialogue-openness. Furthermore, art-based literacies should not be regulated only to “translation”, communication and awareness, but used as vital instruments for embodied research, onto-epistemological rendering and powerful forms of curricula and pedagogical innovation.

Another emerging insight from former and current Hub research practices has been the opportunities of co-creating knowledge with children in informing what is thought about as “ocean literacy”, or ocean literacies and environmental education. Currently, curriculum and lesson plans are formulated and dominated by marine sciences, particularly around biodiversity and climate change, whereas critical ocean literacies focused on ocean justice, ocean cultures and ocean spiritualities are mostly absent. Responding to this absence, by co-creating new curricula and pedagogies with children and teachers, could in itself be highly generative for environmental education praxis, and expand the zone of proximal development (referring to the difference between what a child can do with and without support) for teachers and children (Lotz-Sisitka, 2015). In addition, it could offer vital care work for children and the learning environments they occupy. As Burt *et al.* (2020) have shown using popular education methodology, co-creating educational responses can be in-itself a form of care work with teachers and children. They go on to argue that care-economics and popular education praxis actually work hand in hand and can expand opportunities for livelihoods and solidarity in the climate crisis.

Furthermore, the concept of embodied practices of dwelling (Ingold, 1995; Ingold, 2011; Prince, 2017), valuing and learning from children’s every day and “mundane” engagements with their local marine environment, should be part of informing the development-culture nexus of children’s rights to a healthy ocean. Again, recognising that children that live alongside and interconnected with the ocean will be and are the most affected by ocean degradation and climate change impacts, we should turn to their embodied practices of dwelling to learn how children know the ocean, how children value the ocean and what the ocean means in realising children’s right to development and culture. Building on embodied practices of dwelling to inform learning, environmental and ocean education should as much as possible adhere to place-based learning practices. Philo (2003) and Jones (2003) highlight how children’s identities form through places. Preston (2003: 74) points out that places are ‘drenched in cultural meaning’, which means that place-based learning can ensure that education is less removed from children’s realities and embodied practices, moving towards contextuality and ‘cultural legitimacy’. Similarly, place-based and embodied practices can contribute to cultural orienteering around issues



such as children's rights to a healthy ocean, the meaning of sustainable development and the development-culture nexus. Furthermore, Jickling (2018: 1) suggests that through embodied approaches to environmental education that are attentive and steeped in Indigenous philosophy and praxis can help undo the paternalistic approaches and control over children (and their teachers) and create opportunities for "wild pedagogies" that offer new freedoms for children and adults. This is important, as McGarry (2014) has shown, that embodied approaches to ecological literacy among children and adults alike, can increase capacities for imagination, attentiveness, moral intuition and ultimately empathy.

## 5 Conclusions: Child Rights-based Ocean Literacies can Benefit us All

It has been stressed that children's rights should not be seen and implemented in isolation from other human rights, such as Indigenous peoples' and women's human rights, as well as from the human rights of adults that are the parents and guardians of children (Desmet, 2019). Children are also Indigenous, girls, LGBTIQ+, religious, and have disabilities, identities and rights that are not child-specific. We therefore need a holistic approach to children's rights to a healthy ocean. UN programmes, projects and work with ocean literacy, as well as the CRC, would benefit from an explicit link between the protection of children's right to development and cultural rights as part of environmental, climate and ocean governance. The forthcoming implementation of the IOC/UNESCO ocean literacy programmes and the GC26 should also provide context-specific guidance as children are amongst those most vulnerable to environmental rights regression and violation, but simultaneously recognising that the plenary of international human rights law applies to children. Children's rights are, in addition, not separate from other human rights in that children depend on adults to have their human rights realised – considering that very rarely could a child have their human rights met without the realisation of the rights of their caregiver(s), such as housing, food, water and sanitation which are all heavily dependent on children's caregivers.

Furthermore, protecting children's right to a healthy ocean sets a higher and more precautionary bar for environmental protection (as children are the most vulnerable to environmental harm) that can benefit all other human rights-holders that depend on a healthy environment and ocean. However, this should be complemented with a greater focus on contexts and environmental justice in what is conceptualised as ocean literacies, and an increased recognition of the development-culture nexus in relation to children's rights

to a healthy ocean. Re-imagined ocean literacies informed by our considerations above can prevent the perpetuation of disregarding a pluriversity of knowledge systems, and discriminatory ocean management practices. Further research is therefore encouraged to explore how this can be practically implemented in forthcoming ocean literacy programmes, curricula and guidelines, as well as future ocean decision-making.

We have argued the re-imagining ocean literacies as two-way processes that promote programmes, curricula and courses created by children for children. However, this needs to be done with care and it is important to highlight that the focus should be on children's *opportunity* to participate, and not their *responsibility* to contribute. This holds true to the UN processes, frameworks and Ocean Decade programmes as well, which should provide further opportunities for children to contribute to environmental and ocean decision-making that affects them, through multiple languages, platforms and meaningful spaces. This would benefit from exploring co-creating educational responses and programmes with children, and offering opportunities for expression through play, creativity, exploration and art. Children's rights to participate in the implementation of CRC and the different General Comments that pertains to their rights to a healthy ocean should therefore be adaptable, non-prescriptive and context-sensitive, whilst ensuring children's wellbeing and avoiding increasing anxiety and eco-grief.

For all these reasons, ocean literacies that support the protection of children's rights are to every human (and more-than-human's) benefit. Our suggestions on ocean literacies directly speaks to the UN Ocean Decade's stipulated outcomes 6 (an accessible ocean) and 7 (an inspiring and engaging ocean), and its endorsed Decade of Ocean Empathy,<sup>8</sup> which highlights the importance of emphasising empathy to 'generate ocean connection and stewardship'. Stewardship is where national and international ocean (and climate) governance are currently falling short, and our suggestions on ocean literacies based on children's rights to development and culture should be considered to the benefit of all those who are seeking transformative change.

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8 See UN., "Decade of Ocean Empathy", *UN Ocean Decade 2022*: <https://www.oceandecade.org/actions/the-hydrous-presents-the-decade-of-ocean-empathy/>. Accessed 22 December 2022.

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