



15th meeting of the Conference of the Contracting Parties to the Convention on Wetlands

**“Protecting wetlands for our common future”
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COP15 Doc.11

Report of the Chair of the Scientific and Technical Review Panel (STRP)

Introduction

1. This report covers the 2023-2025 triennium. It provides a synthesis of the activities of the Scientific and Technical Review Panel (STRP), summarizing progress made in the implementation of the STRP work plan¹, and through the 25th, 26th and 27th meetings of the STRP as well as other work carried out with the support of the Secretariat. Additional information can be found in the Chair’s reports to the 62nd, 63rd and 64th meetings of the Standing Committee (documents SC62 Doc.19, SC63 Doc.19 and SC64 Doc.18²).
2. This report of the Chair of the STRP covers:
 - i. Meetings of the STRP;
 - ii. Progress made in implementation of the STRP work plan for 2023-2025;
 - iii. Ad-hoc advice and other requests;
 - iv. Effectiveness and visibility of the STRP;
 - v. Recommendations regarding scientific and technical priorities for 2025-2028;
 - vi. Participation in Standing Committee meetings and pre-COP regional meetings;
 - vii. Participation in meetings of technical bodies of other multilateral environmental agreements (MEAs) and other events;
 - viii. Report on the consultation on the use of Earth observation for wetland inventory, assessment, monitoring and conservation;
 - ix. Acknowledging the work of the Secretariat, STRP observers, International Organization Partners (IOPs) and other contributors; and
 - x. Acknowledging the non-core funding contributions of Contracting Parties and others to support the implementation of the STRP work plan.

Meetings of the STRP

3. The STRP convened three annual in-person meetings during the 2023-2025 triennium:

¹ See <https://www.ramsar.org/document/scientific-technical-review-panel-strp-workplan-2023-2025>.

² See <https://www.ramsar.org/document/sc62-doc19-rev1-report-chair-scientific-technical-review-panel-including-work-plan-2023>; <https://www.ramsar.org/document/sc63-doc19-report-chair-scientific-technical-review-panel-implementation-strp-work-plan>; and <https://www.ramsar.org/document/sc64-doc18-report-chair-scientific-technical-review-panel>.

- a. The 25th meeting of the STRP (STRP25)³ was held in Gland, Switzerland, from 2 to 5 May 2023. This meeting focused on the development of the STRP work plan for 2023-2025, including the development of terms of reference (TORs) for high-priority tasks identified in Resolution XIV.14 on *Future implementation of scientific and technical aspects of the Convention for 2023-2025*, and the establishment of working groups to lead the implementation of the tasks.
 - b. The 26th meeting of the STRP (STRP26)⁴ was held in Gland from 5 to 8 February 2024. The purpose of the meeting was to assess the status of and advance the preparation of the STRP tasks, and agree on the next steps for implementation in the run-up to the 15th meeting of the Conference of the Parties (COP15). Particular attention was given to the Fifth Strategic Plan of the Convention (SP5), advice on wetland-related indicators for the Kunming-Montreal Global Biodiversity Framework (KM-GBF) and the proposed review of the Conventions wetland classification system.
 - c. The 27th meeting of the STRP (STRP27)⁵ was held in Gland from 2 to 5 December 2024. The meeting focused on preparations for the 64th meeting of the Standing Committee (SC64) and COP15, including draft resolutions prepared by the Panel, and the Panel's work on the development of indicators for SP5. The meeting also advanced the consultation on Earth observation conducted pursuant to decision SC63-30.
4. In addition to the annual in-person meetings, the STRP held three online intersessional meetings during the triennium, on 12 July 2023, 16 November 2023 and 19 September 2024. These meetings provided an opportunity to review progress on tasks, coordinate inputs to ongoing processes (including the SP5 and COP15 draft resolutions) and strengthen collaboration between STRP members, National Focal Points, observers and IOPs. Topics covered during these meetings included discussing requests from the Standing Committee, progressing the development of priority STRP tasks and publications, and sharing draft documents for peer review.

Progress made in implementation of the STRP work plan 2023-2025

5. The STRP Work Plan 2023-2025, adopted intersessionally following STRP25, identified 15 high-priority tasks grouped into five Thematic Work Areas (TWAs), in accordance with Resolution XIV.14⁶. The Panel has made substantial progress in completing these tasks, despite the shortened triennium and resource constraints.
6. Under TWA1: *Wetlands of International Importance, development of the Site network and application of criteria*, the STRP:
 - a. Finalized guidance on the application of Criteria 6 and 9; including development of a draft resolution on *application of Criteria 6 and 9 to new and existing Wetlands of International Importance* (COP15 Doc.23.12⁷) (Task 1.1a, b);

³ See <https://www.ramsar.org/meeting/25th-meeting-scientific-technical-review-panel>.

⁴ See <https://www.ramsar.org/meeting/26th-meeting-scientific-technical-review-panel>.

⁵ See <https://www.ramsar.org/meeting/27th-meeting-scientific-technical-review-panel>.

⁶ See <https://www.ramsar.org/document/resolution-xiv14-future-implementation-scientific-technical-aspects-convention-2023-2025>.

⁷ See <https://www.ramsar.org/document/cop15-doc2312-draft-resolution-application-criteria-6-9-new-existing-wetlands>.

- b. Developed a technical proposal on *resourcing and implementing Waterbird Population Estimates* (SC63 Doc.20⁸) in collaboration with Wetlands International and other STRP observers, including waterbird flyways (Task 1.1c);
 - c. Prepared a draft resolution on *establishment of the Waterbird Estimates Partnership and delivery of the 2027 edition of Waterbird Population Estimates* (COP15 Doc.23.11⁹) (Task 1.1c); and
 - d. Submitted a proposal to the Subgroup on Finance for financing the establishment of the Waterbirds Estimates Partnership and delivery of the 2027 edition of Waterbird Population Estimates (WPE2027) (Annex 5, SC64 Doc.18¹⁰) (Task 1.1c).
7. Under TWA2: *Tools for wetland assessment, mapping and monitoring, and development of inventories*, the STRP:
- a. Developed technical guidance on the application of national wetland inventories (NWI) for wetland mapping for carbon assessments (Task 2.1); and
 - b. Prepared a Policy Brief on small wetlands¹¹, highlighting their ecological value and need for targeted monitoring and protection (Task 2.2).
8. Under TWA3: *Direct and climate-change-related pressures on wetlands, their impacts and responses*, the STRP:
- a. Prepared a Technical Report on the role of blue carbon ecosystems in carbon storage and mitigation (Task 3.2);
 - b. Prepared a Technical Report and Policy Brief on wetlands and agriculture, focusing on restoration and wise use in agricultural landscapes, developed in partnership with FAO (Task 3.3); and
 - c. Co-organized a workshop with FAO and contributed to a e-learning module¹² and related technical products (Task 3.3).
9. Under TWA4: *Wise use, sustainable management and restoration of wetlands in the wider landscape/seascape*, the STRP:
- a. Published a Briefing Note on Other effective area-based conservation measures (OECMs)¹³ for the conservation and wise use of wetlands in collaboration with the IUCN – WCPA OECM Specialist Group (Task 4.1).
10. Under TWA5: *Cross-cutting issues, supporting functions, and synergies with other MEAs*, the STRP:
- a. Developed a Technical Report on *scaling up wetland conservation and restoration to deliver the Kunming-Montreal Global Biodiversity Framework: Guidance on including wetlands in NBSAPs*¹⁴, and prepared a Briefing Paper on *Kunming-Montreal Global Biodiversity*

⁸ See <https://www.ramsar.org/document/sc63-doc20-technical-proposal-strp-resourcing-implementing-waterbird-population-estimates>.

⁹ See <https://www.ramsar.org/document/cop15-doc2311-draft-resolution-establishment-waterbird-estimates-partnership-wep-delivery>.

¹⁰ See <https://www.ramsar.org/document/sc64-doc18-report-chair-scientific-technical-review-panel>.

¹¹ See <https://www.ramsar.org/document/small-wetlands-their-importance-strategies-effective-conservation>.

¹² See <https://elearning.fao.org/course/view.php?id=1194>.

¹³ See <https://www.ramsar.org/document/other-effective-area-based-conservation-measures-oecms-conservation-wise-use-wetlands>.

¹⁴ See <https://www.ramsar.org/document/scaling-wetland-conservation-restoration-deliver-kunming-montreal-global-biodiversity>.

- Framework: Upscaling wetland conservation, restoration and wise use through National Biodiversity Strategies and Action Plans (NBSAPs)*¹⁵ (Task 5.2);
- b. Submitted advice to the 6th meeting of the Ad Hoc Technical Expert Group on Indicators on the effective consideration of wetlands in the KM-GBF Monitoring Framework (SC63 Inf.3¹⁶) (Task 5.2);
 - b. Developed a proposed approach to deliver future Global Wetland Outlooks (Annex 4, SC64 Doc.18¹⁷), in line with the forthcoming Special Edition 2025 (Task 5.3); and
 - c. Prepared a scoping note for the review of legal and policy frameworks for wetland conservation and wise use (Annex 3, SC64 Doc.18¹⁸) (Task 5.4).
11. Several STRP outputs will be finalized and published in the period leading up to COP15. These include:
 - a. The Global Wetland Outlook: Special Edition 2025, which will provide an economic perspective on wetland loss and degradation, investment needs and policy responses (Task 5.1);
 - b. A briefing note on climate change and wetlands (Task 3.1), which compiles updated information on the current and projected impacts of climate change on the world's wetlands, and responses across regions and wetland types; and
 - c. A briefing note on integrating wetlands into national sustainable development strategies (Task 4.3), aimed at supporting coherent policy alignment at the national level.
 12. The STRP also responded to requests from the Standing Committee, including requests to initiate a review of the Ramsar classification system for wetland type (SC62-50, SC63-30), contributing to the report on the challenges and opportunities related to the submission and updating of Ramsar Information Sheets (RIS) (SC62-53, SC63-33) and organizing a consultation with the Earth observation community (SC63-30).
 13. Progress on each high priority task was tracked through the STRP workspace, with STRP members, observers and National Focal Points contributing to outputs through task groups, consultations and expert reviews. Detailed updates on each task can be found in the Chair's reports to Standing Committee (SC62 Doc.19, SC63 Doc.19, and SC64 Doc.18¹⁹).
 14. The list of STRP outputs produced during the 2023-2025 triennium is contained within Annex 1 of the draft resolution on *the future implementation of scientific and technical aspects of the Convention for 2025-2028* (COP15 Doc.23.10²⁰). The draft resolution does not yet reflect STRP outputs still under preparation.

¹⁵ See <https://www.ramsar.org/document/kunming-montreal-global-biodiversity-framework-upscaling-wetland-conservation-restoration>.

¹⁶ See <https://www.ramsar.org/document/sc63-inf3-submission-convention-wetlands-6th-meeting-ad-hoc-technical-expert-group>.

¹⁷ See <https://www.ramsar.org/document/sc64-doc18-report-chair-scientific-technical-review-panel>.

¹⁸ Idem.

¹⁹ See <https://www.ramsar.org/document/sc62-doc19-rev1-report-chair-scientific-technical-review-panel-including-work-plan-2023>, <https://www.ramsar.org/document/sc63-doc19-report-chair-scientific-technical-review-panel-implementation-strp-work-plan>, and <https://www.ramsar.org/document/sc64-doc18-report-chair-scientific-technical-review-panel>.

²⁰ See <https://www.ramsar.org/document/cop15-doc2310-draft-resolution-future-implementation-scientific-technical-aspects>.

Ad-hoc advice and other requests

15. In addition to the scheduled tasks under the STRP Work Plan 2023-2025, the Panel responded to several ad-hoc requests and provided advice on matters of scientific and technical relevance raised by the Standing Committee. These included:
- a. Planning for a two-phase technical review of the Convention's wetland classification system, to be carried out during the next triennium (Annex 1, SC63 Doc.19²¹);
 - b. Support to the Strategic Plan Working Group including the development of the *Draft Indicator Framework for the 5th Strategic Plan of the Convention on Wetlands: Preliminary STRP advice* (SC64 Inf.3²²);
 - c. Provision of advice to the Working Group on RIS Updating, in particular on aligning RIS fields with current scientific standards and reporting requirements;
 - d. Organization of the Earth observation (EO) consultation, together with the Secretariat, including interviews, expert engagement and development of draft recommendations for enhanced use of EO in wetland inventory and monitoring (see Annex 2);
 - e. Review of proposed draft resolutions submitted by Contracting Parties that contained scientific and technical content, including: SC64 Doc.29.2 on *restoration of degraded freshwater ecosystems and the Freshwater Challenge*; SC64 Doc.29.4 on *promoting incorporation of frontier technology and traditional ecological knowledge*; SC64 Doc.29.5 on *achieving equitable and effective conservation of wetlands as protected areas and OECMs*; SC64 Doc.29.9 on *promoting sustainable lifestyles for the wise use of wetlands*; SC64 Doc.29.12 on *assessing wetland vulnerability* (a rapid assessment); SC64 Doc.29.3 on *strengthening national actions for the conservation and restoration of the East-Asian Australasian Flyway*; SC64 Doc.29.10 on *the status and conservation of river dolphins*; and SC64 Doc.29.7 on *rights of nature in wetlands*;
 - f. Participation in the Advisory Group on Wetland Restoration to review and guide the Secretariat's work in assessing progress on wetland restoration;
 - g. Submission of proposals to the Subgroup on Finance relating to Waterbird Population Estimates, and to progress the Convention's work on EO;
 - h. Participation in the Advisory Board of the assessment of environmental damage to Ukraine's Wetlands of International Importance;
 - i. Participation in the CEPA Oversight Panel; and
 - j. Participation in the Wetland City Accreditation Independent Advisory Committee.

Effectiveness and visibility of the STRP

16. The STRP has contributed to the organization of thematic webinars designed to disseminate technical guidance, raise awareness on key wetland issues, and help to increase the visibility and practical uptake of STRP outputs. This included a webinar on *Integrating Wetlands into National Biodiversity Strategies and Action Plans (NBSAPs)*, held on 19 June 2024. This session presented Technical Report 12 under STRP Task 5.2 and focused on aligning wetland priorities with the KM-GBF. Case studies were presented and participants discussed ways to improve national wetland integration. In consultation with the Secretariat, the STRP is preparing for further webinars to support launch and dissemination of products as they are finalized.

²¹ See <https://www.ramsar.org/document/sc63-doc19-report-chair-scientific-technical-review-panel-implementation-strp-work-plan>.

²² See <https://www.ramsar.org/document/sc64-inf3-draft-indicator-framework-5th-strategic-plan-convention-wetlands-preliminary>.

17. Two notable developments during the 2023-2025 triennium have contributed to strengthening the effectiveness and visibility of the STRP:
- i. The re-launch of the STRP Workspace, a dedicated online platform developed and maintained by the Secretariat to facilitate information sharing and collaboration among STRP members, National Focal Points, observers and IOPs. The Workspace provides access to key STRP documents, task updates, draft deliverables, internal meeting materials and background resources.
 - ii. Introduction of the STRP Communiqué, a biannual newsletter launched in 2024 to enhance communication and outreach. The Communiqué provides updates on the progress of STRP tasks, upcoming events and opportunities for engagement. It has helped to raise the profile of the STRP's work among stakeholders and Contracting Parties.

Recommendations regarding scientific and technical priorities for 2025-2028

18. The STRP has proposed a set of scientific and technical priorities for the 2025-2028 triennium, building on the lessons learned and progress made during the 2023-2025 work cycle. These proposed priorities were developed through a consultative process involving STRP members, National Focal Points, observers, IOPs and the Standing Committee. A summary of emerging science and technical issues were presented to SC63 (SC63 Doc.19²³) and a draft list of STRP priorities were further discussed during SC64 (SC64 Doc.18²⁴).
19. The five Thematic Work Areas (TWAs) defined in Resolution XIV.14 have been retained to ensure continuity and consistency:
- a. TWA1: *Wetlands of International Importance*: Tasks under this area focus on improving guidelines for the ecological character of Wetlands of International Importance and a global assessment of gaps in the Ramsar Site network, with emphasis on synergies with global biodiversity, climate and development agendas.
 - b. TWA2: *Tools for wetland assessment, mapping and monitoring*: Priorities include the continuation of a two-stage review of the Convention's classification system for wetland type, promoting and strengthening wetland inventory, especially through the use of Earth observation and in coordination with GEO-Wetlands and other relevant initiatives.
 - c. TWA3: *Pressures on wetlands and climate change*: Proposed new tasks will examine the impacts of harmful algal blooms and wetland fires, and provide data and guidance to Parties on how to mitigate and respond to these threats.
 - d. TWA4: *Wise use and restoration in the wider landscape/seascape*: The STRP will continue work on transformative change pathways for wise use of wetlands and strengthen efforts to restore wetlands in line with global restoration targets.
 - e. TWA5: *Cross-cutting issues and synergies*: Priorities include development of the next edition of the Global Wetland Outlook, support towards the development of indicators and methodologies for SP5 and other global frameworks, and continued review of legal and policy frameworks relevant to wetlands.
20. The STRP also identified additional emerging issues for possible inclusion in the 2025-2028 work plan, subject to the availability of financial and human resources. These include improved global reporting on wetlands, urban wetlands, carbon credits, plastic pollution, hydrological change and the integration of biodiversity through updated guidance on wise use of wetlands.

²³ See <https://www.ramsar.org/document/sc63-doc19-report-chair-scientific-technical-review-panel-implementation-strp-work-plan>.

²⁴ See <https://www.ramsar.org/document/sc64-doc18-report-chair-scientific-technical-review-panel>.

21. A detailed list of tasks recommended by the STRP for 2025-2028 is provided in Annex 1 of the present report.

Participation in Standing Committee meetings and pre-COP regional meetings

22. The Chair of the STRP participated actively in all meetings of the Standing Committee during the 2023-2025 triennium. At the 62nd meeting in September 2023, the Chair presented a comprehensive report on the newly constituted STRP and its work plan for 2023-2025. At SC63 in June 2024, the Chair provided an update on the progress of high priority tasks and presented a technical proposal on waterbird population estimation and updated guidance on the application of Criteria 6 and 9. At SC64 in January 2025, the Chair presented the final report of the STRP for the triennium, introduced several draft resolutions submitted by the STRP and participated in discussions on other scientifically relevant draft resolutions submitted by Parties. The STRP also presented an information paper on proposed indicators for SP5.
23. In addition to Standing Committee meetings, the STRP Chair and members contributed to regional preparatory meetings for COP15, including those held for Africa, Asia and Oceania, Europe and the Americas. Presentations were made on key draft resolutions and STRP technical guidance, including the proposed resolution on future scientific and technical implementation of the Convention for 2025-2028, and other draft resolutions on criteria for Wetlands of International Importance, and waterbird population estimates.

Participation in meetings of technical bodies of other multilateral environmental agreements and other events

24. During the 2023-2025 triennium, the Chair, Vice-Chair and members of the STRP actively participated in key international meetings, providing scientific and technical input to enhance synergies between the Convention and other MEAs:
 - a. The STRP Chair and Vice-Chair participated in three meetings of the Multidisciplinary Expert Panel (MEP) and Bureau of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in March 2023, July 2024, and April 2025. In these meetings, the Chair and Vice-Chair presented the Panel's high-priority tasks and explored synergies with the IPBES work programme.
 - b. STRP members participated in technical consultations with the Ad Hoc Technical Expert Group (AHTEG) on Indicators under the Convention on Biological Diversity, supporting improved integration of wetland-relevant indicators into the KM-GBF.
 - c. STRP members also participated in technical side events at the 29th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP29), including a side event on peatland hotspots for climate action.
25. Participation in these fora facilitated alignment of STRP outputs with global processes and reinforced the Convention's contributions to biodiversity, climate change, and sustainable development goals.

Consultation on the use of Earth observation for wetland inventory, assessment, monitoring and conservation

26. Pursuant to Standing Committee Decision SC63-30, the STRP, together with the Secretariat, conducted a consultation on the use of Earth observation (EO) technologies for wetland

inventory, monitoring and conservation, process in late 2024. This consultation included structured interviews with Contracting Parties and EO agencies, technical exchanges with key partners and experts, and a dedicated “Earth observation day” on 6 December 2024 held in conjunction with STRP27. The consultation aimed to assess user needs, explore opportunities for integrating EO into national wetland inventories, and identify priorities for support.

27. The Earth observation day, held during STRP27 as one key component of this broader consultation, featured presentations by representatives of the European Space Agency (ESA), Japan Aerospace Exploration Agency (JAXA), UN Environment Programme-Danish Hydraulic Institute (UNEP-DHI), Digital Earth Africa and others, and culminated in a Panel discussion moderated by the Secretariat. It served to showcase recent developments in EO technologies, shared experiences from practitioners, and helped build momentum for enhanced collaboration..
28. The consultation resulted in several concrete recommendations, notably the establishment of a Convention initiative - GEO Wetlands - to support Contracting Parties in the use of EO tools for wetland inventory and monitoring. Key findings highlighted the importance of harmonized inventory approaches, improved data accessibility and targeted capacity building to enable the effective use of EO by Contracting Parties.
29. The final report of the consultation is provided in Annex 2 to the present report.

Acknowledging the work of the STRP members, Secretariat, STRP observers, IOPs and other contributors

30. The STRP Chair and Vice Chair express thanks to all STRP members for their significant contribution to the scientific and technical work of the Convention, in particular to the Thematic Work Area leads, and the Task leads.
31. The STRP would like to express its appreciation for the dedication and support of the Secretariat throughout the triennium. The coordination, logistical arrangements and technical support provided by the Secretariat staff have been instrumental in enabling the implementation of the STRP Work Plan.
32. The contributions of the STRP observers, including those from scientific institutions, networks and regional partners, have enriched the work of the Panel through their expertise, peer review and collaboration on various outputs.
33. The IOPs - BirdLife International, IUCN, Wetlands International, WWF International, International Water Management Institute (IWMI), and the Wildfowl & Wetlands Trust (WWT) - have been instrumental in co-developing and promoting STRP outputs and mobilizing expert networks.
34. The STRP also acknowledges the valuable input from Contracting Parties, including STRP National Focal Points, and from contributing individuals and organizations who participated in webinars, consultations, workshops and Earth observation day.

Acknowledging the non-core funding contributions of Contracting Parties and others to support the implementation of the STRP work plan

35. The financial contributions of the following Contracting Parties is gratefully acknowledged: the Government of the United Kingdom of Great Britain and Northern Ireland, the Government of the Kingdom of Norway, and the Government of the Republic of Finland, which have supported the delivery of scientific and technical outputs by the STRP. Support was also provided under the current memorandum of understanding between Danone S.A. and the Secretariat.
36. Contracting Parties are encouraged to continue providing such support on a voluntary basis, and to support resource mobilization for addressing future scientific and technical priorities of the Convention.

Annex 1

STRP Priorities 2025-2028

1. Recommendations for the next STRP work plan 2025-2028 have been established through a consultative process that started with an initial discussion on emerging issues during the 26th Meeting of the Scientific and Technical Review Panel (Annex 2, SC63.19²⁵), inputs received during the 63rd and 64th meetings of the Standing Committee²⁶, and subsequent consultations with Panel members, National Focal Points, observers and IOPs, including the third intersessional online meeting of the STRP.

Thematic Working Areas (TWAs):

2. To maintain continuity and ensure a consistent approach, the Thematic Work Areas (TWAs) have been retained from the preceding triennium (defined in Resolution XIV.14²⁷, Pre-SC62 Intersessional Decision 04 on the STRP work plan 2023-2025²⁸):

TWA 1. Wetlands of International Importance, development of the Site network and application of criteria.

This work area focuses on providing information to support Contracting Parties in designating, managing, and monitoring Wetlands of International Importance in line with the objectives of the Convention on Wetlands. It includes guidance on applying criteria for site designation and assessing underrepresented wetland types in the Site network. TWA 1 may also provide guidance on integrating Wetlands of International Importance with broader global biodiversity targets, enhancing their role in achieving international conservation objectives.

TWA 2. Tools for wetland assessment, mapping and monitoring, and development of inventories.

This work area aims to improve the tools and methodologies required for wetland assessment, mapping, and monitoring, including wetland carbon assessments and biodiversity monitoring. TWA 2 will explore innovative techniques for streamlining wetland inventory and reporting, including remote sensing and Earth observation. Future actions will ensure these tools are accessible and adaptable, allowing Contracting Parties to meet their reporting obligations under the Convention and other international frameworks that consider wetlands.

TWA 3. Direct and climate change related pressures on wetlands, their impacts and responses.

This work area provides scientific and technical guidance on the key pressures on wetlands, including the current and projected impacts of climate change, drawing from the latest international assessments. TWA 3 aims to provide Contracting Parties with information to enable adaptation and resilience-building measures for wetlands, promoting nature-based solutions or ecosystem-based approaches to protect ecosystem

²⁵ See <https://www.ramsar.org/document/sc63-doc19-report-chair-scientific-technical-review-panel-implementation-strp-work-plan>.

²⁶ See the meeting reports at <https://www.ramsar.org/document/report-decisions-63rd-meeting-standing-committee> and <https://www.ramsar.org/document/report-decisions-64th-meeting-standing-committee>.

²⁷ See <https://www.ramsar.org/document/resolution-xiv14-future-implementation-scientific-technical-aspects-convention-2023-2025>.

²⁸ See https://www.ramsar.org/sites/default/files/2023-09/STRP_workplan_2023_2025_e.pdf.

services under changing climate conditions and other direct pressures, including agricultural expansion, pollution, and urban development.

TWA 4. Wise use, sustainable management and restoration of wetlands in the wider landscape/seascape.

This work area will support Contracting Parties in implementing actions that promote the wise use and sustainable management of wetlands, restoration, and livelihoods of local communities. TWA 4 includes assessing options for transformative change to achieve wetland wise use in alignment with sustainable development goals and supporting the integration of wetlands into national development strategies. Future activities include guidance to enhance the role of wetlands in disaster risk reduction, promote food security, and enable wetland restoration.

TWA 5. Cross cutting issues, Global Wetland Outlook (GWO), supporting functions, and synergies with other Multilateral Environmental Agreements (MEAs).

This work area will address cross-cutting issues that impact wetland conservation, report on the global status of wetlands (Global Wetland Outlook), and provide technical guidance to facilitate synergies with other multilateral environmental agreements (MEAs). TWA 5 will provide information to support Contracting Parties in applying effective approaches for wetland conservation, restoration, and wise use and promote integrated reporting mechanisms with various international frameworks, including the SDGs and KM-GBF.

Prioritized STRP tasks for the 2025-2028 triennium

3. Each STRP task is assigned to the most relevant TWA, although some tasks will likely contribute to the delivery of work under multiple TWAs. The likely type(s) of output(s)/product(s) are also listed for each task, but these may change as the scope of the work is defined further as the work progresses.

| STRP task | Description | Timeframe | Output(s) | Mandate(s) |
|---|---|-----------|--|--|
| TWA 1: Wetlands of International Importance, development of the Site network and application of criteria. | | | | |
| Task 1.1. Scientific and technical support towards effective monitoring and reporting on the ecological character of Wetlands of International Importance in the Ramsar Information Sheet (RIS). | <p>Task 1.1. will update guidance on assessing and reporting the ecological character (and changes in ecological character) of Wetlands of International Importance (Ramsar Sites), including impacts of climate change on ecological character.</p> <p>This work will also encompass scientific and technical advice regarding RIS updating, including input to possible WG established on this topic, subject to the availability of resources.</p> | 2025-2028 | Revisions to Strategic Framework and RIS | <p>Doc. SC63.19 (Para. 19-21 & Annex 2).</p> <p>Report and Decisions of the 63rd Meeting of the Standing Committee.</p> |
| Task 1.2. Global assessment of gaps in the network of Wetlands of International Importance, and synergies with global climate, biodiversity and sustainable development goals. | <p>Task 1.2. will carry out a global assessment to identify under-represented wetland types, including associated biodiversity and habitats across biogeographic regions (including transboundary wetlands), and consider changes in wetland ecological character, drawing on-site details in the Ramsar Sites Information Service (RSIS) and other relevant sources in order to highlight to Contracting Parties opportunities for enhanced designation of Wetlands of International Importance towards biodiversity, climate and sustainable development goals.</p> | 2025-2028 | Technical Report and/or Briefing Note. | <p>Res. XII.5, Annex 1.</p> <p>Res. XIV.14, Annex 2</p> <p>Res. XIV.6, Para. 38</p> <p>Continuation from STRP 2023-25 work plan (Pre-SC62 Intersessional Decision 04).</p> |

| STRP task | Description | Timeframe | Output(s) | Mandate(s) |
|---|---|---|---|--|
| TWA 2: Tools for wetland assessment, mapping and monitoring, and development of inventories. | | | | |
| Task 2.1. Review of the Convention's classification system for wetland type. | <p>Task 2.1. will undertake a 2-phase review of the classification system of wetland types:</p> <ul style="list-style-type: none"> Phase 1: Initial assessment to determine whether sufficient evidence justifies a comprehensive review. This would clarify why a review is needed, e.g., to meet national and global assessment and reporting purposes. Phase 2: Undertake a comprehensive assessment to address the issues and opportunities identified during Phase 1. <p>Task 2.1 will consider the potential for improving the classification of wetlands, including via minor amendments to enhance harmonization with classification systems used by other MEAs and global and national reporting on wetland extent and condition. It will also consider how national classification schemes may be affected by the proposed review of the classification of wetland types.</p> | 2025-2028 | <p>Reports to SC (one report covering phase 1, and one report on phase 2, if applicable).</p> <p>If relevant, STRP will prepare a resolution for COP16.</p> | <p>Doc. SC63.19 (Para. 16-18 & Annex 1).</p> <p>Report and Decisions of the 63rd Meeting of the Standing Committee (Decision SC63-30).</p> |
| Task 2.2. Advancing the development and use of technology for wetland mapping and inventory. | <p>Task 2.2. will focus on contributions to the development and implementation of a cross-triennial initiative to foster dialogue, knowledge exchange and guidance on the use of Earth observation for wetland inventory, assessment, monitoring, and conservation, following the recommendations of the EO consultation (Annex 2, COP15 Doc.11).</p> <p>Task 2.2 will also inform Contracting Parties about technological advances in wetland mapping and assessment and the application of global ecosystem typologies, including streamlining mapping and inventory approaches (e.g., those used in NWIs) to report on the conservation and wise use of</p> | Cross-triennial (subject to the availability of human and financial resources). | <p>Technical Report and/or Briefing Note.</p> <p>Report to SC on progress as related to Decision SC63-30.</p> | <p>Doc. SC63.19 (Para. 49 (h)).</p> <p>Report and Decisions of the 63rd Meeting of the Standing Committee (Decision SC63-30).</p> |

| STRP task | Description | Timeframe | Output(s) | Mandate(s) |
|--|--|-----------|--|---------------------------------------|
| | wetlands, tracking the status and trends of wetlands, and implementation of international goals and targets, e.g., the Kunming-Montreal Global Biodiversity Framework Target 3 on 30x30 and SDG Target 6.6.1 on Change in the extent of water-related ecosystems over time. | | | |
| TWA 3: Direct and climate-change-related pressures on wetlands, their impacts and responses. | | | | |
| Task 3.1. Assessing the impacts from harmful algal blooms in wetlands. | Task 3.1 will synthesize information on the occurrence and frequency of harmful algal blooms in wetlands, the key causes of harmful algal blooms, and their impact on biodiversity and ecosystem services, including human health and access to clean water for agriculture and other uses. Task 3.1 will also develop guidance on best practice methods to prevent and manage harmful algal blooms, maintain wetland ecological character and protect human health (e.g., in terms of the impact on ecosystem services). | 2025-2028 | Technical Report and/or Briefing Note. | Doc. SC63.19 (Para. 19-21 & Annex 2). |
| Task 3.2. Assessing the impact of fires in wetlands. | Task 3.2. will evaluate the occurrence and change in frequency and extent of fires in wetlands and the impact on (i) protecting biodiversity, (ii) wetland carbon stocks and sequestration potential, and (iii) human health. The task will cover impacts on people (e.g., health issues from smoke) and the effects on ecosystem services, such as food, fiber, and access to clean water, if applicable. | 2025-2028 | Technical Report and/or Briefing Note. | Doc. SC63.19 (Para. 19-21 & Annex 2). |
| TWA 4: Wise use, sustainable management and restoration of wetlands in the wider landscape/seascape. | | | | |
| Task 4.1. An assessment of transformative change pathways for wetland conservation and wise use for nature, climate and people. | Task 4.1 will focus on reviewing and assessing models, scenarios, and pathways for transformative change that address the triple planetary crisis (climate change, pollution, and biodiversity loss), the Strategic Goals of the Convention on Wetlands, and other relevant goals and targets, such as the SDGs and KM-GBF, building on related IPBES | 2025-2028 | Technical Report and/or Briefing Note. | Doc. SC63.19 (Para. 19-21 & Annex 2). |

| STRP task | Description | Timeframe | Output(s) | Mandate(s) |
|--|--|-----------|--|---|
| | <p>assessments (e.g., Nexus Assessment and Transformative Change Assessment).</p> <p>Where applicable, the task will strive towards integrating activities originally planned under task 3.4 in the 2023-2025 work plan, covering a synthesis of successful nature-based solutions (NbS) or ecosystem-based approaches for protecting, conserving, restoring, sustainably using, and managing wetland ecosystems to address climate change and achieve other co-benefits. If possible, it will also review diverse values and views of Indigenous and traditional knowledge as part of the drive towards transformative change.</p> | | <p>Potential topic for future Global Wetland Outlook.</p> <p>Database with NbS cases</p> | Vision of 5th Strategic Plan (TBC) |
| Task 4.2. Strengthening wetland restoration for climate resilience and biodiversity recovery: Building on STRP outputs and global frameworks. | <p>Task 4.2 will synthesize and promote knowledge and guidance related to wetland restoration, which enhances climate resilience and supports biodiversity recovery.</p> <p>Task 4.2 will harness and build on the range of restoration-related outputs already produced by the STRP, such as Briefing Note 10 on wetland restoration for climate change resilience, Briefing Note 11 on practical peatland restoration, and the Global Wetland Outlook: Special Edition 2025. This work will also ensure the integration and communication of international developments on restoration, such as on forthcoming guidance associated with Target 2 of the KM-GBF and the UN Decade of Restoration.</p> | 2025-2028 | <p>Develop communication materials, including Policy Briefs and/or Briefing Notes if needed.</p> <p>Implement capacity-building and knowledge-exchange activities.</p> | Relevant STRP activities: e.g., Res. XIV.6, Para. 45; Res. XIV.14, Annex 2; Res. XIV.16, Para. 21; Res. XIV.17, Para. 14. |

| STRP task | Description | Timeframe | Output(s) | Mandate(s) |
|--|---|---|--|---|
| TWA 5: Cross-cutting issues, Global Wetland Outlook, supporting functions, and synergies with other Multilateral Environmental Agreements (MEAs). | | | | |
| Task 5.1. Global Wetland Outlook | Task 5.1. will serve as a flagship publication under the Convention, providing comprehensive, evidence-based assessments of the global status of wetlands, tracking progress against the Strategic Plan, and offering targeted recommendations for policymakers. The assessment process will follow a structured phased approach, encompassing scoping, data collection, expert review, and extensive communication efforts. | Cross-triennial (subject to the availability of human and financial resources). | Global Wetland Outlook 2028 | Doc. SC64.18 |
| Task 5.2. Improved global reporting on wetlands: synergies in the development of indicators and methods for the Convention's 5th Strategic Plan and other global processes. | Task 5.2. will develop guidance on addressing indicator gaps and tools for reporting on wetlands to support the assessment of indicators and targets associated with the Convention's 5th Strategic Plan and other global assessment and reporting processes (e.g., KM-GBF). A key opportunity will be to continue working in parallel with the KM-GBF to promote the development of ambitious and linked wetland targets and monitoring indicators, for example, as part of National Biodiversity Strategies and Action Plans (NBSAPs). | 2025-2028 | Technical Report and/or Briefing Note | Doc. SC63.19 (Para. 19-21 & Annex 2). Res. XIII.5 Res. XIV.14, Annex 2 Res. XIV.6, Para. 24 & 44 |
| Task 5.3. Review of policy and legal frameworks for wetland conservation and wise use. | Task 5.3 will evaluate policy and legal frameworks to assess how effectively they support wetland conservation, restoration, and wise use. This evaluation will build on the guidance and information provided in Handbook 3: Laws and Institutions while incorporating more recent case studies and legal developments. The task will identify and showcase successful examples of wetland laws and policies that have demonstrated positive outcomes in promoting the wise use, conservation, and restoration of wetlands and provide recommendations for enhancing the implementation of these frameworks. | 2025-2028 | Technical Report and/or Briefing Note Policy database | SC57 Doc.8; Res. XIV.14., Annex 2; & Continuation from STRP 2023-25 work plan (Pre-SC62 Intersessional Decision 04). |

Additional STRP tasks

4. Further tasks may be considered for inclusion in the STRP work plan for the 2025-2028 triennium.

Potential tasks identified during the Panel's consultation on potential priorities are briefly itemized in the table below. However, careful thought needs to be given to availability of human and financial resources in establishing the STRP work plan for the 2025-2028 triennium.

| Further emerging issues identified by the STRP | Description |
|---|---|
| <ul style="list-style-type: none">Revised framework for the Convention and other MEAs to coordinate global reporting on wetland extent and degradation. | Develop a standardized reporting framework to harmonize and enhance global coordination of data on wetland extent, condition, and degradation across multiple MEAs, improving monitoring and reporting on wetland health. |
| <ul style="list-style-type: none">Developing a comprehensive global wetland inventory | Developing a global wetland inventory that consolidates existing data and fills in gaps to provide an accurate and comprehensive overview of wetland ecosystems worldwide. This work would be implemented through GEO Wetlands. |
| <ul style="list-style-type: none">Wetland mapping and inventory in a peri-urban context | Address the specific challenges of wetland mapping and inventorying in peri-urban areas, where pressures from urban expansion and land-use changes pose significant threats to wetland ecosystems. |
| <ul style="list-style-type: none">Changes in hydrological cycles and how to manage drying cycles | Explore the effects of changing hydrological cycles, including increased drying, on wetland ecosystems and develop strategies to manage these shifts to ensure wetland resilience and functionality |
| <ul style="list-style-type: none">Support for livelihoods of wetland communities | Development of strategies to support and enhance the livelihoods of communities living in or around wetlands, ensuring that wetland conservation and wise use align with the social and economic well-being of local populations. |
| <ul style="list-style-type: none">Impacts on wetlands from the shift to electric energy sources and mineral use | Investigate the environmental impacts on wetlands resulting from the growing demand for electric energy sources and the extraction of minerals, particularly focusing on land-use changes, pollution, and habitat degradation |
| <ul style="list-style-type: none">Challenges associated with biodiversity and carbon credits | Address the complexities and challenges of biodiversity and carbon credit mechanisms in wetland ecosystems, aiming to propose frameworks that can maximize both carbon sequestration and biodiversity protection |
| <ul style="list-style-type: none">Integrated wetland assessments to address threats at the river basin scale | Assessment of wetland ecosystems at the river basin scale, incorporating hydrological, ecological, and socio-economic factors to address threats holistically and promote basin-wide wetland management. |
| <ul style="list-style-type: none">Carbon capture potential for mineral soil wetlands | Explore the carbon sequestration capacity of mineral soil wetlands, evaluating their role in mitigating climate change and developing best practices for their conservation and restoration. |

| Further emerging issues identified by the STRP | Description |
|--|--|
| <ul style="list-style-type: none"> • Plastic pollution in wetlands and wetland species | <p>Examine the extent and impacts of plastic pollution in wetland ecosystems, particularly its effects on wetland species, and propose strategies to reduce and manage plastic waste in these critical habitats.</p> |
| <ul style="list-style-type: none"> • Wetlands of International Importance – guidance on shifting baselines (ecological character) | <p>Provide updated guidance on managing Wetlands of International Importance in the face of shifting ecological baselines.</p> |
| <ul style="list-style-type: none"> • Nexus assessment – building on the IPBES assessment in a wetland context | <p>Building on the IPBES assessment, applying its nexus framework to wetlands to evaluate the interconnectedness of water, biodiversity, food, and climate.</p> |
| <ul style="list-style-type: none"> • Wise use of wetlands: updated guidance | <p>Propose revisions and updates to the Convention’s guidance on the wise use of wetlands, incorporating new scientific knowledge, best practices, and emerging environmental challenges.</p> |
| <ul style="list-style-type: none"> • Further work on ‘other effective area-based conservation measures’ (OECMs) | <p>Further explore the application and integration of OECMs in wetland conservation, identifying opportunities to recognize and support non-traditional conservation areas.</p> |

Annex 2

Report on the consultation on the use of Earth observation for wetland inventory, assessment, monitoring and conservation

Background

1. The consultation on the use of Earth observation (EO) for wetland inventory, assessment, monitoring and conservation was organized pursuant to Convention on Wetlands Resolution XIII.10 which, in paragraph 23, requests the Secretariat, subject to the availability of resources, to investigate the options and associated costs for working with EO organizations, including the Group on Earth Observations (GEO) for application areas and coordination with government agencies, to put EO data and monitoring tools at the disposal of Contracting Parties for national wetland inventories (NWIs) or monitoring of changes to Wetlands of International Importance; and Standing Committee Decision SC63-30, which requests the Scientific and Technical Review Panel (STRP), working with the Secretariat, to organize a consultation with the EO community on development of an initiative to foster dialogue, knowledge exchange and guidance for EO in support of wetland inventory, assessment, monitoring and conservation.

The consultation on Earth observation

2. The purpose of the consultation was to contribute to and strengthen the use of EO in development and use of NWIs and in wetland assessment, monitoring and conservation, thereby supporting Contracting Parties in protection and wise use of wetlands, delivering and reporting on commitments under the Convention on Wetlands as well as other relevant global environmental agreements.
3. The consultation was carried out building on in-depth interviews with 13 Contracting Parties on the development of NWIs, priorities and needs (presented in information document SC63 Inf.2), and ongoing efforts under the Convention to support development of NWIs (presented in documents SC64 Doc. 10, SC63 Doc.10 and SC62 Doc.9). Semi-structured interviews were conducted with EO experts from five organizations, UN Environment Programme-Danish Hydraulic Institute (UNEP-DHI), Wetlands International, Japan Aerospace Exploration Agency (JAXA), Digital Earth Africa, and Tour du Valat, to discuss the technical and capacity needs of the Convention's Contracting Parties, particularly in relation to integrating EO technologies into wetland inventory, assessment, monitoring and conservation. This provided the basis for a dedicated "Earth observation day" held on 6 December 2024, in association with STRP27, bringing together Earth observation experts, STRP members, observers and National Focal Points.
4. Earth observation day was opened by Dr Hugh Robertson, STRP Chair, and Jerker Tamelander, Director of Science and Policy of the Secretariat. Flore Lafaye de Micheaux (Senior Advisor for Europe) and Filip Aggestam (Scientific and Technical Officer) presented the Secretariat's ongoing work on supporting Contracting Parties in relation to national wetland inventory and a summary of interviews conducted with Contracting Parties and EO experts. Presentations by Earth observation experts addressed the transformative potential of EO data and tools for wetland inventory and monitoring (Marc Paganini, European Space Agency, ESA); the capabilities of spaceborne radar for wetland mapping, with case studies from the Global Mangrove Watch and the ALOS Wetland Inundation Mapping initiative (Åke Rosenqvist, JAXA); use of machine learning towards creating a global wetland dataset through Global Wetland Watch (Christian Toettrup, DHI, and Stuart Crane, UNEP); the development of operational and sustainable EO services through Copernicus, the EO flagship programme of the European Union

(Michel Massart, EU-JRC); as well as experiences of regional programmes that have been successful in supporting application of EO tools (Anis Guelmami, Mediterranean Wetlands Observatory; and Lisa-Maria Rebelo and Mpho Sadiki, Digital Earth Africa). The day concluded with a panel discussion, moderated by Jerker Tamelander. The Earth observation day background document, programme as well as presentations are available on the Convention website²⁹.

5. This final report summarizes the main findings and recommendations arising from the consultation. It includes minor updates to the draft report presented during the 64th meeting of the Standing Committee (SC64 Inf.2³⁰).

Key findings

6. The key findings of the consultation are summarized below:
 - a. **Earth observation data generation and data quality are increasing rapidly.** The range of satellites and sensors generating data relevant to wetland inventory, assessment, monitoring and conservation has increased rapidly over many years, and continues to increase. This provides more, and more accurate data, at high temporal, spectral and spatial resolution. Ongoing developments in artificial intelligence, and notably machine learning, are expected to further contribute to increasing the availability and applicability of EO for identifying and mapping wetlands, assessing condition and ecosystem service provision.
 - b. **Earth observation data is often freely available.** Publicly available EO data is, for the most part, readily and freely available for application in wetland inventory, assessment, monitoring and conservation. Space agencies put a very large part of the data they generate in the public domain or make it available for non-commercial applications for free. This includes raw data, as well as derived products and services. This is an exceptionally valuable 'public service', also bearing in mind that many countries may not have the infrastructure and technical capability for generating, storing and processing large volumes of Earth observation data, and that developing and maintaining such capability at national level can be very costly as well as impractical. Commercial EO data with very high spatial resolution, while not always freely available, can also play a crucial role in enhancing wetland inventory, assessment and monitoring efforts, offering spatial details that can justify their cost for specific local-scale applications (e.g. monitoring of small or fragmented wetland habitats or human-made wetlands, monitoring of wetland restoration projects, environmental impact assessment etc.).
 - c. **Earth observation data is a valuable but underused asset.** While use of EO data in national wetland inventory, assessment, monitoring and conservation is increasing, it is not keeping pace with the rapid growth in data availability. The significant potential of EO (and associated investments) is under-utilized. While capability on the supply side of EO data is very advanced, it remains constrained at the demand side. Availability of data does not catalyze its application by authorities responsible for wetlands, and in many cases the

²⁹ See <https://www.ramsar.org/sites/default/files/2024-11/Earth%20Observation%20Consultation%20Note.pdf>, <https://www.ramsar.org/sites/default/files/2024-11/Earth%20Observation%20Day%20Working%20Programme.pdf>, and <https://www.ramsar.org/earth-observation-day>.

³⁰ See https://www.ramsar.org/sites/default/files/2025-01/SC64_inf2_earth_observation_consultation_e.pdf.

institutional and policy environment is not keeping up with the supply of data and derived products.

- d. ***User-driven design is key to enhancing use of Earth observation in wetland inventory.*** Enhancing application of EO in NWI requires increased focus on the needs of national authorities responsible for wetland inventory, monitoring and management, as well as requirements of other end users, including authorities responsible for relevant sectoral policies or for tracking and reporting on global biodiversity, climate and sustainable development targets. An active involvement of end-users in the co-design and development of EO data products and tools for wetland inventory is fundamental to fostering genuine ownership, and in order to ensure that EO products and services are relevant, appropriate to the context, and that technical and other capacity needs are well understood and addressed. Adopting a user-driven approach will help 'democratize' EO, making its benefits more accessible and impactful.
- e. ***Limitations to Earth observation data remain but can increasingly be addressed.*** Some wetland types, such as small wetlands and forested inland wetlands, have for long been challenging to identify, map and assess using EO technology. Similarly, some wetland characteristics are challenging, such as depth of peat soil in peatlands, as well as extent and condition of wetlands with high seasonal or inter-annual dynamics. Inventory of human-made wetlands is uneven. Some of these limitations can increasingly be overcome with innovative use of currently available EO technologies, whereas others require further development of EO sensors and products. Space agencies can play a critical role in bridging these gaps by directing their efforts towards advancing EO capabilities. They can align their priorities with the recommendations from intergovernmental processes, such as those of the Convention on Wetlands, to ensure that EO developments meet the critical needs of wetland inventory, monitoring, assessment and conservation globally.
- f. ***Effective use of Earth observation is dependent on ground-based data.*** Unlocking the power of EO data is dependent on high-quality in-situ data for ground validation and to train models. This is important both to sufficiently consider bioregional/local characteristics of wetlands, and for the development of EO solutions for wetland types that to date have been difficult to map using EO. Much field data is already held by national authorities as well as e.g. academic institutions and civil society organizations, as well as private sector organizations, and further field data will be required in many locations and/or for specific wetland types. Enhanced sharing of data suitable for ground validation and model training is needed, requiring trust as well as appropriate cooperation mechanisms. There is also a need for further gap analysis to identify ground validation and training data deficiencies for specific wetland types. This can draw on what has been done for some wetland types, such as mangroves.
- g. ***A common wetland classification system supports data interoperability and reporting.*** A common classification system is an important element for interoperability of data and enables global compilation and presentation of data based on reporting by individual Contracting Parties. The ability of Contracting Parties to pick and choose from among a variety of interoperable wetland data layers aligned with a common classification system can contribute to increased application of EO data in NWI. The Convention on Wetlands Classification System for Wetland Type was created to provide a broad framework for rapid identification of the main wetland habitats represented in Wetlands of International Importance. However, as noted in the 'Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on

Wetlands', its usefulness for any specific wetland inventory should be carefully assessed. Many Contracting Parties have their own national classification systems, but these are not always coherently mapped against the Convention's classification system. Work by the STRP is underway to undertake scoping and planning for a review of the Convention's classification system in the 2025-2027 triennium (pursuant to Standing Committee Decision SC63-30).

- h. ***Essential wetland variables can inform wetland conservation and wise use.*** Wetlands are dynamic ecosystems, and provide multiple services based on e.g. their biodiversity, hydrography and carbon storage and flux. Wetland functions and services are significantly influenced by wetland degradation, not just loss of area. In addition to tracking change in wetland extent over time, it is therefore also important to be able to track the condition of wetlands, or changes in specific characteristics of wetlands. For example, Resolutions of the Convention have called on Contracting Parties to update NWIs to support estimation of carbon storage and fluxes, in order to update greenhouse gas accounts and include wetland actions in Nationally Determined Contributions and other climate change plans (Resolution XII.11 and Resolution XIII.14). Further development of appropriate essential wetland variables which can be measured using EO is important for conservation, restoration and wise use of wetlands, and to support implementation and monitoring of biodiversity, climate and land degradation neutrality targets.
- i. ***Enhanced use of Earth observation in wetland inventory will strengthen reporting on wetland extent and condition in the context of the Convention.*** Contracting Parties have benefited from long-standing engagement of space agencies in activities under the Convention. This includes their contributions to the work of the STRP and their support to Contracting Parties in relation to wetland inventory, as well as in the designation and management of Wetlands of International Importance. However, less than half of Contracting Parties report progress in developing NWIs and even fewer provide data from these inventories through national reports under the Convention and towards tracking of SDG indicator 6.6.1. Additionally, the Convention is yet to produce a comprehensive and coherent global map of wetland extent. Support to the Contracting Parties needs to be significantly increased, in line with the approach established by the Secretariat (as outlined in documents SC62 Doc.9, SC63 Doc.10 and SC64 Doc. 10), and ensuring Contracting Parties have access to guidance, knowledge and support for development and gradual refinement and use of NWIs. There is a need for a periodically updated global inventory of wetlands (noting relevant ongoing efforts such as Global Wetland Watch and the GEO Global Ecosystem Atlas), including their condition and the extent of wetlands under restoration or restored. Such an inventory would support the Global Wetland Outlook, the Convention's flagship product, enhance the work of the STRP, and contribute to other international policy frameworks.
- j. ***Global datasets of specific wetland types are crucial to support development of National Wetlands Inventories as well as global reporting.*** The availability of global datasets of specific wetland types, such as the Global Mangrove Watch, plays a critical role in advancing wetland inventory, monitoring, and assessment efforts worldwide. These global datasets can serve as a valuable starting point for countries that lack their own NWIs, providing baseline information to guide national efforts. Additionally, they enable standardized intercomparison of wetland extent, condition, and trends across countries and regions. Such datasets can also be instrumental in supporting international reporting requirements, such as those under the Convention on Wetlands and SDG Indicator 6.6.1.

Strengthening the quality, accessibility, and updating of these global datasets is vital for their effective use by Contracting Parties as well as other entities.

- k. ***Enhanced international coordination and cooperation, and identification of policy requirements and gaps, are essential to accelerate the uptake and maximize the impact of Earth observation initiatives.*** One of the findings of the GEO Wetlands initiative under the GEO Work Programme 2023-2025 was that there are many scientific initiatives that could contribute better to international efforts on wetlands inventory, monitoring, assessment and conservation if there were a clear expression of need from the Convention on Wetlands. There are many initiatives underway to map, classify and assess wetlands using EO, including global, regional and national initiatives. While many of these generate a wealth of data and tools, greater coordination across initiatives could facilitate better sharing of knowledge and data across initiatives and, importantly, support Contracting Parties in the application of EO data, products and tools in national wetland inventory, monitoring, assessment and conservation. There is a need for a mechanism or a community for ongoing exchange, engaging and supporting Contracting Parties / national authorities as end users but also facilitating engagement with other stakeholders including academia and civil society organizations e.g. in relation to *in situ* data and to support integration of EO tools. Such cooperation may be pursued with the Group on Earth Observations (GEO) Secretariat and the Committee on Earth Observation Satellites (CEOS) for data, science and technology aspects of satellite Earth observations for wetland monitoring and reporting and coordination with space agencies. A regional approach may be particularly useful in providing technical support and capacity building support to Contracting Parties, leveraging regional mechanisms, centres or initiatives established under global Conventions, including Ramsar Regional Initiatives, as well as initiatives such as Digital Earth Africa.

Recommendations

7. Recommended actions through the Convention towards strengthening the use of EO in wetland inventory, monitoring, assessment, and conservation arising from the consultation include the following:
- a. ***Develop an initiative dedicated to supporting use of Earth observation in wetland inventory, monitoring, assessment, and conservation.*** It is recommended that such a mechanism would:
- i. Facilitate access to and utilization of Earth observation technology. Enhance access to and effective use of existing and emerging EO data, derived products, and tools from diverse sources to support the development, maintenance, and use of national wetland inventories (NWIs). Where relevant, contribute to their continued development including by promoting the exchange of ground validation and training data.
 - ii. Develop/strengthen global wetland datasets. Develop and maintain new global datasets of wetland types, and support/promote further development of existing global datasets for specific wetland types. This may also encompass focus on Wetlands of International Importance.
 - iii. Develop essential wetland variables. Advance the development of essential wetland variables to improve the utility of EO data in NWIs, in wetland monitoring and

assessment, and for reporting purposes. This includes monitoring of changes to Wetlands of International Importance, wetland conservation and restoration planning, and supporting national planning and reporting efforts within international policy frameworks such as the Convention on Wetlands and the Sustainable Development Goals.

- iv. Undertake capacity building. Strengthen capacity building initiatives by developing training materials, tools, and activities in collaboration with end users. These efforts should include guidance on performing crosswalk analyses between national wetland classification systems, such as the Convention's Classification System for Wetland Type, and other relevant classification frameworks, such as the Global Ecosystem Typology (GET).
- v. Provide technical advice and support. Offer technical advice and support to Contracting Parties of the Convention throughout their NWI processes. This support should be tailored to address specific technical, methodological, and operational challenges faced by individual countries.
- vi. Strengthen international coordination and cooperation. Actively engage with and strengthen the coordination and collaboration among international initiatives to ensure synergies in addressing wetland-related challenges. Foster partnerships across global, regional, and national efforts to enhance the impact of EO data, derived products, and tools in wetland inventory, monitoring, assessment and conservation.

The initiative should complement and support the Convention's ongoing NWI support mechanism, and be formally mandated by the Convention's governing body, to ensure impact and sustainability. It can be developed building on the tentative proposal for a GEO Wetlands initiative submitted for inclusion in the Group on Earth Observations (GEO) Post-2025 Work Programme, drawing on existing models such as the GEO Flagship Initiatives. It would be developed and implemented in close collaboration with space agencies and EO organizations. It should give consideration to how relevant regional mechanisms including those established under the Convention on Wetlands (Ramsar Regional Initiatives), or other global agreements or processes can be leveraged, and may entail identifying and engaging with 'champion countries' to help ensure solutions are built to address national needs, enable testing and fine tuning of approaches, facilitate peer-to-peer exchange and support broader application. Findings of this EO consultation provides a basis for its further technical development.

Development of the initiative can be led by the Secretariat, working with the STRP and relevant partners. In the first instance, it is critical that start-up financial resources are secured for development of the initiative, including to identify requirements and modalities for its longer-term operation.

- b. ***Establish or strengthen bilateral cooperation with space agencies and Earth observation initiatives.*** This may include, inter alia, expanding the long-standing collaboration with individual space agencies contributing to the work of the STRP and the Convention's programme to support NWI, including to strengthen the applicability of existing EO products and services (such as those of Copernicus, the Global Mangrove Watch and Global Wetland Watch) in NWIs, and to develop new tools and global wetland datasets to address current gaps. This can be done through exchange of letters or cooperation agreements between the Secretariat of the Convention and relevant partner organizations, also

potentially considering cooperation with the Committee on Earth Observation Satellites (CEOS) regarding satellite data for NWI.

- c. ***Undertake in-depth assessments to identify further technological development needs.*** This may include identification of wetland types or wetland areas/regions for which further technical development of EO-based approaches, including dedicated systematic observation strategies for wetlands, are required in order to better support wetland inventory, and identification of wetland types that require additional or better ground validation and training data, or enhanced exchange of such data. Such assessments/analyses may be pursued by the STRP in the context of its work plan for the 2025-2028 triennium, with findings addressed through collaboration with space agencies or EO initiatives. As an initial action, the Secretariat can encourage development of RS approaches and products for mapping e.g. forested inland wetlands, small wetlands, and human-made wetlands as well as assessing depth of peat soils and extent and condition of wetlands with high seasonal or inter-annual dynamics, through formal liaison with the Committee on Earth Observation Satellites (CEOS).
- d. ***Disseminate the findings of the Earth observation consultation, identified needs and recommended actions.*** This may include, inter alia, outreach to space agencies and EO initiatives; international and national funding agencies and philanthropies; relevant international organizations; as well as other MEAs, through their respective secretariats and as appropriate through contributions to meetings of their governing or subsidiary bodies, and may invite contributions towards or collaboration in the implementation of the recommendations arising from the EO consultation. This can be done by the Secretariat of the Convention, with the STRP.

Acknowledgements

8. The invaluable contribution made by representatives of Contracting Parties, space agencies, and EO organizations to the consultation, through interviews and Earth observation day, is gratefully acknowledged.