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GUIDANCE ON DIALOGUE BETWEEN IOC PROGRAMMES AND INDIGENOUS AND LOCAL KNOWLEDGE (ILK)

Summary

The purpose of this guidance document is to assist the IOC Governing Bodies and Secretariat in reflection and possible decisions for a sustainable and beneficial dialogue between holders of Indigenous and Local Knowledge (ILK) and other stakeholders in ocean science. The first part clarifies the chosen terminology and its associated definitions. The paper then documents the relevance of ILK to the High-Level Objectives (HLOs) of the IOC's Medium-Term Strategy 2022–2029, before identifying some opportunities within existing structures and mechanisms, notably through the United Nations Decade of Ocean Science for Sustainable Development (2021–2030). Finally, it raises some programmatic, conceptual and politico/social obstacles and questions to be addressed in the context of opening a dialogue between ILK and ocean science.

1. INTRODUCTION & BACKGROUND

> *In Aotearoa New Zealand, ocean science draws from many sources of knowledge and approaches, including the Pacific Mātauranga Māori. Weaving these knowledge systems together with mainstream science has generated a distinctive approach to how we do research, requiring collective expertise to be involved at every stage. The IOC has a key role to play in supporting these new approaches, particularly in designing solutions to the challenges presented by climate change*. (Ms Nicola Reid, Permanent Delegate of New Zealand to UNESCO, General Policy Debate of the 41st session of the General Conference of UNESCO)

The IOC has a recognized and unique role in the UN system in relation to ocean science[1] and the science base for ocean management, providing an efficient platform for coordination, information and sharing of knowledge to contribute to sustainable and peaceful development. The Medium-Term Strategy of the IOC 2022–2029 (IOC/INF-1412) underlies that never in the history of our civilization has a global and multi-stakeholder cooperation been so urgently required. The pivotal role of the IOC is therefore defined as bringing together the scientific communities, the governmental decision-making system, and a broader set of stakeholders and right holders within the IOC Member States to develop efficient, science-based integrated ocean and coastal management and corresponding solutions, taking in consideration indigenous, local, and traditional knowledge.

Major international science processes have in recent years all increased attention to the recognition of indigenous and local knowledge (ILK) to provide detailed observations and analytical frameworks which are produced from different methods and through different types of institutions than science. These include, *inter alia*, the UNFCCC Paris Agreement[2], the Kunming-Montreal Global Biodiversity Framework[3], as well as the operational processes of both the Intergovernmental Platform on Biodiversity and Ecosystems Services and the Intergovernmental Panel on Climate Change.

Diverse and accelerating social, political, and environmental upheavals and hazards are highlighting the urgent need for a comprehensive worldwide and multi-stakeholders' collaboration, pushing forward the need for both improved scientific cooperation and the recognition of the complementary contribution of Indigenous and Local Knowledge (ILK). Referring to *"the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings"*[4], ILK consists of holistic, territorialized, diversified, and evolving knowledge systems. As these bodies of knowledge and practices address the relationships of beings, human and non-human, with one another over many generations, providing observations on long-term trends, they are increasingly recognized as offering valuable information, methods, theory, and practices, specifically including sustainable

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[1] Ocean science definition: Ocean science includes all research disciplines related to the study of the ocean: physical, biological, chemical, geological, hydrographic, health and social sciences, as well as engineering, the humanities and multidisciplinary research on the relationship between humans and the ocean. Ocean science seeks to understand complex, multi-scale socio-ecological systems and services, which requires observations and multidisciplinary and collaborative research. See: https://en.unesco.org/gosr.

[2] UNFCCC. 2015. *Paris Agreement*. Paris. https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

[3] *Kunning-Montreal Global biodiversity framework.7-19 December 2022 - COP 15*. Convention on Biological Diversity. https://www.cbd.int/doc/c/e6d3/cd1d/daf663719a03902a9b116c34/cop-15-l-25-en.pdf.

[4] UNESCO. 2017. *Local Knowledge, Global Goals*. Paris, UNESCO.

management of the ocean and marine ecosystems[5,6,7,8]. Therefore, engaging in a dialogue with ILK holders is important to the sustainable development and global governance efforts for a healthy ocean and management of risks and opportunities linked to the ocean, which lie at the core of the Vision of the IOC[9].

In this regard, over the last decades, a series of instruments, frameworks, decisions, and guidelines have accompanied the growing participation of Indigenous Peoples and Local Communities (IPLC) within various intergovernmental fora. Accordingly, the UN draws from these and proposes its own mechanisms to acknowledge the "rich sets of knowledge about the natural world, health, technologies and techniques, rites and rituals and other cultural expressions"[10] developed by IPLC. Efforts are under way to ensure consideration, promotion, and protection of IPLC knowledge, intangible heritage, and cultural expressions, notably through the following:

- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), article 31
- United Nations Permanent Forum on Indigenous Issues (UNPFII) System-wide action plan for ensuring a coherent approach to achieving the ends of the United Nations Declaration on the Rights of Indigenous Peoples, articles 7, 16, 27
- World Intellectual Property Organization (WIPO) policy objectives and guiding principles "The Protection of Traditional Knowledge" (Draft)
- International Covenant on Civil and Political Rights (ICCPR), article 27
- The Universal Declaration on Cultural Diversity (UDCD), article 4
- Convention on the Protection and Promotion of the Diversity of Cultural Expressions (CPPDCE), article 7
- Convention for the Safeguarding of the Intangible Cultural Heritage (CSICH), article 15
- Convention on Biological Diversity (CBD), articles 8j, 10c[11]

Through its Policy on Engaging with Indigenous Peoples (202 EX/9; 202 EX/50), UNESCO specifically aims to implement the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) across all relevant programme areas. In this policy, particular attention is paid to Indigenous Peoples' knowledge (articles 33-37), especially since UNESCO's Natural Sciences Sector houses the Local and Indigenous Knowledge Systems (LINKS) Programme. Moreover, two articles directly address UNESCO's work in relation to the ocean and the engagement with IPLC:

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[5] Haggan, N., Neis, B., & Baird, I. G. 2007. Fishers' knowledge in fisheries science and management. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000150580.

[6] Loch, T., & Riechers, M. 2021. Integrating indigenous and local knowledge in management and research on coastal ecosystems in the Global South: A literature review. *Ocean & Coastal Management, 212*, 105821.

[7] Silvano, R., Baird, I., Begossi, A., Hallwass, G., Huntington, H., Lopes, P., Parlee, B., & Berkes, F. 2022. Fishers' multidimensional knowledge advances fisheries and aquatic science. Trends in Ecology & Evolution. 38. 10.1016/j.tree.2022.10.002.

[8] Kuhnlein, H.V., Erasmus, B., Spigelski, D., & Burlingame, B. (2013). Indigenous Peoples Food and Wellbeing: Interventions and Policies for Healthy Communities.

[9] Reid A J, Eckert L E, Lane J, Young N, Hinch S G, Darimont C T, Cooke S J, Ban N C and Marshall A 2021 'Two-Eyed Seeing': an Indigenous framework to transform fisheries research and management. Fish and Fisheries 22: 243-261.

[10] United Nations Development Group. 2009. Guidelines on Indigenous Peoples' Issues. New York, UNDG.

[11] Persic, A. & Martin, G. 2008. Links between biological and cultural diversity-methods and experiences, Report of an International Workshop. Paris, UNESCO.

- The livelihoods of many indigenous peoples are associated with marine and coastal areas and their ecosystems. UNESCO and its Intergovernmental Oceanographic Commission (IOC) recognizes, respects, and values the corresponding knowledge and strategies of indigenous peoples (article 55).
- UNESCO works to ensure the appropriate inclusion of indigenous peoples' knowledge of the ocean and seas in the development of science-based approaches to sustainable management of marine and coastal regions, their ecosystems, and the protection of living and non-living resources of the ocean (article 56).

The IOC is thus explicitly part of UNESCO's Policy on Engaging with Indigenous Peoples. Besides, both its Secretariat and Governing Bodies seem to show an increasing interest in establishing partnerships and dialogues between ILK and ocean science.

- Article 03009 for IOC Programme and budget for 2022–2025 (41 C/5) states that *"Capacity development will remain a key activity of the IOC. In order to create conditions for more harmonious human relations with the ocean, IOC will […] enhance its dialogue with indigenous knowledge holders and strengthen youth engagement and participation".*
- In the speeches delivered during the General Debate of the 41st session of the General Conference (9–24 November 2021), 13 Member States stressed the relevance of creating a stronger dialogue between UNESCO's work and ILK. Moreover, in the specific scope of the IOC Commission (4th meeting of the SC & IOC Commission, 16 November 2021), a few Member States[12] explicitly expressed an interest in working more closely with ILK. Their interventions were echoed in the response of the IOC Executive Secretary, Dr Vladimir Ryabinin, who raised the ethical and environmental relevance of such knowledge for ocean science.
- These manifestations of interest also informed the holding of an internal seminar within the IOC Secretariat (Indigenous and Local Knowledge (ILK): Opportunities, Challenges and Interests for the IOC, 9 December 2021, Paris). The seminar generated a certain amount of enthusiasm as well as many questions regarding the next steps to be envisioned.

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2. CHOICE OF TERMINOLOGY AND ASSOCIATED DEFINITIONS

The term "ILK" is preferred in this document over other similar terminology. Compared to the term "Indigenous Knowledge", ILK suggests that the holistic, territorialized, diversified, and evolving knowledge being discussed here can flourish within all kinds of long-established communities experiencing histories of interaction with their natural surroundings, whether they

[12] The interventions of Canada and Poland in this regard were noted. We believe that other Member States mentioned it as well, but it should be validated with the recording of Item 4.1 – Consideration and adoption of the Draft Programme and Budget for 2022-2025 (41 C/5) Part II.A: Intergovernmental Oceanographic Commission (4th Session of the SC-IOC Commission, 16 November 2021, 3:00-6:00 p.m., Room II). However, the recording was not available to the IOC Secretariat at the time of writing this paper.

identify themselves or are recognized as Indigenous Peoples[13]. The use of ILK is in alignment with recent UN usage, including under IPBES and the UNFCCC. This inclusive approach to knowledge recognition is not intended to diminish in anyway the rights of Indigenous Peoples as set out in the UNDRIP or other constructive agreements, national, regional or international.

Although the ancestral character of these knowledge systems is recognized and celebrated, the fact that they are not strictly referred to as "Traditional Knowledge" accentuates their contemporaneity, currency, dynamism and ongoing importance.

Finally, preferring “ILK” to “Ecological Knowledge” or “Traditional Ecological Knowledge” serves as a reminder that, while it offers a foundation for locally-appropriate protection measures and sustainable development, this “knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, ritual and spirituality”[14]. In this regard, certain scholars[15] suggest that the term “ecological” may be problematic since it refers in its narrowest definitions to only one branch of science, namely biology.

This choice is not intended to invalidate other terminologies. However, it does offer the most consistency with current uses within UNESCO, including UNESCO’s LINKS Programme. Accordingly, ILK is held by groups that are referred to as IPLC throughout this document.

The term “Indigenous Peoples and Local Communities” is increasingly used to recognize community-based, non-governmental stakeholders and rights holders in international fora. This growingly popular terminology stems from “Indigenous and local communities embodying traditional lifestyles”, which was first adopted in the context of the Convention on Biological Diversity (CBD)[16]. Although it sometimes lacks precision, this denomination unites two groups that differ in terms of law, norms, standards, and rights[17]. The advantage of choosing this term lies in its inclusive and nuanced character. It leaves room for the traditional knowledge of communities that do not claim an Indigenous status or identity.

As no final resolution was deemed necessary for an internationally agreed definition of “Indigenous Peoples”, the UN has developed a modern understanding based on identification rather than a restrictive definition. This identification is supported by the following criteria[18,19]:

- Self-identification as Indigenous peoples at the individual level and accepted by the community as their member
- Historical continuity with pre-colonial and/or pre-settler societies
- Strong link to territories and surrounding natural resources
- Distinct social, economic, or political systems
- Distinct language, culture, and beliefs

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[13] Disclaimer: while the term Indigenous and Local Knowledge (ILK) is widely used throughout the document, it is not its aim to define it.

[14] UNESCO. 2017. *Local Knowledge, Global Goals*. Paris, UNESCO.

[15] Berkes, F. 2018. Sacred Ecology. Fourth Edition. Routledge, New York and London. 368 pp. (Third Edition, 2012, 363 pp.; Second Edition, 2008, 313 pp; First Edition, 1999, 209 pp.)

[16] Posey, D. and Dutfield, G. 1996. Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities. Ottawa, International Development Research Center.

[17] Moran, K. 2002. Indigenous Peoples and Local Communities Embodying Traditional Lifestyles: Definitions under Article 8(j) of the Convention of Biological Diversity. M. M. Iwu and J. Wootton (eds), *Ethnomedicine and Drug Discovery*. Amsterdam, Elsevier Science B. V., pp. 181–189.

[18] United Nations Permanent Forum on Indigenous Issues. 2015. *Who are Indigenous Peoples? Factsheet*. New York, United Nations.

[19] UNESCO. 2017. *Local Knowledge, Global Goals*. Paris, UNESCO.

- Form non-dominant groups of society
- Resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities

Like Indigenous Peoples, local communities *"maintain inter-generational connection to place and nature through livelihood, cultural identity, worldviews, institutions and ecological knowledge"*[20]. However, they do not self-identify nor are they normally subject to treaty agreements within national legal frameworks as Indigenous Peoples. Moreover, these groups do not necessarily claim cultural identities, practices, and expressions distinct from the dominant society; they may themselves constitute a majority or identify with the nation states in which they live[21].

The denomination "people" is indeed distinguished from that of "community" since, under the Charter of the United Nations, the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights as well as the Vienna Declaration and Programme of Action, *peoples* hold the right to self-determination, "by virtue of which they freely determine their political status and freely pursue their economic, social and cultural development"[22]. Thus, the main difference between Indigenous peoples and local communities has less to do with the type of knowledge they hold than with the historical and socio-political implications of their status and identity.

A final consideration regarding ILK is that while this unique knowledge has generally been passed down from one generation to another, the transmission has become disrupted. Although knowledge, like cultures, is dynamic and always evolve over time, historical, colonial, and scientific injustices[23,24] paired with rapid environmental changes and misguided politics[25] have led to the minimization of IPLC and the loss of ILK. With such rapid societal and environmental change, it is relevant to include ILK not just as content, but as *process*, i.e., *"a way of observing, discussing and making sense of new information"—Indigenous [and local] ways of knowing"*[26]. Acknowledging that IPLC hold distinct philosophies of both ethical and spiritual systems can, for example, interpret environmental phenomena in different ways from other knowledge systems[27].

Those open, flexible, and holistic definitions and approaches hold the potential to assist the IOC in building the trust, relationships, and connections needed to open a dialogue that would help strengthening scientific knowledge of the ocean and human impact on it, applying that knowledge for societal benefit, and building institutional capacities for sound management and governance.

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[20] Hill, R. et al. 2020. Working with Indigenous Local and Scientific Knowledge in Assessments of Nature and Nature's Linkage with People. *Current Opinion in Environmental Sustainability*, Vol. 43, pp. 8–20.

[21] Moran, K. 2002. Indigenous Peoples and Local Communities Embodying Traditional Lifestyles: Definitions under Article 8(j) of the Convention of Biological Diversity. M. M. Iwu and J. Wootton (eds), *Ethnomedicine and Drug Discovery*. Amsterdam, Elsevier Science B. V., pp. 181–189.

[22] United Nations. 2007. United Nations Declaration on the Rights of Indigenous Peoples. New York, United Nations.

[23] Agrawal, A. 1995. Indigenous and Scientific Knowledge: Some Critical Comments. *Indigenous Knowledge and Development Monitor*, Vol. 3.

[24] Briggs, J. and Sharp, J. 2004. Indigenous Knowledges and Development: A Postcolonial Caution. *Third World Quarterly*, Vol. 25, No.4, pp. 661–676.

[25] Carson, S. et al. 2018. Indigenous Peoples' Concerns About Loss of Forest Knowledge: Implications for Forest Management. *Conservation and Society*, Vol. 16, No. 4, pp. 431–440.

[26] Berkes, F. 2009. Indigenous Ways of Knowing and the Study of Environmental Change. *Journal of the Royal Society of New Zealand*, Vol. 39, No. 4, pp. 151–156.

[27] UNESCO. 2017. *Local Knowledge, Global Goals*. Paris, UNESCO.

3. ILK FOR A BETTER RESPONSE TO THE HLOs OF THE IOC MEDIUM-TERM STRATEGY 2022–2029

The pursuit of knowledge complementarity resonates with the instruments and frameworks outlined above, but it also holds a genuine scientific interest for the IOC. As a matter of fact, even if the attempts to distinguish the epistemological foundations underlying ILK and "science"[28,29] are based on partially criticized oppositions and generalizations[30,31], they do highlight the existence of very different registers and ways of acquiring knowledge. And if such different, but apparently complementary models exist, it means that ocean science is currently missing on a lot of insights that could be useful for the general advancement of knowledge and for the well-being of ocean (eco)systems and human societies that are part of them. In order to illustrate how this knowledge complementarity might enrich the IOC programmatic framework, the table below associates a case study to each of the five HLOs of the IOC's proposed Medium-Term Strategy for 2022–2029.

HLOs of the IOC's proposed Medium-Term Strategy for 2022–2029	**Case studies illustrating how the dialogue between ILK and ocean science contributes to the achievement of HLOs**
Objective 1 – Healthy Ocean and sustained ocean ecosystem services	Local fishermen of the lower Meghna, Bangladesh, report the decline of Hilsa's stock, an anadromous fish species constituting the largest single fishery in Bangladesh and West Bengal, India. According to the fishers' ecological knowledge, this decline is due to several adverse climatic conditions (e.g., increased water temperature, salinity intrusion, low freshwater discharge from upstream) as well as human infrastructures such as damns and polders. Exploring some major adaptations constraints, authors suggest that "incorporation of local knowledge in governmental policy formulation and public support to improve human skill are essential for the adaptive management"[32].
Objective 2 – Effective warning systems and preparedness for tsunamis and other ocean-related hazards	A 9.1M earthquake occurred in Indian Ocean on 26 December 2004 and caused tsunami responsible for hundreds of thousands of deaths, especially in Aceh Province, Indonesia, one of the closest areas from the epicenter. Yet, one specific island reported significantly fewer deaths, the Simeulue Island, which had already faced a deadly tsunami in 1907. Since then, the "story of Smong" – for "tsunami" – was passed through the generations via traditional songs and poems, and it is documented[33] that the Simeulue

[28] Baker, J., Rayner, A. and Wolowic, J. 2011. *Native Science: A Primer for Science Teachers*. Retrieved from: https://ctabobandung.files.wordpress.com/2011/11/ns-primer.pdf

[29] Alaska Native Science Commission. n.d. *What is traditional knowledge?* Retrieved from: http://www.nativescience.org/issues/tk.htm

[30] Agrawal, A. 1995. Indigenous and Scientific Knowledge: Some Critical Comments. *Indigenous Knowledge and Development Monitor*, Vol. 3.

[31] Berkes, F. 2009. Indigenous Ways of Knowing and the Study of Environmental Change. *Journal of the Royal Society of New Zealand*, Vol. 39, No. 4, pp. 151–156.

[32] Jahan, I. et al. 2017. Fishers' Local Knowledge on Impact of Climate Change and Anthropogenic Interferences on Hilsa Fishery in South Asia: Evidence from Bangladesh. *Environment, Development and Sustainability*, Vol. 19, pp. 461–478.

[33] Syafwina. 2014. Recognizing Indigenous Knowledge for Disaster Management: Smong, Early Warning System from Simeulue Island, Aceh. *Procedia Environmental Sciences*, Vol. 20, pp. 573–582.

HLOs of the IOC's proposed Medium-Term Strategy for 2022–2029	Case studies illustrating how the dialogue between ILK and ocean science contributes to the achievement of HLOs
	Island was relatively spared thanks to this warning system.
Objective 3 – Resilience to climate change and contribution to its mitigation	Integration of adaptation into mitigation strategies, as currently advocated, is not a new idea in the African Sahel. ILK "has been directly applied in the Sahel in climate change mitigation through emission reduction, C sequestration and carbon substitution. In the area of adaptation, [ILK] systems have been applied in weather forecasting, vulnerability assessment and implementation of adaptation strategies"[34]. Detailing these long-standing practices, the authors then recommend that they be considered in formal climate change mitigation and adaptation strategies.
Objective 4 – Scientifically-founded services for the sustainable ocean economy	French Polynesia is currently revalorizing the ancestral practice of *rahui*, which is a prohibition on taking certain land and sea resources for defined periods and areas. This practice shares similarities with modern marine protected areas. However, it appears that the *rahui* established on the Tahitian peninsula, which resulted from collective choices and decision-making processes, offer better results than the modern regulations proposed by the territory's administrative services, particularly regarding its acceptability, its implementation, and the interweaving of governance levels it allows. Moreover, between 2014 and 2016, commercial fish density experienced a substantial recovery, with biomass 8-10 times higher than in areas outside the *rahui*[35].
Objective 5 – Foresight on emerging ocean science issues	Since 2005, the Brazilian Socio-environmental Institute (ISA) has been working in collaboration with Indigenous communities of the Tiquie´ River to document how climate change may impact the sustainability of resources, notably fisheries and bitter manioc production. The ethno-astronomical, ecological, and socio-economic calendars and observations of the annual river cycles provided by the Indigenous agents of environmental management (AIMAs) were essential in identifying new trends in precipitation that may impact agroecosystem management. Authors recognized that continued efforts to bridge Indigenous and non-indigenous

[34] Nyong, A. et al. 2007. The Value of Indigenous Knowledge in Climate Change Mitigation and Adaptation Strategies in the African Sahel. *Mitigation and Adaptation Strategies for Global Change: An International Journal Devoted to Scientific, Engineering, Socio-Economic and Policy Responses to Environmental Change*, Vol. 12, No. 5, pp. 787–797.

[35] Bambridge, T. and Montet, C. 2019. La gestion des communs lagonaires en Polynésie française. T. Bambridge, F. Gaulme, C. Montet and T. Paulais (eds), *Communs et océans. Le rahui en Polynésie*. Papeete, Au Vent des Îles, pp. 75–113.

HLOs of the IOC's proposed Medium-Term Strategy for 2022–2029	Case studies illustrating how the dialogue between ILK and ocean science contributes to the achievement of HLOs
	knowledge systems are vital to further measuring and understanding of climate change impacts[36].

These documented examples illustrate the relevance of ILK as *content*. However, ILK systems have much more to offer than punctual information or practices: they provide alternative ways to inhabit the Earth, and innovative forms of resource governance, *inter alia*. As noted above, the IOC would therefore benefit from embracing ILK as *process*, by developing an enabling policy framework attentive to the holistic set of systems that hold it. Guided by these concerns, the next sections outline some avenues of questioning and solutions, including some mechanisms recently set in motion within the IOC to concretize this comprehensive dialogue between ILK and ocean science.

4. OPPORTUNITIES AND CURRENT DEVELOPMENTS WITHIN THE IOC: CLOSE-UP ON THE UN OCEAN DECADE FOR SUSTAINABLE DEVELOPMENT

In its Omnibus Resolution for Oceans and the Law of the Sea (A/RES/72/73) adopted at its 72nd session, the United Nations General Assembly recalled the IOC Assembly's endorsed proposal at its twenty-ninth session (Resolution XXIX-1) and thus decided to proclaim the United Nations Decade of Ocean Science for Sustainable Development (hereafter the Ocean Decade) for the 10-year period beginning on January 1st 2021. It called upon the IOC to prepare an implementation plan for the Ocean Decade in consultation with Member States, specialized agencies, funds, programmes, and bodies of the United Nations, as well as other intergovernmental organizations, non-governmental organizations, and relevant stakeholders. Additionally, to coordinate the Ocean Decade's design and preparation, the IOC is playing a substantive role with regards to identifying programmatic contributions and thereafter implementing the Ocean Decade. In turn, the Ocean Decade provides a unique opportunity to reiterate the relevance of the IOC's work in promoting international scientific cooperation for the advancement of global goals and, specifically, for achieving ocean sustainability (IOC/INF-1341, IOC/INF-1357 and IOC/INF-1372).

By virtue of this close reciprocity between the IOC and the Ocean Decade's programmatic contributions, the latter could act as an important springboard for the introduction of an ILK-sensitive framework within the IOC. Indeed, the Ocean Decade Challenges, Outcomes, Objectives, and Actions pave the way for new participatory mechanisms from which the whole IOC could benefit, as they encourage holders of complementary knowledge systems to engage with one another in an iterative process of co-design and co-delivery of ocean science.

- In this regard, it is worth noting that collaboration with IPLC and the inclusion of ILK has been concretely introduced in the Ocean Decade's Implementation Plan (IOC/2021/ODS/19) that the IOC has been mandated to prepare, including: a definition of ocean science that "recognizes, respects, and include" ILK
- the formulation of the Ocean Decade Sub-Objective 1.4, which aims to "develop mechanisms that support community-led science initiatives and the recognition and inclusion of ILK as a fundamental source of knowledge"
- a list of relevant criteria for endorsement of the Ocean Decade Actions, including:

[36] Cochran, F. et al. 2016. Indigenous Ecological Calendars Define Scales for Climate Change and Sustainability Assessments. *Sustainability Science*, Vol. 11, pp. 69–89.

    - Ocean Decade Actions are co-designed or co-delivered by knowledge generators and users, and thus facilitate the uptake of science and ocean knowledge for policy, decision-making, management and/or innovation
    - Decade Actions contribute toward capacity development, including, but not limited to, beneficiaries in SIDS, LDCs and LLDCs
    - Proponents of Ocean Decade Actions have/will collaborate with and engage ILK holders, where appropriate, and reduce the risk of misappropriation of ILK.
- a database, information and digital knowledge management system that creates space for "industry and citizen-science data, as well as sources of less-quantifiable insights, such as Indigenous and local knowledge"
- a capacity exchange framework that will "recognize, respect, and engage local and Indigenous knowledge holders as both beneficiaries and providers of capacity development"
- the identification of ILK holders as a key stakeholder group that "will make a crucial contribution to the Ocean Decade by contributing knowledge through the co-development, co-design, and co-delivery of the Ocean Decade Actions", while "benefiting from increased access to partnerships with Ocean Decade contributors in areas of common interest"
- the aim to include Indigenous and local perspectives into the overall Monitoring and Evaluation process of the Ocean Decade

Moreover, as the Ocean Decade is committed to establishing a comprehensive enabling framework for a sustainable and ethical relationship between ocean science, ILK, and holders of different knowledge systems, the Decade Coordination Unit (DCU) envisions the following approaches.

- Establishing the **Ocean Decade ILK Network**, i.e., a multi-stakeholder network-of-networks including various regional to local-scale networks and resources to provide guidance in building the trust, relationships, and connections needed to deliver co-designed, co-produced, and co-disseminated ocean science
- Building an **ILK Community of Practice**, i.e., a space within the Global Stakeholder Forum dedicated to proponents of endorsed Ocean Decade Actions. This platform would constitute a key mechanism to ensure that the Ocean Decade is accountable for implementing and complying with the proposed ILK framework, primarily through contributions to the Monitoring and Evaluation framework
- Support the creation of a module **"Embracing Indigenous and Local Knowledge in Ocean Science"** as part of the "Co-designing the Science We Need for the Ocean Decade" course delivered through the Ocean Teacher Global Academy platform
- **Partnering with UNESCO's LINKS Programme** to facilitate the engagement of IPLC and strengthen complementarity of knowledge systems in the Ocean Decade
- **Developing Synergies with Other UN Decades** in order to respect the profoundly holistic nature of ILK systems and to avoid overburdening the small number of IPLC activists who are fluent in English and willing to contribute to the UN system

Even though the IOC is an intergovernmental UN body – not a multistakeholder platform like the Ocean Decade aspires to be –; the opportunity provided by the Ocean Decade's timing is crucial, as the Ocean Decade creates prospects for dialogue between ocean science and ILK. The IOC would therefore benefit from examining the lessons to be drawn from the enabling environment fostered by the Ocean Decade. For example, the IOC could potentially:

- Refer to the ILK Concept Note prepared by the DCU and take note of the outlined ethical principles for working with IPLC and the identified critical gaps and resource needs. It should be emphasized that the framework and the Concept Note are in a constant process of evolution and redefinition as they are intended to be co-designed
- Tap into the information, resources, and contacts shared within the ILK Network initiated by the DCU
- Contribute to and promote the "Embracing Indigenous and Local Knowledge in Ocean Science" training module, while encouraging the IOC Secretariat, Governing Bodies, and partners to complete it
- Continue to support the registration of IOC-led Ocean Decade Actions and encourage the strengthening of this specific and mandatory Ocean Decade criterion: "proponents of Ocean Decade Actions have/will collaborate with and engage ILK holders, where appropriate". In doing so, an initial reflection is launched, and new collaborations are forged. Those may flourish within future IOC programmes, well beyond the Ocean Decade. As of today, some IOC-led Decade Actions include (IOC-31/DR.[3.7]):
    - "Ocean Observing Co-Design" Programme by the Global Ocean Observing System (GOOS), which will build the process, infrastructure and tools for ocean observing co-design necessary to support the Decade
    - "Observing Together" Programme by GOOS, which will transform ocean data access and availability by connecting ocean observers and the communities they serve through enhanced support to both new and existing community-scale projects
    - The establishment of an Ocean Decade Tsunami Programme aimed at achieving transformational advances in tsunami detection, observing and warning, including tsunamis generated by non-seismic sources, making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Programme, as reflected in decision Dec. A-31/3.4.1 of the Assembly
    - The "Ocean Literacy With All (OLWA)" Programme to respond to priorities identified in the Ocean Decade Ocean Literacy Action Framework (Document IOC/2021/ODS/22)
    - "Ocean Practices for the Decade" as a Programme connected to the International Oceanographic Data and Information Exchange - Global Ocean Observing System (IODE-GOOS) Ocean Best Practices System
    - The registration of Ocean Data and Information System (ODIS), Ocean Biodiversity Information System (OBIS), Ocean Teacher Global Academy (OTGA), World Ocean Database (WOD), and Pacific Islands Marine bio-invasions Alert Network (PacMAN) as Ocean Decade Actions

The IOC should therefore take advantage of its privileged and reciprocal role within the Ocean Decade to introduce a sustainable dialogue between ocean science and ILK within its framework. Working alongside the Ocean Decade would enable IOC to address the multiple programmatic, conceptual, methodological, ethical, social, and political considerations that may arise from establishing such dialogue.

5. PROGRAMMATIC LIMITS

Despite the expressed interest among the IOC Secretariat and some of its Member States in pursuing knowledge complementarity, the IOC does not currently offer an enabling policy framework for a sustainable collaboration with IPLC and ILK holders to take place. As outlined above, some brief references to ILK are found within the IOC proposed 41 C/4 (IOC/A-

31/4.1.Doc) and C/5 (IOC/A-31/4.2), but only within the Preface and contextual paragraphs, not in the programmatic orientations constituting the core of those documents. Therefore:

- There is no reference to collaboration with IPLC and/or ILK in:
  - The 5 HLOs stated in the IOC's 41 C/4
  - The Priorities stated in the IOC's 41 C/4
  - The only 41 C/5 Output (3. IOC1) to which the IOC contributes
- The IOC, together with the Social and Human Sciences (SHS), are the only sectors of UNESCO that do not participate in the Intersectoral Programme 3 (IP3): Promoting Indigenous Knowledge, Culture and Languages as a Pathway to Inclusion, which is coordinated by a steering committee formed by Natural Sciences (SC), Communications and Information (CI) and Culture (CLT). Thus, the IOC is not involved in achieving the Output (5.IP3) associated with this Programme either. IOC remains engaged in the UNESCO Inter-Sectoral Working Group on Indigenous Peoples Issues, coordinated by the LINKS Programme.

In order for the manifested interest towards ILK to be fulfilled, it appears necessary to integrate this ambition within the IOC structures, notably in its programmatic framework. However, ILK-related politics and objectives should not be framed too tightly, which could, also, greatly reduce the exploratory, evolutionary, and co-constructed aspect of the process. It would be a step back to close the door to spontaneous projects or collaborations because of a strict framework. Moreover, the result should not be in the optic of "ILK-washing", where reference to IPLC and ILK could be found everywhere without any concrete advancements.

In light of the elements highlighted, some possible solutions could be considered:

- Mentioning ILK mobilization and recognition and collaboration with IPLC in the IOC's HLOs. As illustrated in Section 3, ILK may have relevance to the 5 HLOs of the IOC's Medium-Term Strategy 2022–2029
- Taking into account the transversality of ILK, another avenue to consider would be to mention the interest of a dialogue between ocean science and ILK within the IOC Priorities, which currently target Africa, Gender Equality, Small Island Developing States (SIDS), Early Career Ocean Professionals (ECOP), and an increased understanding of the value of IOC work, including its socio-economic benefits. On that note, recognition of ILK and their holders would fit well within the SIDS Priority, as article 03013 for IOC (41 C/5) states that the IOC strong support to SIDS will be guided by the SIDS Accelerated Modalities of Action (SAMOA) Pathway (A/RES/69/15) and the UNESCO SIDS Action Plan (SC-2016/WS/31). Both the SAMOA Pathway (articles 40, 80, and 81(c)) and the UNESCO SIDS Action Plan (Priority 1 – Action 1.2, Priority 2 - Objective 2, Priority 3 – Objective 4, and Priority 4 – Preface) emphasize the importance of including IPLC and recognizing, protecting, and promoting their rich knowledge, cultural expressions, and tangible and intangible cultural heritage. It would therefore be coherent for the IOC to acknowledge IPLC and ILK within its SIDS Priority
- Encouraging IOC participation in the IP3 and, thus, the related Output 5.IP3, which stipulates that "Member States capacities and awareness are strengthened to protect, safeguard and promote Indigenous knowledge, cultures, and languages through inclusive policies and targeted action"

Providing a place for the advancement of knowledge complementarity within the IOC's programmatic framework seems to be a first step towards building sustainable partnerships with IPLC. However, collaboration with IPLC and ILK is obviously not just a programmatic reality; other issues will need to be addressed if the IOC decides to pursue this path. The following sections should therefore be considered in a pragmatic way, and not only as theoretical reflections since UNESCO's decisions have a very concrete impact on the people

directly or indirectly concerned. When certain variables are overlooked, some of these impacts may be experienced negatively.

6. CONCEPTUAL AND METHODOLOGICAL CONSIDERATIONS

Despite an enabling policy framework and the establishment of relevant participatory mechanisms, including ILK as a *process* raises several conceptual and methodological obstacles. This requires, for example, taking into account the profoundly holistic features of ILK systems, as they relate to cultural practices as well as to livelihoods, resource governance, technical skills, intergenerational exchange, and social rules[37]. Yet, many scientific attempts to acknowledge ILK within their works have only focused on the *content*, i.e., the technical and artifactual dimensions of these knowledge – for instance: to improve accuracy, uptake, and use for weather forecasts[38], to document health and abundance of specific fish species[39], or to complement environmental policy and resource management evaluation programs[40]. These studies have not retained the conceptual or fundamental dimensions of ILK, those that could really challenge the barriers to behavior change required for a step change in humanity's relationship with the environment. Moreover, in order to be "taken seriously", i.e., not being envisioned as mere opinions or folkloric manifestations, ILK must often prove itself in the dominant system. It is tested and translated into the languages of science, development, or preservationist philosophy, leaving the voice of its holders partly unheard. The decontextualization, categorization and distillation of ILK, from which the holders are sometimes left dispossessed, has been qualified as epistemological violence[41,42].

Hopefully, new guidelines and protocols now allow for research and policy development that are increasingly concerned with hearing all voices in their entirety[43]. Nevertheless, it remains extremely difficult to establish a real conceptual dialogue between distinct knowledge systems and cultures without distorting them, without having one integrating the other into its own existing models. Since so-called Indigenous and scientific knowledge systems have different epistemologies and are based on different world views, "not taking knowledge out of its cultural context is one of the biggest challenges of Indigenous knowledge research"[44].

Here is an example aiming to illustrate this difficulty. In *reo māʼohi*, a language spoken in French Polynesia, the current word to designate nature is *nātura*. This literal adaptation from European languages stems from the initial absence of concepts in *reo māʼohi* to designate an abstract and all-encompassing entity with an intrinsic value like "nature" as we know it today. If natural events and biological functions were everywhere in their narratives, Polynesians were not living in "nature", but rather in relation with whole networks of entities more or less charged with sacredness[45]. This example highlights the complexity of establishing a conceptually

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[37] UNESCO. 2017. *Local Knowledge, Global Goals*. Paris, UNESCO.

[38] Radeny, M. et al. 2019. Indigenous Knowledge for Seasonal Weather and Climate Forecasting Across East Africa. Climatic Change: An Interdisciplinary, International Journal Devoted to the Description, Causes and Implications of Climatic Change, Vol. 156, No. 4, pp. 509–526.

[39] Brewster, J. et al. 2016. Traditional Ecological Knowledge (TEK) at Shingle Point, YT: Observations on Changes in the Environment and Fish Populations. Winnipeg, Fisheries and Oceans Canada.

[40] Usher, P. J. 2000. Traditional Ecological Knowledge in Environmental Assessment and Management. *Arctic*, Vol. 53, No. 2, pp. 183–193.

[41] Nadasdy, P. 1999. The Politics of Tek: Power and the "Integration" of Knowledge », *Arctic Anthropology*, Vol. 36, No. 1, pp. 1–18.

[42] Spivak, G. 1988. Can the subaltern speak? C. Nelson and L. Grossberg (eds), *Marxism and the Interpretation of Culture*. Basingstoke: Macmillan, pp. 271–313.

[43] For example, see Díaz, S. et al. 2015. The IPBES Conceptual Framework — Connecting Nature and People. *Current Opinion in Environmental Sustainability*, Vol. 14, pp. 1–16.

[44] Berkes, F. 2009. Indigenous Ways of Knowing and the Study of Environmental Change. *Journal of the Royal Society of New Zealand*, Vol. 39, No. 4, pp. 151–156.

[45] Rigo, B. 2004. Altérité polynésienne ou Les métamorphoses de l'espace-temps. Paris, CNRS.

respectful dialogue when something as seemingly obvious and fundamental as the notion of nature does not necessarily find an equivalent in an interlocutor.

Thus, if the IOC aspires not only to expand the sources and scope of its work, but also to rethink healthier and more sustainable relationships with the ocean in partnership with IPLC, the following questions could be raised and addressed by the IOC Governing Bodies:

- Which innovative approaches and solutions should be envisaged to link ILK and the standardized data formats of science, both conceptually and methodologically, without distorting those knowledge systems nor isolating them from their original frame?
- What previous work has been done in this regard within the UN system or other intergovernmental organizations and platforms? What lessons can be learned from these efforts?
- Considering that knowledge co-production needs, among others, to proceed with humility, recognizing "that all knowledge is partial and incomplete, that evidence is debatable, and that there are ways of knowing determined by culture, semiotics and values" [46], how can the IOC further open up to the examination of non-conventional sources of knowledge?
- How can the IOC include ILK as *process* (a way of observing, discussing, and making sense of new information) rather than solely *content* (specific information that can be passed on from one person to another)[47]?
- How can a programmatic framework be designed to highlight the profound transformative potential of this dialogue so that not only scientific and technical facts, but also lessons and new perspectives and ways of doing can be drawn from it?
- What measures can the IOC put in place to ensure the protection of ILK from misappropriation and that IPLC's access to the documented ILK remains?

7. ETHICAL, POLITICAL, AND SOCIAL ISSUES

Finally, it is worth underlying the sensitivity of considering knowledge systems belonging to peoples that have been historically oppressed. In this regard, the UNDRIP (A/RES/61/295) expresses concern that Indigenous peoples have suffered from historic injustices as a result of, inter alia, their colonization and dispossession of their lands, territories and resources, thus preventing them from exercising, in particular, their right to development in accordance with their own needs and interests. Moreover, the asserted superiority of science has long overshadowed other knowledge systems, reducing them to beliefs, superstitions, or folklore[48,49]. Today, the consequences of various colonial legacies are still unfolding, as IPLC and their territories are suffering the social and environmental costs of development (expansions of roads, cities, hydroelectric dams, oil and gas pipelines...)[50], sometimes without their free, prior, and informed consent. In fact, many IPLC are directly impacted by management decisions, while being particularly vulnerable to climate change and ecosystem

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[46] Harris, G. 2007. *Seeking Sustainability in an Age of Complexity*. Cambridge, Cambridge University Press.

[47] Berkes, F. 2009. Indigenous Ways of Knowing and the Study of Environmental Change. *Journal of the Royal Society of New Zealand*, Vol. 39, No. 4, pp. 151–156.

[48] Agrawal, A. 1995. Indigenous and Scientific Knowledge: Some Critical Comments. *Indigenous Knowledge and Development Monitor*, Vol. 3.

[49] Briggs, J. and Sharp, J. 2004. Indigenous Knowledges and Development: A Postcolonial Caution. *Third World Quarterly*, Vol. 25, No.4, pp. 661–676.

[50] Díaz, S. et al. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services for the Intergovernmental Science-Policy and Biodiversity and Ecosystem Services (IPBES). Bonn (Germany), IPBES Secretariat.

degradation[51,52]. Therefore, and in accordance with the five country programming principles of the United Nations Sustainable Development Group (UNSDG) guiding the United Nations system's work on Indigenous Peoples' issues (human rights-based approach, gender equality, environmental sustainability, results-based management, and capacity development) (E/C.19/2016/5), it appears essential that the IPLC agreeing to share their knowledge benefit from it. Old colonial patterns of appropriation and dispossession must not be perpetuated. The IOC should therefore consider not only what its programmes can gain from ILK, but also what these programmes are able to offer to IPLC and how they can be co-constructed. From this perspective, IPLC should become not only valuable partners, but also beneficiaries and co-designers.

In addition, as a famously discussed duo[53], knowledge and power are closely articulated, even within the intergovernmental fora[54]. Thus, a scientific and technical secretariat should also reflect on how remaining power relations can manifest themselves in the dialogue between science and ILK. This power-knowledge articulation raises, among others, statutory questions. IPLC have a consultative status within the UN system, as final decision-making is restricted to Member States[55], except in the framework of the UNPFII. Aware of the UN's strengths, but also limitations, some Indigenous Peoples' representatives claim a status distinct from that of NGOs, putting forward their rights to be decolonized and to be free to have their own nations, which are not "non-governmental"[56]. Concurrently, consideration must be given to the choice of IPLC representatives and networks with which an intergovernmental organization exchanges knowledge, since not all may have the same legitimacy in the eyes of the various stakeholders more or less involved[57].

In order to develop the ethical relationships with IPLC that will lead to more optimal knowledge sharing, outcomes, and impacts, the IOC must be sensitive to their delicate political and social situation. The following questions, among others, are thus worth asking:

- What will be the outcomes and impacts of an ILK-ocean science dialogue for IPLC?
- How can positive outcomes and impacts be generated while limiting those that could potentially harm them?
- What indicators should be used to measure the usefulness of this dialogue for participating IPLC along with their satisfaction?
- How can power relations manifest themselves within this ILK-ocean science dialogue and what can the IOC do to mitigate their consequences?
- What are the limits of working with stakeholders with a consultative status, not with the decision-making power of Member States?

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[51] Hill, R., et al. 2020. Working with Indigenous Local and Scientific Knowledge in Assessments of Nature and Nature's Linkage with People. *Current Opinion in Environmental Sustainability*, Vol. 43, pp. 8–20.

[52] Reyes-García V., et al. 2019. The Contributions of Indigenous Peoples and Local Communities to Ecological Restoration: Indigenous Peoples for Ecological Restoration. *Restoration Ecology*, Vol. 7, No.1, pp. 3–8.

[53] Foucault, M. 1975. *Surveiller et punir*. Paris, Gallimard.

[54] Tallberg, J. et al. 2015. NGO Influence in International Organizations: Information, Access and Exchange. *British Journal of Political Science*, Vol. 48, pp. 213–238.

[55] Office of UN High Commissioner for Human Rights. 2012. Leaflet no. 1 Indigenous Peoples and the United Nations System: An Overview. Geneva, OHCHR.

[56] Venne, H. 2015. NGOs, Indigenous Peoples and the United Nations. *Law Explorer*. Retrieved from: https://lawexplores.com/ngos-indigenous-peoples-and-the-united-nations/.

[57] Tramontana, E. 2012. Civil Society Participation in International Decision Making: Recent Developments and Future Perspectives in the Indigenous Rights Arena. *The International Journal of Human Rights*, Vol. 16, No. 1, pp. 173–192.

- In an effort to build ethical relationships, how to apprehend some IPLC's demands for sovereignty and for a distinctive status within the UN despite the secretariat role that the IOC must assume?
- Which IPLC representatives and networks should the IOC engage with?
    - Which ones are the most locally and nationally legitimate?
    - What kind of authority is being given to them by consulting them rather than others?
    - What consequences do these choices have on the peoples and communities concerned and the knowledge they carry?

8. CONCLUSION: POTENTIAL NEXT STEPS WHICH COULD BE CONSIDERED

Several intergovernmental and non-governmental organizations and platforms have developed protocols and guidelines that are increasingly adapted to collaboration with IPLC and their knowledge. A non-exhaustive list of these tools can be found in the Appendix. This effort of opening a dialogue between different knowledge systems can help strengthening scientific knowledge of the ocean and human impact on it, applying that knowledge for societal benefit, and building institutional capacities for sound management and governance. In addition to the considerable expansion of our knowledge and to the redefinition of our relationship to the ocean, collaboration with ILK holders can serve to elevate their voices and richness even higher in the international fora.

In light of the issues discussed in this guidance document, it could be considered for the IOC Secretariat to propose a questionnaire to Member States to gauge their interest toward the following:

- Collaborate with IPLC in establishing a dialogue between ILK and ocean science;
- Engage in and support a working group, panel of experts, taskforce, or network to implement this dialogue within the IOC, taking into account the considerations raised in the present document;
- Build on the framework, principles, and networks developed for the Ocean Decade regarding collaboration with IPLC and their knowledge.

The following table summarizes the main issues and avenues to explore.

	Programmatic Limits	**Conceptual and Methodological Considerations**	**Ethical, Political, and Social Issues**
Main Lines of Questioning	• How to address ILK within the IOC texts and structures? • How to develop a meaningful enabling policy framework for ILK? • How to avoid the trap of over-institutionalization?	• How to bring ILK and science into dialogue, both conceptually and methodologically, without distorting those knowledge systems nor isolating them from their original frame? • What previous work has been done in this regard? What can be learned from it?	• What outcomes and impacts for IPLC? • How to make those outcomes and impacts positive and which indicators to measure them? • How can power relations manifest themselves within the ILK-ocean science dialogue and what can the

	Programmatic Limits	Conceptual and Methodological Considerations	Ethical, Political, and Social Issues
		• How can the IOC further open up to the examination of non-conventional sources of knowledge (i.e., peer-reviewed)? • How can the IOC include ILK as *process* rather than *content*? • How can the IOC recognize the profound transformative potential of this dialogue and draw from it lessons and new perspectives? • What measures can the IOC put in place to ensure the protection of ILK from misappropriation and that IPLC's access to the documented ILK remains?	IOC do to mitigate their consequences? • What are the limits and sensitivities of working with stakeholders with a consultative status, not with the decision-making power of Member States? • How to apprehend some IPLC's demands for sovereignty and for a distinctive status within the UN despite the secretariat role that the IOC must assume? • Which IPLC representatives and networks should the IOC engage with?
Solutions and Avenues to Consider	• Mentioning ILK mobilization and recognition and collaboration with IPLC in IOC's HLOs and Priorities (would fit well with the SIDS Priority) • Encouraging IOC participation in the IP3 and the related Output 5.IP3	• Collaborating with knowledge holders from the earliest stages of the project or research being conducted, not just at the time of data collection, in order to avoid isolating knowledge from its original framework and to benefit from the different philosophies behind it • Consulting and referring to existing protocols and guidelines regarding collaboration with IPLC and their knowledge (examples in the Appendix) • Stimulating reflections and discussions within the potential established Working group, Panel of Experts, Taskforce, or Network • Collaborating with the LINKS program and other UN entities dedicated to IPLC issues, as well as other intergovernmental organizations and platforms addressing the recognition of ILK in environmental science (CBD, IPBES…) • Taking advantage of the resources, contacts and lessons learned from the Ocean Decade	

	Programmatic Limits	Conceptual and Methodological Considerations	Ethical, Political, and Social Issues
		to raise awareness and inform the IOC Secretariat and Governing Bodies about these issues	

APPENDIX

Non-Exhaustive List of Existing Protocols and Guidelines Regarding Collaboration with IPLC and their Knowledge

Intergovernmental examples:

- Convention on Biological Diversity. 2004. *Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at its Seventh Meeting*. Kuala Lumpur, CBD. Retrieved from: https://www.cbd.int/doc/decisions/cop-07/cop-07-dec-16-en.pdf
- Food and Agriculture Organization of the United Nations. 2016. Free Prior and Informed Consent: An Indigenous Peoples' Right and a Good Practice for Local Communities. Manual for Project Practitioners. Rome, FAO
- Inter-Agency Support Group on Indigenous Issues. 2019. *Supporting the Knowledge of Indigenous Peoples: Global Initiatives and Response*. Retrieved from: https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2019/05/19.IASG_.1a.-IASG-TK-PAPER-APRIL-2019-FINAL.pdf
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. 2017. Annex II to decision IPBES-5/1: Approach to recognizing and working with indigenous and local knowledge in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Bonn, IPBES. Retrieved from: https://ipbes.net/sites/default/files/decision_ipbes_5_1_en.pdf
- McElwee, P., Fernández-Llamazares, Á., Aumeeruddy-Thomas, Y, et al. 2020. Working with Indigenous and local knowledge (ILK) in large-scale ecological assessments: Reviewing the experience of the IPBES Global Assessment. Journal of Applied Ecology, Vol. 57, pp. 1666–1676
- United Nations Department of Economic and Social Affairs. 2007. *Indigenous Women and the United Nations System Good Practices and Lessons Learned*. New York, United Nations
- United Nations Development Group. 2009. *Guidelines on Indigenous Peoples' Issues*. New York and Geneva, United Nations
- UNESCO. 2018. UNESCO Policy on Engaging with Indigenous Peoples. Paris, UNESCO
- World Intellectual Property Organization. 2017. *Documenting Traditional Knowledge, a Toolkit*. Geneva, WIPO
- United Nations Permanent Forum on Indigenous Issues/ Department of Economic and Social Affairs/Division for Inclusive Social Development DSPD. 2008. *Resource Kit on Indigenous Peoples' Issues*. New York, United Nations

National, Regional, and Non-Governmental examples:

- Climate and Traditional Knowledges Workgroup. 2014. *Guidelines for Considering Traditional Knowledges in Climate Change Initiatives*. Retrieved from: https://climatetkw.wordpress.com/guidelines/
- Inuit Circumpolar Circle. 2021. *ICC Ethical and Equitable Engagement Synthesis Report*. Retrieved from: https://www.inuitcircumpolar.com/project/icc-ethical-and-equitable-engagement-synthesis-report/
- Woodward, E., Hill, R., Harkness, P. and Archer, R. 2020. Our Knowledge Our Way in caring for Country: Indigenous-led approaches to strengthening and sharing our knowledge for land and sea management. Best Practice Guidelines from Australian experiences. NAILSMA and CSIRO. Retrieved from: https://www.csiro.au/en/research/indigenous-science/Indigenous-knowledge/Our-Knowledge-Our-Way/OKOW-resources