

Proposed draft resolution on promoting incorporation of frontier technology and traditional ecological knowledge in wetland conservation, restoration, management, and wise use

Submitted by China, Burkina Faso, Gabon, Madagascar, and Panama

Action requested:

The Standing Committee is invited to review and approve the attached draft resolution for consideration by the 15th meeting of the Conference of the Contracting Parties.

Secretariat cover note

The draft resolution is to call on incorporation and integration of frontier technology and TEK in wetland conservation, restoration, management, and wise and sustainable use.

Paragraph 19 requests the Secretariat to report on the status on technology and knowledge sharing under Resolution VII.19 to the 67th meeting of the Standing Committee. It is not clear what guidance in Resolution VII.19 is to be applied in the preparation of a report on technology and knowledge sharing. The Secretariat suggests including specific language as to the nature, content, format, etc. of the report in the draft resolution to determine what resources would be needed to implement this action.

The Secretariat has invited the STRP to review the draft resolution.

Introduction

Frontier or new technologies and traditional knowledge are important working areas and initiatives to address global challenges in environment and sustainable development. Technology and knowledge are important working areas in UN programmes and agencies and MEAs, including UNEP, UNESCO, UNFCCC and CBD, particularly implementation of the Kunming-Montreal Global Biodiversity Framework. Both frontier technology and traditional ecological knowledge (TEK) are contributing to wetland conservation, restoration, management and wise use. Scientific knowledge and indigenous and local knowledge are integral parts of knowledge systems. Modern science-based technology and traditional knowledge are inseparable in long-term human development and both vital to build a harmonious relationship with nature. Resolution VII.19 on Guidelines for international cooperation under the Convention on Wetlands indicates that the Convention will increase its efforts to share knowledge (traditional, indigenous, and more recently derived technologies and methods) among Contracting Parties. Traditional knowledge and technology are targets of the Fifth Strategic Plan of the Convention. The draft resolution is to call on incorporation and integration of frontier technology and TEK in wetland conservation, restoration, management, and wise and sustainable use.

Financial implications of implementation

Paragraph (number and key part of text)	Action	Cost (CHF)
Paragraph 18	Request STRP to develop a technical report and recommendations to COP17	25,000
Paragraph 19	Request the Secretariat to report status to SC	3,000

Draft Resolution XV.xx on Promoting incorporation of frontier technology and traditional ecological knowledge in wetland conservation, restoration, management, and wise use

1. AWARE that science and technology are means to implement and revitalize the Global Partnership for Sustainable Development under Goal 17 of the United Nations 2030 Sustainable Development Goals (SDGs); and that the Technology Facilitation Mechanism was established and aimed at supporting the SDGs¹;
2. NOTING that frontier or new technologies and traditional knowledge are important working areas and initiatives to address global challenges in environment and sustainable development in multiple UN programmes and specialized agencies, including the UN Secretary-General's Strategy on New Technologies, the UN Environment Programme's Digital Transformations and the Coalition for Digital Environmental Sustainability (CODES), and the Science, Technology and Innovation (STI) system and Local and Indigenous Knowledge Systems (LINKS) of the UN Educational, Scientific and Cultural Organization (UNESCO);
3. ALSO NOTING that technology and knowledge are important in multiple environmental agreements (MEAs); that the UN Framework Convention on Climate Change established its Technology Mechanism in 2010; and that the Parties to the Convention on Biological Diversity confirmed in Decision 15/4 that implementation of the Kunming-Montreal Global Biodiversity Framework should be based on scientific evidence and traditional knowledge and practices, recognizing the role of science, technology and innovation²;
4. ACKNOWLEDGING that advances and practices of frontier technology are contributing to wetland conservation, restoration, management and wise use, such as machine learning and artificial intelligence, space-air-ground integrated networks (SAGIN), smart sensors, the internet of things, clouds and data processing engines, biotechnology, nanotech, robotics, etc., which provide significant support to wetland inventory and monitoring, ecological character assessment, prediction of trends of changes, regulation of hydrological and ecological processes, etc., with precise, highly frequent, and intelligent data and analysis;
5. ALSO ACKNOWLEDGING that traditional knowledge, especially traditional ecological knowledge (TEK³), has an irreplaceable value and role in wetland conservation, restoration, management, and wise and sustainable use; and NOTING that many Wetlands of International Importance are also nominated as World Natural and Cultural Heritage Properties or Cultural Heritage Landscapes, or Biosphere Reserves, for example for their traditional wetland agriculture;
6. AWARE that scientific knowledge and indigenous and local knowledge are integral parts of knowledge systems (IPBES, 2022)⁴; and REALIZING that modern science-based technology and traditional knowledge are inseparable in long-term human development and both vital to build a harmonious relationship with nature;

¹ Paragraph 70, the 2030 Agenda for Sustainable Development.

² CBD/COP/DEC/15/4 Section C. Paragraph 7(l).

³ Traditional Ecological Knowledge (TEK) is a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. IPBES. <https://www.ipbes.net/node/42038>

⁴ IPBES (2022). Summary for Policymakers of the Methodological Assessment Report on the Diverse Values and Valuation of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Pascual, U, et al. IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.6522392>

7. RECALLING that the *Guidelines related to the sharing of expertise and information* in Resolution VII.19⁵ indicate that the Convention will increase its efforts to share knowledge (traditional, indigenous, and more recently derived technologies and methods) among Contracting Parties;
8. ACKNOWLEDGING that the Scientific and Technical Review Panel has developed the technology and knowledge publications for the Convention since 2006;
9. WELCOMING the fact that Standing Committee Decision SC63-26 decided the theme of World Wetland Day 2026 as “Wetlands and traditional knowledge: Celebrating cultural heritage”;
10. NOTING that traditional knowledge and technology are indicated in Target 1.x, 2.x, 3.x and 4.x (to be updated with the final SP5) in the Fifth Strategic Plan of the Convention (Resolution XV.xx Annex 2); and
11. REALIZING the significance of the incorporation and integration of frontier technology and TEK in wetland conservation, restoration, management, and wise and sustainable use, and the weakness of separate applications of frontier technology and TEK;

THE CONFERENCE OF THE CONTRACTING PARTIES

12. AFFIRMS that Contracting Parties have different practices of frontier technology and traditional ecological knowledge (TEK) at national and local levels depending on their national situation, culture, and available resources;
13. URGES Contracting Parties to promote the development of wetland science and technology and preserve wetland TEK;
14. ENCOURAGES Contracting Parties to share technology and knowledge for promotion of integrative development of frontier technologies and TEK at regional and global levels through multiple mechanisms, including Ramsar Regional Initiatives;
15. FURTHER ENCOURAGES Contracting Parties to promote the incorporation and integration of frontier technology and TEK in wetland conservation, restoration, management, and wise use, based on national feasibility;
16. INVITES those Contracting Parties developing frontier technologies, such as satellites, artificial intelligence, open access databases, clouds and data process engines, etc. to build public services and access to the Convention on voluntary bases;
17. INVITES those Contracting Parties incorporating and integrating frontier technology and TEK to share their practices, experiences and lessons;
18. REQUESTS the Scientific and Technical Review Panel to review the advances in wetland frontier technology and their application, the preservation status of wetland TEK, best practices of incorporation and integration of frontier technology and TEK into wetland conservation, restoration, management, and wise and sustainable use; and to develop guidelines for presentation to the Contracting Parties at the 17th meeting of the Conference of the Contracting Parties (COP17), with areas of frontier technology and TEK possibly covering but not limited to:
 - Wetland inventory, mapping and monitoring;

⁵ Annex Section D Paragraph D1.

- Carbon calculation and estimation;
- Evaluation of trends of ecological character changes;
- Regulation of hydrological and ecological processes;
- Ecosystem services valuation and trade-off;
- Wise and sustainable use of wetland resources;
- Threat treatment and management;
- Management and decision making;
- Risks and control of new technologies;
- (...)

19. REQUESTS the Secretariat to report on the status on technology and knowledge sharing under Resolution VII.19 to the 67th meeting of the Standing Committee (SC67); and
20. CALLS ON the International Organization Partners of the Convention, other NGOs, research institutes, and private sector bodies to contribute to the development and application of wetland frontier technology incorporating with TEK.