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Indigenous and Local Knowledge(s) and Science(s) for Sustainable Development

**Policy Brief by the
Scientific Advisory Board of the
UN Secretary-General**

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Executive Summary

The UNSG's Scientific Advisory Board (SAB) acclaims cultural diversity as a creative source and enabler for sustainable development. The cultures and values of peoples, and the knowledge and innovations of indigenous peoples and local communities, are fundamental cultural resources, vital for contemporary problem-solving.

In order to cope and adapt to change, people are relying on essential elements of traditional knowledge, cultural values and customary institutions for relief and support. These are critical building blocks of integrated solutions needed at this time of local-global change.

SAB welcomes recent policy decisions within the United Nations¹ which recognize Indigenous and Local Knowledge(s) as complementary to Science(s) and integral to knowledge-policy platforms on sustainable development, biodiversity and climate change.

Diversification and popularization of Science, Technology and Innovation (STI) under the 2030 Sustainable Development Agenda are essential towards closing persistent knowledge and technology gaps and engendering robust knowledge-policy-society interfaces needed to achieve inclusive and just sustainable development at multiple scales.

Recognition, protection and promotion of indigenous and local knowledge strengthens economic, environmental, social and cultural resilience within societies and forms the knowledge base for addressing critical sustainability problems of the 21st century.

Partnerships amongst science and technology communities and indigenous peoples and local communities, together with Major Groups and other stakeholders, should be fostered to enhance implementation of the Sustainable Development Goals (SDGs).

¹ See Annex 1 for the most significant decisions within the UN system

Background

This policy brief by the UN Secretary General's Scientific Advisory Board (UNSG SAB) responds to the UN SG's request to promote greater commitment to recognizing indigenous and local knowledge (ILK) in sustainable development. It considers the role of cultures and cultural diversity for sustainable development with a focus on the contributions of indigenous and local knowledge systems to critical themes such as food security, climate change mitigation and adaptation, biodiversity conservation and sustainable use, disaster risk preparedness and responses, and the transition to low carbon economies. It elaborates on certain elements contained in the UNSG SAB's Policy Brief on Science and the 2030 Agenda for Sustainable Development pertaining to Science, Technology and Innovations (STI) for the implementation of the SDGs, and provides recommendations for enhancing synergies between Indigenous and Local Knowledge(s) and science(s) moving forward.

The UNSG's Scientific Advisory Board (SAB) acclaims cultural diversity as creative sources and enablers for sustainable development. The cultures and values of peoples, and the knowledge and innovation within societies are fundamental cultural resources and building blocks for problem-solving and solutions.² Effective implementation of universal sustainable development goals requires being mindful of national contexts, whilst respecting cultural diversity.

Diverse knowledge systems, encompassing the physical and natural sciences, social sciences and humanities, as well as indigenous and local knowledge systems are all critically important for understanding and addressing complex challenges and opportunities for people and planet. Inasmuch as biological diversity underpins the resilience of ecosystems, likewise, cultural diversity underpins social resilience for sustainable development.³ This includes legal pluralism; diverse health traditions including traditional healing and medicines; diverse local food systems, economies and traditional livelihoods; and diverse educational curricula including science as well as transmission of cultural traditions and languages as essential components of open, democratic and multi-cultural societies and as antidotes to the homogenizing impacts of globalization. Rather than implying an abandonment of tradition, modernity should be tested and made sustainable in the light of cultural knowledge and values.

Indigenous and Local Knowledge(s) and Science(s) for Sustainable Development

Indigenous and Local knowledge(s) in alliance with the science(s) as enablers of sustainable development should play critical roles in closing knowledge and technology gaps, and directing its powers of innovation towards the eradication poverty and inequality in the world. To deal with rapid environmental and social change, not only do we need all sources of information and knowledge, we also need a diversity of ways to think and learn, adapt and transform. Combining insights and enabling exchanges between diverse knowledge systems creates a richer understanding for decision-making. It is imperative to collaborate and build synergies around our collective efforts and concerns. By harnessing the powers of diversity and democracy as resources and enablers for change, it is possible to move beyond a strong science-policy interface towards robust knowledge-policy-society interfaces at local-global scales, thus making this a truly pan-human endeavour.

² UNESCO, *The Power of Culture for Development*, 2010
<<http://unesdoc.unesco.org/images/0018/001893/189382e.pdf>>.

³ UNESCO and SCBD, 'Joint Programme between UNESCO and the SCBD', pp. 1–4
<<http://www.unesco.org/mab/doc/iyb/JointProgramme.pdf>>.

Opportunities

Indigenous and local knowledge (ILK) systems, developed by societies with long histories of interaction with their natural surroundings, are living cultural traditions which encompass governance, social and family institutions, language, naming and classification systems, natural resource use and conservation practices, rituals, spirituality and worldviews. These contemporary knowledge systems are continuously evolving through interactions of lived experiences and different types of knowledge (written, oral, tacit, practical, and scientific). All indigenous and local knowledge systems have been, and are, empirically-tested, applied, and validated by indigenous peoples and local communities, and are being revitalized through contemporary problems-solving and use of appropriate technologies.

Indigenous peoples and local communities in all global regions deploy such knowledge in day-to-day social, economic and environmental decision-making, thus grounding sustainable development planning and implementation.

Indigenous and local knowledges underpin, inter alia, mountain, dryland, and coastal ecosystem conservation and management; forest and watershed protection and management; fire and disaster abatement; and climate change monitoring and adaptation, which are indispensable action areas for sustainable development (Box 1).

Considerable scientific research also supports the view that strengthening land and resource tenure rights, and strengthening community engagement in and benefits from natural resource and environmental management, are typically more likely than alternatives to generate positive sustainable development outcomes. The potential for scaling up is high in community-based interventions because incentives for good environmental management are built in and do not require external contributions.

In considering issues related to the protection and promotion of indigenous and local knowledge, it is equally important to recognise the underlying need for conservation of the lands and natural resources on which this knowledge is based, as well as ensuring inter-generational transmission.

The adoption of the 2030 Sustainable Development Agenda opens up a unique opportunity to align indigenous and local knowledge with national strategies and planning for sustainable development, climate change actions, conservation agendas and tackling persistent poverty and marginalisation of indigenous peoples and local communities.⁴ The pledge to “leave no one behind” is guided by the human rights principles of equality and non-discrimination, and a critical analysis of the SDGs shows that 92% or 117 of the 169 targets are linked to existing international human rights instruments and labour standards, giving effect to recognized human rights. Indigenous Peoples are mentioned in Target 2.3 on Hunger and Food Security and Target 4.5 on Education as well as in the follow-up and review of the SDGs, highlighting the importance of adopting relevant indicators, disaggregated by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics.⁵

⁴ United Nations General Assembly, *A/RES/70/1. Transforming Our World: The 2030 Agenda for Sustainable Development, Resolution Adopted by the General Assembly on 25 September 2015*, 2015, pp. 1–5 <<http://dx.doi.org/10.1007/s13398-014-0173-7.2>>.

⁵ United Nations, ‘A/RES/68/261. Fundamental Principles of Official Statistics. Resolution Adopted by the General Assembly on 29 January 2014’, 2014 <http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/68/261>.

The UN System- Wide Action Plan (SWAP) on the Rights of Indigenous Peoples highlights the synergies between implementing the outcomes of the World Conference on Indigenous Peoples and the 2030 Sustainable Development Agenda.⁶ There are also multiple linkages between the Convention on Biological Diversity's Strategic Plan for Biodiversity (2011-2020) and the Aichi Biodiversity Targets aimed at the conservation, sustainable use of biodiversity and equitable benefit-sharing arising from the use of genetic resources, including associated traditional knowledge of indigenous peoples and local communities.⁷

Box 1 Examples of ILK contribution to solving key sustainable development challenges from local to global levels

Regarding **food security**, smallholder families, indigenous peoples and local communities grow, sustainably manage, harvest and process a wide range of goods and services for subsistence use and for the local, national or international markets. Even today, small-scale food systems feed 70% of the world's population—30 to 50% of that is provided by small farms, 15 to 20% by urban orchards, 5 to 10% by artisanal fisheries, and 10 to 15% by hunting and wild-crafting. These forms of food production maintain *in situ* genetic and seed diversity, biodiverse ecosystems and are mostly free of chemicals and genetically modified organisms (GMOs) and sustain pollinators for food security. In contrast, food products from the agro-industrial food system only reach 30% of the population, but use 75 to 80% of the world's arable land and 70% of water and fuel for agricultural use and control commercial seed varieties.⁸

Regarding **disaster risk reduction and response**, one striking example relates to the Indian Ocean tsunami that tragically took over 200,000 lives in December 2004. Emerging from this disaster were accounts about how the traditional knowledge of Moken peoples of the Surin Islands in Thailand saved lives. The Moken explained that the entire village, adults and children, knew that the unusual withdrawal of the ocean from the island shore was a sign that they should abandon the village and move rapidly to high ground. None of the Moken present on the Surin Islands had themselves witnessed *laboon*, their term for tsunami but, from the knowledge passed down through generations, they knew the signs and how to respond. The tsunami completely destroyed their small seaside village, but no lives were lost.⁹ More recently, the Japanese government's inclusion of *satoyama* and *satoumi* – the traditional forest production and coastal management systems in the reconstruction process after the 2011 earthquake and tsunami in northeastern Japan confirms the importance of locally based solutions.

Regarding **carbon emissions and fire management**, the Arnhem Land Fire Abatement project (ALFA) in Australia, covering an area of around 120,000 km² employs traditional Australian Aboriginal fire management practices for fire abatement.

⁶ United Nations, 'System-Wide Action Plan on the Rights of Indigenous Peoples', 2015 <http://www.un.org/esa/socdev/unpfii/documents/2016/Docs-updates/SWAP_Indigenous_Peoples_WEB.pdf>.

⁷ CBD, 'UNEP/CBD/SBSTTA/19/INF/9. Links between the Aichi Biodiversity Targets and the 2030 Agenda for Sustainable Development', 2015 <<https://www.cbd.int/kb/record/meetingDocument/105794>>.

⁸ GRAIN, *GRAIN in 2014. Towards Community-Controlled and Biodiversity-Based Food Systems*, 2014 <<https://www.grain.org/article/entries/5211-grain-in-2014-highlights-of-our-activities>>; ETC Group, 'With Climate Chaos ... Who Will Feed Us? The Industrial Food Chain / The Peasant Food Web', 2013, 1–19 <http://www.etcgroup.org/sites/www.etcgroup.org/files/030913_ETC_WhoWillFeed_AnnotatedPoster_0.pdf>.

⁹ UNESCO, *UNESCO Science Report. Towards 2030. Executive Summary*, 2015 <<http://unesdoc.unesco.org/images/0023/002354/235407e.pdf>>.

Every year, rangers, scientists and knowledge holders, including hundreds of Aboriginal clan groups get together to plan for burning at the right time to avoid disastrous seasonal forest fires. This project mitigates against global warming by lessening carbon emissions and importantly, brings families back to Country and provides cash to support communities to look after their health, language, cultural ceremonies, and biodiversity.

Regarding **land management systems and climate change**, shifting/swidden agriculture or rotational farming agro-forestry systems have been practised throughout the tropical forests of Asia, Latin America and Africa. But understanding of these landscape-level resource management practices are missing in mainstream thinking concerning climate change. This thinking blames these systems for carbon emissions and drivers of deforestation and forest degradation, leading to statutory prohibition and criminalization of these customary systems of forest management in some countries. Community participatory research has documented fallow forests as the backbone of shifting cultivation. When fallow periods are long enough, it is a stable system in which soil fertility is maintained and, by keeping forests young and growing and maintaining a mosaic of differently aged growing forests at a landscape level, shifting cultivation results in a landscape level 'carbon bank.' Thus recognition for indigenous peoples' land use practices also offers opportunities for climate change mitigation.¹⁰

Challenges

Numerous good examples (Box 1) showing progress in the recognition of indigenous and local knowledge should not overlook the underlying social marginalization faced by indigenous peoples and local communities in most countries.

Ill-informed climate-related strategies, policies and interventions could exacerbate their underlying vulnerabilities to climate change impacts. Research on local community experiences of climate change in sub-Saharan Africa show that unpredictable and severe weather phenomena such as floods, droughts and desertification are affecting food security, access to water, livestock and wildlife management, and community cohesion. For pastoralists, greater drought frequency inhibits crop and animal system recovery, resulting in long-term degradation of grazing resources, continual reduction in herd size, a potential increase in human-wildlife conflict, and destabilization of the social and economic standing of resource poor livestock keepers.

In order to cope and adapt, people are relying on essential elements of traditional knowledge, cultural values and customary institutions, households, extended families and clans for relief and support. In contrast, many government policies regarding access to land and resources are restricting the communities' capacity to adapt, and the support provided in the form of cash transfers or external technical assistance, risk creating dependency upon knowledge, institutions and services that are beyond their control, rather than supporting long-term sustainable adaptation and the strengthening their social, political and cultural institutions.

¹⁰ PAR, 'Platform for Agrobiodiversity Research' <<http://agrobiodiversityplatform.org/>> [accessed 23 June 2016]; Prasert Trakansuphakon, *Rotational Farming-Shifting Cultivation and Climate Change*, 2010 <<http://agrobiodiversityplatform.org/climatechange/2010/11/10/rotational-farming-shifting-cultivation-and-climate-change/>>; AIPP, FAO and IWGIA, *Shifting Cultivation Livelihood and Food Security: New and Old Challenges for Indigenous Peoples in Asia*, ed. by Christian Erni (Bangkok, 2015) <<http://www.fao.org/3/a-i4580e.pdf>>; AIPP and IWGIA, *Drivers of Deforestation? Facts to Be Considered Regarding the Impact of Shifting Cultivation in Asia. Submission to the SBSTTA on the Drivers of Deforestation by AIPP and IWGIA.*, 2012 <http://aippnet.org/wp-content/uploads/2012/05/Driver_-_of_Deforestation-20120515171222.pdf>.

Contemporary Recognition of Indigenous and Local Knowledge Systems

Recent UN political summits on sustainable development, including the 2012 Rio+20 Summit, and the 2015 UN Sustainable Development Summit, have highlighted the importance of science, technology and innovation, including data and knowledge for engendering problem-solving societies, including the contributions of indigenous peoples and local communities and citizen science.

A growing trend in science emphasizes trans-disciplinarity and learning across the divides of social and natural science and the humanities, and systems approaches that are better equipped to study complex relationships between nature and people. This greater openness to overcoming limitations of compartmentalization, reductionism and specialization in the sciences also applies to renewed linkages and respect for indigenous and local knowledges, in a changing world breaching the limits to growth.

Existing science-policy platforms on biodiversity and ecosystem services and climate change such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC), underscore that knowledge diversity and multiple disciplinary expertise are important features of forward-looking knowledge platforms informing adaptive decision-making and governance at multiple scales.¹¹ Scientists and indigenous and local knowledge holders are building collaborative approaches through dynamic mutual learning and capacity-building, such as in the conduct of IPBES assessments, the IPCC Fifth Assessment Report, and monitoring of multilateral environmental agreements.¹²

This 21st century recognition about the distinct contributions of indigenous and local knowledge, seeks to overcome the historical legacy in the relationship between knowledge systems which separated positivist science as universal and superior to indigenous and local knowledge(s)¹³. Although rarely made explicit and reflected upon, science and scientific knowledge, in common with indigenous and local knowledge, also exists in a cultural and social context, requiring critical renewal in the light of present-day requirements, understandings and sensibilities.¹⁴

Indigenous and local knowledge embody distinct and diverse epistemologies, understandings and values which enrich and expand the knowledge base for decision-

¹¹ See Annex to this paper; Finn Danielsen, Karin Pirhofer-Walzl, and others, 'Linking Public Participation in Scientific Research to the Indicators and Needs of International Environmental Agreements', *Conservation Letters*, 7.1 (2013), 12–24 <<http://dx.doi.org/10.1111/conl.12024>>; IPBES, 'IPBES Conceptual Framework' <<http://www.ipbes.net/conceptual-framework>> [accessed 20 April 2016].

¹² Simon G Potts and others, *Summary for Policymakers of the Thematic Assessment on Pollinators, Pollination and Food Production Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Key Messages Values of Pollinators and Pollination*, 2016 <http://www.ipbes.net/sites/default/files/downloads/Pollination_Summary_for_policymakers_EN_.pdf>; Finn Danielsen, Per M Jensen, and others, 'Testing Focus Groups as a Tool for Connecting Indigenous and Local Knowledge on Abundance of Natural Resources with Science-Based Land Management Systems', *Conservation Letters*, 00.April (2014), 1–26 <<http://dx.doi.org/10.1111/conl.12100>>; IPCC, *Climate Change 2014. Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. by R.K. Pachauri and L.A. Meyer, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Geneva: IPCC, 2014) <<http://dx.doi.org/10.1017/CBO9781107415324>>.

¹³ James D. Ford and others, 'Including Indigenous Knowledge and Experience in IPCC Assessment Reports', *Nature Climate Change*, 6 (2016), 349–535 <<http://dx.doi.org/10.1038/nclimate2954>>.

¹⁴ Arun Agrawal, 'Dismantling the Divide between Indigenous and Scientific Knowledge', *Workshop in Political Theory and Policy Analysis*, 1995 <<http://dx.doi.org/10.1017/CBO9781107415324.004>>; David Turnbull, 'Reframing Science and Other Local Knowledge Traditions', *Futures*, 29.6 (1997), 551–62 <[http://dx.doi.org/10.1016/S0016-3287\(97\)00030-X](http://dx.doi.org/10.1016/S0016-3287(97)00030-X)>.

making. Mainstreaming ILK in governance for sustainable development does not mean simple integration or direct assimilation into existing policy frameworks, nor its incorporation and validation by science, but rather a diversification of knowledge platforms and institutions to accommodate the dynamics of complexity of natural and social systems.¹⁵ Gaining respect and recognition for Indigenous and Local Knowledge within mainstream global and national outlooks and institutions is a strategic and transformative pathway requiring actions by many actors at multiple levels.

Bringing Together Different Knowledge Systems

These challenges faced in mainstreaming ILK, highlight large gaps in existing institutions, mechanisms, tools and procedures for fostering productive collaboration between diverse knowledge systems. Therefore bold initiatives and experiments bridging these gaps provide important learning opportunities.

In Latin America, a network of Indigenous Intercultural Universities - Universidad Indígena Intercultural (UII) - has been established, where indigenous students undertake post-graduate courses supportive of professional development and technical excellence in the service of indigenous peoples' development with culture and identity. Integral to the curriculum are modules taught by indigenous women and men respected for their wisdom, expertise, leadership, cultural knowledge or spiritual guidance, speaking directly from their experiences as interlocutors for indigenous peoples self-determination. This mobile faculty – named Itinerant Indigenous Chair (IIC) or - forms the backbone of the UII network which currently includes 26 associated academic centres (CAAs), which are universities, study centres or research institutes experienced in providing university-level education programs for and with indigenous peoples. Instead of creating a new institution, the UII network builds on the CAA's teaching staff, their knowledge and practices, as well as their infrastructure, and in addition develops new curricula and enriches existing ones with new perspectives and contents based on the worldviews and proposals of the indigenous peoples.

In a more recent development, Indigenous peoples and local community participants at the 4th Plenary Meeting of Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES4) informed the meeting about the formation of a network of Indigenous and Local Knowledge (ILK) Centres of Distinction. It is composed of organizations implementing programmes of work on traditional knowledge in different global regions and which have a long history of engaging within the United Nations system to deliver policy recommendations, implement projects and provide assessments, such as for biodiversity indicators and community-based monitoring systems. Each Centre has its own distinct activities and strengths, which by working together will provide a more comprehensive set of inputs to the IPBES work programme by mobilising participation and contribution of diverse knowledge views and evidence from all regions. In addition, facilitating and coordinating engagements in multi-stakeholder knowledge platforms, the Centres of Distinction aim to be support mechanisms for indigenous and local knowledge holders for their initiatives such as community-based monitoring, knowledge transmission and participatory research and documentation.

¹⁵ Jayalaxshmi Mistry and Andrea Berardi, 'Bridging Indigenous and Scientific Knowledge. Local Ecological Knowledge Must Be Placed at the Center of Environmental Governance', 7–9
<https://pure.royalholloway.ac.uk/portal/files/26516549/Science_Perspective_Author_Final_Version.pdf>.

Recommendations for the Way Forward – Building a partnership of Indigenous and Local Knowledge(s) and Science(s) to diversify, popularize and expand the STI Agenda for Sustainable Development

The 2030 Agenda for Sustainable Development presents an auspicious platform for elevating the contributions of indigenous peoples to sustainable development. A transformative agenda committed to leaving no one behind and making a transition to low carbon economies should facilitate local self-determined development and building on indigenous and local knowledge and technologies. Win-win examples which synergize respect for human rights, secure land tenure, revitalized local economies and social and ecological resilience can be found in many parts of the world. Disaggregated data and relevant indicators will be needed to capture this growing evidence of positive change.

- ❖ Community-based monitoring and information systems (CBMIS) are increasingly recognized as important complementary sources of knowledge that can inform local, national and global policy and decision-making, monitoring and reporting about progress under the CBD's Strategic Plan for Biodiversity (2011-2020)¹⁶, related environmental conventions and the new Sustainable Development Goals. Indigenous peoples and local communities are generating quantitative data and qualitative information about local conditions unavailable from national statistics, and validating data products derived from remote sensing, statistics and other global and national sources. The rapid evolution of creative applications and digital technologies make data and information more accessible and knowledge creation and sharing more socialized.
- ❖ Science, Technology and Innovation (STI) for sustainable development, in their broadest sense, encompass the rich diversity of cultures and knowledge systems from all global regions, countries and peoples. Partnerships between indigenous and local knowledge and science can be developed with respect to the Technology Facilitation Mechanism established by the Addis Ababa Action Agenda, which envisions a collaborative Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs. Collaboration can cover such areas as technology assessment of appropriate and emerging technologies, including their social, economic and cultural impacts.
- ❖ Joint contributions to the Global Sustainable Development Report and the Secretary General's annual Sustainable Development Report can present additional evidence based inputs to support policy-makers in promoting poverty eradication and sustainable development.
- ❖ In order to fulfill the vision of being universal, the annual Multi-stakeholder Forum on science, technology and innovation for the sustainable development goals (STI Forum), needs to put in place mechanisms, measures and spaces to ensure that the voices and needs of women, indigenous peoples and other marginalized groups are heard and addressed, including on the impacts of current development interventions. The forum must show-case STI problem-solving initiatives by those normally excluded from decision-making about sustainable development, including providing a platform for community-based monitoring of the SDGs. To make the Technology Facilitation Mechanism and the STI Forum more accessible, such mechanisms could be replicated or echoed at appropriate scales in-country, including through local government support, thus creating interfaces with existing organizations and institutions of

¹⁶ CBD, 'UNEP/CBD/COP/DEC/XII/12. Decision Adopted by the Conference Of the Parties of the Convention on Biological Diversity', 2014 <<https://www.cbd.int/decisions/cop/?m=cop-12>>.

Major Groups and other Stakeholders and governance institutions of indigenous peoples and local communities.

- ❖ The UN System-wide Action Plan to implement the Outcome Document of the World Conference on Indigenous Peoples provides another vehicle for concerted action by UN agencies on the theme of Indigenous and Local Knowledge and the rights of indigenous peoples, consistent with the Sustainable Development Goals.
- ❖ Academies of Science, including Global Young Academy to undertake dialogues and initiatives to enhance collaboration with indigenous and local knowledge holders and experts.

ANNEX 1:

Paris Agreement

5. Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate. (FCCC/CP/2015/10/Add.1, Article 7, Para 5)

UNFCCC decision to adopt the Paris Agreement

'135. Recognizes the need to strengthen knowledge, technologies, practices and efforts of local communities and indigenous peoples related to addressing and responding to climate change, and establishes a platform for the exchange of experiences and sharing of best practices on mitigation and adaptation in a holistic and integrated manner; ' (Decisions to give effect to the Agreement, Para 135)

Addis Ababa Action Agenda of the Third International Conference on Financing for Development

G. Science, technology, innovation and capacity-building

117. ... At the same time, we recognize that traditional knowledge, innovations and practices of indigenous peoples and local communities can support social well-being and sustainable livelihoods and we reaffirm that indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions.

Sendai Framework for Disaster Risk Reduction 2015–2030 (Priority for Action 1: Understanding disaster risk)

24 (i) To ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programmes of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context;

SIDS Accelerated Modalities of Action [S.A.M.O.A.] Pathway

44. We call for support for the efforts of small island developing States:
(c) To raise awareness and communicate climate change risks, including through public dialogue with local communities, to increase human and environmental resilience to the longer-term impacts of climate change; (Climate Change)

81. (c) To develop and strengthen national and regional cultural activities and infrastructures, including through the network of World Heritage Sites, which reinforce local capacities, promote awareness in small island developing States, enhance tangible and intangible cultural heritage, including local and indigenous knowledge, and involve local people for the benefit of present and future generations; (Culture and sport)

The Future We Want

58. We affirm that green economy policies in the context of sustainable development and poverty eradication should:

(j) Enhance the welfare of indigenous peoples and their communities, other local and traditional communities and ethnic minorities, recognizing and supporting their identity, culture and interests, and avoid endangering their cultural heritage, practices and traditional knowledge, preserving and respecting non-market approaches that contribute to the eradication of poverty;

IPCC Summary for Policymakers

Adaptation planning and implementation at all levels of governance are contingent on societal values, objectives, and risk perceptions (high confidence). Recognition of diverse interests, circumstances, social-cultural contexts, and expectations can benefit decision-making processes. Indigenous, local, and traditional knowledge systems and practices, including indigenous peoples' holistic view of community and environment, are a major resource for adapting to climate change, but these have not been used consistently in existing adaptation efforts. Integrating such forms of knowledge with existing practices increases the effectiveness of adaptation.

Other resources

<http://www.unesco.org/new/en/natural-sciences/priority-areas/links/science-policy/projects/climate-change-policy/>

<http://www.unesco.org/new/en/natural-sciences/priority-areas/links/science-policy/>