THE CONVENTION ON WETLANDS

59th Meeting of the Standing Committee

Resumed session

Gland, Switzerland, 23-27 May 2022

**SC59/2022 Doc.25**

**Report of the Chair of the Scientific and Technical Review Panel**

**Actions requested:**

The Standing Committee is invited to:

i. take note of the report of the Chair of the Scientific and Technical Review Panel (STRP); and

ii. consider for submission to the Conference of the Contracting Parties the STRP’s recommendation to update Criterion 6 of the Ramsar Criteria regarding the use of population estimates in accordance with Decision SC58-06.

**Introduction**

1. The present report covers the work of the Scientific and Technical Review Panel (STRP), from the publishing of document SC58 Doc.19 *Report of the Chair of the Scientific and Technical Review Panel* on 29 May 2020 to 23 February 2022. The present report constitutes an update to the report presented to the 59th Meeting of the Standing Committee in 2021 (document SC59 Doc.25). The report provides both an overview and selected highlights of the work completed during this period.

2. In particular, this report of the Chair of the STRP covers:

1. The 24th meeting of the STRP (STRP24);

b. Progress with the delivery of the STRP work plan 2019-2021:

i. Highest priority tasks and steps for their completion;

ii. Medium and lower priority tasks; and

ii. Ad-hoc advisory tasks and other requests;

c. STRP participation in global meetings;

d. STRP recommendations in response to the request from Standing Committee decision SC58-06 on the use of population estimates under Criterion 6 (at Annex 1 of the present document); and

e. Information on the STRP’s preparation of the list of future scientific and technical priorities, in line with Resolution XII.5, Annex 1, para. 45 (at Annex 2).

**Meetings of the STRP**

*24th meeting of the STRP*

3. In light of the ongoing COVID-19 pandemic, the Management Working Group (MWG) decided to cancel STRP23, which was scheduled to take place from 16 to 20 March 2020, in the interest of public health and safety. A number of virtual calls were held for each of the highest priority tasks with the working groups established at STRP22.[[1]](#footnote-2)

4. A virtual STRP meeting (STRP24) was hold on 29 April 2021. The meeting informed the Panel and STRP National Focal Points about the progress accomplished during the triennium, the role of the STRP in reviewing scientific and technical draft resolutions for COP14 and steps to convene the next Panel for the 2022-2024 triennium.

**Update on progress with the STRP work plan 2019-2021**

Highest priority tasks

*Global Wetland Outlook (GWO) – special edition 2021:*

5. The Standing Committee at its 57th meeting (SC57) instructed the Panel to align the GWO with the theme of the 50th anniversary of the Convention. Given that the theme of the 50th Anniversary was unknown until late 2020, the Management Working Group (MWG) had advised the Panel to start drafting and to bring the draft in line with the theme once known.

6. Accordingly, following the announcement of the theme – *wetlands are important* – and further instructions from the MWG in November 2020, the Panel refocussed the scope of the draft to highlight the multiple values of wetlands and the evolution of this concept over time (i.e., from habitat to waterfowl to disaster risk reduction and climate change mitigation and adaptation), and to highlight the increasing awareness of the benefits of being outdoors and in closer contact with nature (including for health, recreation and wellbeing). Work from the other highest priority tasks below was also included into the GWO.

7. A final draft was submitted to the Secretariat in June 2021. Further to Standing Committee Decision SC59-04, the *Global Wetlands Outlook Special Edition 2021* was finalized by the Secretariat in close consultation with the STRP. It was launched on 15 December 2021 in association with the commemoration of the Convention’s 50th Anniversary.

*Wetlands and sustainable agriculture (task 1.2):*

8. A consultancy report, produced by consultant Anne van Dam (IHE Delft Institute for Water Education), has been completed. Building on the report, a working group, led by Hugh Robertson, has finalized a Briefing Note and a Policy Brief, both of which were submitted to the Secretariat for production and are currently being laid out and will be published in March 2022.

*Peatland rewetting/restoration (task 2.2)*

9. A Ramsar Technical Report on peatland rewetting and restoration, including tropical peatlands, drafted by consultant Hans Joosten (Greifswald Mire Centre), has been completed. The consultant also drafted a practitioner-oriented Briefing Note deriving from the report.

10. A working group led by Lars Dinesen has produced a Policy Brief, and submitted it to the Secretariat for production.

11. The Policy Brief, Briefing Note and Technical Report have been finalized in English. French and Spanish versions are at final stages of production.

12. Funds to help with the delivery of this task have been generously provided by the Government of Norway, for which the STRP is very grateful.

*Wetlands and blue carbon (task 5.1):*

13. A desktop review of coastal blue carbon ecosystems in Wetlands of International Importance, drafted by consultants Silvestrum Associates, was completed in August 2020.

14. A working group, led by Siobhan Fennessy, has finalized a Briefing Note, based on the desktop review, which has been peer reviewed. The Briefing Note has been finalized in English; French and Spanish versions are at final stages of production. The desktop review and derived Briefing Note correspond to the Contracting Parties’ request to the STRP in Resolution XIII.14, para.15(a).

15. Funds to help with the delivery of this task have been generously provided by the Government of Norway, for which the STRP is very grateful.

16. Planned further work led by Siobhan Fennessy responding to sub-paragraphs 15 (b), (c) and (d) of Resolution XIII.14[[2]](#footnote-3)) was presented to the MWG in January 2022.

Medium and lower priority tasks

17. Given that STRP members have reported having limited capacity, the MWG instructed the Panel to focus its capacity and resources on the highest priority tasks. However, it is worth recalling that the STRP delivered task 2.5, which called for the development of terms of reference for the Ramsar Culture Network (RCN), a medium priority task, to Standing Committee at SC57.

18. The Governments of Norway and Finland generously provided funds to support the delivery of task 4.1, *Develop guidance on integrating gender issues in the implementation of the Convention*. However, the MWG instructed the Panel to focus on its highest priority tasks and asked the Secretariat to assist with moving the task forward. The STRP is very grateful for the support of the Governments of Norway and Finland.

Ad-hoc advisory tasks and other requests

*Application of Criterion 6 – use of population estimates*

19.The Secretariat requested the STRP’s advice in October 2019 on the use of population estimates when applying Criterion 6 of the Ramsar Criteria for the designation and update of Wetlands of International Importance, after receiving a request for advice from the Government of Australia on the matter. Subsequently, during its intersessional process for its 58th meeting (SC58), the Standing Committee through Decision SC58-06 requested the STRP to provide a proposal to update Criterion 6, for the Committee to consider for submission to the Conference of Contracting Parties.

20. A core group of STRP experts was established, led by David Stroud. Their recommendations were circulated to the full Panel, and further updated in line with Decision SC59-05. This is presented, for consideration by SC59, in Annex 1 of the present document.

*Wetland inventories – toolkit*

21. Former STRP Chair David Stroud provided comments to the Secretariat, on behalf of the Panel, during the development of a wetland inventories toolkit for Contracting Parties, which the Secretariat integrated.

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

22. The STRP Chair participated in the following international meetings:

* the 16th Meeting of the Multidisciplinary Expert Panel (MEP) and Bureau of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), held virtually from 2 February to 2 March 2021, and the 17th Meeting of the MEP and Bureau of IPBES held virtually from 11 to 19 October 2021. The Chair participated in sessions opened to observers, and presented the work of the Convention relevant to IPBES assessments, including the Global Wetland Outlook;
* the 16th Meeting of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) Technical Committee, which took place from 25 to 29 January 2021;
* the COP15 phase I meeting of the Convention on Biological Diversity (CBD) in Kunming, China, between 10 and 15 October 2021, providing a keynote presentation in one of the parallel sessions;
* the World Coastal Forum in Yancheng, China, from 10 to 11 January 2022.

23. The STRP Chair participated in online panel discussions organized by the Secretariat for World Wetlands Day 2021, highlighting policy recommendation towards ensuring that wetlands remain an important source of freshwater. The STRP Vice Chair participated in the online event for World Wetlands Day 2022, sharing the main findings of the Global Wetlands Outlook: Special Edition 2021.

**Future scientific and technical priorities**

24. Thematic Work Areas adopted by Contracting Parties in Resolution XII.5 *Draft resolution on the future implementation of scientific and technical aspects of the Convention for 2022-2024,* as well as future priorities,were submitted to SC59 in 2021 for consideration (document SC59 Doc.26). Further to Decision SC59-07 of the Standing Committee as well as guidance of the MWG arising from its meeting in January 2022, the STRP has been working intensively through five virtual working group meetings, email communications and consultation with the Secretariat to revise this document. A revised list of future scientific and technical priorities is included as Annex 2 for consideration by the Standing Committee. Priorities have been identified based on the Strategic Plan of the Convention, COP13 Resolutions, international processes of relevance to the Convention and Contracting Parties’ needs.

**Annex 1**

**The application of quantitative criteria to select Wetlands of International Importance (Ramsar Sites)**

**Ad-hoc advisory notes on the application of quantitative criteria to select Ramsar Sites**

**1. Introduction**

1.1 There are three quantitative Criteria for the selection of Wetlands of International Importance (Ramsar Sites): Criterion 5 (>greater than 20,000 waterbirds regularly occurring), Criterion 6 (>1% of a waterbird biogeographic population regularly occurring), and Criterion 9 (the same formulation as for Criterion 6 but for non-avian, wetland-dependent animal populations). The advice in this document concerns only the application of Criterion 6, which states that: “A wetland should be considered internationally important if it regularly supports 1% or greater of the individuals in a population of one species or subspecies of waterbird.”

1.2 Criterion 6 has been used to designate 867 Ramsar Sites (generally in combination with other Criteria), over 35% of all Ramsar Sites.

1.3 A Party has raised the issue of whether, in the designation of a Ramsar Site, it is possible to use 1% thresholds for the application of Criterion 6 that are not published in Wetlands International’s *Waterbird Population Estimates (WPE)*, where other data on a biogeographical population size are deemed to be more contemporary and accurate. The STRP’s views on this issue have been sought.

1.4 The background to the issue is summarized in section 2 below. The specific question is addressed in section 3.

**2. Background to Ramsar’s quantitative Criteria**

2.1 The history of the two Criteria related to waterbirds (currently Criteria 5 and 6) is described by Matthews (1993)[[3]](#footnote-4). Given the initial motivation of the Convention as a policy tool for the conservation of the habitats of waterbirds, it is not surprising that these Criteria received much early attention. Essentially, they capture two related, but different attributes of importance of a wetland: absolute numbers present (Criterion 5) and proportionate importance for a single population (Criterion 6).

2.2 Criterion 6 has been an effective and widely adopted means of identifying wetlands of international importance for waterbirds (Atkinson-Willes *et al.* 1982)[[4]](#footnote-5). It works only for those waterbirds that tend to congregate, a desirable feature because such species will, by definition, be those dependent on a relatively small proportion of total territory and therefore be vulnerable to changes on that limited area.

2.3 Application of Criterion 6 depends on contemporary information on population sizes both at individual sites but importantly at biogeographic-scale for the calculation of 1% thresholds. Such data needs have proved highly stimulating to waterbird monitoring worldwide, notably through the International Waterbird Census.

2.4 A first comprehensive list of population sizes and formal thresholds for all waterbirds was presented by the International Waterfowl and Wetlands Research Institute (IWRB), as an Information Paper to Ramsar COP5 in 1993 and published subsequently (Rose & Scott 1994[[5]](#footnote-6)). Resolution 5.9[[6]](#footnote-7) established the application by Parties of standardized waterbird population estimates as the basis for the use of the 1% criterion and requested IWRB to prepare further updates to WPE. This was undertaken and WPE is now in its fifth edition and exists as a searchable on-line database maintained by Wetlands International (Table 1). However, without funding from the Convention, the timetable anticipated at the process’ outset of bringing a triennial update to each COP has not proved possible, and *ad-hoc* editions have been produced as donor funding has permitted.

2.5 Accessibility of increasingly good data for *WPE* stimulated international discussion about how frequently 1% thresholds should be updated. Conclusions of a 1994 international workshop on this topic co-convened by the United Kingdom and Denmark (Rose & Stroud 1994[[7]](#footnote-8)) were presented to Ramsar COP6 (Stroud 1996[[8]](#footnote-9)) and adopted by Resolution VI.4,[[9]](#footnote-10) which established a schedule of updates for 1% thresholds and “CALLS ON Contracting Parties to use these estimates and thresholds, upon their publication, as a basis for designation of sites for the List of Wetlands of International Importance”.

Table 1. The publication of *Waterbird Population Estimates*

| ***Waterbird Population Estimate* edition** | **Citation** | **Format** |
| --- | --- | --- |
| *WPE* 1 | Rose & Scott 1994 | Hard copy, 102 pp |
| *WPE* 2 | Rose & Scott 1997 | Hard copy, 106 pp |
| *WPE* 3 | Delany & Scott 2002 | Hard copy, 226 pp |
| *WPE* 4 | Delany & Scott 2006 | Hard copy, 239 pp |
| *WPE* 5 | Mundkur & Nagy 2012 | Online searchable database <http://wpe.wetlands.org/>; 24 pp summary report |

2.6 Subsequently, Resolution VIII.38[[10]](#footnote-11) further recognized WPE as the definitive source of 1% thresholds and “URGES all Contracting Parties to use appropriate 1% thresholds contained in the third edition of *Waterbird Population Estimates* as the official and consistent basis for their application of Criterion 6 of the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* for the designation of Ramsar sites during the 2003-2005 triennium”. It also encouraged the taxonomic scope ofWPE to be expanded to include seabirds.

2.7 From the outset of the WPEprocess established under Ramsar, it was recognized that it was desirable to publish official 1% thresholds only periodically[[11]](#footnote-12). This gave clarity for government and other decision-makers as to which data to use at any one time. It also facilitated the administrative process as to the generation of new editions of *WPE*. The recommended basic nine-year update cycle for international 1% thresholds recommended by Rose & Stroud (1994) (other than for populations in rapid change) was subsequently endorsed by Resolution VI.4.

2.8 Realistically, prior to internet publishing, it would have been difficult to publish updated estimates and thresholds other than at periodic intervals, but with internet publishing it is more conceivable that new estimates as they become available, could be added to an online database in a rolling-update process. However, there seems to be no reason to revise the original assessment that such a process would be chaotic for decision makers who would have no certainty as to which information to use at any point in time.

2.9 Since then, essentially the same recommendations drawn from previous Resolutions have been incorporated into Ramsar’s guidance related to the selection and designation of wetlands of international importance—The *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on Wetlands*, first adopted at COP7 (Resolution VII.11) in 1999, and substantively revised and updated by COP11 in 2012 (Resolution XI.8, Annex 2).

**3. Whether a Party can use 1% thresholds other than those published within Waterbird Population Estimates?**

3.1 Turning now to the specific question regarding the use of non-WPE estimates and thresholds. The various Resolutions relating to WPE recognize the need for common international standards. They ‘Call on’ and ‘Urge’ Parties to use WPE thresholds but do not legally require it through use of mandatory language.

3.2 In situations where thresholds are unavailable, the *Strategic Framework* states:

“Note that this Criterion [6] should be applied only to those waterbird populations for which a 1% threshold is available. However, for populations of waterbird species in taxa not presently covered by *Waterbird Population Estimates*, this Criterion may be applied if a reliable population estimate and 1% threshold is available from another source and if that information source is clearly specified.”[[12]](#footnote-13)

3.3 Thus, there is no reason why a Party could not use alternative 1% thresholds where there is good evidence that these more accurately reflect the current biological status of the population concerned.

3.4 However, there is long-established consensus as to how this process should work. Based on these principles, if a Party decides to use alternative thresholds, STRP recommends that the following conditions apply:

* that the biogeographical population of the species concerned should be clearly stated cf. the biogeographic populations for the species as listed in WPE;
* that such thresholds should be derived from estimates that are published, and have been subject to peer review [note that if that is not the case, then STRP could provide that function on request];
* that the reasons why a new estimate is considered more appropriate is documented with a clear audit trail to sources – allowing third parties to check the derivation of the estimate. This recognizes the potential for legal challenge, and the need for ‘traceability’ of data used to support policy processes;
* that the standard rounding conventions now established to convert from an estimate size to a 1% threshold should be used; and finally
* that in this, and any similar situations that arise in the future, any variant thresholds used are communicated both to the Secretariat (to maintain a log of such instances), and also to Wetlands International (to include in future WPE updates – if/when they occur).

3.5 The best resources of population estimation are from regional flyway initiatives which are now generating population estimates and 1% thresholds (but for migratory species only) for relevant use. Thus, the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) has a three-yearly update cycle via its Conservation Status Review (CSR) process[[13]](#footnote-14) and the East Asian-Australasian Flyway Partnership (EAAFP) has a similar process. Whilst WPE provides an assessment of all populations of the world’s waterbirds (WPE 5 provides information on the distribution, status, and trends of 2,304 populations of 871 species), AEWA’s CSR covers 553 populations of 254 migratory species. Both WPE and CSR outputs are made available in the WPE searchable on-line database wpe.wetlands.org.

3.6 However, the sum of regional waterbird population update activity does not equal a global WPE process since: (a) not all regions/ flyways are covered; and (b) even within regions, only populations of migratory waterbirds are considered, whereas Criterion 6 relates to all waterbird species. Thus, flyway initiatives only cover a selection of waterbird species within the areas of their remit.

3.7 From CSR7, the AEWA process has been updating relevant 1% thresholds for populations within the AEWA region whose status has changed. This is leading to confusion within the region as to the current definitive source of 1% thresholds, since AEWA Parties have established a new process such that for some populations there are different estimates and 1% thresholds published in WPE5 (2012) and CSR7 (2018).

**Annex 2**

**Revised STRP Future Priorities (2023-2025)**

**Thematic Working Areas (TWAs):**

**TWA 1:** Wetlands of International Importance, development of the site network and application of criteria.

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

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

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

**TWA 5:** Cross cutting issues, supporting functions, and synergies with other MEAs.

Each STRP task is assigned to the most relevant Thematic Work Area (TWA), although some tasks will also 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. The cross references under each task to the specific [draft targets](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) of the Convention on Biological Diversity’s (CBD) post-2020 Global Biodiversity Framework (GBF) might change after the final details of the GBF are adopted by Contracting Parties to the CBD.

| ***TWA*** | ***Priority*** | ***STRP task*** | ***Description*** | ***Mandate(s)*** |
| --- | --- | --- | --- | --- |
| **TWA 1: Wetlands of International Importance, development of the Site network and application of criteria.** | | | | |
| 1 | High | **Further guidance on application of criteria for designating Wetlands of International Importance** | * Further guidance on application of Ramsar Criterion 9 for the designation of Wetlands of International Importance (Ramsar Sites), including advice on sources of technical information and their use, and identification of information gaps that limit the nomination of Sites. Such guidance is lacking, which is limiting the effective and consistent application of this criterion. This will include engagement with IUCN/SSC in relation to the Red List and population estimates. * As required,provision of scientific and technical advice in relation to global waterbird population estimates (WPE) in relation to application of Ramsar Criterion 6.   Output(s)/product(s): Technical Report (with guidance) | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 14.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 4, 3. |
| 1 | High | **Global assessment of gaps in the network of Wetlands of International Importance, and synergies with global climate and biodiversity goals** | * Global assessment to identify under-represented ecosystem types and the constituent species and habitats across biogeographic regions (including transboundary wetlands), drawing on site details in the Ramsar Sites Information Service (RSIS) and other relevant sources. * Identification of synergies e.g. in terms of how addressing gaps in the network of Wetlands of International Importance can contribute towards meeting global biodiversity and climate goals, as well as use in conjunction with or vis-à-vis other site networks e.g. Key Biodiversity Areas (KBAs).   Output(s)/product(s): Technical Report; Briefing Note | Resolution [XII.5](https://www.ramsar.org/sites/default/files/documents/library/cop12_res05_new_strp_e_0.pdf), Annex 1, ¶¶ 1-2  Initiated in the 2019-2021 triennium (Task 1.7)).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 2, Target 6.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 3, 1. |
| 1 | Medium | **Assessment of options, including current and emerging technology, to support and enhance updating of Ramsar Sites Information** | * Technical report on means/approaches/technology or other tools needed to facilitate an improvement to the electronic submission of Ramsar Information Sheets (RIS) by Contracting Parties e.g. in response to Resolution VIII.13 (para 11) <https://www.ramsar.org/sites/default/files/documents/pdf/res/key_res_viii_13_e.pdf> and Resolution XI.8 (para 6) <https://www.ramsar.org/sites/default/files/documents/pdf/cop11/res/cop11-res08-e.pdf>. This will aim to provide additional support to Contracting Parties in the updating of their RIS within the Ramsar Sites Information Service (RSIS), since the RSIS should be the authoritative source of up-to-date information on Ramsar Sites. This is vital for Contracting Parties as well as the STRP's work e.g. for the synthesis of wetland site details at the regional or global level. GWO 2021 noted that “…as information on the state of a large proportion of Wetlands of International Importance is out of date or in the process of being updated, it is not possible to provide a comprehensive, current assessment of their condition”. * Including support to the Secretariat’s task of developing electronic transfer protocols for RIS input by providing technical input as requested.   Output(s)/product(s): Technical Report | Resolution [VIII.13](https://www.ramsar.org/sites/default/files/documents/pdf/res/key_res_viii_13_e.pdf), ¶ 11) and Resolution [XI.8](https://www.ramsar.org/sites/default/files/documents/pdf/cop11/res/cop11-res08-e.pdf), ¶ 6).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 18, 19.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 3, 1, 19 (and Implementation support mechanisms). |
| 1 | Medium | **Management of transboundary Wetlands of International Importance and other wetlands (effectiveness)** | * Review of management approaches of transboundary wetlands and of relevant associated measures and indicators used therein, including testing the suitability of the Ramsar Site Management Effectiveness Tracking Tool (R-METT) and information provided in the Ramsar Information Sheets (RIS). This should be pursued in collaboration with relevant CPs as well as Ramsar Regional Initiatives. * Recommendations and guidance to support and promote the use of existing tools listed in the international cooperation handbook, as well as tools to evaluate management effectiveness.   Output(s)/product(s): Technical Report (with guidance); Briefing Note | Standing Committee 59, [Doc 10](https://www.ramsar.org/sites/default/files/documents/library/sc59_10_spwg_report_e.pdf).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 18.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 3, 4 1. |
| 1 | Low | **Technical guidance for the design of urban and peri-urban Wetlands of International Importance and other wetlands** | * Guidance to design urban and peri-urban wetlands to include their role as nature-based solutions to mitigate climate change and pollution impacts, with a focus on promoting the use of existing tools and publications, such as <https://www.ramsar.org/sites/default/files/documents/library/good_practices_urban_wetlands_handbook_e.pdf>.   Output(s)/product(s): Technical Report (with guidance) or Briefing Note | Resolution [XIII.16](https://www.ramsar.org/sites/default/files/documents/library/xiii.16_urbanization_e.pdf), ¶ 18a  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 2, Target 5; Goal 3, Target 9.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 12, 8, 11. |
| **TWA 2: Tools for wetland assessment, mapping and monitoring, and development of inventories.** | | | | |
| 2 | High | **Wetland mapping and National Wetland Inventories (NWI) to catalyse greater use of available methodologies for wetland carbon assessments** | * Guidance to support further development and use of National Wetland Inventories (NWIs) in relation to national greenhouse gas (GHG) assessments, as well as inclusion of the role of wetlands (and associated actions within them) for inclusion within reporting of Nationally Determined Contributions (NDCs) under the UNFCCC. This is anticipated to include e.g. wetland mapping and NWIs as tools in enabling and supporting carbon assessment; information on national application of methodologies for wetland carbon assessment; identification of activity data and emission factors for different wetland types, and relevant case studies; building on work initiated in the 2019-2021 triennium. * May be pursued in liaison or cooperation with IPCC, pending approval of its 7th cycle work plan.   Output(s)/product(s): Technical guidance; Policy Brief; Cross cutting support/collaboration | Resolutions [XIII.13](https://www.ramsar.org/sites/default/files/documents/library/xiii.13_peatland_restoration_e.pdf) and [XIII.14](https://www.ramsar.org/sites/default/files/documents/library/xiii.14_blue_carbon_e.pdf).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 8.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 8. |
| 2 | High | **Prepare guidance on inventories and monitoring of small wetlands, and their multiple values for biodiversity conservation, especially in the contexts of landscape management and climate change** | * Guidance to support improved identification, mapping, monitoring and assessment, and management of small wetlands as set out in Resolution XI.8 (para 21 iii). * This is anticipated to encompass:   + Inventory of naturally small wetlands (e.g. seasonal pools, some glacial systems, oases);   + Overview of critically endangered species often associated with small wetlands;   + Review of the role of wetland fragmentation, including as a foundation for restoration;   + Case studies illustrating national experiences with inventory of small wetlands;   + Information on the extent of small wetlands, and implications for estimates of wetland area/extent, loss estimates, contribution to meeting relevant international targets (e.g. related to species conservation, protected areas, connectivity);   + Synthesis of best available and innovative tools for mapping and monitoring, including Earth observation.   Output(s)/product(s): Technical Report (with guidance) | Resolution  [XIII.21](https://www.ramsar.org/sites/default/files/documents/library/xiii.21_small_wetlands_e.pdf), ¶ [23](https://www.ramsar.org/document/resolution-xiii21-conservation-and-management-of-small-wetlands).  Medium priority in work plan 2019-2021 (Task 1.3).  Resolution [XI.8](https://www.ramsar.org/sites/default/files/documents/pdf/cop11/res/cop11-res08-e.pdf), ¶ 2iii).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Targets 8, 11.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 3, 1, 8. |
| 2 | Medium | **Peatland conservation and wise use: Developing templates for national reporting on peatland restoration, and advice to support the global action plan on peatlands and the Global Peatlands Assessment** | * Development of a recommended template for national reporting on peatland restoration (taking into account the relationship of associated reporting in the National Reports), thus providing a mechanism for sharing data/information in a standardized way across Contracting Parties. * Technical input into the Global Peatland Assessment being prepared under the Global Peatlands Initiative, including review/input to draft reports, as required.   Output(s)/product(s): Technical Report (with reporting template); Cross cutting support/collaboration | Resolution [XIII.13](https://www.ramsar.org/sites/default/files/documents/library/xiii.13_peatland_restoration_e.pdf), ¶ 34.  Lower priority in work plan 2019-2021 (tasks 2.4 (a) and (b); 2.3).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 12.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 2, 8, 1, 3. |
| **TWA 3: Direct and climate change related pressures on wetlands, their impacts and responses.** | | | | |
| 3 | High | **Climate change and wetlands – updated information on the current and projected impacts of climate change on the world’s wetlands, and responses** | * Synthesis of technical information on the current and projected impact of climate change pressures on wetlands, following on from GWO Special Edition (2021) and drawing on IPCC 6th Assessment Report and other relevant global reports. * Focus on horizon scanning and responses. * Maybe pursued in liaison or cooperation with IPCC, pending approval of its 7th Assessment cycle work plan.   Output(s)/product(s): Briefing Note; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goals 1, 2 & 3.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 8, 11. |
| 3 | High | **Blue carbon guidance, data and models, and support for integration of blue carbon in climate change planning frameworks** | * Continuation of tasks initiated in the 2019-2021 triennium: development of guidance on prioritizing coastal blue carbon ecosystems for conservation and restoration; compiling and reviewing data and models on carbon stock and fluxes; and analysis of National Wetland Inventories (NWIs) as tools in greenhouse gas (GHG) accounting and for inclusion of wetland targets and actions (and within the reporting by Contracting Parties in their Nationally Determined Contributions (NDCs). * Further emphasis on reviewing and updating (as appropriate) existing guidance for the conservation, restoration and sustainable management of blue carbon ecosystems in Ramsar Sites. Such a review could include development of case studies with regional experts to illustrate how guidance has been applied, and how Contracting Parties have carried out assessments which have been integrated into relevant climate change planning, strategy or reporting frameworks. * Further to guidance of the MWG, this may encompass work in relation to intertidal mudflats as blue carbon ecosystems, as well as in relation to carbon finance and development of appropriate guidance. * May be pursued in liaison or cooperation with IPCC, pending approval of its 7th Assessment cycle work plan.   Output(s)/product(s): Technical Report (with guidelines), Briefing Note; Cross cutting support/collaboration | Resolution [XIII.14](https://www.ramsar.org/sites/default/files/documents/library/xiii.14_blue_carbon_e.pdf), ¶ 15(b)-(d).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 14.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 8, 2. |
| 3 | High | **Agriculture and wetlands: maintaining and restoring the ecological character of wetlands in agricultural settings** | * Guidelines to support reporting on the ecological character of wetlands in agricultural settings, which highlight opportunities to enhance the wise use of wetlands. * The guidelines should be informed by case studies based on issues outlined in the GWO Special Edition (2021) and the Briefing Note prepared under the STRP work plan 2019-2021, which highlighted land-use change, water extraction and pollution, all arising from agriculture as key drivers of wetland degradation.   Output(s)/product(s): Technical Report (with guidelines) | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 9.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 2, 4, 7, 10. |
| 3 | Medium | **Wetlands and water security under a changing climate** | * Synthesize information on changing water cycles, the implications for wetlands and the role of wetlands in water security under projected climate change scenarios. Present technical information on water stress and the effect on wetlands, as well as ensuring water security for human uses. * Relevance to UN decades on ‘Restoration’ and ‘Water’. * Potential synergy/cooperation with IPCC, UNDRR, FAO, AGWA, UN Water.   Output(s)/product(s): Briefing Note; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 9.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 8, 11. |
| 3 | Low | **Sustainable cities and the wise use of wetlands – enhanced data on urban wetlands, and update urban wetland guidance as required** | * Working with Ramsar Accredited Wetland Cities and other leading/innovating cities to gather information on how cities are addressing climate change and other pressures that influence the conservation and wise use of urban wetlands, including urban/peri-urban constructed wetlands. * May include an update of existing guidance <https://www.ramsar.org/sites/default/files/documents/library/good_practices_urban_wetlands_handbook_e.pdf> * Output(s)/product(s): Briefing Note, updated Technical Report (with guidelines) | Resolution [XIII. 16](https://www.ramsar.org/sites/default/files/documents/library/xiii.16_urbanization_e.pdf), ¶ 18.  Medium priority in work plan 2019-2021 (Task 2.7).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Targets 9, 11, 13.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 7, 8, 11, 12. |
| 3 | Low | **Best practices for developing action plans to manage the negative impacts of Invasive Alien Species (IAS) in Ramsar Sites and other wetlands** | * Synthesis of information on the status and negative impact of Invasive Alien Species (IAS) in Ramsar Sites and other wetlands, and responses to address them, including a summary of existing guidance from the Convention and other global and regional fora involved in / with experience in IAS management. * May be pursued in consultation/collaboration with other relevant external entities. To be further contextualized following the adoption of the post-2020 GBF.   Output(s)/product(s): Briefing Note; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 1, Target 4.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Target 6. |
| **TWA 4: Wise use, sustainable management and restoration of wetlands in the wider landscape/seascape.** | | | | |
| 4 | High | **OECMs as an opportunity in promoting wetland conservation and wise use** | * Other Effective area-based Conservation Measures (OECMs) form part of the CBD’s area-based biodiversity conservation target (current Target 3 in the developing post-2020 Global Biodiversity Framework (GBF) (first draft) (at least 30% globally of land areas and sea areas are conserved by 2030 – the ‘30by30’ target). * Identify and highlight the emerging evidence of the status and trends of OECMs for wetlands across different regions, including an overview of the various national approaches to OECMs. Highlight how effectively managed wetlands that are not designated protected areas might qualify as OECMs, and elaborate how wetland-focussed OECMs may help Contracting Parties meet relevant goals and targets. * Potential synergy/cooperation with IUCN, UNEP-WCMC, CBD, IPBES.   Output(s)/product(s): Technical Report (with guidelines); Briefing Note; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 9.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 2, 3. |
| 4 | High | **Develop guidance on the conservation, wise use and management of “working coastal habitats”, including a synthesis of the global pressures on coastal wetlands** | * Develop guidance on the conservation, wise use and management of sustainable “working coastal habitats”, such as by elaborating strategies and models for economic development that maintain the ecological character and functionality of such habitats to the benefit of various users of these wetlands e.g. local communities and migratory and other wetland species. * May be appropriate to pursue this in coordination with scientific and technical subsidiary bodies of other MEAs and potentially also be linked to efforts towards establishment of a World Coastal Forum (Resolution XIII.20).   Output(s)/product(s): Technical Report (with guidelines); Cross cutting support/collaboration | Resolution [XIII.20](https://www.ramsar.org/sites/default/files/documents/library/xiii.20_intertidal_wetlands_e.pdf), ¶ 45.  Lower priority in work plan 2019-2021, Task 3.2.  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 10.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 2, 3, 5, 9, 10. |
| 4 | Medium | **Wetland management to reduce the risk of waterborne and aquatic-vector borne disease** | * Update and finalize the draft Policy Brief produced in the 2016-18 triennium, addressing recent developments (e.g. in relation to HPAI, also the current COVID-19 pandemic), and drawing on the existing wetland disease manual and Technical Report <http://www.ramsar.org/sites/default/files/documents/pdf/lib/rtr6-health.pdf> and <http://www.ramsar.org/sites/default/files/documents/library/rtr7-disease.pdf>. * Potential relevance to ongoing IPBES assessments; potential collaboration with WHO and FAO.   Output(s)/product(s): Policy Brief, Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 14.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Target 5. |
| 4 | Medium | **Review of the effectiveness of wetland compensation and mitigation in addressing wetland loss and degradation** | * Collating and analysing experiences and best practices relating to wetland compensation and mitigation from different parts of the world and different policy frameworks/jurisdictions. Develop this in further response to the requirements set out in Resolution XI.9 to avoid and minimise wetland loss and degradation.   Output(s)/product(s): Technical Report or Briefing Note | Resolution [XI.9](https://www.ramsar.org/sites/default/files/documents/library/cop11-res09-e.pdf)  Standing Committee 57 [Doc.8](https://www.ramsar.org/sites/default/files/documents/library/sc57_8_urgent_challenges_e.pdf) – urgent challenges.  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 1, Target 2.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Target 2, 14. |
| 4 | Medium | **Industry and wetlands: guidelines to conserve and enhance wetlands and their services for use by the energy, mining infrastructure, manufacturing and processing sectors.** | * Prepare guidance that collates technical information on the wise use of wetlands, tailored for specific sectors, building on the draft reports on extractive industries and on the energy sector from the previous STRP cycle.   Output(s)/product(s): Briefing Note or Policy Brief | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 9.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 2, 7. |
| **TWA 5: Cross cutting issues, supporting functions, and synergies with other MEAs.** | | | | |
| 5 | High | **Financial costs of wetland loss and degradation, and investment required to maintain and restore wetlands** | * Synthesise information on the known financial costs to society incurred from the loss of wetlands and their ecosystems services, including consideration of ‘future loss’ based on available projections. * Identify the scale of financing required (at various scales) to achieve the conservation, restoration and wise use of wetlands, and concurrently to achieve the related elements of the goals and targets of the post-2020 Global Biodiversity Framework, the UNFCCC and other relevant international commitments. * Provide recommendations on investment opportunities and mechanisms for wetland management and restoration, including those which are nature-based solutions. * Contribution towards the UN Decade on Restoration.   Output(s)/product(s): Technical Report and/or Policy Brief; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Targets 17 & 19.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 2, 18, 19. |
| 5 | High | **Post-2020 Global Biodiversity Framework and SDGs** | * Synthesis of urgent actions needed to meet the Convention on Biological Diversity’s (CBD) post-2020 Global Biodiversity Framework (GBF) conservation targets from a wetlands perspective/focus, and the contribution that the effective management and wise use of wetlands can help support Contracting Parties to meet specific goals and targets. * Identify wetland-focussed reporting mechanisms (through Ramsar) which can feed into the reporting in / tracking progress of implementation against the post-2020 GBF goals and targets. * Contribute STRP advice into the revision of the 4th Ramsar [[Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf)](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) 2016 – 2024 following adoption of the post-2020 GBF under the CBD.   Output(s)/product(s): Cross cutting support/collaboration, Briefing Note | Resolution [XIII.5](https://ramsar.org/sites/default/files/documents/library/xiii.5_sp4_review_e.pdf).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Target 18.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Potentially all targets. |
| 5 | High | **Global Wetland Outlook** | * Develop a planning approach to facilitate the delivery of future GWOs, including methodological considerations, timeframes, financial requirements and sources etc., building on experiences from preparation of the first GWO published in 2018 and the Special Edition prepared under the 2019-21 work plan, as well as other relevant global assessments. * Prepare for the next GWO. Consider a thematically focused GWO addressing a topic of high relevance to the implementation of the Convention, to be published in 2024.   Output(s)/product(s): Briefing Note; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 4, Targets 14 & 18. |
| 5 | High | **Review of policy and legal frameworks for wetland conservation and wise use: scoping study** | * Global trends indicate that policy and legal frameworks are not resulting in effective wetland conservation, restoration and use. * Prepare a detailed scope outlining a suggested approach of how to undertake such a review, based also on wider inputs from Contracting Parties, for action in the subsequent triennium.   Output(s)/product(s): Briefing Note, Cross cutting support/collaboration | Standing Committee 57 [Doc.8](https://www.ramsar.org/sites/default/files/documents/library/sc57_8_urgent_challenges_e.pdf) – urgent challenges.  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 11.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 3, 5. 7. |
| 5 | Medium | **Indigenous and local knowledge systems to support wetland wise use** | * Synthesis of case studies providing examples of the contribution of indigenous and local knowledge, and values systems, to the conservation and wise use of wetlands, and develop guidance to enhance involvement of indigenous and local communities in wetland management. * Where possible, leverage the body of work in the context of other MEA frameworks. Relevant to IPBES work programme relating to “Enhanced recognition of and work with indigenous and local knowledge systems”.   Output(s)/product(s): Technical Report (including guidelines) or Briefing Note, Cross cutting support/collaboration | Resolution [XIII.8](https://www.ramsar.org/sites/default/files/documents/library/xiii.8_strp_priorities_20192021_e.pdf).  [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 10.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 20, 21. |
| 5 | Medium | **Review of effectiveness of Ramsar Convention in conserving waterbirds** | Review the effectiveness of past and current initiatives by Ramsar for the conservation of waterbirds, working with flyway initiatives (AEWA, EAAFP, WHSRN and others). This will document, using case studies, the impact of the designation of Ramsar Site networks at a flyway-scale, the role of trans-boundary Ramsar Sites and twinning, and policies for wise-use targeted at waterbirds and their habitats. It will identify the scope for improvements in conservation delivery, in particular the adequacy of representation of wetland types along flyways, and the use of wise use policies to address drivers of change in waterbirds.  Output(s)/product(s): Policy Brief; Cross cutting support/collaboration | [Strategic Plan](https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf) Goal 3, Target 11.  [CBD post-2020 GBF first draft](https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf) Targets 1, 2, 3, 4, 5. |

1. The four STRP highest priority tasks (as designated by SC57) are: (1) Global Wetland Outlook (GWO): Special edition for the 50th anniversary of the Convention on Wetlands; (2) Task 1.2 (Wetlands and sustainable agriculture): Compiling and reviewing positive and negative impacts of agricultural practises on wetlands including extent of changes in area from agricultural land conversion since 1970s, and how adverse impacts can be avoided in the future; (3) Task 2.2 (Peatland re-wetting/ restoration): Elaborating on practical experiences of restoration methods for tropical peatlands; (4) Task 5.1 (Wetlands and blue carbon): Desktop study of coastal blue carbon ecosystems in Ramsar Sites (consistent with relevant IPCC guidelines). [↑](#footnote-ref-2)
2. The text from the tasks in the Resolution is as follows:   
   b) reviewing and analysing regional modelling of carbon stocks, greenhouse gas emissions and carbon dynamics in coastal blue-carbon ecosystems and providing information, as appropriate, to the IPCC to inform future updates to the Wetlands Supplement;   
   c) developing guidance for prioritizing coastal blue-carbon ecosystems for conservation and restoration that includes inter alia: climate change mitigation and adaptation benefits; the range of other potential ecosystem benefits and services; and assessment of costs relative to benefits; and   
   d) reviewing and, as appropriate, updating existing guidance on the preparation of plans for conservation, restoration and sustainable management of coastal blue-carbon ecosystems at Ramsar Sites where such a review could include development of case studies with regional experts to illustrate how guidance has been applied. [↑](#footnote-ref-3)
3. Matthews, G.V.T. (1993). The Ramsar Convention on wetlands: its history and development*.* Ramsar Convention Bureau, Switzerland. <https://www.ramsar.org/sites/default/files/documents/pdf/lib/Matthews-history.pdf>. [↑](#footnote-ref-4)
4. Atkinson-Willes, G.L., Scott, D.A. & Prater, A.J. (1982). Criteria for selecting wetlands of international importance. In Proceedings of the conference on the conservation of wetlands of international importance especially as waterfowl habitat. Cagliari, Italy, 24-29 November 1980, pp. 1017-1042. Supplemento alle Ricerche di Biologia della Selvaggina, 81 (1). [↑](#footnote-ref-5)
5. Rose, P.M. & Scott, D.A. (1994). *Waterfowl population estimates.* IWRB Special Publication 29. IWRB. Slimbridge, U.K. [↑](#footnote-ref-6)
6. Ramsar Convention. (1993). *Resolution 5.9:* *Application of the Ramsar Criteria for identifying wetlands of international importance*. 5th Meeting of the Conference of the Contracting Parties, Kushiro, Japan, 9-16 June 1993. <https://www.ramsar.org/sites/default/files/documents/library/resolution_5.9.pdf>. [↑](#footnote-ref-7)
7. Rose, P. & Stroud, D.A. (1994). Estimating international waterfowl populations: current activity and future directions. *Wader Study Group Bulletin* 73, 19-26. https://sora.unm.edu/sites/default/files/journals/iwsgb/n073/p00019-p00026.pdf [↑](#footnote-ref-8)
8. Stroud, D.A. (1996). Estimating international waterbird populations: use of Criterion 3(c). Pp. 37-44. In *Proceedings of the 6th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands. Brisbane, Australia, 19-27 March 1996. Technical Sessions E and F.* Ramsar Bureau, Switzerland. [↑](#footnote-ref-9)
9. Ramsar Convention. (1996). *Resolution VI.4: Adoption of population estimates for operation of the specific criteria based on waterfowl*. Proceedings of the 6th Meeting of the Conference of the Contracting Parties, Brisbane, Australia, 19-27 March 1996. <https://www.ramsar.org/sites/default/files/documents/pdf/res/key_res_vi.04e.pdf>. [↑](#footnote-ref-10)
10. Ramsar Convention. (2002). *Resolution VIII.38: Waterbird population estimates and the identification and designation of Wetlands of International Importance*. 8th Meeting of the Conference of the Contracting Parties to the Convention on Wetlands (Ramsar, Iran, 1971) Valencia, Spain, 18-26 November 2002. [https://www.ramsar.org/sites/default/files/documents/pdf/res/key\_res\_viii\_38\_e.pdf](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ramsar.org%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2Fpdf%2Fres%2Fkey_res_viii_38_e.pdf&data=02%7C01%7C%7C2c60092ede794735d2a108d7515a86a0%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637067321555985127&sdata=avHKeFJFrVrvXdYYTESuaqMl6a%2FgTTXIj%2BupS5DYSuI%3D&reserved=0). [↑](#footnote-ref-11)
11. The issues were outlined by Rose & Stroud (1994). [↑](#footnote-ref-12)
12. Ramsar Convention. (2012). Resolution XI.8, Annex 2: *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on Wetlands (Ramsar, Iran, 1971) – 2012 revision*. 11th Meeting of the Conference of the Parties to the Convention on Wetlands (Ramsar, Iran, 1971), Bucharest, Romania, 6-13 July 2012. <https://www.ramsar.org/document/resolution-xi8-annex-2-rev-cop13-strategic-framework-and-guidelines-for-the-future>. [↑](#footnote-ref-13)
13. *e.g.* [https://www.unep-aewa.org/sites/default/files/document/aewa\_mop7\_14\_CSR7\_with\_annexes\_en\_corr1\_0.pdf](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.unep-aewa.org%2Fsites%2Fdefault%2Ffiles%2Fdocument%2Faewa_mop7_14_CSR7_with_annexes_en_corr1_0.pdf&data=02%7C01%7C%7C2c60092ede794735d2a108d7515a86a0%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637067321555995133&sdata=WafnbnM8I63c3JZG05RpP7BmDwNaQi72cA5TnEATIxo%3D&reserved=0) [↑](#footnote-ref-14)