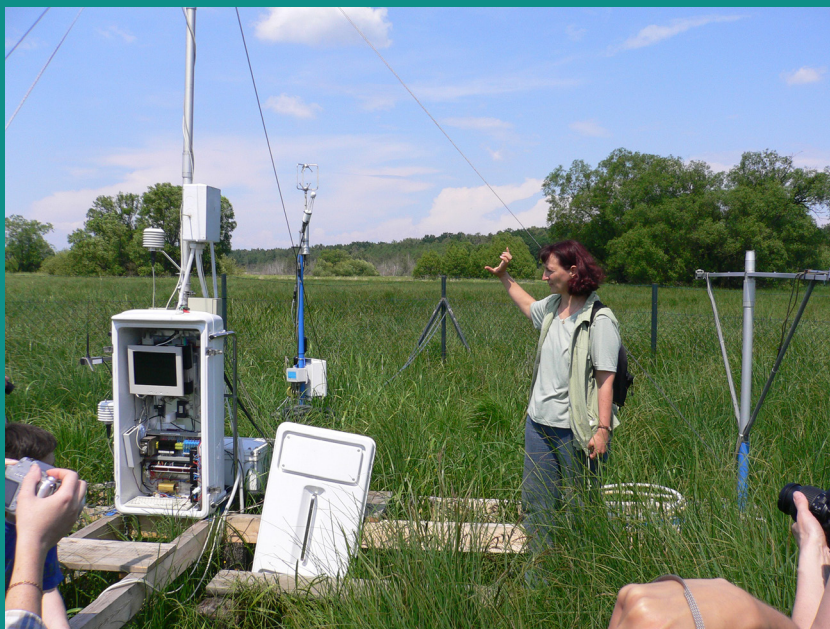


*Ramsar*  
*Handbooks*  
4<sup>th</sup> edition

# Handbook 14

## Data and information needs

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## About the Convention on Wetlands

The Convention on Wetlands (Ramsar, Iran, 1971) is an intergovernmental treaty whose mission is “the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”. As of October 2010, 160 nations have joined the Convention as Contracting Parties, and more than 1900 wetlands around the world, covering over 186 million hectares, have been designated for inclusion in the Ramsar List of Wetlands of International Importance.

## What are wetlands?

As defined by the Convention, wetlands include a wide variety of habitats such as marshes, peatlands, floodplains, rivers and lakes, and coastal areas such as saltmarshes, mangroves, and seagrass beds, but also coral reefs and other marine areas no deeper than six metres at low tide, as well as human-made wetlands such as waste-water treatment ponds and reservoirs.

## About this series of handbooks

This series has been prepared by the Secretariat of the Convention following the 7<sup>th</sup>, 8<sup>th</sup> 9<sup>th</sup>, and 10<sup>th</sup> meetings of the Conference of the Contracting Parties (COP7, COP8, COP9 and COP10) held, respectively, in San José, Costa Rica, in May 1999, Valencia, Spain, in November 2002, Kampala, Uganda, in November 2005, and Changwon, Republic of Korea, October-November 2008. The guidelines on various matters adopted by the Parties at those and earlier COPs have been prepared as a series of handbooks to assist those with an interest in, or directly involved with, implementation of the Convention at the international, regional, national, subnational or local levels. Each handbook brings together, subject by subject, the various relevant guidances adopted by Parties, supplemented by additional material from COP information papers, case studies and other relevant publications so as to illustrate key aspects of the guidelines. The handbooks are available in the three working languages of the Convention (English, French, and Spanish).

The table on the inside back cover lists the full scope of the subjects covered by this handbook series at present. Additional handbooks will be prepared to include any further guidance adopted by future meetings of the Conference of the Contracting Parties. The Ramsar Convention promotes an integrated package of actions to ensure the conservation and wise use of wetlands. In recognition of these integrated approaches, the reader will find that within each handbook there are numerous cross-references to others in the series.

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**Cover photo:** Hana Cizkova explaining hydrological monitoring equipment, Trebon Ramsar Site, Czech Republic, 2007 (Tobias Salathé / Ramsar)

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# Handbook 14

## Data and information needs

**A Framework for  
Ramsar data and  
information needs**



This 4<sup>th</sup> edition of the Ramsar Handbooks replaces the series published in 2007. It includes relevant guidance adopted by several meetings of the Conference of the Parties, in particular COP7 (1999), COP8 (2002), COP9 (2005), and COP10 (2008), as well as selected background documents presented at these COPs.

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## Acknowledgements

The work to prepare this first Framework was undertaken during 2006-2008 as a task of Working Group 1 of the Ramsar Convention Scientific & Technical Review Panel (STRP), in response to requests from Contracting Parties (Resolution IX.2). Its initial scoping was assisted by Douglas Taylor, and subsequent work was then greatly facilitated by input from the UNEP-World Conservation Monitoring Centre (UNEP-WCMC), in particular Jerry Harrison and Peter Herkenrath. They hosted and facilitated two working meetings in January and March 2008 in the UK, where they collaborated with STRP member Dave Pritchard and Nick Davidson of the Ramsar Secretariat to elaborate the Framework and the draft Resolution which was considered and adopted by the 10th meeting of the Conference of Parties to the Ramsar Convention (COP10) in November 2008 as Resolution X.14. Thanks are due to these individuals, and others who assisted them, for producing these materials.

All Resolutions of the Ramsar COPs are available from the Convention's Web site at [www.ramsar.org/resolutions](http://www.ramsar.org/resolutions). Background documents referred to in these handbooks are available at [www.ramsar.org/cop7-docs](http://www.ramsar.org/cop7-docs), [www.ramsar.org/cop8-docs](http://www.ramsar.org/cop8-docs), [www.ramsar.org/cop9-docs](http://www.ramsar.org/cop9-docs), and [www.ramsar.org/cop10-docs](http://www.ramsar.org/cop10-docs).



Monitoring and data collection, Glaciar Vinciguerra Ramsar Site, Argentina. 2002 (Photo: Rodolfo Iturraspe)



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## Getting the most out of this Handbook

### The Handbooks in general

The purpose of the Ramsar Handbooks is to organize guidance material from relevant decisions adopted by the Contracting Parties over the years, according to subject themes. This helps practitioners to implement the internationally-agreed best practice in a way that is convenient to handle and more naturally matches their own everyday working environment.

The intended readership includes national and local staff of the government departments, ministries and agencies that act as Administrative Authorities for the Ramsar Convention in each country. Equally important users in many cases are managers of individual wetland areas, as some aspects of the guidance relate specifically to site management.

The Ramsar guidance has been adopted by member governments as a whole, and increasingly it addresses itself to the crucial roles of other sectors beyond the “environment” or “water” sectors. It is thus very important that these Handbooks should be used by **all** whose actions may benefit from or impact upon the wise use of wetlands.

A vital first step in each country therefore is to ensure adequate **dissemination** of these Handbooks to all who need or can benefit from them. Copies are freely available in PDF format from the Ramsar Secretariat in three languages on CD-ROM or by download from the Convention website ([www.ramsar.org](http://www.ramsar.org)).

Other early steps would be, in each particular context, to **clarify** lines of responsibility and **actively check** how to align the terms used and approaches described with the reader’s own jurisdiction, operating circumstances, and organizational structures.

Much of the text can be used in a **proactive sense**, as a basis for framing policies, plans and activities, sometimes by simply importing relevant sections into national and local materials. It can also be used in a **reactive sense** as a source of help and ideas for responding to problems and opportunities, navigating subjects by the need of the user.

Cross-references, original sources, and further reading are liberally cited: the Handbooks will often not be the “last word”, but they provide a helpful “route-map” to further sources of information and support.

**Strategic direction** in the Ramsar Convention is provided by the Strategic Plan, the latest version of which was adopted by COP10 in 2008 for the period 2009-2015. All thematic implementation frameworks, including the Handbooks, sit within the context of the goals and strategies of this Plan and the priorities it highlights for the period covered.

In this fourth edition of the Handbooks, additions to and omissions from the text of the original guidelines, required by the results of COP8, COP9 and COP10, are shown in square brackets [...].

The Handbook series is updated after each meeting of the Conference of the Parties, and feedback on user experience is always appreciated in helping to refine each new edition.

### This Handbook (Data and information needs)

Data and information issues are obviously of relevance to all goals and strategies of the Convention’s Strategic Plan, and the needs framework set out in this Handbook treats each area of the Plan in turn. Specific information management activities, however, are reflected in Plan items such as Strategy 1.1 on “wetland inventory and assessment”, which is to “Describe, assess and monitor the extent and condition of all types of wetlands as defined by the Ramsar Convention and wetland resources at relevant scales, in order to inform and underpin implementation of

the Convention. . . .” This has Key Result Areas (to be achieved by 2015) including KRA 1.1.i: “All Parties to have completed national wetland inventories in line with the Ramsar Framework for Wetland Inventory” and KRA 1.1.ii: “An easily accessible Web-based metadatabase in place, managed by the Secretariat, populated with information on all national wetland inventories, and linked to national and other international relevant databases”.

Strategy 1.2 concerning Global wetland information is to “Develop a global wetland information system, through partnerships, to be covered by voluntary contributions, to increase accessibility of data and information on wetlands”, with KRAs 1.2.i: “Global wetland distribution and status data and information available through Webportal mechanisms” and 1.2.ii: “Global wetland observing system(s) reporting on changes in wetland status”.

Information-related KRAs for other Strategies include

- 1.3.ii, “Parties to have Strategic Environmental Assessment in place for policies, programmes and plans impacting on wetlands”;
- 1.4.ii, “An analysis of the ecosystem services and their values of wetlands (especially Ramsar Sites) achieved for all Parties”;
- 1.6.i, “High quality research completed, widely disseminated in appropriate formats and styles and applied concerning areas of key importance for wetland sustainability, such as agriculture-wetland interactions, climate change, and valuation of ecosystem services”;
- 1.9.i, “All Parties to have a national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands, especially Ramsar Sites”;
- 2.2.i, “Ramsar site data and information services reviewed, restructured and further developed for Web-accessibility to stakeholders, and linked to a global information and observing system for all wetlands”;
- 2.2.ii, “The Ramsar Sites Information Service delivering a range of tools and support to Contracting Parties to aid their identification of gaps and priorities for further Ramsar site designation”;
- 3.1.v, “Harmonized information management and reporting systems available and widely used at national level with the appropriate [Multilateral Environmental Agreements]”;
- 3.4.ii, “Increased flow of information made available by the Parties . . . to the Secretariat for dissemination”; and
- 3.4.iii, “ Relevant research findings that have been evaluated by the [Scientific & Technical Review Panel] promoted and made widely available”.

The text in this Handbook is drawn mainly from Resolution X.14 and its Annex, and the substance of it thus reflects a formal decision adopted by the Conference of Contracting Parties. The Handbook also brings together other resource materials relevant to the issue. The views expressed in these additional materials do not necessarily reflect the views of the Ramsar Secretariat or the Contracting Parties, and such additional materials have not been endorsed by the Conference of the Parties.

## Foreword

Data and information are the life-blood of good decision-making and implementation of commitments made by Ramsar Contracting Parties to secure the wise use of wetlands and the maintenance of their ecological character.

The Framework for Ramsar data and information needs adopted by Parties at COP10 and presented in this Handbook provides a mechanism for recognizing all the different categories of data and information needed to implement the Convention's Strategic Plan 2009-2015 (Resolution X.1). The Framework itself is structured to correspond to the Goals and Strategies set out in the Plan.

The framework covers data and information needs at all levels, including the needs of the Parties, the Secretariat, the Scientific and Technical Review Panel (STRP), the Standing Committee, and the Conference of the Parties (COP), from global to local scales. It specifically offers assistance to Contracting Parties on sources and uses of data and information for their effective implementation of the Convention, and it is designed to be adapted by Parties into tailored versions for use in their own contexts.

It is central to the concept of this Framework that it has been compiled by a process driven by defined purposes, mandates and needs, rather than the more "supply-driven" approach often seen in other cases, which might consist only of listing what is available or readily obtainable.

The picture presented may appear rather static in nature, but this belies the fact that data management in fact is all about flows of information from one place to another, and this aspect should be borne in mind.

In addition to providing guidance for Contracting Parties and others for immediate use as described above, the Framework is also in effect the first stage of a "work in progress", since there are certain aspects of it (indicated in the tables) that will be further developed by the STRP and made more complete during the 2009-2012 period. The types of data and information identified should therefore be considered as "indicative" rather than "comprehensive".

It is anticipated that this Framework will also assist the STRP in identifying gaps in current data and information, including guidances, and establishing priorities for filling these gaps. It can also be conveniently used by Parties as an action agenda for filling gaps at local, national and regional levels.



Experts meeting assessing information gaps on carbon sequestration, Ramsar Secretariat, 2009 (Photo: Ramsar)



## **A Framework for Ramsar data and information needs**

*(adopted as the Annex to Resolution X.14 by the 10th Conference of the Contracting Parties, Changwon, Republic of Korea, 2008)*

### **Relevant implementation commitments made by Contracting Parties in COP Resolutions**

#### **Resolution X.14: A Framework for Ramsar data and information needs**

##### THE CONFERENCE OF THE CONTRACTING PARTIES

5. WELCOMES the “Framework for Ramsar data and information needs” provided in the annex to this Resolution, and URGES Contracting Parties, relevant organizations and other stakeholders to make good use of it as appropriate, adapting it as necessary to suit national conditions and circumstances, within the frameworks of existing regional initiatives and commitments and in the context of sustainable development;
6. INSTRUCTS the STRP to include in its work plan for the 2009-2012 period work to . . . update and further develop the Convention’s Framework for Ramsar data and information needs . . . [and] produce a companion document identifying actions and action gaps of relevance to meeting the needs defined in the Framework at different scales . . . .

## **1. Background**

1. Access to sound, relevant data and information, including good practice advice, is key to supporting good decision-making and implementation of commitments made by Ramsar Contracting Parties to secure the wise use of wetlands and the maintenance of their ecological character.
2. Such relevant data and information is needed, not only about wetlands themselves but also about the drivers of change to wetlands by many different stakeholders in, and affecting, the Ramsar process, from local to global scales, including those responsible for wetland (including Ramsar site) management, national governments and their Ramsar Administrative Authorities, other government administrations from local to national level, National Ramsar/Wetland Committees, and global processes such as the Convention’s Standing Committee, Scientific and Technical Review Panel (STRP), and Secretariat.
3. The “Framework for Ramsar data and information needs” which forms the basis of this guidance has been developed in recognition of these needs – it has been prepared by the STRP and its Working Group 1, with input from the UNEP-World Conservation Monitoring Centre (UNEP-WCMC), as a response to one aspect of the STRP’s 2006-2008 work plan priority task 52.
4. In order to support clearly the implementation of the Convention through its Strategic Plan and identified priorities, the Framework provided below is structured in line with the Goals and Strategies of the Convention’s Strategic Plan 2009-2015 (Resolution X.1). [...] [Note to 4<sup>th</sup> edition Handbook: the original text here indicated that following the adoption of the Strategic Plan at the 10<sup>th</sup> meeting of the Conference of the Contracting Parties, the Framework would need to be revised and updated as necessary to be

### *Additional Information*

#### **Specific uses of this Framework by Contracting Parties**

The Framework in Resolution X.14, and in this Handbook, provides an **organizing structure** for Ramsar data and information needs in relation to the Convention as a whole, and to all of its processes at all levels.

In addition therefore to external partnership linkages and internal work by the STRP and other Convention bodies, it **specifically offers assistance to Contracting Parties** on sources and uses of data and information **for their effective implementation** of the Convention. (Purposes are summarised in paragraph 7 of the Introduction).

The organization of the Framework according to the Convention's Strategic Plan **gives Parties a mechanism for seeing clearly the different categories of data and information needed to implement each of the Strategies and Key Result Areas defined in the Plan** on national matters such as policies, institutional arrangements, site designation, wetland management, public awareness, etc., and for locating relevant guidance materials.

In addition to mapping out what already exists, the Framework is also an inventory of needs, and it can therefore be conveniently used by Parties as an **action agenda, i.e., for filling gaps in the existing information**.

Most importantly, the Framework is designed to be **adapted by Parties into tailored versions for use in their own contexts**, with relevant national or regional specifics replacing or supplementing the ones already listed. The Framework then helps to juxtapose these alongside the globally-applicable items, to put everything in context. The Framework is deliberately not prioritized, so that **Contracting Parties can add into it their own expression of priorities**, as appropriate.

aligned with the final form and content of the Plan. Those revisions and updates have been incorporated in the version presented here and are indicated by square-brackets as appropriate].

5. In addition to providing guidance for Contracting Parties and others on such data and information needs, it is anticipated that this Framework will also assist the STRP in identifying gaps in current data and information, including guidances, and establishing priorities for filling these gaps.

## **2. Purposes for needing data and information under the Convention**

6. Whilst the efficient and effective use of data and information is essential for effective implementation of the Convention at all levels, a key to this is ensuring that the purpose for which this data and information is being collected is clearly established and recognized.
7. Eight broad categories of "purpose" can be defined that identify the ways in which data and information can be necessary to support and assess implementation of the Convention at different levels. These are:
  - baseline knowledge;
  - compliance and accountability;

- performance against targets;
  - learning lessons;
  - identifying new and emerging issues;
  - promoting benefits, CEPA;
  - targeted problem solving; and
  - selecting sites for Ramsar site designation.
8. This broad-scale “taxonomy of purposes” has been applied in the Framework table below to cross-check against the data and information “needs” identified for each of the Strategies in the Strategic Plan 2009-2015, as a means of validating what data and information has been identified under each Strategy.
9. For each type or category of data or information there is often more than one specific purpose for its collection, provision and/or dissemination, and this should be taken into account when developing and implementing information strategies and services.

### **3. Guiding principles for assessing data and information needs**

10. In order to ensure a common understanding of the scope of the data and information needs Framework, and hence a common approach to its implementation, the assessment of needs upon which the Framework is based was carried out according to the following guiding principles:
- i) The assessment should cover basic data and information in the forms both of analysed and assessed data and of implementation guidance.
  - ii) The assessment should cover anticipated data and information needs at all levels, including the needs of Parties, Secretariat, STRP, Standing Committee, and the COP.
  - iii) The assessment should be driven by purpose and mandate, focusing on key data and information needs for guiding the Convention implementation process.
  - iv) The assessment should focus on delivering data and information that is relevant and fit for purpose, not simply listing all data and information which might be useful.
  - v) The assessment should recognize and address the close links with strategic planning, national reporting, effectiveness indicators, and so on, which cross-cut all Convention activities.
  - vi) While the assessment should recognize and build on data and information products and processes already in place, it should be driven by what is needed, not by what already exists.
11. With respect to guiding principle vi) above, it is recognized that some data and information provision and mechanisms are already in place (e.g., existing implementation guidelines) and others will need to be developed or will require further work. The status of the current response to each identified data and information need will have to be identified, so as to help identify current gaps and future priorities.

#### **4. The approach to developing the data and information needs Framework**

12. After evaluation of several different available categorizations of the Convention's mandates and decisions (provided in the appendix), including 1) Dave Pritchard's 2007 analysis for the Ramsar Standing Committee of COP decisions in response to Resolution IX.17, 2) the themes identified and used by the UNEP/IUCN-funded *tematea* (issue-based modules for coherent implementation of biodiversity related conventions) project (at: <http://www.tematea.org/>), and 3) the Wise Use Handbooks' (3<sup>rd</sup> edition) themes and topics, the approach that was identified as most helpful to Parties and others is to base the data and needs assessment on the Ramsar Strategic Plan 2009-2015 in order to ensure that the needs identified relate directly to implementation of the Plan's Strategies and Key Result Areas.
13. Thus the attached "Framework" provides a mechanism for recognizing all the different categories of data and information needed to implement the Convention's Strategic Plan. As well as scientific and technical information on wetlands, the framework therefore identifies the need for data and information on matters such as policies, institutional arrangements, and measures taken.
14. The Framework should also be regarded as the first stage of a 'work in progress' since there are certain aspects of it that will be further reviewed by the STRP, and because certain aspects of the Framework will need further elaboration and input by the STRP as part of its 2009-2012 priority tasks, notably in relation to the full range of data and information needs for Ramsar site identification and designation.
15. Hence the types of data and information identified and listed in the attached Framework should be considered as 'indicative' rather than 'comprehensive'. Furthermore, in using the Framework, Contracting Parties and others involved in Ramsar Strategic Plan implementation should:
  - i) adapt it as necessary to suit national conditions and circumstances, within the frameworks of existing regional initiatives and commitments; and
  - ii) in so doing, determine whether there are other types of data or information needed to support delivery of one or more Strategic Plan strategies, and report this to the STRP so that such matters can be taken into account in the further development of the Framework.
16. The Framework tables below indicate, for each of the Strategic Plan's Strategies, the data and information needs at the national/subnational level and at the international level separately.
17. The Framework as presented below does not seek to provide any prioritisation for the collection of each category of data and information listed. That is a matter for each Contracting Party to consider in relation to any review of its existing data and information holdings and any priorities it has established for future implementation of the Convention through its Strategies.

### *Additional Information*

#### **The Ramsar Sites Information Service (RSIS)**

Maintaining accessible and up-to-date information on the network of sites in the global List of Wetlands of International Importance (Ramsar Sites) is important for a number of purposes and processes under the Convention. Begun in 1990, the Ramsar Sites Information Service (RSIS) has been developed and managed by Wetlands International under contractual arrangements with the Ramsar Secretariat, in order to support Contracting Parties in their activities for the conservation and wise use of important wetlands.



The RSIS includes the online searchable Ramsar Sites Database, covering all Ramsar Sites. In recent years this has been significantly expanded and developed to provide a range of additional tools and services for accessing information about designated Ramsar Sites, to assist Contracting Parties with the identification of further qualifying wetlands, and to support implementation of the *Strategic Framework and Guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Handbook 17).

Data in the database derives from the official Information Sheets on Ramsar Wetlands (RIS), national reports and other official materials provided by Contracting Parties. This includes information on wetland types, land uses, threats, hydrological values of the sites, and other parameters.

RSIS utilities include a WebGIS system displaying spatial information on Ramsar Sites, and downloadable GIS data (spatial boundary and/or location) on Ramsar Sites. Ramsar Site locations are viewable in Google Earth. There is on-line access to all official Ramsar Information Sheets (RISs), and an increasing range of links to other relevant but unofficial information sources concerning Ramsar Sites in different countries, such as external websites, wetland directories, publications and management plans.

Also available are selected results of different analyses conducted using the database, including assessment and gap analyses of coverage of wetland types, summary and indicator analyses at the global or regional level, and assessments in relation to other conservation actions and features. Development of additional capabilities for the system continues.

Purposes of the RSIS, in general terms, have been characterized as:

- i) Supporting reporting obligations in the Convention text;
- ii) Supporting priority setting and decision taking in the context of the Convention;
- iii) Increasing access to information on Wetlands of International Importance;
- iv) Promoting scientific and technical cooperation;
- v) Helping to ensure that Ramsar Sites are well recognized in other international fora; and
- vi) Supporting communications, education and public awareness.

A long-standing task related to Ramsar site data and information has been the establishment and maintenance of a standard record of changes to the ecological character of Ramsar Sites reported under Article 3.2 of the Convention. Resolution X.15 on *Describing the ecological character of wetlands, and data needs and formats for core inventory: harmonized scientific and technical guidance* now includes an ecological character description sheet, containing a section which can be used as a simple mechanism for reporting change. Work will be undertaken in future to establish how best to incorporate these ecological character descriptions and Article 3.2 reports from Parties into the RSIS.

The RSIS can be accessed at <http://ramsar.wetlands.org>. Further information is available in the Information Paper from COP10: *The Ramsar Sites Information Service (RSIS): progress, developments and tools for Contracting Parties supporting Ramsar site designation* (document COP10 DOC. 29).



18. In considering any such prioritisation, Contracting Parties may wish to take into account the Key Result Areas for each Strategy in the Ramsar Strategic Plan 2009-2015, and in order to assist with this those Key Result Areas are provided in the tables below.
19. The following additional explanatory notes are provided to aid in understanding the table's presentation and contents:
  - i) Where "guidance" information is indicated, a cross-reference to relevant existing guidance (Ramsar Wise Use Handbooks, [4<sup>th</sup>] edition) is included. An "x" against "guidance" indicates that such guidance may need to be developed in the future.
  - ii) "National level" data and information needs may range from site to country level, including those of Administrative Authorities, other government sectors, within-country scientific/technical expertise, wetland managers (Ramsar Sites and other wetlands), and so on.
  - iii) "International level" data and information needs cover the anticipated needs of global Ramsar Convention bodies (SC, STRP, CEPA Panel, COP, etc.) and the Secretariat, as well as supranational/regional scales including shared systems.
  - iv) Data and information types are listed in the column (National or International level) relevant to the spatial scale at which they are developed or provided.
20. The STRP expects, following further review, to continue to elaborate the Framework, including further developing the lists of data and information types provided in the tables, for example through the addition of further information on Ramsar site data and information needs; providing guidance on data and information flows between the national/subnational and international scales; and adding a further column to the Framework tables providing information on current availability of data/information.
21. An example of guidance already developed by the STRP on data and information flows between the different Convention 'actors' at national/subnational and international scales is provided in Resolution X.16 for processes of detecting, reporting and responding to change in wetland ecological character -- in this case speaking to Strategies 2.4 (Ramsar site ecological character) and 2.6 (Ramsar site status) of the new Ramsar Strategic Plan 2009-2015 [See also Handbook 19 (4th edition), *Addressing change in wetland ecological character*].

### *Additional Information*

#### **Meeting Ramsar Convention data and information needs: support from the UNEP World Conservation Monitoring Centre**

The UNEP World Conservation Monitoring Centre (UNEP-WCMC) is a collaboration between the United Nations Environment Programme and WCMC 2000, a UK-based charity.



The Centre, based in Cambridge, UK, has a mandate from the UNEP Governing Council to provide a range of biodiversity-related services to UNEP, the biodiversity-related conventions and their constituent party-states, and other bodies in the non-governmental and private sectors.

UNEP-WCMC collaborates with the Ramsar Convention in a variety of ways. It is among the organizations invited to participate as observers in meetings of the Convention's Scientific and Technical Review Panel (STRP) and to maintain close working cooperative arrangements with the STRP on matters of common interest (Resolution X.9). This cooperation has been a strong feature of work in the Ramsar context on issues such as ecosystem assessment, indicators of Convention effectiveness, and harmonization of reporting, among others.

Examples of UNEP-WCMC programmes and activities which are capable of supporting the data and information needs of the Ramsar Convention and its Parties, include:

- i) The Centre's **Ecosystem Assessment Programme** was established in 2006 to address the growing demand for integrated information on the state of and trends in the world's ecosystems and the services they provide to the planet's people. It builds on the biodiversity assessment work within the Centre to supply the best available information to a wide range of decision makers worldwide. The Ecosystem Assessment Programme incorporates research, synthesis, facilitation and capacity-support to improve information and knowledge regarding biodiversity and ecosystems and its availability to and use by decision-makers. Key technical areas within the Programme include work on biodiversity indicators and assessments, ecosystem services and their values for people, and support to policy processes at national, regional and global scales.
- ii) A number of **Atlases** have been published, including:
  - The World Atlas of Seagrasses;
  - The World Atlas of Coral Reefs;
  - The World Mangrove Atlas.
- iii) A global **assessment of areas of special importance for freshwater biodiversity** is ongoing.
- iv) The Protected Areas Data Unit was set up in 1981 to compile information on the world's protected areas, and to be a resource for those requiring such information. The **World Database of Protected Areas (WDPA)** is a joint project of UNEP and IUCN, produced by UNEP-WCMC and the IUCN World Commission on Protected Areas, working with governments and collaborating NGOs. It is the most comprehensive global spatial dataset on marine and terrestrial protected areas and offers a range of interactive map services. The WDPA is a foundation dataset for conservation decision making and is being used for ecological gap analysis, environmental impact analysis, and increasingly for private sector decision-making.

For more information, see <http://www.unep-wcmc.org/>

## A Framework for Ramsar data and information needs, with indicative lists of data and information types, based on the Ramsar Strategic Plan 2009-2015

### Notes.

1. Where guidelines are listed as a need, references to “HBx” refer to the relevant Handbooks available in the Ramsar ‘toolkit’ of Wise Use Handbooks [4<sup>th</sup> edition, 2010]), and to “RTRx” to relevant supporting *Ramsar Technical Reports*. Where an “(x)” occurs against an indicated need of guidelines, this indicates that the Convention has not yet adopted relevant guidance.
2. “Metadata” is commonly described as “data about data”. It has many elements which can include information that describe *inter alia* the age, accuracy, content, currency, scale, reliability, lineage, authorship and custodianship of an individual dataset.

### GOAL 1 Wise Use.

To work towards achieving the wise use of all wetlands by ensuring that all Contracting Parties develop, adopt and use the necessary and appropriate instruments and measures, with the participation of the local indigenous and non-indigenous population and making use of traditional knowledge, while at the same time ensuring that conservation and wise use of wetlands contribute to poverty eradication, mitigation of and adaptation to climate change, as well as prevention of disease and of natural disasters.

Indicative list of information/data/metadata needs collected or provided at:		
	National level	International level
<b>Strategic Plan 2009-2015 Strategies</b> <b>STRATEGY 1.1 Wetland inventory and assessment</b> Describe, assess and monitor the extent and condition of [all types of] wetlands [as defined by the Ramsar Convention] and wetland resources at relevant scales, in order to inform and underpin implementation of the Convention, in particular in the application of [its provisions concerning] the wise use [of all wetlands]; (CPs, advised by STRP and assisted by IOPs)	<b>Key Result Areas (KRAs) by 2015</b> 1.1.i All Parties to have completed national wetland inventories in line with the Ramsar <i>Framework for Wetland Inventory</i> and as far as possible to have disseminated comprehensive national wetland inventories, including information on wetland importance, potential Ramsar Sites, wetlands for restoration, location of under-represented wetland types, and the ecosystem services provided by wetlands. (National: CPs) 1.1.ii An easily accessible Web-based metadatabase in place, managed by the Secretariat, populated with information on all national wetland inventories, and linked to national and other international relevant databases. (Global: Secretariat)	International status and trends Status of national wetland inventories Guidelines and definitions (HB [13, 15 & 18]; RTR 1) Identification of data and information received from Parties and others by the Secretariat

Indicative list of information/data/metadata needs collected or provided at:		
	Key Result Areas (KRAs) by 2015	
Strategic Plan 2009-2015 Strategies		
<b>STRATEGY 1.2: Global wetland information</b> Develop a global wetland information system, through partnerships, to be covered by voluntary contributions, to increase accessibility of data and information on wetlands (CPs, Secretariat, advised by STRP and assisted by IOPs)	1.2.i Global wetland distribution and status data and information available through Web-portal mechanisms. (Global: STRP)  1.2.ii Global wetland observing system(s) reporting on changes in wetland status. (Global: STRP)	<b>National level</b> [to be further developed by STRP following scoping of the proposed Global Wetland Observing System – G-WOS]
<b>STRATEGY 1.3 Policy, legislation and institutions</b> Develop and implement policies, legislation, and practices, including growth and development of appropriate institutions, in all Contracting Parties to ensure that the wise use provisions of the Convention are being effectively applied. (CPs, Secretariat)	1.3.i National Wetland Policy or equivalent instruments fully in place alongside and integrated with other strategic and planning processes by all Parties, including poverty eradication strategies, water resources management and water efficiency plans, coastal and marine resource management plans, national forest programmes, national strategies for sustainable development, and national [policies or] measures on agriculture. (National: CPs)  1.3.ii Parties to have Strategic Environmental Assessment in place for policies, programmes and plans impacting on wetlands. (National: CPs)	<b>International level</b> Effectiveness indicators Guidelines and definitions (HB 2, 3 & [16], Resolution X.17) Case studies/best practice

Indicative list of information/data/metadata needs collected or provided at:		International level	
National level		International level	
<b>Strategic Plan 2009-2015 Strategies</b> <b>STRATEGY 1.4 Cross-sectoral recognition of wetland services</b> Increase recognition of and attention in decision-making to the significance of wetlands for reasons of biodiversity conservation, water supply, coastal protection, [integrated coastal zone management], flood defense, climate change mitigation and/or adaptation, food security, poverty eradication, [tourism], cultural heritage, and scientific research, by developing and disseminating methodologies to achieve wise use of wetlands. (CPs, Secretariat, STRP, IOPs)	<b>Key Result Areas (KRAs) by 2015</b> 1.4.i Development and implementation of wetland programmes and projects that contribute to poverty eradication objectives and food and water security plans at local and national levels. (National: CPs) 1.4.ii An analysis of the ecosystem services and their values of wetlands (especially Ramsar Sites) achieved for all Parties. (National: CPs) 1.4.iii The socio-economic and cultural heritage value of wetlands fully taken into account in wetland wise use and management. (National: CPs; Subnational: wetland managers)	Value of ecosystem services Key players in other sectors Opportunities (role or potential role of wetlands in.....) Effectiveness indicators	Effectiveness indicators Guidelines and definitions (HB [8 & 12]; RTR 3) Case studies/best practice Opportunities (role or potential role of wetlands in.....) Value of ecosystem services
<b>Strategy 1.5 Recognition of role of the Convention</b> Raise the profile of the Convention by highlighting its capacity as a unique mechanism for wetland ecosystem management at all levels; promote the usefulness of the Convention as a possible implementation mechanism to meet the goals and targets of other global conventions and processes. (CPs, Secretariat, STRP, IOPs)	1.5.i Global environmental organizations and conventions aware of and applying the mechanisms developed by the Ramsar Convention for wetland ecosystem management, wise use, and conservation. (Global: Secretariat; National: CPs)	[to be developed]	[to be developed]



Indicative list of information/data/metadata needs collected or provided at:		Indicative list of information/data/metadata needs collected or provided at:	
National level		International level	
<b>Strategic Plan 2009-2015 Strategies</b>  <b>STRATEGY 1.6 Science-based management of wetlands</b>  Promote successful implementation of the wise use concept by ensuring that national policies and wetland management plans are based on the best available scientific knowledge, including technical and traditional knowledge. (CPs, Secretariat, STRP, IOPs)	<b>Key Result Areas (KRAs) by 2015</b>  1.6.i High quality research completed, widely disseminated in appropriate formats and styles and applied concerning areas of key importance for wetland sustainability, such as agriculture-wetland interactions, climate change, and valuation of ecosystem services. (Global: Secretariat; National: CPs, IOPs)  1.6.ii All wetland management plans founded on sound scientific research, including research on potential threats. (Global: Secretariat; National: CPs, IOPs)	[to be developed]	[to be developed]
	<b>STRATEGY 1.7 Integrated Water Resources Management</b>  Ensure [that] policies and implementation of Integrated Water Resources Management (IWRM), applying an ecosystem-based approach, are included in the planning activities in all Contracting Parties and in their decision-making processes, particularly concerning groundwater management, catchment/river basin management, coastal and [nearshore] marine zone planning, and climate change mitigation and/or adaptation activities. (CPs, STRP, IOPs)		
<b>STRATEGY 1.7 Integrated Water Resources Management</b>  Ensure [that] policies and implementation of Integrated Water Resources Management (IWRM), applying an ecosystem-based approach, are included in the planning activities in all Contracting Parties and in their decision-making processes, particularly concerning groundwater management, catchment/river basin management, coastal and [nearshore] marine zone planning, and climate change mitigation and/or adaptation activities. (CPs, STRP, IOPs)	1.7.i All Parties to have made available the Ramsar guidance on water allocation and management for ecosystems to support decision-making on water resource management, as a contribution to achieving the WSSD target on water resources management and water efficiency plans. (National: CPs)  1.7.ii All Parties, in their water governance and management, to be managing wetlands as natural water infrastructure integral to water resource management at the scale of river basins (National: CPs)  1.7.iii National policies or guidelines enhancing the role of wetlands in mitigation [...] and/or adaptation to climate change in progress or completed. (National: CPs)  1.7.iv The Convention's role in encouraging IWRM planning established as part of international environmental efforts. (Global: Secretariat, STRP)  1.7.v Parties to have formulated plans to sustain and enhance the role of wetlands in supporting and maintaining viable farming systems. (National: CPs)	Current water resources: Policies and practices Current water allocations Effectiveness indicators Case studies/best practice Wetland - climate change adaptation and mitigation	Effectiveness indicators Guidelines and definitions (HB [8, 9, 10 & 11]; Resolution X.19) Case studies/best practice Catchment level water resource management Review methods for ecosystem based water management Wetland - climate change adaptation and mitigation

Indicative list of information/data/metadata needs collected or provided at:		
	Key Result Areas (KRAs) by 2015	International level
<b>Strategic Plan 2009-2015 Strategies</b> <b>STRATEGY 1.8 Wetland restoration</b> Identify priority wetlands and wetland systems where restoration or rehabilitation would be beneficial and yield long-term environmental, social, or economic benefits, and implement the necessary measures to recover these sites and systems. (CPs, Secretariat, IOPs)	<b>Key Result Areas (KRAs) by 2015</b> 1.8.i All Parties to have identified priority sites for restoration; restoration projects underway or completed in at least half the Parties. (National: CPs) 1.8.ii New case studies and methods added to Ramsar wetland restoration pages on the Web site. (Global: STRP, National: CPs)	<b>National level</b> Inventory of sites suitable for wetland restoration/rehabilitation (cf inventory of wetlands/assessment/monitoring) Measures that have been taken Impacts of measures taken
<b>STRATEGY 1.9 Invasive alien species</b> Encourage Contracting Parties to develop a national inventory of invasive alien species that currently and/or potentially impact the ecological character of wetlands, especially Ramsar Sites, and ensure mutual supportiveness between the national inventory and IUCN's Global Register on Invasive Species (GRIS); develop guidance and promote procedures and actions to prevent, control or eradicate [such] species in wetland systems. (CPs, STRP, other agencies, IOPs)	1.9. All Parties to have a national inventory of invasive alien species that currently or potentially impact the ecological character of wetlands, especially Ramsar Sites. (National: CPs) 1.9.ii Parties to have identified more comprehensively the problems posed by invasive species in wetland ecosystems within their territories. (National: CPs) 1.9.iii National invasive species control and management policies or guidelines in place for wetlands ([National: CPs] [...]) 1.9.iv Comprehensive and up-to-date global guidance on invasive species, in cooperation with GISP, available to all stakeholders. (Global: STRP) 1.9.v Increased collaboration with the Convention on Biological Diversity on actions to address gaps in international regulations relating to invasive alien species. (Global: Secretariat)	<b>International level</b> Guidelines and definitions (x) Case studies/best practice

Indicative list of information/data/metadata needs collected or provided at:			
	Key Result Areas (KRAs) by 2015	National level	International level
<b>Strategic Plan 2009-2015 Strategies</b> <b>STRATEGY 1.10 Private sector</b> Promote the involvement of the private sector in the conservation and wise use of wetlands. (CPs, Secretariat)	1.10.i Significant progress in the private sector applying the concepts and approaches for conservation and wise use of wetlands contained in Ramsar guidance (Ramsar Handbooks [1 to 20, 4 <sup>th</sup> edition]) and other relevant guidelines in their activities and investments affecting wetlands. (Global to Subnational: private sector) 1.10.ii Increased private sector engagement in the wise use of wetlands and in the management of Ramsar Sites. (Subnational: private sector) 1.10.iii Awareness-raising material made available to the public to enable wetland-friendly consumer choices. (National: private sector & CPs)	Stakeholders and rights holders Case studies/best practice Incentives and their impacts/ potential impacts	CEPA material on wetland friendly consumer choice Case studies/best practice Incentives and their impacts/ potential impacts
<b>STRATEGY 1.11 Incentive measures</b> Promote incentive measures that encourage the application of the wise use provisions of the Convention. (CPs, Secretariat, IOFs)	1.11.i Better design and implementation of incentive measures of relevance to wetlands taking place in all Parties, and better monitoring and assessment of both positive and perverse incentives affecting wetlands in place in all Parties. (National: CPs)	[to be identified subsequently]	Good practice guidance on positive incentives and removal of perverse incentives (x)

## GOAL 2 Wetlands of International Importance.

To develop and maintain an international network of wetlands that are important for the conservation of global biological diversity, [including waterbird flyways and fish populations] and for sustaining human life, by ensuring that all Contracting Parties appropriately implement the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* and by appropriate management and wise use of those internationally important wetlands that are not yet formally designated as Ramsar Sites but have been identified as qualifying through domestic application of the *Strategic Framework* or an equivalent process.

Strategic Plan 2009-2015 Strategies	Key Result Areas (KRAs) by 2015	Indicative list of information/data/metadata needs collected or provided at:	
		National level	International level
<b>STRATEGY 2.1 Ramsar site designation</b> Apply the <i>Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance</i> (Ramsar Handbook [17]). (CPs)	2.1.i All Parties to have prepared, using the <i>Strategic Framework</i> , a national plan and priorities for the designation and management of Ramsar Sites, including where appropriate for shared wetlands in collaboration with neighboring Parties. (National: CPs) 2.1.ii Completed, and as appropriate updated, Ramsar Information Sheets submitted for all Ramsar Sites. (National: CPs) 2.1.iii At least 2,500 Ramsar Sites designated worldwide, covering at least 250 million hectares. (National: CPs) 2.1.iv Contracting Parties to have considered designating Ramsar Sites from among wetland types under-represented in the Ramsar List. (National: CPs)	National wetland inventory and/or ecological character description National datasets (to test against each Criterion) List of candidate sites derived from national wetland inventory/ ecological character description and other national/international datasets to test against each criterion [Note. Further STRP work in 2009-2011 will elaborate this listing by Criterion]	Criteria and guidance (HB [17]; RTR 1) International datasets (to test potential sites against Criteria) Status of whatever candidate listing process is applied [Note. Further STRP work in 2009-2011 will elaborate this listing by Criterion]

Indicative list of information/data/metadata needs collected or provided at:			
	Key Result Areas (KRAs) by 2015	National level	International level
<b>Strategic Plan 2009-2015 Strategies</b>  <b>STRATEGY 2.2 Ramsar site information</b>  Ensure that the Ramsar Sites Information Service, including the Ramsar Sites Database, [is] available and enhanced as a tool for guiding the further designation of wetlands for the List of Wetlands of International Importance and for research and assessment, and is effectively managed by the Secretariat. ([...] STRP, Secretariat, IOPs)	2.2.i Ramsar site data and information services reviewed, restructured and further developed for Web-accessibility to stakeholders, and linked to a global information and observing system for all wetlands. (Global: STRP, Secretariat, IOPs)  2.2.ii The Ramsar Sites Information Service delivering a range of tools and support to Contracting Parties to aid their identification of gaps and priorities for further Ramsar site designation. (Global: Secretariat, IOPs)	Data and information necessary for completion of the RIS as may be defined by COP and COP nominated processes  Identification of data and information sent to the Secretariat  For candidate sites - national lists as provided by CPs	For designated sites: completed RIS as defined by COP and COP nominated processes  For candidate sites – from national lists as provided by CPs  Guidelines (x)  Identification of data and information received from Parties and others by the Secretariat
<b>STRATEGY 2.3 Management planning – new Ramsar Sites</b>  While recognizing that Ramsar site designation can act as a stimulus for development of effective site management plans, generally encourage the philosophy that all new Ramsar Sites should have effective management planning in place before designation, as well as resources for implementing such management. (CPs, IOPs, Secretariat)	2.3.i Adequate management planning processes established and submitted with all or most new site designations or a commitment made to work towards that goal, taking into account the possible lack of financial and human resources to fulfill this objective, and recognizing that the designation of a site can work as an incentive for the establishment of future management planning. (National: CPs; subnational: wetland managers)	Candidate list for Ramsar Sites  Data and information for management plan development (including ecological character description)	Guidance (HB [18])



Indicative list of information/data/metadata needs collected or provided at:			
National level		International level	
<b>Strategic Plan 2009-2015 Strategies</b> <b>STRATEGY 2.4 Ramsar site ecological character</b> Maintain the ecological character of all designated Ramsar Sites, through planning and management. (CPs, Secretariat, IOPs)	<b>Key Result Areas (KRAs) by 2015</b> 2.4.i Progress in developing effective management plans for all Ramsar Sites within each Party's territory. (National: CPs; Subnational: wetland managers) 2.4.ii Management objectives, as part of management planning, for ecological character maintenance established for all Ramsar Sites. (Subnational: wetland managers) 2.4.iii Zoning measures to be put in place for larger Ramsar Sites, wetland reserves, and other wetlands (Recommendation 5.3 and Resolution VIII.14) and strict protection measures to be enacted for certain Ramsar Sites and other wetlands of small size and/or particular sensitivity. (Subnational: wetland managers) 2.4.iv Cross-sectoral site management committees in place for Ramsar Sites, involving relevant government agencies, citizens and local communities, and other stakeholders, including the business sector as appropriate, in place, including as a mechanism for dispute settlement. (Subnational: wetland managers) 2.4.v Statements of ecological character finalized for all Ramsar Sites and used as a basis for implementing Article 3.2 of the Convention. (Subnational: wetland managers)	Ecological character description(s) Site management objectives, and limits of acceptable change Ecological character status Change in ecological character time series (through monitoring and surveillance)	Guidelines and definitions, including format for describing ecological character (HB [7 & 18]; Resolution X.15) Effectiveness indicators – status & trends reporting
	<b>STRATEGY 2.5 Ramsar site management effectiveness</b> Review all existing Ramsar Sites to determine the effectiveness of management arrangements, in line with the <i>Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance</i> . (CPs, STRP)	Effectiveness indicators Guidance on applying management effectiveness tools in national context Management objectives Monitoring results	Guidance on management effectiveness tools (HB [7, 17 & 18]) Effectiveness indicators

Indicative list of information/data/metadata needs collected or provided at:			
Strategic Plan 2009-2015 Strategies	Key Result Areas (KRAs) by 2015	National level	International level
<b>STRATEGY 2.6 Ramsar site status</b> Monitor the condition of Ramsar Sites and address negative changes in their ecological character, notify the Ramsar Secretariat of changes affecting Ramsar Sites, and apply the Montreux Record, if appropriate, and Ramsar Advisory Mission as tools to address problems. (CPs, Secretariat, IOPs)	2.6.i All Parties with Ramsar Sites whose ecological character has changed, is changing or is likely to change owing to human-induced actions to have reported this to the Ramsar Secretariat, in line with the requirements of Article 3.2 of the Convention. (National: CPs) 2.6.ii For all sites on the Montreux Record that have not been the subject of a Ramsar Advisory Mission (RAM), intended to provide advice on the steps needed to remove those sites from the Record, Parties to request such a Mission. (National: CPs) 2.6.iii Implementation of relevant STRP ecological outcome-oriented indicators of effectiveness of the Convention. (Global: STRP; National: CPs)	Case studies on individual sites Results from monitoring against management objectives and RAM EIA for development proposals Identification of data, information and reports sent to the Secretariat	Guidelines (HB [16, 17 & 19]; Resolutions X.15 & X.16) Article 3.2 report format and reports Montreux Record questionnaires Article 2.5 reports Article 4.2 compensation reports RAM reports Identification of data, information and reports received from Parties and others by the Secretariat
<b>STRATEGY 2.7 Management of other internationally important wetlands</b> Appropriate management and wise use achieved for those internationally important wetlands that have not yet been formally designated as Ramsar Sites but have been identified through domestic application of the <i>Strategic Framework</i> or an equivalent process (CPs)	2.7.i Ramsar guidance on the maintenance of ecological character to have been applied with a priority upon recognized internationally important wetlands not yet designated as Ramsar Sites. (National: CPs; Subnational: wetland managers)	[to be developed]	[to be developed]

**GOAL 3 International cooperation.**  
To [enhance] the conservation and wise use of wetlands [using effective international cooperation,] through [inter alia] the active application of the *Guidelines for international cooperation under the Ramsar Convention*.

		Indicative list of information/data/metadata needs collected or provided at:	
		National level	International level
<b>Strategic Plan 2009-2015 Strategies</b>	<b>Key Result Areas (KRAs) by 2015</b>		
<b>STRATEGY 3.1 Synergies [and partnerships] with MEAs and IGOs</b> Work as partners with international and regional multilateral environmental agreements (MEAs) and other intergovernmental agencies (IGOs). (CPs, Secretariat, [IOPs, STRP])	<p>3.1.i CBD-Ramsar Joint Work Plan and CMS/AEWA/Ramsar Joint Work Plan being implemented and participation continued in the CBD Biodiversity Liaison Group. (Global: Secretariat, STRP; National: CPs)</p> <p>3.1.ii Joint activities developed with the UN Convention to Combat Desertification (UNCCD) and the UN Framework Convention on Climate Change (UNFCCC), as appropriate, including through participation in the Joint Liaison Group. (Global: Secretariat, STRP)</p> <p>3.1.iii The Action Plan of the New Partnership for Africa's Development (NEPAD) to have fully incorporated Ramsar issues and mechanisms and being implemented by relevant Parties. (Regional: Secretariat; National: CPs, IOPs)</p>	Shared information on MEAs and IGOs focal points and institutional arrangements	<p>MEA/IGO focal points and institutional arrangements</p> <p>Joint work plans and other collaborative working arrangements</p> <p>Harmonized international information and reporting systems</p>

Indicative list of information/data/metadata needs collected or provided at:	
National level	International level
<p><b>Strategic Plan 2009-2015 Strategies</b></p> <p><b>Key Result Areas (KRAs) by 2015</b></p> <p>3.1.iv Additional partnership approaches initiated with the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), [the UNECE Water Convention], the UN Food and Agriculture Organization (FAO), UNESCO, the World Health Organization (WHO), the World Tourism Organization (WTO), the International Tropical Timber Organization (ITTO), the UN Forum on Forests with its Collaborative Partnerships on Forests, the European Union*, ASEAN, APEC, BIMSTEC, SAARC, and other relevant United Nations agencies and regional bodies, as well as through UN Water. (Global: Secretariat, STRP and National/Regional: CPs with IOPs support)</p> <p>[*Note to 4<sup>th</sup> edition Handbook: reference to "European Union" here does not match the Strategic Plan, which was amended to read "European Community", since at the time of COP10 that was a correct reflection of the name of the legal entity. However, since then, with the entry into force of the Treaty of Lisbon in 2009, the legal entity is now properly referred to as the "European Union"; so in this instance the original wording has been retained]</p> <p>3.1.v Harmonized information management and reporting systems available and widely used at national level with the appropriate MEAs. (Global: Secretariat; National: CPs)</p>	
<p><b>STRATEGY 3.2 Regional initiatives</b></p> <p>Support existing regional arrangements under the Convention and promote additional arrangements. (CPs, Secretariat, IOPs)</p>	<p>Knowledge network – list – who's who and why</p> <p>Opportunities for resources and capacity</p> <p>Knowledge network (wise use resource centre ) to deliver case studies, best practice, guidelines, experts list, (wetlands clearing house mechanism)</p> <p>Guidance (initiative development) (Resolution X.6)</p>

Indicative list of information/data/metadata needs collected or provided at:			
		National level	International level
<p><b>Strategic Plan 2009-2015 Strategies</b></p> <p><b>STRATEGY 3.3 International assistance</b></p> <p>Promote international assistance to support the conservation and wise use of wetlands, while ensuring that environmental safeguards and assessments are an integral component of all development projects that affect wetlands, including foreign and domestic investments. (CPs, Secretariat, IOPs)</p>	<p><b>Key Result Areas (KRAs) by 2015</b></p> <p>3.3.i Parties with bilateral donor agencies to have encouraged those agencies to give priority for funding for wetland conservation and wise use projects in relation to poverty eradication and other relevant international targets and priorities. (National: CPs)</p> <p>3.3.ii Proposed grants, loans, and development projects from international development agencies, including banks, financial institutions and private investors and developers, to include environmental safeguards and environmental assessments of possible impacts. (Global: Secretariat, development agencies)</p>	<p>Who will fund what where in my country? E.g., GEF</p>	<p>Who will fund what, where?</p>
<p><b>STRATEGY 3.4 Sharing information and expertise</b></p> <p>Promote the sharing of expertise and information concerning the conservation and wise use of wetlands. (CPs, Secretariat)</p>	<p>3.4.i Less time required from Parties on managing information for national reports, but better quality and more timely reports produced. (Global: Secretariat; National: CPs)</p> <p>3.4.ii Increased flow of information made available by the Parties (e.g., [Ramsar-related] policies, [Ramsar site] management plans, Ramsar site monitoring, etc.) to the Secretariat for dissemination via the Ramsar Web site and other means. (National/Regional : CPs with IOPs [support])</p> <p>3.4.iii Relevant research findings that have been evaluated by the STRP promoted and made widely available through Ramsar Technical Reports, Ramsar and IOP Web sites, and other means. (Global: Secretariat, STRP, IOPs; National: CPs)</p>	<p>Knowledge network – list – who’s who and why - CEPA and STRP NFPs and NRCs and beyond</p> <p>Shared information management capacity for national reporting</p>	<p>Knowledge network (wise use resource centre) to deliver case studies, best practice, guidelines, experts list, (wetlands clearing house mechanism),</p> <p>National reports and synthesis</p>



Indicative list of information/data/metadata needs collected or provided at:	
Strategic Plan 2009-2015 Strategies	Key Result Areas (KRAs) by 2015
STRATEGY 3.5 Shared wetlands, [river] basins and [migratory] species Promote inventory and [cooperation for the] [...]management of shared wetlands and hydrological basins, including cooperative monitoring and management of shared wetland-dependent species. (CPs, Secretariat, IOPs)	<p>3.5.i Where appropriate, all Parties to have identified their shared wetlands, river basins and migratory species, and Parties to have identified collaborative management mechanisms with one another for those shared wetlands and river basins. (National: CPs)</p> <p>3.5.ii Where appropriate, Parties with shared basins and coastal systems to consider participation in joint management commissions or authorities. (National: CPs)</p> <p>3.5.iii Regional site networks and initiatives in place for additional wetland-dependent migratory species, as exemplified <i>inter alia</i> by the African-Eurasian Migratory Waterbird Agreement (AEWA), the East Asian-Australasian Flyway Partnership, the Western Hemisphere Shorebird Reserve Network, and the Central Asian Flyway Initiative. (Global: STRP, Secretariat, other MEAs; National: CPs)</p>
	<p><b>National level</b> National level inventory, which are shared systems Available/existing collaborative mechanisms</p> <p><b>International level</b> Guidance/case studies/ best practice – how to collaborate on management (x)</p>

**GOAL 4 Institutional capacity and effectiveness.**

To progress towards fulfillment of the Convention's mission by ensuring that it has the required mechanisms, resources, and capacity to do so.

**GOAL 5. Membership:**

To progress towards universal membership of the Convention.

		Indicative list of information/data/metadata needs collected or provided at:	
		National level	International level
<b>Strategic Plan 2009-2015 Strategies</b>	<b>Key Result Areas (KRAs) by 2015</b>		
<b>STRATEGY 5.1 Membership</b> Secure universal membership of the Convention and provide an appropriate level of service. (CPs, Secretariat)	5.1.i Achieve membership in the Convention of at least 170 Parties by COP11 and of all eligible nations by COP12. (Global: Secretariat, Standing Committee) 5.1.ii Strive to make resources available to provide servicing for Parties, especially recently acceded Parties, to assist them in implementing this Strategic Plan. (Global: Secretariat, Standing Committee, donor CPs)		Obligations and processes for accession guidance Accession guidance for prospective Parties

## Appendix

## Different available categorizations of Convention mandates

CATEGORIES OF MANDATE			
Resolution IX.17 review	Wise Use Handbooks, 3 <sup>rd</sup> edition (2007)	UNEP/IUCN “Issue-based Modules” (tematea)	Ramsar Strategic Plan (2009-2015) Strategies
<ul style="list-style-type: none"> <li>• Convention governance and administration</li> <li>• Regional issues</li> <li>• Strategic Plans, work plans and national reports</li> <li>• Finance and membership</li> <li>• Partnerships, coordination, synergy, and international cooperation (not development assistance – see below)</li> <li>• Development assistance; poverty reduction</li> <li>• Wetland inventory, assessment and monitoring</li> <li>• Ecological character, responses to change, management and restoration</li> <li>• Listing of Ramsar Sites (process, rather than specific sites)</li> <li>• Conservation of specific areas</li> <li>• Wise use (including peatlands, IWRM, ICZM, national planning and public participation etc)</li> <li>• Water</li> <li>• Communication, education, public awareness and capacity-building</li> </ul>	<ul style="list-style-type: none"> <li>• Conceptual Framework for the wise use of wetlands</li> <li>• Developing and implementing National Wetland Policies</li> <li>• Reviewing laws and institutions to promote the conservation and wise use of wetlands</li> <li>• The Convention’s Programme on communication, education and public awareness (CEPA) 2003-2008</li> <li>• Establishing and strengthening local communities’ and indigenous people’s participation in the management of wetlands</li> <li>• An Integrated Framework for the Convention’s water-related guidance</li> <li>• Integrating wetland conservation and wise use into river basin management</li> <li>• Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands</li> <li>• Managing groundwater to maintain wetland ecological character</li> <li>• Wetland issues in Integrated Coastal Zone Management</li> </ul>	<ul style="list-style-type: none"> <li>• Assessments</li> <li>• Legislative measures and national policies</li> <li>• Management</li> <li>• Economic instruments</li> <li>• Provision of resources</li> <li>• Communication, education and public awareness</li> <li>• Cooperation</li> <li>• Cross-cutting obligations</li> </ul>	<ul style="list-style-type: none"> <li>• Wetland inventory and assessment</li> <li>• Global wetland information</li> <li>• Policy, legislation and institutions</li> <li>• Cross-sectoral recognition of wetland services</li> <li>• Recognition of role of the Convention</li> <li>• Science-based management of wetlands</li> <li>• Integrated Water Resources Management</li> <li>• Wetland restoration</li> <li>• Invasive alien species</li> <li>• Private sector</li> <li>• Incentive measures</li> <li>• Ramsar site designation</li> <li>• Ramsar site information</li> <li>• Management planning – new Ramsar Sites</li> <li>• Ramsar site ecological character</li> <li>• Ramsar site management effectiveness</li> </ul>

Resolution IX.17 review	Wise Use Handbooks, 3 <sup>rd</sup> edition (2007)	UNEP/IUCN "Issue-based Modules" (tematea)	Ramsar Strategic Plan (2009-2015) Strategies
	<ul style="list-style-type: none"> <li>• An Integrated framework for wetland inventory, assessment, and monitoring</li> <li>• A Ramsar framework for wetland inventory</li> <li>• Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment</li> <li>• Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance</li> <li>• Addressing change in ecological character</li> <li>• Frameworks for managing Ramsar Sites and other wetlands</li> <li>• Guidelines for international cooperation under the Ramsar Convention on Wetlands</li> </ul>		<ul style="list-style-type: none"> <li>• Ramsar site status</li> <li>• Management of other internationally important wetlands</li> <li>• Synergies and partnerships with MEAs and IGOs</li> <li>• Regional initiatives</li> <li>• International assistance</li> <li>• Sharing information and expertise</li> <li>• Shared wetlands, river basins and migratory species</li> <li>• Communication, education, participation and awareness</li> <li>• Convention financial capacity</li> <li>• Convention bodies' effectiveness</li> <li>• Working with IOPs and others</li> <li>• Membership of the Convention</li> </ul>

**Relevant Resolution**

**Resolution X.14**

*(adopted by the 10<sup>th</sup> meeting of the Conference of the Contracting Parties, Changwon, Republic of Korea, 2008)*

**A Framework for Ramsar data and information needs**

1. AWARE of the suite of technical and scientific guidelines and other materials prepared by the Scientific and Technical Review Panel (STRP) to support Contracting Parties in their implementation of wetland conservation and wise use;
2. ALSO AWARE of the Ramsar Sites Information Service (RSIS) developed and managed for the Convention by Wetlands International under contractual arrangements with the Ramsar Secretariat to support Contracting Parties in their implementation of wetland conservation and wise use, especially concerning Wetlands of International Importance; and FURTHER AWARE of other tools and resources available from International Organisation Partners and other organisations that contribute to supporting Ramsar data and information needs;
3. NOTING that the 9<sup>th</sup> meeting of the Conference of the Contracting Parties (COP9) instructed the STRP to prepare further advice and guidance for consideration by the Parties at their 10<sup>th</sup> meeting, which would focus on the immediate and high priority tasks set out in Annex 1 to Resolution IX.2; and
4. THANKING the STRP for its work in preparing the advice and guidance annexed to this Resolution as part of its high priority work during the 2006-2008 triennium; and ALSO THANKING the UNEP-World Conservation Monitoring Centre (UNEP-WCMC) for its support for the development of this guidance;

THE CONFERENCE OF THE CONTRACTING PARTIES

5. WELCOMES the “Framework for Ramsar data and information needs” provided in the annex to this Resolution, and URGES Contracting Parties, relevant organizations and other stakeholders to make good use of it as appropriate, adapting it as necessary to suit national conditions and circumstances, within the frameworks of existing regional initiatives and commitments and in the context of sustainable development;
6. INSTRUCTS the STRP to include in its work plan for the 2009-2012 period work to:
  - a) update and further develop the Convention’s Framework for Ramsar data and information needs, drawing upon implementation experience, end-user perspectives, and analysis of further needs defined in the decisions of COP10, in particular in relation the data and information needed for identification and designation of Ramsar Sites;
  - b) produce a companion document identifying actions and action gaps of relevance to meeting the needs defined in the Framework at different scales;
  - c) make use of the Framework *inter alia* to inform harmonisation/interoperability activities with other Multilateral Environmental Agreements (MEAs), construction and prioritisation of relevant project proposals either developed or supported by the Ramsar Convention, and the future development of the Ramsar Sites Information Service; and
7. INSTRUCTS the Ramsar Secretariat to disseminate this Framework widely, especially through amendment and updating of the Ramsar Wise Use Handbooks.





## The Ramsar Convention 'toolkit' for the conservation and wise use of wetlands, 4<sup>th</sup> ed. (2010)

### Convention pillar 1: Wise Use

Handbook 1	<b>Wise use of wetlands</b> Concepts and approaches for the wise use of wetlands
Handbook 2	<b>National Wetland Policies</b> Developing and implementing National Wetland Policies
Handbook 3	<b>Laws and institutions</b> Reviewing laws and institutions to promote the conservation and wise use of wetlands
Handbook 4	<b>Avian influenza and wetlands</b> Guidance on control of and responses to highly pathogenic avian influenza
Handbook 5	<b>Partnerships</b> Key partnerships for implementation of the Ramsar Convention
Handbook 6	<b>Wetland CEPA</b> The Convention's Programme on communication, education, participation, and public awareness (CEPA) 2009-2015
Handbook 7	<b>Participatory skills</b> Establishing and strengthening local communities' and indigenous people's participation in the management of wetlands
Handbook 8	<b>Water-related guidance</b> An Integrated Framework for the Convention's water-related guidance
Handbook 9	<b>River basin management</b> Integrating wetland conservation and wise use into river basin management
Handbook 10	<b>Water allocation and management</b> Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands
Handbook 11	<b>Managing groundwater</b> Managing groundwater to maintain wetland ecological character
Handbook 12	<b>Coastal management</b> Wetland issues in Integrated Coastal Zone Management
Handbook 13	<b>Inventory, assessment, and monitoring</b> An Integrated Framework for wetland inventory, assessment, and monitoring
Handbook 14	<b>Data and information needs</b> A Framework for Ramsar data and information needs
Handbook 15	<b>Wetland inventory</b> A Ramsar framework for wetland inventory and ecological character description
Handbook 16	<b>Impact assessment</b> Guidelines on biodiversity-inclusive environmental impact assessment and strategic environmental assessment

### Convention pillar 2: Ramsar sites designation and management

Handbook 17	<b>Designating Ramsar Sites</b> Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance
Handbook 18	<b>Managing wetlands</b> Frameworks for managing Ramsar Sites and other wetlands
Handbook 19	<b>Addressing change in wetland ecological character</b>

### Convention pillar 3: International cooperation

Handbook 20	<b>International cooperation</b> Guidelines and other support for international cooperation under the Ramsar Convention on Wetlands
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### Companion document

Handbook 21	<b>The Ramsar Convention Strategic Plan 2009-2015</b> Goals, strategies, and expectations for the Ramsar Convention's implementation for the period 2009 to 2015
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*Ramsar*  
*Handbooks*  
4<sup>th</sup> edition

# Handbook 14

## Data and information needs

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