Meeting of an expert group on indicators for the Ramsar Strategic Plan (2016-2024)
18th September 2015
Centre International de Conférences, Genève (CICG)

Report of the Meeting

Introduction

1. COP12 Resolution XII.2, *The Ramsar Strategic Plan 2016-2024*, requested the Ramsar Secretariat to:

   > [C]onvene, initially, a small, regionally representative expert group back-to-back with the meeting of the CBD's Ad Hoc Technical Expert Group on Indicators (AHTEG)[for the Strategic Plan for Biodiversity (2011-2020)] in Switzerland …, including interested Contracting Parties, expert support from the STRP [Scientific and Technical Review Panel], IOPs [International Organization Partners] and other relevant MEAs [Multilateral Environmental Agreements] and international processes to develop options, for additional indicators for the Strategic Plan having regard in particular to:
   >
   > - previous Resolutions of the Conference of the Parties related to indicators, including Resolution IX.1;
   > - the need for indicators to address outcomes and effectiveness and to be capable of practical implementation; and
   > - the need to minimise cost of indicator implementation by using existing data and information flows, including through national reporting and reporting on Ramsar Sites.

2. The Resolution also requested the expert group to report on possible indicators to the Standing Committee which will then refine or develop them and present them to COP13 for approval.

3. Accordingly, on 18 September 2015, the Ramsar Secretariat convened a small group of experts, including regional participants of the AHTEG meeting, representatives of Contracting Parties' Missions to the UN in Geneva and UN-related organizations, as well as of other MEAs, for a total of 28 participants, including Secretariat staff. See Annex II for the full list of participants.

4. Participants discussed the revision and/or possible development of potential indicators for the 4th Ramsar Strategic Plan (SP4), where expressly indicated in the text of the Strategic Plan, to report to the Standing Committee. The expert inputs collected during the meeting for consideration of the Standing Committee are summarized below (see Annex I).

Report

I. Welcome and opening remarks

5. **Ramsar Secretary General** Mr Christopher Briggs welcomed participants, thanking them for their presence and explaining the rationale for the meeting (as set forth in Resolution XII.2). He added that the objective of the meeting was to collect inputs for the development of possible indicators for the Fourth Ramsar Strategic Plan (SP4), where indicated in the Plan. He noted that such indicators would be considered by Contracting Parties at COP13, based on existing work and ongoing international processes. He acknowledged the contributions and work of STRP National Focal Point and STRP Invited Expert (2013-2015) David Stroud.

II. Presentations

***Overview of the Ramsar Convention and its Fourth Strategic Plan (2016-2024)*:**

6. **The Secretary General** provided an introduction to wetlands and the Convention, including the Convention's mission; the importance of wetlands and its multiple benefits and services, as well as trends in wetland loss and degradation. He noted the importance of the development of the SP4 and the aim to align it with the Sustainable Development Goals (SDGs). He highlighted the importance of having a clear goal when developing a SP and provided a brief overview of the SP4.

Outcomes of the CBD's Ad Hoc Technical Expert Group (AHTEG) on Indicators Meeting for the Strategic Plan for Biodiversity (2011-2020) and their implications for the Ramsar Strategic Plan

7. **Mr Robert Hoft (CBD Secretariat)** provided a summary of the outcomes of the AHTEG meeting and their relevance to the Strategic Plan of the Ramsar Convention. He summarized the process for developing the Strategic Plan for Biodiversity, the Aichi targets and their indicators and explained that the rationale for the 2015 AHTEG meeting was to refine some of the existing indicators (as there was difficulty in measuring some of them), and to fill out gaps in the coverage of global indicators linking them to national monitoring. In terms of process, the AHTEG looked at national indicators, national level reporting, and overlaps with the SDGs and linkages with other processes, as well as whether indicators can provide data for global use and their potential for disaggregation. The AHTEG's recommendations will go to SBSTTA19 (November 2015). The AHTEG will recommend a peer review by the scientific community of the indicators proposed at the meeting.

Sustainable Development Goals (SDGs) Target 6.6 and Ramsar's contribution to the monitoring of the proposed indicator

8. **Mr Matt Walpole (UNEP-WCMC)** provided an introduction to the Wetland Extent Trend (WET) index, which is a method to measure the extent of global wetland loss using the Living Planet Index method, using incomplete data sets), the process for its development and its relevance in the SDGs context. He noted that the WET Index provides an area-based measure and it does not measure the change in wetland quality or functions. He further noted the index is an initial attempt to fill out gaps using existing information. Thus, there are regional gaps and it is expected that the index will be enhanced with new data, as it emerges, and with remote sensing. He added that the index had been proposed as part of the SDG indicator under Target 6.6, which would be subject to approval by the UN General Assembly. He concluded by explaining that the index is being peer reviewed and that eventually gaps will need to be filled out, which would require additional resources.

9. **Mr Jorge Velásquez (Colombia):** asked about the gaps in the Neotropics and whether there were any ideas to fill out the gaps. Matt Walpole explained that the Secretariat was looking at possible partnerships in the region, and he invited those interested to contribute, explaining that the data for the index is collected at continent level and applied at the country scale.

10. **Mr Lifeng Li (WWF-International):** asked about the total area covered by the index and whether there were thoughts to publish the index in the Living Planet Index (LPI) 2016. He also asked whether there were hotspots of loss and degradation in regions of the world. Matt explained that the total area is less than the size of Mexico and that here are hotspots of wetland loss, but

because both natural and manmade wetlands were considered, manmade trends may mask the data.

11. **Mr Xu Haigen (China):** mentioned that surveys in China could prove useful to enhance the data sets. He asked whether the index considered transformation of wetlands into other uses (types). Matt explained that the WET data base contains information about China and explained that many studies did not distinguish wetland transformation and that this is a gap that needs to be filled out.

12. **The Secretary General** explained that Ramsar is collaborating with ESA on the GlobWetland Africa project as another aspect of the work on SDG target 6.6, as well as with JAXA's Global Mangrove Watch. He expressed deep appreciation to WCMC and Tour Du Valat for their contributions to the development and testing of the WET Index.

UNDP and the SDGs

13. **Ms Jamison Ervin (UNDP)** provided an overview of UNDP's role in the SDGs process. She mentioned that UNDP does considerable work relating to the Global Water Goal, SDG Goal 6 (i.e. UNDP water and governance program; international water programme—transboundary lakes and aquifers and global issues such as ballast and pollution). With regards to SDG Goal 15, she explained that there are over 500 projects across 132 countries working on biodiversity and natural resource management issues. Additionally, she explained that there are a number of programmes at the global level including the NBSAP forum, BIOFIN and BES-NET, among others.

III. Methodology

14. **The Secretary General** explained that the expected outcomes for this meeting were to collect inputs on a process for refining indicators to report back to the Ramsar Standing Committee, who will then develop a process and timeline for developing the indicators for consideration of Contracting Parties at COP13.

15. In response to questions by **Mr James Williams (UK)**, **the Secretary General** explained that looking at indicators that could involve other players would be ideal, as well as to have SMART indicators. He further added that the Convention had a starting point with national-level indicators (from national reports), such as the National Wetlands Inventories, stressing the importance of having indicators with practical application and being mindful of the time, data and resources limitations.

16. **Mr Dave Pritchard (CMS Secretariat)** provided an overview of the process for developing the "Ecological-outcome oriented indicators" adopted by Ramsar Contracting Parties (COP9) (Resolution IX. 1, Annex D.

IV. Working sessions

17. During this session participants broke out into four working groups corresponding to the four goals of the SP4, focussing on the options (under each Target) for refinement/development of new indicators, as follows:

Working Groups	Participants
Group 1 (Goal 1- Loss & Degradation): 4 targets, 2 targets with options for new indicators (2 and 4)	Matt Walpole, Christian Perennou, Tobias Salathé, Robert Hoft, Umai Basilus, Haigen Xu, and Lifeng Li
Group 2 (Goal 2- Ramsar Sites): 3 targets, 2 with	Stuart Butchart, Dave Pritchard, Lew Young, Tessema

options for new indicators (targets: 5 and 7)	Lemma Misikire, James Williams, Jorge Velásquez, Shirin Karryeva, and Onial Malvika
Group 3 (Goal 3- Wise Use): 6 targets, 4 targets with options for new indicators (targets:9, 10, 12 and 13)	Stefano Barchiesi, Chris Perceval, Jamie Ervin, Solongo Khurelbaatar, Mohamed Ali Ben Temmesek and Slavisa Popovic
Group 4 (Goal 4- Implementation): 6 targets, 3 targets with options for new indicators (targets: 14, 16 and 17)	Anna Chenery, Carolina Padró, Christopher Briggs and Marcela Bonells

18. The inputs collected during the session are reflected in Annex I.

V. Reporting Back

19. During this session groups reported their feedback. General comments are included below. For inputs specific to targets and indicators see Annex I.

20. It was mentioned throughout the meeting that some of the indicators should be reworded to be able to obtain information more effectively. Thus, instead of asking for yes/no answers, some of these indicators could be rephrased to ask for trends or responses using a graded response, or even a scoring system of implementation that could permit building an index over time. Additionally, it was mentioned that given that each of the targets have several different ideas wrapped up into them, it would be worth splitting them up and placing these into distinct sub-elements per target. Then each indicator would speak to each sub-target.

21. **The Secretary General** outlined the next steps in the process, explaining that a report of the meeting, including participants' inputs would be circulated to all participants. Inputs would be then provided to the Standing Committee in the form of a report. The Standing Committee would then develop a process and timeline for further development of the indicators and present it to the Conference of the Contracting Parties at its 13th Meeting in 2018.

22. **James Williams (UK)** explained that there was a rich exchange of ideas and a strong sense of practicality moving forward in the AHTEG and Ramsar meetings. He noted, however, that there is an issue of what could be developed vs what can be available at the moment and that there is value in pushing forward in light of current processes and explore how to have broader trends not just limited to parties. He added that this was an opportunity to ask smarter questions in National Reports' formats (and seek to link then to the SDGs, CBD processes) and urged joining efforts.

23. **Stuart Butchart (BirdLife International)** commented that it would be good to identify which components of the Strategic Plan will not be able to be reported on unless other indicators are further developed. He suggested that if the outcomes of the meeting would be shared with Parties, the group could send a message to Parties to prioritize on the ground monitoring of ecological character of Ramsar Sites.

24. **Dave Pritchard (CMS Secretariat)** noted that there would be a meeting on harmonizing indicators for the CMS strategic plan and asked whether it would be possible to circulate and share with CMS the information collected during the Ramsar meeting, which was agreed upon once the document became public.

25. **The Secretary General** thanked participants for their contributions and support, as well as Secretariat Staff and the Centre International de Conférences, Genève (CICG) for facilitating the organization and running of the meeting.

Annex I

Options for possible indicators for the Ramsar Strategic Plan 2016-2024 with Goals, Targets and relevant baselines Working session inputs (Agenda Item 6)

24. Note: The Ramsar Secretariat prepared the table below based on the contribution of David Stroud (DS), STRP Invited Expert 2013-2015. Feedback collected during the meeting is included in this table.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
Goal 1: Addressing the drivers of wetland loss and degradation						
1	Wetland benefits are featured in national/ local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level	**Baseline** 19% of Parties have made assessment of ecosystem services of Ramsar Sites. (National Reports to COP12[1]). 70% of Parties have included wetland issues within national strategies and planning processes such as water resource management and water efficiency plans. (National Reports to COP12). 47% of Contracting Parties have included wetland issues within National Policies or measures on agriculture. (National Reports to COP12). **Indicators** % of Parties that have made assessment of ecosystem services of Ramsar Sites. (Data source: National Reports).	**2**	**15.**9 by 2020, integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts **17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Sectoral information not addressed by existing indicators but anyway inherently impossible to collect/collate even at national level (DS). **STRP Ecological Outcome Indicator L** – Wise use policy (in fact this has not been developed) Further options and sources of information needed	**General suggestions and comments:** The group suggested making the indicator on ecosystem services assessment broader to refer to all wetlands, not only Ramsar Sites or to provide graduated response options (i.e. only few sites, most sites, all sites). Regarding the indicator on inclusion of wetland issues in National Policies or agricultural measures, the following comments/suggestions were made: • Electronic reporting could provide an opportunity to tick boxes for different sectors (i.e. water, energy, mining, etc.). • The ticking should be "no, planned, in prep, yes" making specific reference to what achievements are/were sought (i.e. "explain How you are doing it (including references to other MEAs)". It is more important and helpful to report on "outcomes" rather than only on "processes". • Target 1 is about process, while Target 13 refers to outcomes related to these sectoral issues. Narrative text boxes are needed for each sector. Should show that sectoral drivers are recognized and are addressed through inter-

[1] Information based on 131 National Reports received to COP 12.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		% of Parties that have included wetland issues within national strategies and planning processes such as water resource management and water efficiency plans. (Data source: National Reports). % of Parties that have included wetland issues within National Policies or measures on agriculture. (Data source: National Reports).				sectoral policies (probably could be better reported under Target 13). It was emphasized that a superficial Y/N answer may be quite difficult to accomplish at the national level (in terms of the level of detail needed). See the Millennium Ecosystem Assessment's main drivers of biodiversity loss and AHTEG discussions, as well as AICHI Targets in section B, which may be a way to address the target as a whole in a more generic level rather than for each of the sectors.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
2	Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone.	**Baseline** 70% of Parties have included wetland issues into national strategies and planning processes such as water resource management and water efficiency plans. (National Reports to COP12). **Indicators** % of Parties that have included wetland issues into national strategies and in the planning processes such as for water resource management and water efficiency plans. (Data source: National Reports).	**7, 8**	**6.5 By** 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate. **15.1** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Possible link to whatever SDG indicator is developed? **SOWWS:** Possible links to TEEB? **SOWWS:** Possible direct link to outcome of the Transboundary Waters Assessment Programme (TWAP) River Basins Assessment **STRP Ecological Outcome Indicator C** – Water-related Indicator(s). Trends in water quality (Trends in dissolved nitrate or nitrogen) concentration and in Biological Oxygen Demand (BOD). Status of Current data from UNEP GEMS Water Programme other regional assessments. **STRP Ecological Outcome Indicator J** – The economic costs of unwanted floods and droughts (has not been developed). Other sources available: WMO. **STRP Ecological Outcome Indicator R** – Plans affecting wetlands that are positively modified in the light of an impact assessment (Initial proposal, has not been developed).	**General suggestions and comments:** Finding the indicator too general, it was proposed to consider refining it with the following language: Are ecological flows part of IWRM policies? This would be measured through wetland ecosystem functions and services monitoring and quantifying the water requirements for each wetland ecosystem. The indicators of the Water Footprint Network, Water Quality Index for Biodiversity (UN-GEMS Water programme) or transboundary waters assessment programme, measuring water stress, could be helpful. Ramsar could compile data on these programmes to produce consolidated monitoring data and elaborate an index to measure water requirements for individual wetland ecosystems to assess (quantitatively) the water needs for each wetland ecosystem and monitor their actual water quantity available over time.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
					STRP Ecological Outcomes Indicator S. The proportion of current wetland uses that are considered sustainable or "wise" use (Initial proposal has not been developed)	
		Possible further indicators that may be developed {% of Ramsar sites which have improved the sustainability of water use in the context of ecosystem requirements}			It will be realistically impossible to develop a responsive assessment across the Ramsar List (to express as a proportion of the whole). Maybe the best way to go is to seek the identification of those individual sites where there has been improved sustainability of water use, and express this as a total. But would need baseline. (DS) Possible option use Mexican experience to develop priority case studies under Ramsar Resolution XII. 12 Call to action to ensure and protect the water requirements of wetlands for the present and the future. Other options further sources of information.	**Suggestions and comments:** The group suggested considering a quality assessment of the efficiency and effectiveness of the water policy as a possible indicator, which should be linked with SDG Target 6.4, 6.5 and 6.6. It was noted that a number of Parties have already reported on such policies applied to specific sites but that the questions were how many Parties have conducted a specific assessment? How many Parties have included water requirements into national policies? It was mentioned that water requirements should be a focus under GEF's International Waters programme (See Resolution XII.12). **Suggested language:** • % of CPs conducted water assessment • How many CPs included this in plans/policies There is an indicator produced for the BIP on Water Quality, which may be helpful.
3	The public and private sectors have increased their efforts to apply guidelines and good	**Baselines** 50% of Parties report actions taken to implement incentive measures that encourage the conservation and wise use of wetlands. (National Reports to COP12).	**3, 4, 7, 8**	**6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	Possible link to whatever SDG indicator is developed? **Note:** New national Report question to define.	**General suggestions and comments:** It was mentioned that the current indicators are largely focussed at the national level. A suggestion was made to consider looking into Carbon Disclosure Projects, where companies have to release information on their

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
	practices for the wise use of water and wetlands.	37% of Parties report actions taken to remove perverse incentive measures that discourage conservation and wise use of wetlands. (National Reports to COP12). 60% of Parties report private sector undertaking activities for the conservation, wise use and management of wetlands in general. (National Reports to COP12). % of Parties have national Ramsar Committees that include both governmental and non-governmental representation. **(Data source: new question for National Reports).** **Indicators** % of Parties reporting actions taken to implement incentive measures that encourage the conservation and wise use of wetlands. (Data source: National Reports). % of Parties reporting actions taken to remove perverse incentive measures that discourage conservation and wise use of wetlands. (Data source: National Reports). % of Parties reporting private sector undertaking activities for the conservation, wise use and management of wetlands in general. (Data source: National Reports). % of Parties having national Ramsar Committees that include both governmental and non-governmental representation. (Data source: new question		**6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. **6.5 By** 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate. **17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing	**STRP Ecological Outcome Indicator A** – The coverall conservation status of wetlands (Status and trends in ecosystem extent, ecosystem status-qualitative assessment). Some data available Sources: FAO, MODIS landcover project: mapped data for the same Reef check Lehner & Döll 2004. Regional sources include: Europe: Corine Landcover assessment: 2000, 2004 North America: Dahl 1990, 2000 Caribbean Reefs: Gardner et al. 2003. Other options, sources of information. **STRP Ecological Outcome Indicator R** – Plans affecting wetlands that are positively modified in the light of an impact assessment (Fact sheets have not been developed). **STRP Ecological Outcomes Indicator S. The proportion of current wetland uses that are considered sustainable or "wise" use** (Initial proposal fact sheets have not been developed).	respective footprints. Additionally, it was proposed: • To consider reporting on concrete actions implemented to remove perverse incentive measures, on improved industrial standards applied. • To include "wise use" into sectoral policies/guidelines (e.g. for mining, finance, etc.). • That the Ramsar Secretariat keeps track of (voluntary) global guidelines, and inform Parties to report on how they apply them (i.e. assess the adherence of Parties to such protocols, for example the Chinese hydropower protocol).

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		for National Reports).		strategies of partnerships	Other possible indicators and sources of information.	
4	Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.	**Baselines** 36% of Parties have established national policies or guidelines on invasive species control and management. (National Reports to COP12). 20% of Parties have a national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands. (National Reports to COP12). **Indicators** % of Parties that have established or reviewed national policies or guidelines on invasive wetland species control and management. (Data source: National Reports). % of Parties having a national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands. (Data source: National Reports).	**9**	**15.8** By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	Possible link to whatever SDG indicator is developed?	**General suggestions and comments:** The group mentioned that CBD has a target to prevent new invasions, and indicator already in use for the CBD, which would also apply to wetlands, could be used. It was commented that the current indicators are indicators of efforts, while Target 4 is more results-oriented.
		Possible further indicators that may be developed {Number of invasive species that are being controlled through management actions}			Simple absolute count of species subject to control recognising that indicators in the form of "% of non-native species" require a complete national inventory – which no-where exists (DS) Further options, sources of information, comments	**Suggestions and comments:** The group suggested that the indicator could be about Invasive Alien Species (IAS) that have been eradicated and that CBD has an indicator on frequency of introduction pathways of past invasive species (to identify the major pathways, prior to elaborating prevention measures), which could be considered, as well as what is the detail of measurement. IUCN Invasive Species Specialist group may have developed already useful indicators. **Suggested language:** The group suggested "adoption of national policies addressing

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
						IAS", as an indicator for the management response. For Parties that respond positively to having a national policy, create an indicator that shows progress with the implementation of national policies (according to a standard scale, of e.g. 1-5), number of Invasive Alien Species addressed. Such a general scale could also be used to indicate the degree of implementation of other targets. It was noted that three quarters of AHTEG proposed indicators are relevant to IAS, including: • Trends in number of IAS introduction events • Trend sin adoption of national legislation for prevention of introduction of IAS • Red List for wetland species (impacts of IAS) [this shows trends driven only by IAS impacts and excludes other drivers] WCMC is working with IUCN Invasive Species Specialist group looking to develop an indicator of pathways and it is worth to see if it could be disaggregated for wetlands.
		{Effectiveness of wetland invasive alien species control programmes}			Could form the basis of new national report question? But would need to be in the form of categorical information e.g. no. of eradications / national control programmes / local control programmes etc. But realistically as much non-native control measures are implemented *locally*, it is hard to see how any *national* government would have this information. So maybe not much mileage here. (DS) Further options, sources of information.	There is an indicator in the UK that looks at a tiered approached for those species that are established or have become a threat. But there will continue to be an issue with non-eradicable IAS.
Goal 2: Effectively conserving and managing the Ramsar Site network						

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
5	The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management	**Baselines** At COP12, 973 Ramsar Sites have implemented management plans. (National Reports to COP12). Number of Ramsar Sites that have effective, implemented management plans**. (Data source: new National Report question).** 27% of Parties have made assessments of effective management of Ramsar sites. (National Reports to COP12). 43% (950 of Ramsar Sites have updated Ramsar Information Sheets. (Report of the Secretary General pursuant to Article 8.2 COP12 Doc.7). **Indicators** Number of Ramsar Sites that have effective, implemented management plans. (Data source: National Report). Number of Ramsar Sites that have effective, implemented management planning[2]. (Data source: new National Report question). % of Parties that have made assessments of effective management of Ramsar Sites. (Data source: National Reports). % of Ramsar Sites that have updated	**6, 11, 12**	**14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans **15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	**Note:** New national Report question to define for Number of Ramsar Sites that have effective, implemented management planning. **STRP Ecological Outcome Indicator B** – The status of the ecological character of Ramsar Sites (fact sheet was under development no further work) **STRP Ecological Outcome Indicator D** – The frequency of threats affecting Ramsar Sites (qualitative assessment, (Initial draft of the fact sheet, no further development). **STRP Ecological Outcome Indicator E. Wetland sites with successfully implemented conservation or wise use management plans** (Fact sheet was under development but no further wok).	

[2] Actions for appropriate wetland management that are not necessarily in the context of a formal management plan – Resolution VIII.14

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		Ramsar Information Sheets. (Data source: Ramsar Sites database) **Possible further indicators that may be developed** {Coverage of wetland dependent bird populations by designated Ramsar Sites. Indicator from Resolution IX.1 to be developed}.			**STRP Ecological Outcome Indicator F. Overall population trends of wetland taxa (Status and trends of waterbird biogeographic populations** (fact sheet, no further work) **STRP Ecological Outcome Indicator G. Changes in threat status of wetland taxa** (This is measured by the Red List Index for wetland-dependent species. Factsheet has been developed.) Not feasible for all waterbirds owing to lack of census information, but could be developed for a significant number of species on many of the better monitored flyways. Initial task would be to develop a means of selecting representative species, but could be done with respect to ecology/habitat use – e.g. long-distance estuarine feeder = Red Knot *Calidris canutus*; temperate grassland breeding wader *e.g.* Black-tailed Godwit *Limosa limosa*. Information from the International Waterbird Census could be matched against Ramsar Sites for the species concerned in the absence of update RIS (DS).	**Suggestions and comments:** The group suggested the following possible indicators: Ecological character: trends in extinction risk of wetland-dependent species (e.g. Red List Index for wetland-dependent species). • Proxy – affected by processes operating outside Ramsar sites. Population trends of wetland-dependent species (e.g. Living Planet Index for wetland-dependent species). • Proxy – affected by processes operating outside Ramsar sites. Trends in the condition of the ecological character of Ramsar sites. • Note that this requires monitoring of all aspects of ecological character and scoring this using some system to be defined. Trends in community intactness of wetland habitats (e.g. Biodiversity Habitat Index for wetland species/habitats). • Note that the Proposed Biodiversity Habitat Index is based on PREDICTS model but hasn't been applied to wetland species (and would be difficult to do so). Restoration: Trends in % of Ramsar sites requiring restoration where such activities are underway. • Note that not all sites require restoration Restoration: Trends in mean progress in achieving restoration activities at Ramsar sites requiring them. • Progress to be scored as: complete, majority, minority and none (i.e. distance to restoration project objectives) Management effectiveness: Trends in mean management effective score for Ramsar sites : • To be derived from PAME assessments • or area-weighted score

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
					SOWWS: Direct link to Index of change in abundance of populations in Ramsar Sites (SOWWS Figure 6 & 7) Further options, sources of information.	Trends in % of Ramsar sites with effective management (i.e. highest scores from PAME assessment) • or derived from other assessments/ For example, provide a description of different component of effective management and respondents can score yes/no • easier to communicate The group noted the need to decide arbitrary threshold for "effective" if not already defined in the PAME system. Additionally, it was mentioned that of the indicators listed above, the Red List Index and Living Planet Index are readily available for use and they don't need further development. Furthermore, R-METT could be achieved by collecting data from PAME/METT (but it would be partial). It was noted that Percentage of sites may be a more useful metric but many of the indicators are referring to percentage of Parties, which may not prove as useful.
		{Coverage of wetland dependent non-avian populations by designated Ramsar Sites. Indicator from Resolution IX.1 to be developed}.			As above, but in the absence of wide application of Criterion 9, would need to identify relevant datasets for the species concerned. Probably possible for charismatic species such as crocodilians; river dolphins; hippos etc. via relevant IUCN Specialist Groups. (DS) **SOWWS:** Direct link to Index of change in abundance of populations in Ramsar Sites (SOWWS Figure 6 & 7) **STRP Ecological Outcome Indicator F** – Overall population trends of wetland	

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
					taxa **(Status and trends of waterbird biogeographic populations (**fact sheet, no further work)	
		{% loss of IUCN Red Listed species from Ramsar Sites}			**STRP Ecological Outcome Indicator G** – Change to threat status of wetland taxa (no fact sheet has been developed no further work). **STRP Ecological Outcome Indicator P** – Coverage of threatened taxa by Ramsar Sites (Initial proposal no fact sheet has been developed no further work). Other options, sources of information	
6	There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network in particular under-represented types of wetlands including in under-represented ecoregions and transboundary sites	**Baseline** By COP12, 2,186 Ramsar Sites have been designated. (Ramsar Sites database). By COP12 2,085,000 ha of Ramsar Sites have been designated. (Ramsar Sites database). By COP12 [16] transboundary Ramsar Sites have been designated. (Ramsar Secretariat). By COP12, Ramsar Sites have been designated for the following under-represented Ramsar Sites: Karst and other subterranean hydrological systems – [110 Sites] Coral reefs – [96 Sites]	**10, 11**	**14.5** By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information **15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and,	**STRP Ecological Outcome Indicator H** – The proportion of candidate Ramsar Sites designated so far (Coverage of the wetland biodiversity resource by designated Ramsar sites). This is addressed by "% of Important Bird and Biodiversity Areas qualifying as Ramsar sites that have been designated as such". Factsheet provided. **STRP Ecological Outcome Indicator N** – The proportion of each type of wetland "effectively conserved" (Initial proposal but no further development of the fact	**General suggestions and comments:** The group suggested refining the current indicators by looking at: Trends in river fragmentation • However, it was noted that there is only baseline data and no process to produce trend. Thus, it would be a poor proxy for Ramsar site connectivity Trends in degree of hydrological connectivity between sites. But the issue would be how to measure this. Trends in the degree of fragmentation of wetland habitats • It was suggested to consider building on Biofrag index and applying it to wetlands. Ecological representativeness: Trends in proportion of candidate Ramsar Sites designated (Ramsar coverage of IBAs/KBAs identified for wetland-dependent species for which the populations exceed

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		Wet grasslands – [517 Sites] Peatlands – [564 Sites] Sea-grass beds – [249 Sites] Mangroves – [280 Sites] Temporary Pools – [729 Sites] Bivalve (shellfish) reefs – [99 Sites] (Ramsar Sites database, June 2015). **Indicators** Number of Ramsar sites that have been designated. (Data source: Ramsar Sites database). Total hectares of Ramsar sites that have been designated. (Data source: Ramsar Sites database). Number of transboundary Ramsar Sites that have been designated. (Data source: Ramsar Sites database). Number of Ramsar Sites[3] designated for the following under-represented wetland types: Karst and other subterranean hydrological systems – [XXX Sites] Coral reefs – [XXX Sites] Wet grasslands – [XXX Sites] Peatlands – [XXX Sites] Sea-grass beds – [XXX Sites] Mangroves – [XXX Sites] Temporary Pools – [XXX Sites] Bivalve (shellfish) reefs – [XXX Sites] (Data source: Ramsar Sites database).		by 2020, protect and prevent the extinction of threatened species	sheet) Further options, sources of information.	thresholds for Ramsar site designation). • Important Bird and Biodiversity Areas or Key Biodiversity Areas The group suggested disaggregating by ecoregion/wetland types. It was noted that measuring the degree of hydrological connectivity could be quite challenging and that a trends analysis could be built based on infrastructure built (i.e. dams) for which there is currently some available data. On underrepresented wetland types, a recommendation was made to consider whether to look at the percentage of existing natural coastal lines (in China many are man-made), so it would be a matter of estimating the global percentage and then averaging.
7	Sites that are at	**Baseline**	**5, 7, 11,**	**15.5** Take urgent	**SOWWS:** Indirect link to	

[3] Totals relate to number of sites containing the relevant habitat site: some sites may contain more than one habitat type and so be counted under each habitat

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
	risk of change of ecological character have threats addressed.	At COP12, [47] Ramsar Sites (2.2%) are listed on the Montreux Record. (Report of the Secretary General pursuant to Article 8.2 COP12 Doc.7). 21% of Parties have reported to the Ramsar Secretariat all cases of negative human- induced change or likely change in the ecological character of Ramsar sites pursuant to Article 3.2. (National Reports to COP12). [76] Ramsar Sites reported by Parties to the Ramsar Secretariat of negative human-induced change or likely change in the ecological character of Ramsar Sites pursuant to Article 3.2. (Data source: Report of the Secretary General pursuant to Article 8.2 COP12 Doc.7). 16% of Parties have taken actions to address the issues for which Ramsar sites have been listed on the Montreux Record. (National Reports to COP12). **Indicators** Number of Ramsar Sites removed from the Montreux Record. (Data source: Ramsar Site database). % of Parties reporting to the Ramsar Secretariat all cases of negative human-induced change or likely change in the ecological character of Ramsar Sites pursuant to Article 3.2. (Data source: National Reports). [Reword as % cases that are reported by Parties]	**12**	and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Wetland Global Extent Index **SOWWS:** Direct link to Index of change in abundance of populations in Ramsar Sites (SOWWS Figures 6 & 7) **SOWWS:** Direct link to Wetland Extent Index (UNEP-WCMC) **STRP Ecological Outcome Indicator B** – The status of the ecological character of Ramsar Sites (fact sheet was under development but no further work) **STRP Ecological Outcome Indicator D** – The frequency of threats affecting Ramsar Sites (Initial draft of the fact sheet, but no further development). Other options, sources of information	

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		Number of Ramsar Sites reported by Parties to the Ramsar Secretariat of negative human-induced change or likely change in the ecological character of Ramsar Sites pursuant to Article 3.2. (Data source: National Reports). % of Parties that have taken actions to address the issues for which Ramsar Sites have been listed on the Montreux Record. (National Reports to COP12).				
		Possible further indicators that may be developed {Indicator(s) relating to (numbers of) Ramsar Sites at risk}			Any 'at risk' indicator inherently politically sensitive. So realistically would need to be related to objective information such as potential sea-level rise or acid deposition – obtainable from other global sources. (DS)	**Suggestions and comments:** The group proposed the following indicators: Trends in number of Ramsar sites at which threats are being monitored: • Through Article 3.2 reports Trends in the degree of threat of Ramsar sites (Mean threat score for IBAs that are Ramsar Sites): • Based on standardised IBA monitoring methods that score all threats for timing, scope and severity, and repeated over time Ecological character Trends in extinction risk of wetland-dependent species (e.g. Red List Index for wetland-dependent species). • Proxy – affected by processes operating outside Ramsar sites. Population trends of wetland-dependent species (e.g. Living Planet Index for wetland-dependent species). • Proxy – affected by processes operating outside Ramsar sites. Trends in the condition of the ecological character of Ramsar Sites

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
						• Requires monitoring of all aspects of ecological character and scoring this using some system to be defined. Trends in community intactness of wetland habitats (e.g. Biodiversity Habitat Index for wetland species/habitats) • Proposed Biodiversity Habitat Index is based on PREDICTS model but hasn't been applied to wetland spp (and would be difficult to do so) (See Indicators of management effectiveness, which are relevant)
Goal 3: Wisely using all wetlands						
8	National wetland inventories have been initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands.	**Baselines** At COP12, 47% of Parties have a complete national wetlands inventory. (National Reports to COP12). At COP13, [XX] % of Parties have updated their national inventories in the last decade. **(New question for National Reports).** **Indicators** % of Parties that have complete national wetland inventories. (Data source: National Reports). % of Parties that have updated their national inventories in the last decade. (Data source: new question for National Reports).	**12, 14, 18, 19**	**15.**1 by 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	**Note:** New national Report question to define.	**General suggestions and comments:** The group proposed refining the indicators' language with the following text: • Trends in the number of Parties that have completed or submitted updated National Wetlands Inventories of wetlands (this has consistency with AHTEC). • Trends in the number of Parties that have included National Wetlands Inventories in national biodiversity, sectoral, sustainable development, and development plans. • Trends in the number of Parties that have included National Wetlands Inventories in their Ramsar CEPA plans and / or CBD Clearing House Mechanism.
9	The wise use of wetlands is strengthened	**Baseline** 55% of Parties have adopted wetland	**4, 6, 7**	**12.2** By 2030, achieve the sustainable	Possible link to whatever SDG (sub) indicator(s) developed? (refer to List of the SDG	

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
	through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone.	policies or equivalent instruments that promote the wise use of their wetlands. (National Reports to COP12). 71% of Parties consider wetlands as natural water infrastructure integral to water resource management at the scale of river basin. (National Reports to COP12). **Indicators** % of Parties that have adopted wetland policies or equivalent instruments that promote the wise use of their wetlands. (Data source: National Reports). % of Parties that consider wetlands as natural water infrastructure integral to water resource management at the scale of river basin. (Data source: National Reports).		management and efficient use of natural resources **14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans **15.1** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Indicators) **SOWWS:** Direct link to Index of change in abundance of populations in Ramsar Sites (SOWWS Figure 6 & 7) **STRP Ecological Outcome Indicator S** – The proportion of current wetland uses that are considered sustainable or "wise" use (Initial proposal but no further development) **STRP Ecological Outcome Indicator E** – Wetland sites with successfully implemented conservation or wise use management plans (was under development but no further work)	
		Possible further indicators that may be developed			An assessment and reporting mechanism would be needed	**Suggestions and comments**:

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		{Involvement of stakeholders in various aspects of wetland and/or basin-scale management}			at basin scale which is not feasible. Need to unpack what is meant by "integrated resource management" – may be mileage in some aspects of that e.g. sustainability of relevant inland or coastal fisheries: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0122809 (DS) Further options, sources of information.	The group suggested the following possible indicators: Trends in the number of Parties with IWRM at the scale of a river basin or coastal zone (source IWRM data sources through UNEP DHI portal) http://iwrmdataportal.unepdhi.org/ . • % of population using well managed water services (ref. SDG 14.2) • Number of countries that are represented through transboundary River Basin Organizations (emphasizes the importance of international co-operation) (See link to the IWRM UNEP DHI website for more information about participation). Furthermore, the group proposed also looking at two additional indicators: • wetland extent index and • percentage of area of protected wetlands
10	The traditional knowledge, innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources, are documented, respected, subject to national legislation and	**Possible further indicators that may be developed** {Possible use or further development of indicator(s) linked to work currently being undertaken to develop indicator(s) for related Aichi Target 18 of the Strategic Plan for Biodiversity}.	**18**	**12.8** by 2030 ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	**Aichi #18** linkage. Note paper from UN Secretary General to UNGA on Harmony with Nature: https://sustainabledevelopment.un.org/content/documents/7935Advanced%20unedited%20version-%20Harmony%20with%20Nature.pdf Note ongoing work by IPBES on Local and Indigenous Knowledge Systems: http://www.unesco.org/new/en/natural-sciences/priority-areas/links/biodiversity/projec	**Suggestions and comments:** The following possible indicators were suggested: • Trends in the number of countries that have reported inventories of cultural practices and traditional knowledge related to wetlands within their area • Trends in the number of Ramsar Sites Management Plans that incorporate issues regarding local communities and traditional knowledge (links with AICHI Target 18)

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
	relevant international obligations and fully integrated and reflected in the implementation of the Convention with a full and effective participation of indigenous and local communities at all relevant levels.				ts/indigenous-knowledge-within-the-framework-of-ipbes/ Further options, sources of information.	
11	Wetland functions, services and benefits are widely demonstrated, documented and disseminated.	**Baseline** 19% of Parties have made assessment of ecosystem services of Ramsar sites. (National Reports to COP12). 39% of Parties have incorporated wetlands issues into poverty eradication strategies. (National Reports to COP12). 42% of Parties have implemented programmes or projects that contribute to poverty alleviation objectives or food and water security plans. (National Reports to COP12). **Indicators** % of Parties that have made assessment of ecosystem services of Ramsar Sites. (Data source: National Reports).	**1, 2, 13, 14**		Further options, sources of information.	**General suggestions and comments:** The following suggestions to refine existing indicators were made: • Identified and mapped wetlands: Trends in the number of Parties that have identified and mapped wetlands for wetland ecosystem services. • National wealth accounting: Trends in the number of Parties that have carried out a National Wealth Accounting of wetland Ecosystem Services (e.g. WAVES, TEEB, etc.) and incorporated that into their UN statistical and accounting frameworks. • Ecosystem services incorporated into sectoral/development plans: Number of Parties that have incorporated results of wetland Ecosystem Services assessments into key sectoral and development plans. • Trends in Water Quality (e.g. water quality index from EEA, World Water Quality Assessment, and TWAP).

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		% of Parties that have incorporated wetlands issues into poverty eradication strategies. (Data source: National Reports). % of Parties that have implemented programmes or projects that contribute to poverty alleviation objectives or food and water security plans. (Data source: National Reports).				• Number of people to benefit from wetlands services. It was mentioned that the suggestion to incorporate ecosystem services into sectoral/development plans, it could also be a good indicator for target 1. Additionally, it was noted that reporting on water quality may be a distant proxy and that focus should be kept on process. It was suggested to make reference to acceptance of the ecosystem services concept and communication of this concept. There is also an element of dissemination in Target 8 and can look at a similar approach.
12	Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation	**Baseline** 68% of Parties have identified priority sites for restoration. (National Reports to COP12). 70% of Parties have implemented restoration or rehabilitation programmes. (National Reports to COP12). **Indicators** % of Parties that have established restoration plans [or activities] for sites. (Data source: National Reports). % of Parties that have implemented effective restoration or rehabilitation projects. (Data source: National Reports).	**14, 15**	**13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries **14.2** By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans **15.1** By 2020, ensure the	**SOWWS:** Indirect link to Wetland Global Extent Index **SOWWS:** Global Mangrove Watch may have relevant datasets at regional scale **STRP Ecological Outcome Indicator Q** – The number of wetland restoration schemes underway (Initial proposal but not proposed for further development) **STRP Ecological Outcome Indicator J** – The economic costs of unwanted floods and droughts (no fact sheet has been developed no further work) Further options, sources of information	N.B. This Target links to Aichi 15

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
				conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements		
		Possible further indicators that may be developed {Outcome-based indicators(s) related to (extent of) wetland restoration possibly including remote sensing as appropriate}.			Remote sensing would be feasible but complex, as would need to distinguish degraded wetland rewetted as a result of restoration from, say, climate change enhanced flooding, for example. Would need significant development work, but this might be stimulated via academic or other interested stakeholders?? (DS) **SOWWS:** outcomes of GlobWetland Africa? Further options, sources of information	**Suggestions and comments:** The following possible outcome-based indicators were proposed: • Trends in the number of Parties that have developed wetland inventories which include maps of degraded wetlands that can be restored, which provide critical ecosystem services (source: National Wetland Inventories / Reports; Also cross reference with target 8). • Trends in number of Parties that have developed restoration projects (source: Global Ecosystem Restoration Index for wetlands, GEO BON). • Trends in productivity of wetlands use (Source: Land-use productivity, UNCCD). • Area of wetlands that have been restored or are under restoration (Source: wetlands extent trends (WET) Index; National Reports). It was noted that restoration projects take a long time to be completed, so it is difficult to report on results because this will take time. It would be difficult to develop a restoration indicator at the national level, let alone globally.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
						It would be very important to relate the amount of area restored to the amount of candidate area available for restoration and National Reports (so indicator needs to include information on area needing or meriting restoration).
13	Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries when they affect wetlands, contributing to biodiversity conservation and human livelihoods	**Possible further indicators that may be developed** {Indicators related to the relevant sectors especially using or linking to relevant Aichi Target indicators and other relevant international processes}.	**6, 7**	**12.2** By 2030, achieve the sustainable management and efficient use of natural resources	Issue is much bigger than Ramsar – possibly piggy-back on Aichi/SDG indicators (DS). Existing fisheries indicators would be possible? (DS) **STRP Ecological Outcome Indicator L** – Wise use policy (no fact sheet has been developed nor further work) Other options, sources of information	**Suggestions and comments:** N.B. Cross references with AICHI Target 2 and with SDG Target 12.6. The group proposed considering the following: • Industry norms: Trends in the number of industry norms that exist to reduce impact on wetlands (e.g. Industry Association Standards, Environmental Impact Assessments, Certifications). • Technologies that reduce water dependence: Trends in the uptake of technologies that reduce water dependence. • Trends in the number of financial institutions that have incorporated consideration of impact on Ramsar Sites into lending and investment criteria. • Trends in the number of national approaches to achieve no net loss in wetlands. It was mentioned that a guidance note may be required to support this. It was noted that It would be difficult to come up with indicators here, but considering how sectors driving wetland loss can reduce water use/input of impacts would be helpful.
Goal 4: Enhancing implementation						
14	Scientific guidance and technical	**Baseline** In 2015, [543] 'hits' on scientific and	**19**			**General suggestions and comments:** The group recommended refining the language Should refine on

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
	methodologies at global and regional levels is developed on relevant topics and is available to policy makers and practitioners in an appropriate format and language	technical guidance pages of the Ramsar web-site. (Data source: Google Analytics Ramsar web-site, May-June, 2015). In 2015, [60] 'hits' on STRP briefing notes from the Ramsar web-site. (Data source: Google Analytics Ramsar web-site, May-June, 2015)). In 2015, [176] 'hits' of relevant Ramsar Handbooks downloaded from the Ramsar web-site (Data source: Google Analytics Ramsar web-site, May-June, 2015) In 2015, [150} practical tools and guidance documents for wetland conservation and wise use, and other key scientific documentation, which has been developed by either STRP, Parties and others, and is available via the Ramsar website. (Data source: Ramsar web-site). **Indicator** Number of 'hits' on scientific and technical guidance pages of the Ramsar web-site and associated subtotals by country and Ramsar Region of the source of these hits. (Data source: Ramsar web-site analytics). Number of STRP briefing papers downloaded from the Ramsar web-site and subtotals by country and Ramsar Region of the source of these downloads. (Data source: Ramsar web-site analytics). Number of relevant Ramsar Handbooks downloaded from the Ramsar web-site and subtotals by country and Ramsar Region of				"number of hits with number of downloads", as a more practical method than going through webpages. **Suggestions and comments:**

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		the source of these downloads. (Data source: Ramsar web-site analytics). Number of practical tools and guidance documents for wetland conservation and wise use, and other key scientific documentation, which has been developed by STRP, Parties and others, and is available via the Ramsar website. (Data source: Ramsar web-site). **Possible further indicators that may be developed** {Indicator(s) related to the use of guidance and availability in various language versions}.				The following possible indicator was proposed: • % of the guidance available in the three Convention languages The group noted that this could be measured by reporting on a yearly basis by the Secretariat through Google analytics and would have a nominal cost. There is some overlap with Aichi target 19. It was further mentioned that language is an important issue in the regions. Thus, the indicator could be expanded to include where guidance is available in languages beyond the three Ramsar Convention languages. It was also noted that most of these indicators appear to be linked to Ramsar dissemination platforms. One of the AHTEG's indicators refers to peer reviewed journals. Perhaps the same could be translated to the Ramsar context.
15	Ramsar Regional Initiatives with the active involvement and support of the Parties in each region are reinforced and developed into effective tools to assist in the full implementation of the Convention.	**Baselines** By COP12, [15] Regional Initiatives are in operation under the framework of the Ramsar Convention. (Ramsar Secretariat). 68% of Parties have been involved in the development and implementation of a Regional Initiative under the framework of the Convention. (National Reports to COP12). **Indicators** Number of Regional Initiatives successfully implemented. (Data source: National Reports). % of Parties that have been involved in the development and implementation of a				**General suggestions and comments:** It was noted that "Successfully implemented" needs to be further refined (i.e. ongoing things/past?). Both indicators are quite similar and could perhaps be merged into one. Additionally, it was suggested to consider looking beyond National Reports and at Regional Centres performance guidance, as well as including information on financial resources for implementation of regional initiatives.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		Regional Initiative under the framework of the Convention. (Data source: National Reports).				
16	Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness.	**Baselines** *World Wetland Day* 89% of Parties have branded Word Wetlands Day activities. (National Reports to COP12). In 2015 884 World Wetland Day activities or events reported to the Secretariat. (Data source: Ramsar Secretariat CEPA program) In 2015, [379} internet references (in the press) to World Wetland Day activities. (Data source: Meltwater internet analysis). In 2015, [58, 566} individual visits to the World Wetlands Day website. {Data source: worldwetlandsday.org website}. In 2015 Social media links to World Wetland Day: 16,135,974 people reached in FaceBook . (Data source: https://www.facebook.com/RamsarConventionOnWetlands) . 795 views of WWD message from Youtube channel (Data source Ramsar Youtube Channel https://www.youtube.com/user/RamsarConvention) 292,100 reached in Twitter (Data	**1, 18**	**13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	**STRP Ecological Outcome Indicator K** – Legislative amendments implemented to reflect Ramsar provisions (no fact sheet has been developed no further work) **STRP Ecological Outcome Indicator L** – Wise use policy (no fact sheet has been developed no further work) **STRP Ecological Outcome Indicator U** – The views of affected communities about Ramsar objectives (Initial proposal nut not for further development). Other options, sources of information.	**General suggestions and comments:** Regarding the World Wetlands Day indicators: the group suggested that instead of having multiple stand-alone indicators on the same subject, perhaps there could be a more generally-worded indicator with all these indicators falling under as sub-indicators. A recommendation was made to amalgamate the indicators under visitor centres.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		source https://twitter.com/RamsarConv) *CEPA programmes* 80% of Parties with a) a governmental CEPA National Focal Point and 69% of Parties with b) a non-governmental National Focal Point. (Data source: Ramsar Secretariat Data Base and National Reports to COP12). 27% of Parties have established national action plans for wetland CEPA. (National Reports to COP12). *Visitor centres* By COP12, 636 centres (visitor centres, interpretation centres, education centres) have been established in Ramsar sites. (National Reports to COP12). By COP12, 309 centres established at other wetlands. (National Reports to COP12). **Indicators** *World Wetland Day* % of Parties that have branded World Wetlands Day activities. (Data source: National Reports). Number of World Wetland Day activities or events reported to the Secretariat. (Data source: Ramsar CEPA program). Number of internet references to				

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		World Wetland Day activities. {Data source: internet analysis}. Number of internet references to the Ramsar Convention. {Data source: internet analysis}. Number of social media links to World Wetland Day. {Data source: social media analyses}. *CEPA programme* % of Parties with a) a governmental CEPA National Focal Point and b) a non-governmental National Focal Point (Data source: National Reports). % of Parties that have established national action plans for wetland CEPA. (Data source: National Reports). *Visitor centres* Number of centres (visitor centres, interpretation centres, education centres) have been established in Ramsar Sites. (Data source: National Reports). Number of centres at other wetlands. (Data source: National Reports).				
		Possible further indicators that may be developed {Indicator(s) related to whether and how wetland conservation and wise-use issues are included formal education programmes}.			Would need to be a national report question. (DS).	**Suggestions and comments:** The group suggested looking at the SDG target 12.8 and monitoring progress to possibly to as proxy. Target 12.8: looks at the % of education institutions providing education for sustainable development (UNESCO global modules,

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
						with 11 components). • Proxy: whether the modules use a biodiversity wording. May seek to collaborate with UNESCO in the development of a Ramsar module It was noted that the issue would be with the disaggregation to a wetlands level. An alternative could be adding an indicator on CEPA reporting in National Reports as follows: • Indicator at primary and secondary school level: % of schools at the national level report holding World Wetlands Day activities. To be measured through the national World Wetlands Day (WWD) report. The BIP biodiversity barometer would be helpful and biodiversity awareness could be used as proxy. This would be undertaken by Countries through their WWD reports, with the data collated and analysed by the Ramsar Secretariat. • Indicator at the university level: percentage of schools offering wetland-specific courses. This would be measured through CEPA reporting (National Reports), but it could prove quite burdensome for Parties. It was mentioned that from their wording, it is difficult to see how these indicators can measure how wise use and wetlands have been mainstreamed. If the focus is on mainstreaming, there is a need to involve other sectors (i.e. to work more with decision makers, so as to integrate wetland activities within their national plans and programmes). • The indicator could be worded: "how many national plans consider wetlands in implementation". It was suggested to put the emphasis on the communication, capacity development aspect and If this approach were to be adopted, this could be viewed as a form of mainstreaming into the education sector as one of the sectors (in Target 1). If you are

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
						seeking to mainstream wetlands into education, you could do it through course and curricula at the national level.
17	Financial and other resources for effectively implementing the fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available	**Baseline** 21% of Contracting Parties have provided additional financial support through voluntary contributions to non-core funded Convention activities. (National Reports to COP12). 40% of Contracting Parties have received funding support from development assistance agencies for national wetlands conservation and management. (National Reports to COP12). **Indicators** % of Contracting Parties that have provided additional financial support through voluntary contributions to non-core funded Convention activities. (National Reports to COP12). % of Parties that have received funding support from development assistance agencies for national wetlands conservation and management. (Data source: National Reports).	**20**	**15.a** Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems		
		Possible further indicators that may be developed {Indicator(s) related to flows of financing related to different aspects of Strategic Plan implementation}.			Discussion at COP12 highlighted the inherent impossibility of developing such a metric for developed countries owing to OECD not including 'wetland' as keyword in international economic overviews (and hence national reporting)	**Suggestions and comments:** There were no specific indicators proposed given the complexity of the issue (see David Stroud's comment). It was mentioned that looking at OECD data to find out whether "wetlands" are used in their coding of financial flows towards wetland-related projects would be useful. However, this would need crosschecking with David Stroud's comment.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
					Realistically little potential here (DS).	This information could be collated by the Secretariat. It was also suggested to consider the Secretariat's GEF analysis on amount of funds invested in wetland related projects. Additionally, SDG 15, "Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems" may be helpful. • The group suggested considering using proxies, such as: amounts mobilized towards biodiversity conservation, as proxy for wetland conservation. A percentage for wetlands could be developed It was also suggested using spatial overlays (Ramsar Sites polygon data)—if the OECD has this polygon data-- to see where projects have taken place. Even for Ramsar Sites for which don't have yet polygons this could be buffered. However, the Secretariat noted that his would be an enormous task to undertake for which there are no sufficient financial resources.
18	International cooperation is strengthened at all levels	**Baselines** *Regional Initiatives* By COP12, [15] Regional Initiatives are in operation under the framework of the Ramsar Convention. (Ramsar Secretariat). 68% of Parties have been involved in the development and implementation of a Regional Initiative under the framework of the Convention. (National Reports to COP12). *Other aspects of co-operation* 35% of Parties have established networks including twinning arrangements nationally or internationally for knowledge sharing and training for wetlands that share		**17.17** encourage and promote effective public, public-private, and civil society partnerships, building on the experience and resourcing strategies of partnerships	**Note:** New national Report question to define. **SOWWS:** Possible direct link to outcome of the Transboundary Waters Assessment Programme (TWAP) River Basins Assessment. Other options, sources of information	**General suggestions and comments:** The group suggested looking at TWAP on how to monitor the level of Parties 'cooperation—a starting point could be approaching UNEP to find out if information is available and if it could be extracted. It was noted that the Indicator on coordination mechanism seems to overlap with others.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		common features. (National Reports to COP12). 33% of Parties have effective cooperative management in place for shared wetland systems (for example in shared river basins and coastal zones). (National Reports to COP12). [XX]% of Parties have co-ordination mechanisms for the implementation of MEAs existing at a national level. **(Data source: new question for National Reports).** At COP12, 168 Parties have acceded to the Ramsar Convention. (Report of the Secretary General to COP12 on the implementation of the Convention, COP12Doc8). At COP12, [16] transboundary Ramsar Sites. (Data source: Ramsar Secretariat). **Indicators** *Regional Initiatives* Number of Regional Initiatives successfully implemented. (Data source: National Reports). % of Parties that have been involved in the development and implementation of a Regional Initiative under the framework of the Convention. (Data source: National Reports). *Other aspects of co-operation* % of Parties that have established				

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		networks including twinning arrangements nationally or internationally for knowledge sharing and training for wetlands that share common features. (Data source: National Reports). % of Parties that have effective cooperative management in place for shared wetland systems (for example in shared river basins and coastal zones). (Data source: National Reports). % of Parties where co-ordination mechanisms for the implementation of MEAs exist at a national level. (Data source: new question for National Reports). Number of Parties which have acceded to the Ramsar Convention. (Data Source: National Reports). Total number of transboundary Ramsar Sites. (Data source: Ramsar Sites Database).				
19	Capacity building for implementation of the Convention and the 4th Ramsar Strategic Plan 2016 – 2024 is enhanced.	**Baseline** 20% of Parties have made an assessment of national and local training needs for the implementation of the Convention. (National Reports to COP12). **Indicator** % of Parties that have made an assessment of national and local training needs for the implementation of the Convention.	**1, 17**	**15.a** Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems **17.9** Enhance international		**General suggestions and comments:** The group suggested refining the indicator's language with the following language: "trends in parties that are undertaking activities for capacity building for wetlands", and by removing the word "assessment" to include information on activities undertaken to improve capacity building/training needs. There may be an indicator using data from GEF projects that include a capacity building component. As a first step, it was suggested looking whether it would be possible to extract the data.

No	Targets	Indicator(s) and Baselines	Relevant Aichi Target	SDG x-references	Possible indicator development / Comments: Secretariat/David Stroud	Possible indicator development / Comments: Indicators Expert Group
		(National Reports to COP12).		support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation		The following SDGs were recommended as possible proxies (should monitor their development to see if they are adopted): • 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems. • 17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation. On SDG 15a, it may not necessarily be Parties providing this information but organizations such as UNESCO.

Annex II
List of Participants

Country/organization	Region	Title	Last name	First Name
AHTEG, regions				
Ethiopia	Africa	Mr	Misikire	Tessema Lemma
Tunisia	Africa	Mr	Ben Temessek	Mohamed Ali
Palau	Asia and Pacific	Ms	Basilius	Umai
Argentina	GRULAC	Ms	Padro,	Carolina
Turkmenistan	CEE	Ms	Karryeva	Shirin B
China	Asia and Pacific	Mr	Xu	Haigen
Serbia	CEE	Mr	Popović	Slaviša
Colombia	GRULAC	Mr	Velásquez Tibatá	Jorge
India	Asia	Ms	Onial	Malvika
Missions/CPs				
Guatemala (Mission)	LAC	Ms	Marroquín	Alicia
Guatemala (Mission)	LAC	Mr	Escobedo	Carlos
UK, Joint Nature Conservation Commission	Europe	Mr	Williams	James
IOPs				

BirdLife International		Mr	Butchart	Stuart
IUCN HQ		Mr	Barchiesi	Stefano
WWF		Mr	Li	Lifeng
MEAs/ UN agencies				
CBD Secretariat		Mr	Hoft	Robert
CMS Secretariat		Mr	Pritchard	David E.
UNDP		Ms	Ervin	Jamison
UNEP-WCMC		Ms	Anna	Chennery
Other Organizations				
Tour du Valant/Mediterranean Wetlands Observatory		Mr	Perennou	Christian
STRP				
STRP Expert/WCMC		Mr	Matt	Walpole
Ramsar Secretariat				
Secretary General		Dr	Briggs	Christopher
Scientific and Technical Support Officer		Ms	Bonells	Marcela
Administrative Assistant		Ms	Bremond	Delphine
Head of Partnerships		Mr	Perceval	Christopher

Assistant Advisor, Asia-Oceania		Ms	Khurelbaatar	Solongo
SRA Europe		Mr	Salathé	Tobias
SRA Asia-Oceania		Mr	Young	Lew