

Wise use of wetlands







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 June 2007, 155 nations have joined the Convention as Contracting Parties, and more than 1700 wetlands around the world, covering over 151 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 7th, 8th and 9th meetings of the Conference of the Contracting Parties (COP7, COP8, and COP9) held, respectively, in San José, Costa Rica, in May 1999, Valencia, Spain, in November 2002, and Kampala, Uganda, in November 2005. 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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Citation: Ramsar Convention Secretariat, 2007. Wise use of wetlands: A Conceptual Framework for the wise use of wetlands. Ramsar handbooks for the wise use of wetlands, 3rd edition, vol. 1. Ramsar Convention Secretariat, Gland, Switzerland.

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Cover photo: Zhaling Lake Ramsar site, courtesy Ramsar Convention Implementation Office of the China State Forestry Administration.

Wise use of wetlands

Handbook 1

A Conceptual Framework for the wise use of wetlands



This 3rd edition of the Ramsar handbooks replaces the series published in May 2004. It includes relevant guidance adopted by several meetings of the Conference of the Parties, in particular COP7 (1999), COP8 (2002), and COP9 (2005), as well as selected background documents presented at these COPs.





This 3rd edition of the Ramsar handbooks series has been made possible through generous contributions from the U.S. Department of State and the U.S. Fish & Wildlife Service.

Acknowledgements

The work of preparing the guidance and a conceptual framework for the wise use of wetlands provided in this Handbook was undertaken as a collaborative effort during 2003-2005 by Ramsar's Scientific & Technical Review Panel (STRP) Working Groups 1 (Inventory and assessment, led by Max Finlayson, International Water Management Institute) and 2 (Wise use, led by Randy Milton, Canada). This team also prepared an underlying analysis and recommendations which were provided to COP9 as an Information Paper (COP9 DOC. 16). Major contributions to the work were made in particular by Randy Milton, David Pritchard, Max Finlayson, and the Ramsar Secretariat (Deputy Secretary General and the Secretary General). The work of the STRP was greatly assisted by the concurrent work of the Millennium Ecosystem Assessment (MA), and in particular the MA's conceptual framework for ecosystems and human well-being and its definition and description of the characteristics of ecosystems and ecosystem services (Millennium Ecosystem Assessment 2003. *Ecosystems and Human Well-being: A Framework for Assessment*. Island Press, Washington, D.C.).

Note. This Handbook is based on Resolution IX.1 and its Annex A, but also brings together an Information paper and other resource materials relevant to the issue of wetland and water management. 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 Contracting Parties.

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

All decisions of the Ramsar COPs are available from the Convention's web site at http://www.ramsar.org/index_key_docs.htm#res. Background documents referred to in these handbooks are available at http://www.ramsar.org/cop7/cop7_docs_index.htm, http://www.ramsar.org/cop8/cop8_docs_index_e.htm, and http://www.ramsar.org/cop9/cop9_docs_index_e.htm.



Fishing boats in Sao Tomé and Principe. Photo: Tim Dodman.

Table of Contents

Acknowledgements	2
Foreword	4
A Conceptual Framework for the wise use of wetlands and the maintenance of their ecological character	5
Introduction Wetland ecosystem terminology A Conceptual Framework for wetland wise use Updated definitions of "ecological character" and "change in ecological character" of wetlands	5 8 11
An updated definition of the "wise use" of wetlands Appendix 1: Ramsar's wise use definition in relation to sustainable use, sustainable development and ecosystem approaches	16
Appendix 2: Additional guidance on the wise use of wetlands	18
Appendix 3: The Ramsar Handbooks for the wise use of wetlands: Contents of Handbooks 2-17	21
Relevant Resolution Resolution IX.1: Additional scientific and technical guidance for implementing the Ramsar wise use concept	25

Foreword

This Handbook 1 provides the over-arching guidance on the use of the whole set of Ramsar Wise Use Handbooks, with each of the other Handbooks (2-17) of this 3rd edition addressing one or more specific types of intervention under its "Conceptual Framework for the wise use of wetlands and the maintenance of their ecological character".

The principles of "wise use" and the maintenance of "ecological character" of wetlands lie at the very heart of the Ramsar Convention. Maintaining the ecological character of wetlands designated as Wetlands of International Importance (Ramsar sites) and securing, as far as possible, the wise use of the wetlands in their territory, is recognized in the text of the Convention adopted in 1971 as amongst the key outcomes of the implementation of the Convention by its Contracting Parties.

But what precisely is meant by the terms "wise use" and "ecological character"? A definition of "wise use" was first adopted by Contracting Parties at COP3 in 1987. Subsequently, the Convention's Scientific & Technical Review Panel (STRP) developed definitions of "ecological character" and "change in ecological character" which were adopted by COP7 in 1999.

Since the adoption of the "wise use" definition, the language of environmental conservation has evolved and changed, with new terminologies such as in the 1987 Brundtland Commission report on sustainable development, the 1992 Convention on Biological Diversity's (CBD) use of the terms "ecosystem approach" and "sustainable use", and most recently the Millennium Ecosystem Assessment's (MA) definitions and descriptions of the characteristics of ecosystems and of "ecosystem services". In order to ensure that the Ramsar definitions are up-to-date and in line with such current language, in 2002 Parties requested the STRP to review the definitions and propose updated definitions as necessary. This Handbook provides these updated definitions, as adopted by COP9 in 2005 as Resolution IX.1 Annex A.

Importantly, in undertaking this work the STRP recognized that the Convention lacked an overall framework for its implementation of "wise use". The conceptual framework for ecosystems and human well-being developed by the MA proved to be highly relevant in this context, particularly as it speaks directly to the Ramsar Convention's recognition of the interdependence of people and their environment. This conceptual framework links indirect and direct drivers of change with biodiversity, ecosystems and their services and then with human well-being and poverty reduction. Under this framework, Ramsar's "wise use" equates with the maintenance of ecosystems and the continued delivery of ecosystem services to maintain human well-being.

Furthermore, this conceptual framework provides an invaluable tool for those implementing the Ramsar Convention in forming the basis for how and when each aspect and topic of the Convention's guidances can and should be applied as interventions to achieve wise use and the maintenance of the ecological character of wetlands. All Contracting Parties and others involved in the implementation of the Convention are urged to use this Handbook as their "route-map" for successful implementation.

A Conceptual Framework for the wise use of wetlands and the maintenance of their ecological character

(adopted as Annex A to Resolution IX.1 by the 9th meeting of the Conference of the Contracting Parties, Kampala, Uganda, 2005)

Introduction

- 1. Definitions of the key Ramsar Convention concepts of "wise use" and "ecological character" of wetlands were adopted by COP3 (1987) and COP7 (1999) respectively. Action 3.1.1 of the Ramsar Strategic Plan 2003-2008 requested the Convention's Scientific and Technical Review Panel (STRP) to "review the wise use concept, its applicability, and its consistency with the objectives of sustainable development". [See Appendix 1 for information on Ramsar's wise use definition and its relation to sustainable use, sustainable development and ecosystem approaches.]
- 2. In addition, COP8 Resolution VIII.7 requested the STRP to further review and, as appropriate, develop guidance and report to COP9 concerning identified gaps and disharmonies in defining and reporting the ecological character of wetlands, including, inter alia, harmonization of definitions and terms in the guidance on inventory, assessment, monitoring and management of the ecological character of wetlands.
- 3. The work of the STRP has been greatly assisted by the concurrent work of the Millennium Ecosystem Assessment (MA), in particular the MA's Conceptual Framework for Ecosystems and Human Well-being (Millennium Ecosystem Assessment 2003. *Ecosystems and Human Well-being: A Framework for Assessment*. Island Press, Washington, D.C.), and its definition and description of the characteristics of ecosystems and ecosystem services.
- 4. The STRP determined that it is appropriate to update and harmonize the Convention's "wise use" and "ecological character" definitions to take into account other now more-widely used terms and definitions relating to ecosystems and sustainable development, and that a conceptual framework for the delivery of "wise use" would be of assistance to Contracting Parties and others in determining when and where to make policy and management interventions to support this delivery.
- 5. This guidance covers harmonizing wetland ecosystem terminologies and provides both a conceptual framework for wetland wise use and updated and harmonized definitions of "ecological character", "change in ecological character", and the "wise use" of wetlands.

Wetland ecosystem terminology

6. Within the Millennium Ecosystem Assessment (MA), ecosystems are described as the complex of living communities (including human communities) and non-living environment (Ecosystem Components) interacting (through Ecological Processes) as a functional unit which provides *inter alia* a variety of benefits to people (Ecosystem Services).

Additional information

Millennium Ecosystem Assessment

Ecosystems and Human Well-being: A Framework for Assessment

The Millennium Ecosystem Assessment (MA) was an international work programme that "focused on ecosystem services (the benefits people obtain from ecosystems), how changes in ecosystem services have affected human well-being, how ecosystem changes may affect people in future decades, and response options that might be adopted at local, national, or global scales to improve ecosystem management and thereby contribute to human well-being and poverty alleviation". It was launched by UN Secretary General Kofi Annan in June 2001 and completed in March 2005. It is intended to help to meet assessment needs of the Convention on Biological Diversity, the Convention to Combat Desertification, the Ramsar Convention on Wetlands, and the Convention on Migratory Species, as well as the needs of others in the private sector and civil society.

According to its Web site, "the MA synthesized information from the scientific literature, datasets, and scientific models, and included knowledge held by the private sector, practitioners, local communities and indigenous peoples. All of the MA findings underwent rigorous peer review. More than 1,300 authors from 95 countries were involved in four expert working groups preparing the global assessment, and hundreds more [have undertaken] more than 20 sub-global assessments".

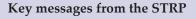
The four main volumes of the MA general report - entitled Current State and Trends, Scenarios, Policy Responses, and Multiscale Assessments - as well as Our Human Planet (Summary for Decision Makers), are available for PDF download from the MA web site and for purchase in printed form from Island Press: http://www.millenniumassessment.org/en/index.aspx.

The Synthesis reports

In addition to the enormous general report, there are five synthesis reports that integrate the general findings that are significant to five main subject areas. All with the general title "Ecosystems and Human Well-being", the syntheses include Wetlands and Water (prepared for the Ramsar Convention), Biodiversity (prepared for the CBD); Desertification (prepared for the UNCCD); Opportunities and Challenges for Business and Industry; and Health (with the WHO). These are available for PDF download from the Web link above.

The Wetlands and Water synthesis report was prepared by an MA Synthesis Team of more than twenty authors co-led by Max Finlayson, Rebecca D'Cruz, and Nick Davidson. It includes a Key Messages section and a Summary for Decision-Makers as well as chapters on the distribution of wetlands and their species; wetland services; drivers of loss and change to wetland ecosystems; human well-

being; scenarios for the future of wetlands; and responses for the wise use of wetlands.



To complement the messages in the Wetlands and Water synthesis report, the Ramsar Scientific and Technical Review Panel (STRP), at its February 2005 meeting, prepared a set of 14 key messages for decision-makers on the implications of the MA for the Ramsar Convention and the future of wetlands. These were presented to Ramsar COP9 in November 2005.

STRP's 14 Key Messages for the Ramsar Convention and the future of wetlands

- A cross-sectoral focus is urgently needed from policy- and decision-makers that emphasizes securing wetland ecosystems and their services in the context of achieving sustainable development and improving human well-being.
- 2 Management of wetlands and water resources is most successfully addressed through integrated management at the river (or lake or aquifer) basin scale that is linked to coastal zone management for coastal and near-shore wetlands and that takes into account water allocations for the ecosystems.
- Wetlands deliver a wide range of critical and important services (e.g. fish and fiber, water supply, water purification, coastal protection, recreational opportunities, and increasingly, tourism) vital for human well-being. Maintaining the natural functioning of wetlands will enable them to continue to deliver these services.
- 4 The principal supply of renewable fresh water for humans comes from an array of wetland types, including lakes, rivers, swamps and groundwater aquifers. Up to 3 billion people are dependent on groundwater as a source of drinking water, but such abstractions increasingly exceed their recharge from surface wetlands.
- The services delivered by wetlands have been arguably valued at US\$14 trillion annually. Economic valuation now provides a powerful tool for placing wetlands on the agenda of conservation and development decision-makers.
- 6 Wetlands encompass a significant proportion of the area of the planet; the global estimate is 1280 million hectares (equivalent to approximately 9% of land surface) and is recognized as an underestimate.
- The degradation and loss of wetlands is more rapid than that for other ecosystems. Similarly, the status of both freshwater and, to a lesser extent, coastal species is deteriorating faster than that of species in other ecosystems. Wetland-dependent biodiversity in many parts of the world is in continuing and accelerating decline.
- Wetland loss and degradation has primarily been driven by land conversion and infrastructure development, water abstraction, eutrophication and pollution and over-exploitation. Losses tend to be more rapid where populations are increasing most and where demands for increased economic development are greatest. There are a number of broad, interrelated economic reasons, including perverse subsidies, why wetlands continue to be lost and degraded.
- 9 Global climate change is expected to further exacerbate the loss and degradation of wetland biodiversity including species that cannot relocate and migratory species that rely on a number of wetlands at different stages of their life cycle.
- 10 The continuing loss and degradation of wetlands are leading to reduction in the delivery of wetland ecosystem services, yet at the same time demand for these same services is projected to increase.
- 11 Current use of two wetland ecosystem services freshwater and capture fisheries dependent on natural reproduction in some regions is now in excess of levels that can be sustained even at current demands, much less future ones.
- 12 The projected continued loss and degradation of wetlands will result in further reduction in human well-being, especially for poorer people in less developed countries where technological solutions are not as readily available.
- 13 Progress towards achievement of the Millennium Development Goals depends on maintaining or enhancing wetland ecosystem services.
- 14 The priority when making choices about wetland management decisions is to ensure that the ecosystem services of the wetland are maintained (and, where appropriate, restored). This can be achieved by application of the wise use principle and guidelines of the Ramsar Convention.

- 7. Included in "MA Ecosystem Services" are provisioning, regulating, and cultural services that directly affect people, and supporting services which are needed to maintain these other services. Further information can be found in the Synthesis Report prepared by the MA for the Ramsar Convention (Finlayson, C.M., D'Cruz, R. & Davidson, N.C. 2005. Wetlands and water: ecosystem services and human well-being. World Resources Institute, Washington D.C). In the context of the Ramsar Convention this refers to products, functions and attributes as defined in Resolution VI.1 and expanded to include both material and non-material cultural values, benefits and functions as outlined in COP8 DOC.15 "Cultural aspects of wetlands".
- 8. Terms currently used in previous Ramsar guidelines and documents are shown in Table 1 alongside those used in the MA. Further review of the harmonization of definitions and terms related to ecosystem benefits/ services (with reference to Resolution VIII.7 (paragraph 15) and COP9 DOC. 16, taking into account the usage of such terms in other international fora) is [being undertaken] by the STRP, to be reported to COP10.

Table 1. Comparative terminology for describing wetland ecosystems

MA Ecosystem terms	Ramsar terms
Ecosystem Components: physical; chemical; biological (habitats, species, genes)	"components", "features", "attributes", "properties"
Ecological Processes within and between ecosystems	"processes", "interactions", "properties"; "functions"
Ecosystem Services : provisioning; regulating; cultural; supporting	"services", "benefits", "values", "functions", "goods", "products"

A Conceptual Framework for wetland wise use

- 9. The Conceptual Framework developed by the Millennium Ecosystem Assessment (MA) for the maintenance of ecosystem services for human well-being and poverty reduction provides a multi-scalar approach which indicates how and where policy and management interventions and decision-making can be made (Figure 1). Under the MA framework, "wise use" equates to the maintenance of ecosystem benefits/services to ensure long term maintenance of biodiversity as well as human well-being and poverty alleviation.
- 10. Mapping the Ramsar Wise Use toolkit contents onto this conceptual framework also permits an assessment of the toolkit's coverage and gaps in coverage in relation to intervention opportunities and topics. It should be noted that many of the current Ramsar wise use guidelines concern strategies and interventions to ecosystems and their processes, or strategies and interventions addressing aspects of the direct drivers of change to ecosystems. Also, these concern interventions chiefly at local or national levels, since Ramsar guidance is for Contracting Parties acting within their territories, although some guidance also applies regionally and globally (e.g., aspects of the Guidelines for International Cooperation Handbook [17]). [See Appendix 3 for further information on the 3rd Edition of the Ramsar toolkit]

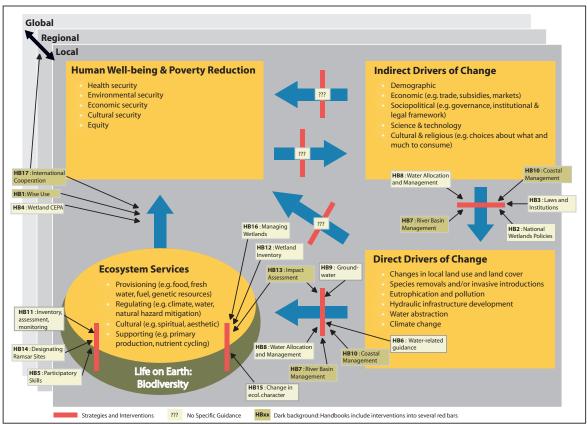


Figure 1. A Conceptual Framework for the Wise Use of Wetlands and the maintenance of their ecological character, and the application of the guidelines in the Ramsar 'toolkit' of Wise Use Handbooks 3rd edition (2006). (From the MA report to the Ramsar Convention: Ecosystem Services and Human Well-Being: Wetlands & Water: Synthesis. 2005. World Resources Institute, Washington D.C.)

- 11. The strategies and intervention opportunities which are relevant for the application of each of the guidelines of the Ramsar toolkit are listed in Table 2
- 12. Only two current Ramsar wise use guidelines National Wetland Policies and Reviewing Legislative and Institutional Frameworks wholly concern interventions to indirect drivers of change, although some other guidelines include some policy aspects. However, it is clear that these 'interventions' onto the indirect drivers of change are important to have in place if efforts to manage wetland ecosystems sustainably through the application of the rest of the suite of Ramsar wise use guidelines are to be effective and efficient. Without such a policy and legislative framework in place, there is a risk that other interventions will take place in a 'political vacuum' without a clear authorizing environment for their delivery, thus risking such efforts failing.
- 13. For some intervention opportunities indicated by the MA Conceptual Framework for example, between indirect drivers of change and human well-being and *vice versa* there are currently no Ramsar guidelines developed.

Table 2. The application of guidelines in the Ramsar "Toolkit" of Wise Use Handbooks [3rd Edition], supported by Ramsar Technical Reports, to different intervention opportunities in the MA's Conceptual Framework (see Figure 1).

Intervention opportunity(ies) Relevant

Relevant Ramsar Wise Use Handbooks ([3rd edition]), COP9 Resolutions and Ramsar Technical Reports (RTR)

Indirect drivers → Direct drivers

фГ

Ramsar Technical Reports (RTR)

2. National Wetland Policies

- 3. Laws and Institutions
 6. Water-related framework
- 7. River Basin Management (some parts) 8. Water Allocation and Management

(some parts)

10. Coastal Management (some parts)

Direct drivers → Wetland Ecosystems

- 6. Water-related framework7. River Basin Management
- 8. Water Allocation and Management
- 9. Groundwater
- 10. Coastal Management12. Wetland Inventory13. Impact Assessment
- RTR. 1 Rapid Assessment
- RTR. 3 Economic valuation of wetlands RTR. Vulnerability assessment (in prep.) RTR. Environmental water requirements

(in prep.)

Within Wetland Ecosystems

- 5. Participatory Skills7. River basin management
- 8. Water Allocation and Management
- 9. Groundwater
- 11. Inventory/assessment /monitoring

framework

12. Wetland Inventory13. Impact Assessment14. Designating Ramsar Sites16. Managing Wetlands

RTR 1 Rapid assessment

RTR 2 GIS for inventory, assessment &

monitoring

Covers several types of intervention opportunities (Indirect drivers → Direct drivers, Direct drivers → Wetland Ecosystems, and within Wetland Ecosystems)

- 1. Wise Use of Wetlands 4. Wetland CEPA
- 17. International Cooperation

Resolution IX.1 Annex D. Indicators of

effectiveness

14. All aspects of the outline *Guidelines for the implementation of the wise use concept* adopted by COP4 (Recommendation 4.10) and most aspects of the *Additional guidance for the implementation of the wise use concept* adopted by COP5 (Resolution 5.6) have now been superseded by the suite of elaborated guidelines adopted by subsequent Conferences of Contracting Parties and compiled in the Ramsar toolkit of Wise Use Handbooks (see Table 2). However, three aspects of the COP5 guidance have not been further developed, those concerning "Research", "Training" and "Technical issues" of sustainable technologies. [These sections of Resolution 5.6 are included here in Appendix 2.]

Updated definitions of "ecological character" and "change in ecological character" of wetlands

15. Applying the MA's terms and concepts, under which services form an integral part of ecosystems, an updated definition of Ramsar "ecological character" is:

"Ecological character is the combination of the ecosystem components, processes and benefits¹/services that characterise the wetland at a given point in time."

- 16. The phrase "at a given point in time" refers to Resolution VI.1 paragraph 2.1, which states that "It is essential that the ecological character of a site be described by the Contracting Party concerned at the time of designation for the Ramsar List, by completion of the Information Sheet on Ramsar Wetlands (as adopted by Recommendation IV. 7)."
- 17. Furthermore, paragraph 2.3 of Resolution VI.1 states that "Contracting Parties are requested to verify the data which they have provided on Information Sheets on Ramsar Wetlands every six years, i.e., every second meeting of the Conference and to provide the [Secretariat] with updated sheets if necessary." In addition, under paragraph 2.4 "Change in ecological character of a listed site should be assessed against the baseline status presented in the Information Sheet on Ramsar Wetlands, at the time of designation for the List (or at the time the Information Sheet was first provided to the [Secretariat]), together with any information which has been received subsequently."
- 18. Essential to wetland management is baseline data that establishes the range of natural variation in components, processes and benefits/services at each site within a given time frame, against which change can be assessed. Contracting Parties have already adopted a range of guidance relevant to the identification, assessment, monitoring and management of the ecological character of Wetlands of International Importance and other wetlands, including wetland risk assessment (Resolution VII.10), impact assessment (Resolutions VII.16 and VIII.9), monitoring (Resolution VI.1), inventory (Resolution VIII.6), and management planning (Resolution VIII.14). In addition, the STRP is committed to the future development of a hierarchical mechanism for describing the ecological character of wetlands.

¹ Within this context, ecosystem benefits are defined in accordance with the MA definition of ecosystem services as "the benefits that people receive from ecosystems".

19. Consistent with the updated definition of "ecological character", an updated definition of "change in ecological character of wetlands" is:

"For the purposes of implementation of Article 3.2, change in ecological character is the human-induced adverse alteration of any ecosystem component, process, and/or ecosystem benefit/service."

- 20. The inclusion of specific reference to Article 3.2 of the Convention text within the definition is designed to clarify the maintenance obligation for the ecological character of listed Wetlands of International Importance (Ramsar sites) under Article 3.2, and to note that such change concerns only adverse change caused by the actions of people. This is in line with the context of Article 3.2 and Recommendation 4.8 (1990) establishing the Montreux Record, which was re-affirmed by COP8 Resolution VIII.8. For the purposes under the Convention, this definition therefore excludes the processes of natural evolutionary change occurring in wetlands and also excludes positive human-induced change.
- 21. However, it should be noted that other actions adopted by the Convention, such as those concerning assessing the overall status and trends of wetlands and Ramsar sites, require information on all types of change in ecological character positive and negative, natural and human-induced (as is recognized in COP8 DOC. 20 and by Resolution VIII.8). Likewise, the Ramsar Convention has also recognized that wetland restoration and/or rehabilitation programmes can lead to favourable human-induced changes in ecological character (Annex to Resolution VI.1, 1996) and are a key aspect of wetland management interventions (see, e.g., Annex to Resolution VIII.14 (Handbook 16) and Handbook 15).

An updated definition of the "wise use" of wetlands

22. An updated definition of "wise use", taking into account the Convention's mission statement, the MA's terminology, the concepts of the ecosystem approach and sustainable use applied by the Convention on Biological Diversity, and the definition of sustainable development adopted by the 1987 Brundtland Commission, is:

"Wise use of wetlands is the maintenance of their ecological character, achieved through the implementation of ecosystem approaches², within the context of sustainable development³."

23. The wise use provisions of the Convention apply, as far as possible, to all wetland ecosystems. Societal choice is inherent in advancing human well-being and poverty alleviation, which depends on the maintenance of ecosystem benefits/services. Pressures to follow sustainable development precepts, and to maintain environmental, economic and social sustainability

² Including inter alia the Convention on Biological Diversity's "Ecosystem Approach" (CBD COP5 Decision V/6) and that applied by HELCOM and OSPAR (Declaration of the First Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, Bremen 25-26 June 2003).

³ The phrase "in the context of sustainable development" is intended to recognize that whilst some wetland development is inevitable and that many developments have important benefits to society, developments can be facilitated in sustainable ways by approaches elaborated under the Convention, and it is not appropriate to imply that 'development' is an objective for every wetland.

- in land use decisions, encourage compromises ("trade-offs") between individual and collective interests.
- 24. Within the context of ecosystem approaches, planning processes for promoting the delivery of wetland ecosystem benefits/services should be formulated and implemented in the context of the maintenance or enhancement, as appropriate, of wetland ecological character at appropriate spatial and temporal scales.

Additional information

Wetlands and Poverty Reduction Project: securing wetlands - sustaining life

by Wetlands International

The Wetlands and Poverty Reduction Project of Wetlands International is dedicated to demonstrating and promoting the crucial role wetlands can play in poverty reduction. Together with partners from environmental and development organizations, the project supports improved wetland management. The challenge is to overcome the conflicts of interest as well as lack of knowledge among people involved in wetland management.

The project develops clear views and information, offers training facilities and uses advocacy and communication to bring knowledge to the right people. For optimal wetland management, leading to sustainable benefits for many, we also put pressure to reverse adverse policies and practices and support partnerships and policies that lead to long term solutions for the poor.

Knowledge: developing convincing information and views

The project works on a knowledge base of information and clear views on various wetland topics in order to inform and convince those responsible for policies. Therefore we have set up five demonstration projects in Africa and Asia. These projects will teach us about the potential of different kinds of wetlands for poverty reduction and how they can best be managed.

In the five demonstration projects local partnerships aim to illustrate how poverty reduction can be achieved through the wise use of wetlands. By the end of 2008 the projects will hopefully demonstrate, in a practical way, how a resilient wetland ecosystem can both provide for human needs and sustain biodiversity. Stakeholders in the demonstration projects are encouraged to learn from the experience of others, especially indigenous stakeholders. One of the funding criteria for the projects is the demonstrable commitment

of an active partnership between conservation and development agencies and other sector interests in project planning and implementation.

The demonstration projects are:

MALI: Poverty reduction in the Inner Niger Delta

KENYA: Improved water management as an entry point for community livelihood improvement, sustainable land use planning, and institutional development

Fishing in the Inner Niger Delta. Photo: Leo Zwarts.

ZAMBIA-MALAWI: Striking a balance

- maintaining seasonal wetlands and their livelihood contributions in South Central Africa

SOUTH AFRICA: Coastal peat swamp forest conservation and poverty alleviation in and around the Greater St. Lucia Wetland Park

INDONESIA: Improving the livelihoods of poor and vulnerable communities in the buffer zone of Berbak and Sembilang National Parks through the wise use of wetlands.

Of course, a lot can be learned by looking at the successes and failures of wetland management in the past. This is our second source of knowledge: the development of 'lessons learned' from wetland management. Wetlands International itself also has a long history of wetland management from which we can learn. All this information forms the basis of our activities.

Training the right people

Training people who deal with wetland policies and management is key to success. Therefore the project and its partners have developed a large-scale training programme, consisting of two courses; one for high level policy makers and one for mid-level wetland managers. Partner institutions will offer these courses in West and East Africa, respectively in French and English. In addition, 100 trainers are being trained so that they also can offer these courses to many others.

Working on better policies

The project hopes to bring about improvements in policies of specific international decision-making bodies like the Ramsar Convention, CBD and regional authorities in Africa, Latin America and Asia so that the role of wetlands in poverty alleviation is recognized in appropriate policy documents. At this international level, Wetlands



Drying fish, Inner Niger Delta. Photo: Leo Zwarts.

International plays a visible role at conventions; informing and supporting delegations representing governments as well as other non-governmental stakeholders.

Most of our ambitions are however on the development of national policies in developing countries. At this level we work in partnership with local NGOs. These NGOs are best able to identify opportunities to improve policies. They will also urge our mission with key people in other relevant NGOs, governments and companies.

Finally, we work with governmental and non-governmental donors to improve their policies on poverty reduction and conservation.

For more information visit http://www.wetlands.org/wprp or contact Trevor Wickham (trevor.wickham@wetlands.org)

Appendix 1

Ramsar's wise use definition in relation to sustainable use, sustainable development and ecosystem approaches

(from Ramsar COP9 DOC. 16, paragraphs 14-20: Rationale for proposals for *A Conceptual Framework for the wise use of wetlands* and the updating of wise use and ecological character definitions)

As part of its definition of the wise use of wetlands, COP3 also defined "sustainable utilisation" as:

"human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations".

Also in 1987, the Brundtland Commission defined "sustainable development" as:

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (UN World Commission on Environment and Development. 1987. *Our common future*.)

Ramsar COP3 also recognized that both wise use policy and actions at site management levels are integral parts of sustainable development. Since the terms of the Brundtland definition and the Ramsar COP3 definition of "sustainable utilisation" are very similar, it follows that rather than equating wise use simply with sustainable utilisation (use), it is now more appropriate and relevant to define wise use in the context of sustainable development.

Furthermore, wise use as a sustainable development mechanism has subsequently been recognized by the Ramsar Convention in 1996 (COP6) through its adoption of the Convention's mission statement in the Strategic Plan 1997-2002, reaffirmed by this amended mission statement in the Strategic Plan 2003-2008 (COP8 Resolution VIII.25):

"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."

The Convention on Biological Diversity (CBD) has described its "ecosystem approach" as that Convention's overarching approach for its implementation. CBD has described (in Decision V/6; COP5, 2000) the "ecosystem approach" (see also Appendix 2) as:

"a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organizms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems."

Thus the CBD's overarching "ecosystem approach" can be regarded as congruent with Ramsar's overarching concept of "wise use". In addition, the "Addis Ababa Principles and Guidelines for the sustainable use of biodiversity", adopted by the Convention on Biological Diversity in 2004 (CBD

COP7 decision VI/12), focus attention on the sustainable use of components of biological diversity. These guidelines cover a similar range of implementation interventions at similar levels of detail to the original Ramsar Wise Use Guidance of COP4 and COP5. Hence the CBD's sustainable use guidelines also equate to the Ramsar 'toolkit' of guidelines for delivering wise use through maintaining the ecological character of wetlands.

In addition to the CBD's description of "ecosystem approach", there are a number of other definitions and descriptions in current use. These include the definition used by the OSPAR and Helsinki Commissions (Declaration of the First Joint Ministerial Meeting of the Helsinki and OPSAR Commissions, June 2003) and the description and eleven principles applied by the US Fish and Wildlife Service.



At this working saltpan in the town of Pomorie, an important tourist resort on the Black Sea coast of Bulgaria, there are plans to establish a salt museum and to train young salters in the traditional craft. Photo:

Hjalmar Dahm and Theodora Petanidou.

Appendix 2

Additional guidance on the wise use of wetlands

The text below, taken from Resolution 5.6, *Additional guidance on the implementation of the wise use concept* (1993), is reproduced here since research and training issues have not been further developed by the guidelines in this Handbook. For further information on Ramsar and training/capacity building, readers are also referred to http://www.ramsar.org/outreach_advisoryboard.htm for information on the form and function of the Ramsar Advisory Board on Capacity Building.

II.3 Research

Research can be anything that expands upon basic knowledge. Particular areas that may deserve attention are both identification and quantification of wetland values, sustainability of wetland use, and landscape functioning and modification. Contracting Parties should take positive steps to acquire and, when possible, share any knowledge developed on wetland values, functions and uses.

- 1) Priority research actions may include:
 - The development of a vocabulary of terms, understandable world-wide;
 - The development of means to emphasize landscape or catchment approaches in management;
 - The development of techniques for monitoring ecological change and forecasting the evolution of wetland characteristics under the pressure of present uses;
 - The improvement of the knowledge base of wetland functions and values, especially the socio-economic values of wetlands, in order to learn about the traditional management techniques of the local populations and their needs;
 - The improvement of the knowledge of the scientific classification of wetlands microorganizms, plants and animals, and the lodging of study specimens with museums or other appropriate institutions;
 - The development of methodologies to evaluate sustainable practices;
 - The provision of the data on which alternative/wise use technologies can be developed;
 - The development of techniques for restoration of wetlands.
- 2) The above-mentioned research questions represent an indication of needs. In practice, it can be expected that the number of specific research questions to be addressed will increase as progress is made in natural resource programmes. Research priorities must be based on management needs.

II.4 Training

- 1) Attention should be devoted to four aspects of training:
 - The definition of training needs
 - The differing needs between regions, countries and sites
 - Expertise may not always be available and some key aspects of wise use may not be covered in the existing programme. These key aspects must be considered as priorities for further training activities. Therefore, the first step in establishing a training programme should be to carry out a training needs analysis.
 - The target audience

There is a huge difference between educational and awareness programmes and professional training. Generally, it can be said that while the general public and senior policy makers should be made aware of ecological, cultural, social and economical values of wetland ecosystems, training should be provided for those who are directly involved in administering and practising wetland management. Training sessions should focus on the most up-to-date methods for implementing wise use. Such sessions need also to be organized for judicial authorities and other law enforcement officials.

The subject

Training should furnish wetland managers and administrators with the professional knowledge needed for establishing, defending, and implementing the concept of wise use of wetlands.

- 2) Three broad types of training appear to be of particular relevance for wetland professionals:
 - Courses on integrated management

Training should seek to bring together specialists from different fields to generate a common understanding and a common approach to wetland management and planning;

Courses on wetland management techniques

Training should seek to provide the participants with the most up-to- date and effective techniques of inventory, planning, monitoring, environmental impact assessment (EIA) and restoration;

Courses for field staff

Wardens and rangers need to have a very basic understanding of the concept of wise use and to be able to deal with day-to-day situations such as enforcement of legislation and public awareness;

The development of training manuals and other resource materials should be an important long-term goal for any training programme.

3) Training methods and resources

Training activities and transfer of appropriate knowledge should be an integrated component of all wise use projects. Those activities should be as catalytic as possible, and seek to train potential trainers at regional level who can then pass on their expertise to lower levels, and involve the cooperation of governmental and non-governmental organizations, using local resources and institutions whenever possible.

The Guidelines for Global Action on Peatlands (GGAP)

The **Guidelines for Global Action on Peatlands (GGAP)**, adopted as the Annex to Resolution VIII.17 by the 8th Conference of the Contracting Parties, Valencia, Spain, 2002, have not been included as a separate volume in this 3rd Edition of the Handbooks. The text below, taken from these guidelines, provides the actions relevant to research and training included in the GGAP.

E. Research networks, regional centres of expertise, and institutional capacity

Ramsar handbooks for the wise use of wetlands, 3rd edition

Guidelines for Action

- E1. Networks for research and programme cooperation should be established, involving research institutes and other peatland scientific organizations so as to share knowledge and information and improve understanding of the biodiversity, ecological character, values, and functions of the world's peatlands.
- E2. Research institutes and other peatland scientific organizations should seek opportunities for the development of cooperative scientific and management studies to fill the identified gaps in the knowledge required to implement peatland wise use. The GAP Coordinating Committee (see Guideline G1 below) should assist in this process by reviewing and identifying such gaps.
- E3. Opportunities should be sought for cooperative research to further elucidate the role of peatlands in mitigating the impacts of global climate change, in line with the gaps in knowledge identified by the comprehensive review of "Wetlands and climate change: impacts and mitigation" submitted to Ramsar COP8.
- E4. The creation of Regional Centres of Expertise in the wise use and management of peatlands should be promoted for training and the transfer of knowledge in order to assist developing countries and those with economies in transition to increase their capacity for implementation of wise use of peatlands.
- E5. Peatlands suitable for restoration and rehabilitation should be identified following the procedures outlined in the *Principles and guidelines on wetland restoration* adopted by Ramsar COP8 (Resolution VIII.16), and research and transfer of technologies for peatland management and the restoration and rehabilitation of appropriate peatlands should be facilitated, particularly for local community use in developing countries and countries with economies in transition.
- E6. Contracting Parties should encourage the establishment and activities of national and local organizations with expertise in peatland management.
- E7. Research into, and development of, appropriate sustainable alternatives to peat in, for example, horticultural use, should be encouraged.

Appendix 3

The Ramsar Handbooks for the wise use of wetlands: Contents of Handbooks 2-17

Handbook 2: National Wetland Policies

Developing and implementing National Wetland Policies

which includes guidance on:

Why are wetland policies needed?

What is a wetland policy?

The relationship between policy and wise use

Considerations for a National Wetland Committee

National issues statement and background paper

Defining wetlands at a national level

Defining stakeholders and initiating national consultations

Objectives for a National Wetland Policy and policy implementation strategies

Seeking government endorsement and approval

Defining who is responsible for implementation

Developing implementation guidelines and defining resource needs

Interministerial harmonization

Establishing a national monitoring programme

Handbook 3: Laws and institutions

Reviewing laws and institutions to promote the conservation and wise use of wetlands which includes guidance on:

The purpose of a legal and institutional review

Establishing political and institutional responsibility for the review

Defining the review methodology

Establishing a knowledge base of relevant legal and institutional measures

Evaluating the knowledge base

Recommending legal and institutional changes necessary to support conservation and wise use

Handbook 4: Wetland CEPA

The Convention's Programme on communication, education and public awareness (CEPA) 2003-2008

which includes guidance on:

Major achievements under the first CEPA programme

Investing in CEPA - Opportunities and benefits

Vision and guiding principles

General and Operational Objectives

Actions to pursue the Vision and Objectives

Handbook 5: Participatory skills

Establishing and strengthening local communities' and indigenous people's participation in the management of wetlands

which includes guidance on:

Why community involvement is beneficial

Lessons learned from community involvement

Incentives; trust; flexibility; knowledge exchange and capacity building; continuity

Monitoring and evaluating the involvement of local people in wetland management

Handbook 6: Water-related guidance

An Integrated Framework for the Convention's water-related guidance

which includes guidance on:

Water and Ramsar – an overview

Ramsar's suite of Resolutions and guidance in relation to the hydrological cycle

Water in the environment

Water resources management in the context of the hydrological cycle

A framework for Ramsar's water-related guidance

Ramsar resolutions and guidance related directly to water

Ongoing development of the framework for water-related guidance

Handbook 7: River basin management

Integrating wetland conservation and wise use into river basin management

which includes guidance on:

What is integrated river basin management?

Developing and strengthening of policy and legislation for integrated water resources management

Establishing river basin management authorities and strengthening of institutional capacity

Involving stakeholders, community participation and public awareness

Assessing and enhancing the role of wetlands in water management

Identifying current and future supply and demand for water

Minimising the impacts of land use and development projects on wetlands and their biodiversity

Maintaining natural water regimes to maintain wetlands

Protecting and restoring wetlands, and their biodiversity, in the context of river basin management

Special issues related to shared river basin and wetland systems

Handbook 8: Water allocation and management

Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands

which includes guidance on:

Principles

The decision-making framework

The process for determining water allocations

Scientific tools and methods

Implementation

Handbook 9: Managing groundwater

Managing groundwater to maintain wetland ecological character

which includes guidance on:

An overview of groundwater-related wetlands

Understanding groundwater-related wetlands

Towards a framework for the development of groundwater management strategies to maintain wetlands

Handbook 10: Coastal management

Wetland issues in Integrated Coastal Zone Management

which includes guidance on:

Recognizing the role and significance of the Ramsar Convention and wetlands in the coastal zone

Ensuring full awareness of the values and functions of wetlands in the coastal zone Using mechanisms for securing the conservation and sustainable use of wetlands in the coastal zone

Addressing the integration of the conservation and sustainable use of wetlands in broad-scale integrated ecosystem management

Handbook 11: Inventory, assessment and monitoring

An Integrated Framework for wetland inventory, assessment and monitoring which includes guidance on:

The importance of identifying, assessing and reporting the status of Ramsar sites and other wetlands in the implementation of the Convention

The relationship between wetland inventory, assessment, monitoring and management Multi-scalar approaches to wetland inventory, assessment and monitoring

The Ramsar 'toolkit' of guidance available to Ramsar Parties for implementing the integrated wetland inventory, assessment and monitoring framework

Gaps in Ramsar's 'toolkit' of inventory, assessment and monitoring guidance Priorities for improving integrated wetland inventory, assessment and monitoring

Handbook 12: Wetland inventory

A Ramsar framework for wetland inventory

which includes guidance on:

Stating the purpose and objective

Reviewing existing knowledge and information

Reviewing existing inventory methods

Determining the scale and resolution

Establishing a core or minimum data set

Establishing a habitat classification

Choosing an appropriate method

Establishing a data management system

Establishing a time schedule and the level of resources that are required

Assessing the feasibility & cost effectiveness

Establishing a reporting procedure

Establishing a review and evaluation process

Planning a pilot study

Implementation of the inventory

Handbook 13: Impact assessment

Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment which includes guidance on:

Biodiversity issues at different stages of environmental impact assessment

Incorporation of biodiversity considerations in strategic environmental assessments Ways and means: capacity-building; legislative authority; participation; incentives;

Additional guidance on strategic environmental assessment

Handbook 14: Designating Ramsar sites

Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance

which includes guidance on:

The vision, objectives and short-term targets for the List of Wetlands of International Importance

Wetlands of International Importance and the Ramsar principle of wise use

Guidelines for adopting a systematic approach to identifying priority wetlands for designation under the Ramsar Convention

Criteria for identifying Wetlands of International Importance, guidelines for their application, and longterm targets

Guidance on compiling a Ramsar Information Sheet (RIS)

Handbook 15: Addressing change in ecological character

Addressing change in the ecological character of Ramsar sites and other wetlands which includes guidance on:

Assessing and reporting change in ecological character

Applying the Montreux Record 'tool' of the Convention

Deleting or restricting the boundaries of a listed Ramsar site: interpreting "urgent national interests" under Article 2.5 of the Convention

Deleting or restricting the boundaries of a listed Ramsar site: reasons other than under Article 2.5 of the Convention

Designing restoration programmes

Compensation and mitigation for wetland loss

Handbook 16: Managing wetlands

Frameworks for managing Ramsar sites and other wetlands

which includes guidance on:

Describing the 'ecological character' of a wetland

Developing a management planning process

Designing a monitoring programme

Applying a wetland risk assessment framework

Handbook 17: International cooperation

Guidelines for international cooperation under the Ramsar Convention on Wetlands which includes guidance on:

Interpreting Article 5 of the Ramsar Convention

Managing shared wetlands and river basins

Managing shared wetland-dependent species

Ramsar working in partnership with international/regional environment Conventions and agencies

Sharing of expertise and information

International assistance to support the conservation and wise use of wetlands

Sustainable harvesting and international trade in wetland derived plant and animal products

Regulation of foreign investment to ensure wetland conservation and wise use

Relevant Resolution

Resolution IX.1

(adopted by the 9th Conference of the Contracting Parties, Kampala, Uganda)

Additional scientific and technical guidance for implementing the Ramsar wise use concept

- 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. NOTING that the 8th Meeting of the Conference of the Contracting Parties (COP8) instructed the STRP to prepare further advice and guidance for consideration by Contracting Parties at COP9 on topics including, *inter alia*, inventory and assessment, wise use, water resource management, Ramsar site designation and management, and assessing the effectiveness of the implementation of the Convention;
- 3. THANKING the STRP for its work in preparing the advice and guidance annexed to this Resolution, as well as for the supporting technical reviews and reports being made available to Contracting Parties and others as *Ramsar Technical Reports*; and
- 4. ALSO THANKING the Government of Sweden and IUCN, WWF, the World Fish Centre, and the Water Research Commission (South Africa), which have provided financial support to the Panel and its Working Groups for the preparation of this advice and guidance and technical reports, and EXPRESSING GREAT APPRECIATION to the many organizations that have provided significant in-kind support to the work of the Panel;

THE CONFERENCE OF THE CONTRACTING PARTIES

- 5. APPROVES the Conceptual Framework for the wise use of wetlands and the maintenance of their ecological character (Annex A to this Resolution) and its updated definitions of "wise use" and "ecological character", and CONFIRMS that these supersede all previous definitions of these terms:
- 6. ALSO APPROVES the revised *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Annex B to this Resolution), INSTRUCTS the Ramsar Secretariat to introduce these changes in the preparation of a new edition of Ramsar Wise Use Handbook 7, including revisions to the Information Sheet on Ramsar Wetlands (RIS), and URGES all Contracting Parties preparing a RIS for the designation of a new site for the Ramsar List and for updating the RIS for an existing site to submit the information to the Ramsar Secretariat in this revised format;
- 7. WELCOMES the frameworks, guidelines and other advice provided as annexes C, D, and E to this Resolution and URGES Contracting Parties to make good use of them as appropriate, adapting them as necessary to suit national conditions and circumstances and within the frameworks of existing regional initiatives and commitments and in the context of sustainable development;
- 8. URGES Contracting Parties to draw these frameworks, guidelines and other advice to the attention of all relevant stakeholders, including *inter alia* government ministries, departments and agencies, water and basin management authorities, non-governmental organizations, and civil society; and FURTHER URGES Contracting Parties to encourage these stakeholders to take these guidelines into account, together with those of the Ramsar 'Toolkit' of Wise Use

Ramsar handbooks for the wise use of wetlands, 3rd edition

- Handbooks 2nd edition, in their decision-making and activities which relate to the delivery of the wise use of wetlands through the maintenance of their ecological character; and
- 9. INSTRUCTS the Ramsar Secretariat to disseminate widely the frameworks and guidelines annexed to this Resolution, including through amendment and updating of the Ramsar 'Toolkit' of Wise Use Handbooks.



The current Chair and Vice Chair (right) of the Scientific and Technical Review Panel, with Secretariat staff, 2006.

The Ramsar Convention 'toolkit' for the conservation and wise use of		
wetlands		
Convention pillar 1: Wise Use		
Wise use of wetlands		
Handbook 1	Conceptual Framework for the wise use of wetlands	
	Wetland policies and legislation	
Handbook 2	National Wetland Policies Developing and implementing National Wetland Policies	
Handbook 3	Laws and institutions Reviewing laws and institutions to promote the conservation and wise use of wetlands	
Wetlands and people		
Handbook 4	Wetland CEPA The Convention's Programme on communication, education and public awareness (CEPA) 2003-2008	
Handbook 5	Participatory skills Establishing and strengthening local communities' and indigenous people's participation in the management of wetlands	
Wetlands and water		
Handbook 6	Water-related guidance An Integrated Framework for the Convention's water-related guidance	
Handbook 7	River basin management Integrating wetland conservation and wise use into river basin management	
Handbook 8	Water allocation and management Guidelines for the allocation and management of water for maintaining the ecological functions of wetlands	
Handbook 9	Managing groundwater Managing groundwater to maintain wetland ecological character	
Wetlands and spatial planning		
Handbook 10	Coastal management Wetland issues in Integrated Coastal Zone Management	
Wetland inventory, assessment, and monitoring		
Handbook 11	Inventory, assessment, and monitoring An Integrated framework for wetland inventory, assessment, and monitoring	
Handbook 12	Wetland inventory A Ramsar framework for wetland inventory	
Handbook 13	Impact assessment Guidelines for incorporating biodiversity-related issues into environmental impact assessment legislation and/or processes and in strategic environmental assessment	
	Convention pillar 2: Ramsar sites designation & management	
	Wetlands of International Importance	
Handbook 14	Designating Ramsar Sites Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance	
Handbook 15	Addressing change in ecological character	
	Managing wetlands	
Handbook 16	Managing Wetlands Frameworks for managing Ramsar sites and other wetlands	
	Convention pillar 3: International cooperation	
International cooperation		
Handbook 17	International cooperation Guidelines for international cooperation under the Ramsar Convention on Wetlands	



Wise use of wetlands



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