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Capacity-building and development, technical and
scientific cooperation, clearing- house mechanism
and knowledge management under the Convention
and its Protocols

Draft knowledge management strategy to support the implementation of the Kunming-Montreal Global Biodiversity Framework

Note by the Secretariat

Introduction

The present note contains, in its annex, the draft knowledge management strategy to support the implementation of the Kunming-Montreal Global Biodiversity Framework, pursuant to paragraph 9 (a) of decision 15/16 of the Conference of the Parties, for consideration by the Subsidiary Body on Implementation at its fourth meeting. The draft strategy has been prepared as described in document CBD/SBI/4/7. Elements of a draft recommendation by the Subsidiary Body on the strategy are also provided in document CBD/SBI/4/7.

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* CBD/SBI/4/1.

Annex

Draft knowledge management strategy to support the implementation of the Kunming-Montreal Global Biodiversity Framework

I. Background and context

1.   Knowledge management is one of the key strategic means of implementation of the Convention and its Protocols that will underpin the achievement of the goals and targets of the Kunming-Montreal Global Biodiversity Framework, as recognized in Target 21 and section K of the Framework, as well as in Article 17 of the Convention.

2.   The knowledge management strategy supports the effective implementation of the Framework and complements its monitoring framework, the long-term strategic framework for capacity-building and development, the technical and scientific cooperation mechanism, the clearing-house mechanism of the Convention and the clearing-houses of its Protocols.

II. Components

3.   Knowledge management encompasses a range of processes, strategies and practices through which biodiversity-related data, information and knowledge are generated and collected; organized, curated, stored and shared; and used or applied to achieve biodiversity-related objectives and outcomes.

4.   While various definitions of knowledge management exist, this strategy considers four interdependent components, namely: (a) people, including knowledge holders, researchers and practitioners, indigenous peoples and local communities, managers, curators and users; (b) processes, that is, the relevant procedures, standards and policies; (c) technology, including artificial intelligence, and the technological tools, systems, infrastructures and platforms; and (d) content, that is, biodiversity-related data, information and knowledge, including how it is managed, for example through cataloguing, tagging and indexing, digitization and organization.

III. Principles

5.   The strategy recognizes that, to contribute to the achievement of the 2050 vision, goals and targets of the Framework, it is important for data, information and knowledge, including the traditional knowledge, innovations and practices of indigenous peoples and local communities that are made available with their free, prior and informed consent and awareness of further application, possible benefits, and potential consequences,[1] to be available and accessible in a timely manner to decision makers, practitioners and the public. In this regard, the strategy acknowledges the approach of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services to recognizing and working with indigenous and local knowledge[2] in the context of biodiversity and ecosystem services assessments. It is also important for knowledge to be fit for purpose in terms of content and format of transmission.

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[1] All references to "free, prior and informed consent" refer to the tripartite terminology of "prior and informed consent", "free, prior and informed consent" or "approval and involvement" and include the understanding by indigenous peoples and local communities of the future use, purpose, potential consequences, and benefits of sharing their traditional knowledge, innovations, and practices.
[2] Approach to recognizing and working with indigenous and local knowledge in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services" (IPBES/5/15, annex II).

6. Furthermore, it is important for Parties, other Governments and stakeholders to foster a culture of knowledge-sharing, co-production of knowledge, continuous learning from experience, and knowledge retention and re-use to improve policy and implementation processes and practices.

7. The strategy also recognizes that effective knowledge management requires acknowledging and optimizing the contributions of various governmental and non-governmental institutions, regional and international organizations, infrastructures, researchers, practitioners, indigenous peoples and local communities, the private sector and relevant stakeholders, and where necessary developing capacity to do so, to promote diverse and inclusive knowledge societies.[3]

8. The strategy recognizes the importance of embracing new technologies, including artificial intelligence, and encourages an innovative and forward-looking approach to enhance the effectiveness and efficiency of knowledge management processes.

9. The strategy promotes the principles of findability, accessibility, interoperability and reusability (FAIR principles), with a view to promoting the open sharing of data, information and knowledge and the fair and equitable sharing of benefits from the utilization of knowledge, innovations and practices of indigenous peoples and local communities related to conservation and sustainable use of biological diversity.

10. In order to ensure that access to the traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities is given with their free, prior and informed consent, the strategy also promotes the principles of collective benefit, authority to control by indigenous peoples and local communities, responsibility, reciprocity and ethics (CARE principles) and the strengthening of their technical capabilities, skills and knowledge.

IV. Purpose

11. The strategy intends to foster the mutual exchange and use of relevant data, information and knowledge, including traditional knowledge with the free, prior and informed consent of indigenous peoples and local communities, for informed policy development, planning, decision-making and action at both the policy and practitioner levels to support the implementation and monitoring of the Framework at all levels. It also seeks to develop or strengthen tools and systems to enhance communication, awareness-raising, education, knowledge-sharing and organizational learning among policymakers, practitioners, and other relevant stakeholders, while respecting the rights and knowledge systems of indigenous peoples and local communities.

12. The strategy aims to address some of the challenges and needs identified by Parties related to biodiversity knowledge, information and data management in order to facilitate the effective implementation of the Framework and related decisions of the Conference of the Parties, including by achieving the following:

(a) Addressing disparities in data and information availability and accessibility across countries, and the barriers to the effective use of existing biodiversity-related data, information and knowledge, taking into account the specific challenges faced by developing countries in particular the least developed countries and small islands developing States among them, and Parties with economies in transition;

(b) Strengthening regional, national and, as appropriate, subnational capacities, systems and mechanisms for biodiversity-related data, information and knowledge management to support evidence-based, inclusive and gender-responsive decision-making and action, and for the monitoring and reporting of progress towards the achievement of national targets as contributions to the goals and targets of the Framework;

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[3] The United Nations Educational, Scientific and Cultural Organization (UNESCO) describes inclusive knowledge societies as those that value the creation, dissemination, and utilization of knowledge as key drivers for development, fostering collaboration, innovation, and the empowerment of individuals and groups (UNESCO, 2015).

(c)   Increasing the level of standardization for greater harmonization and interoperability among national and regional biodiversity information systems, tools and platforms, so that data can flow seamlessly to support planning, implementation, monitoring and reporting;

(d)   Leveraging existing biodiversity knowledge management initiatives and networks by bridging the gaps that prevent their full and effective usage;

(e)   Developing appropriate national policies and strategies to support the generation of data and information and knowledge management;

(f)   Fostering cooperation and synergies among biodiversity-related conventions to streamline information management processes, including national reporting, data-sharing and knowledge exchange, in accordance with their respective mandates, legal authority and responsibilities;

(g)   Enhancing coordination and collaboration among various regional and national biodiversity knowledge initiatives, tools and platforms to avoid their duplication and foster efficiency and sustainability;

13.   The strategy promotes a regional approach to knowledge management, through the regional and/or subregional support centres of the technical and scientific cooperation mechanism,[4] to encourage the sharing of resources, best practices and expertise among stakeholders to optimize the implementation of the Framework.

V.   Expected outcomes

14.   The implementation of the strategy is expected to result in: the increased capacity of Governments, indigenous peoples and local communities, women, youth and other relevant stakeholders to capture, manage and use biodiversity-related data, information and knowledge; an expanded knowledge base; and the increased availability, accessibility and uptake of relevant data, information and knowledge at all levels, with a view to facilitating evidence-based programming and policy design, informed decision-making and the effective implementation, monitoring and reporting of the Framework.

15.   The strategic objectives, component actions and main actors to achieve those outcomes are listed in the table in section VIII, below.

VI.   Implementation (2024–2030)

16.   The strategy will be implemented in an inclusive and gender-responsive manner by Parties, other Governments, indigenous peoples and local communities, women, youth and other relevant stakeholders,[5] with support from the Secretariat. The implementation will be in line with the priorities outlined in the national biodiversity strategies and action plans, the Framework and relevant decisions of the Conference of the Parties,[6] by making full use of existing resources and cooperation with relevant organizations and processes, noting that any new and additional activities by the Secretariat will need to be conducted subject to the availability of resources.

17.   The strategy will consider the capacity, technical, technological and financial gaps that undermine the capabilities of countries, in particular developing countries and countries with economies in transition, to produce and gain access to biodiversity-related data, information and knowledge. The strategy will also prioritize the need to engage indigenous peoples and local

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[4] Decision 15/8.

[5] These may include: subnational governments, cities, other local authorities, intergovernmental organizations, non-governmental organizations, the scientific community, academia, faith-based organizations, networks and the private sector.

[6] In particular decisions 15/16 and 14/25 related to knowledge management, including the Global Knowledge Support Services for Biodiversity and decision 15/8 related to the global coordination entity and the regional and/or subregional support centres of the technical and scientific cooperation mechanism.

communities, women, youth and groups in vulnerable situations in research programmes for the conservation and sustainable use of biodiversity.

VII. Monitoring

18.   The implementation of the strategy will be monitored at national and regional levels, using the information provided by Parties in their national reports and the indicators included in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework. Governmental and non-governmental actors are encouraged to voluntarily use the indicators to monitor, assess and report on the outcomes and impact of their knowledge management efforts at the national, regional and global levels, taking into account their respective capacities and resources. Subject to the availability of funding and resources, the Secretariat, the regional and/or subregional technical and scientific cooperation support centres and relevant organizations will provide support to Parties in implementing the strategy and monitoring its progress. The information generated from the monitoring process will be used to inform the review and update of the strategy, as appropriate, in 2030.

VIII. Strategic objectives, actions and actors

Strategic objectives	Component actions	Main actors
A. Scoping and framing of the situation and the needs	(1) Map existing knowledge assets, knowledge holders, curators, sources[a] and platforms relevant to the Kunming Montreal Global Biodiversity Framework and national biodiversity strategies and action plans	Parties, indigenous peoples and local communities, organizations and networks, Secretariat
	(2) Identify knowledge gaps, needs and priorities of Parties to ensure that the knowledge generated is fit for purpose	Parties, indigenous peoples and local communities, organizations, Secretariat
	(3) Identify options and mechanisms for addressing the identified knowledge gaps and needs	Parties, organizations, indigenous peoples and local communities, academia/scientific community
	(4) Develop national and regional knowledge management, strategies and action plans based on the needs and priorities identified by Parties	Parties, indigenous peoples and local communities
	(5) Evaluate the effectiveness of existing knowledge management systems and platforms at the global, regional, national and subnational levels	Parties, subnational governments, indigenous peoples and local communities, organizations, Secretariat, as relevant
B. Promoting knowledge generation and synthesis	(1) Establish multi-stakeholder processes and mechanisms for knowledge co-creation and production	Parties, indigenous peoples and local communities, organizations
	(2) Enhance collaboration among government institutions, organizations, private sector and relevant initiatives to promote knowledge generation	Parties, indigenous peoples and local communities, organizations, Secretariat
	(3) Engage and encourage research and academic institutions, holders of traditional knowledge, and other knowledge institutions and communities to undertake research and share relevant data, information and knowledge	Parties, indigenous peoples and local communities, regional support centres
	(4) Strengthen national and regional capacity for knowledge generation, including the collection of data, information and knowledge by private citizens at the subnational and local levels	Parties
	(5) Promote the use of digital technology, including artificial intelligence and remote sensing, to collect data and information	Parties, organizations, regional support centres, Secretariat

Strategic objectives	Component actions	Main actors
	(6) Identify and collect, where authorized, the traditional knowledge of indigenous peoples and local communities, with particular attention to the knowledge of indigenous women, with their free, prior and informed consent, and with clear acknowledgement of the source	Parties, indigenous peoples and local communities
	(7) Establish and convene communities of practice on knowledge management, including knowledge generation, storage, dissemination and application	Parties
	(8) Promote the documentation and publication of traditional knowledge of indigenous peoples and local communities in research publications, with their free, prior and informed consent, and with a clear acknowledgement of the traditional knowledge holders	Parties, indigenous peoples and local communities, and organizations
C. Facilitating knowledge discovery and collection	(1) Develop, enhance and use web-based tools to discover and collect data, information and knowledge from various sources, including through the promotion of already existing tools, platforms and services available	Secretariat, Parties, academia, organizations
	(2) Promote the use of tools and technology for knowledge discovery, such as data mining and machine learning	Parties, organizations, Secretariat, regional support centres, academia
	(3) Engage relevant stakeholders, including knowledge holders, generators, creators, brokers and private citizens, in the creation and collation of knowledge	Parties, organizations
D. Enhancing knowledge organization and sharing	(1) Review metadata and enhance the tagging and mapping of knowledge objects from various sources to increase findability	Parties, organizations
	(2) Develop and promote data, information and knowledge-sharing standards and protocols and best practices to ensure good quality data, compatibility and interoperability across biodiversity information systems, tools and platforms[b]	Parties, organizations, indigenous peoples and local communities, regional support centres
	(3) Improve data harmonization and interoperability among biodiversity-related data, information and knowledge systems	Secretariat, Parties, organizations
	(4) Strengthen the capacity of Governments and other stakeholders, including the private sector, to manage and share data, information and knowledge efficiently across conventions[c] and the programme to implement the Sustainable Development Goals and other related strategies	Parties, Secretariat, organizations, regional support centres
	(5) Promote a culture of sharing data, information and knowledge and their application at global, regional, national, subnational and local levels, including through entering into data-sharing agreements	Parties, Secretariat, indigenous peoples and local communities, organizations

Strategic objectives	Component actions	Main actors
	(6) Develop, showcase and disseminate tailored knowledge products, including through workshops, webinars, knowledge fairs community meetings, open-access online resources	Secretariat, Parties, indigenous peoples and local communities, organizations, regional support centres
	(7) Ensure compliance of data users and databases with relevant access and benefit-sharing legislation related to access to traditional knowledge to prevent the misuse and misappropriation of traditional knowledge	Parties, indigenous peoples and local communities, organizations, Secretariat
	(8) Develop a single national repository or portal for biodiversity-related data, information and knowledge to promote access and use as part of or linked to the national clearing-house mechanism	Parties
	(9) Encourage peer-to-peer learning on knowledge management, including through the regional technical and scientific cooperation support centres	Secretariat, Parties, organizations, regional support centres
E. Promoting the uptake and effective use and application of knowledge	(1) Develop and implement strategies to increase the uptake, use and application of existing biodiversity-related data, information and knowledge to inform biodiversity programming and policy and decision-making	Parties
	(2) Promote and facilitate the sharing, replication, scale-up, adaptation and systematization of data, information and knowledge, including documented good practices and lessons learned, to improve processes and practices	Parties, organizations, indigenous peoples and local communities, Secretariat
	(3) Create and utilize mechanisms to facilitate interactions and dialogue between policymakers and decision makers and the research community, practitioners, indigenous peoples and local communities	Parties, indigenous peoples and local communities
	(4) Establish linkages between scientific networks and communication experts to enable the translation of scientific research outcomes into knowledge products	Parties, indigenous peoples and local communities, regional support centres, global entity for technical and scientific cooperation, Secretariat
F. Conducting knowledge audits and reviews	(1) Undertake periodic surveys to assess, inter alia, the types of information and knowledge most frequently sought, the ease of access to the information needed, existing knowledge gaps, the level of knowledge-sharing and preferred channels, and uptake, use and application of knowledge in decision-making	Parties, Secretariat
	(2) Analyse major knowledge gaps and identify options to address them	Parties, indigenous peoples and local communities, Secretariat

Strategic objectives	Component actions	Main actors
	(3) Conduct a comprehensive review of the knowledge management strategy	Parties, Secretariat
G. Developing capacity in data, information and knowledge management	(1) Undertake gap and need analyses of national knowledge management capacities in the implementation of national biodiversity strategies and action plans	Secretariat, Parties, indigenous peoples and local communities
	(2) Develop or strengthen the policies, strategies and programmes for biodiversity knowledge management, including for traditional knowledge	Parties, indigenous peoples and local communities
	(3) Strengthen the institutional capacity of relevant national agencies in biodiversity informatics and knowledge management, including to support efforts by indigenous peoples and local communities to strengthen their secure indigenous knowledge systems of knowledge management	Parties, indigenous peoples and local communities, organizations, regional support centres
	(4) Strengthen national knowledge management systems and mechanisms for biodiversity conservation and sustainable use	Parties, organizations
	(5) Provide guidance on national database development and the sharing of experience in data access and use	Parties, indigenous peoples and local communities, regional support centres
	(6) Strengthen the capacities of decision makers, practitioners, the public, relevant stakeholders and knowledge holders to gain access to and use biodiversity-related data, information and knowledge, including traditional knowledge provided with the free, prior and informed consent of indigenous peoples and local communities	Parties, indigenous peoples and local communities, organizations, Secretariat
	(7) Develop targeted capacity-building initiatives to support the engagement of indigenous peoples and local communities, women and youth in the generation, management and use of biodiversity-related data, information and knowledge, through improved data infrastructure, training, guidance, and technical support	Parties, indigenous peoples and local communities, organizations, regional support centres, Secretariat
	(8) Establish partnerships between universities and scientific institutions and indigenous peoples and local communities, women and youth to enhance the contributions of scientific and traditional knowledge to conservation and sustainable use research programmes, in line with the principle of free, prior and informed consent	Parties, indigenous peoples and local communities, organizations, regional support centres, Secretariat
	(9) Mobilize funding to support knowledge management efforts and ensure sustainability in the generation, collection, management and sharing of biodiversity data, information, and knowledge	Parties, organization, Secretariat, regional support centres

Strategic objectives	Component actions	Main actors
H. Strengthening knowledge networks and partnerships	(1) Strengthen networks on biodiversity-related data, information and knowledge management	Parties, indigenous peoples and local communities, organizations
	(2) Link centres of expertise, communities of practice, indigenous peoples and local communities and other knowledge sources	Parties, indigenous peoples and local communities, organizations, regional support centres
	(3) Enhance collaboration among scientific institutions, public institutions and indigenous peoples and local communities in their work on traditional knowledge related to sustainable practices	Parties, indigenous peoples and local communities, organizations, regional support centres
	(4) Enhance coordination and collaboration among various biodiversity knowledge initiatives, tools and platforms, and community-based monitoring and citizen science programmes	Parties, indigenous peoples and local communities, organizations, Secretariat
	(5) Substantially increase the exchange of results of technical, scientific and socioeconomic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge, as such and in combination with the technologies referred to in paragraph 1 of Article 16 of the Convention	Parties, indigenous peoples and local communities, organizations, Secretariat, regional support centres

[a] Including tools identified in the *Compendium of Guidance on Key Global Databases Related to Biodiversity-related Conventions* of the United Nations Environment Programme World Conservation Monitoring Centre.

[b] In the context of traditional knowledge, this involves the development and promotion of community protocols and biocultural community protocols for gaining access to and using traditional knowledge.

[c] An example of an applicable tool to manage data, information and knowledge at the national level is the Data Reporting Tool for Multilateral Environmental Agreements (available at https://dart.informea.org).

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