

# **Global review of wetland resources and priorities for wetland inventory**

## Project description and methodology

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## **Acknowledgments**

This review was undertaken by Wetlands International and the Environmental Research Institute of the Supervising Scientist, Australia, under contract to the Bureau of the Ramsar Convention on Wetlands and with financial support from the United Kingdom Government. It was undertaken by a team that included personnel based in Australia, Canada, Malaysia and the Netherlands with support from colleagues spread around the globe and an international steering committee. The European team was also supported by project funding from the Institute for Inland Water Management and Waste Water Treatment (RIZA) from the Netherlands and the Norwegian Agency for Development Cooperation (NORAD) from Norway.

## Summary

A review of the global wetland resource, as available in national wetland inventories, was undertaken by Wetlands International, with support from the Environmental Research Institute of the Supervising Scientist (*eriss*, Jabiru, Australia), on behalf of the Bureau of the Ramsar Convention on Wetlands. Funding support came from the United Kingdom with complementary support provided through concurrent projects.

The project was organised through the Wetlands International Inventory and Monitoring Specialist Group and coordinated by the International Coordination Unit. Reviews of the extent of wetland inventory effort in each of the seven Ramsar regions were assigned to an individual Wetlands International regional licensee or sub-licensee. A further review of supra-national and continental scale inventories was also undertaken. The project was overseen by an international steering group and draft reports and progress discussed in a workshop (Dakar, Senegal, November 1998) before the final reports were produced.

The limited time and resources available for the project have meant that a fully comprehensive global analysis has not been possible. However, the use of standardised data collating and recording procedures have provided a sound basis for a thorough analysis of the coverage and quality of wetland inventory worldwide.

The findings of the regional and supra-national analyses of inventories form the basis for a summary report that accompanies the seven regional and one global reports (note that the Ramsar Asia Region was reviewed in two separate components). All reports and their accompanying inventory database and bibliography are presented in hardcopy and CD-ROM formats.

This section of the report provides details of project management and methodology developed to ensure consistent review procedures in each element of the work. The overall recommendations of the review are presented in the summary report and the regional analyses and their recommendations in the respective regional reports.

# 1 Introduction

Conservation and management of wetlands and their biodiversity have been identified as a priority area for action in international conventions and regional policies. The importance of sustainable management of wetlands and their biodiversity is also being increasingly recognised in the wide-ranging debate on managing the world's water resources. However, despite these priorities and frameworks for action, many natural wetlands, and the species which depend upon them, continue to be threatened or degraded through a variety of human actions, both direct and indirect (Dugan 1994, Finlayson & Moser 1992). In part this arises because at national and international levels decision-takers are unaware of the features and values of the wetland resource in their charge (Finlayson & van der Valk 1995a).

Although there is much information about wetland resources and their management, it is held scattered in a variety of sources in incompatible formats, making it difficult to access or use, both to assess the state of the global wetland resource, and source the information and expert guidance needed to establish priorities for wetland management. There is thus an urgent need to develop tools and mechanisms to provide a more integrated management system for the world's wetlands, to use this system to monitor the changing status of the global wetland resource and to make it available for those undertaking national and regional wetland conservation planning.

Knowledge of the location, distribution and character of wetlands, their values and uses, and the threats to them is an essential basis for developing and implementing management for their wise use (Dugan 1990, Hollis et al 1992, Finlayson & van der Valk 1995a, Finlayson 1996). This is required at a variety of geographical scales, ranging from local site management, through development of regional and national policies to global priority setting. There have been many wetland inventories and assessments undertaken for different purposes, at differing geographical scales, and at differing levels of detail and topic coverage (see papers in Finlayson & van der Valk 1995b). Others are known to be underway or planned. However, many basic features of wetlands around the globe have not apparently been recorded or documented (Mitsch et al 1994, Finlayson & van der Valk 1995a).

Because of such differences in the purpose and use of wetland inventories, the information that is collated is often not readily accessible for broader uses or users. Furthermore, because of the scattered nature of wetland inventories it is not entirely clear where adequate inventory information exists, or where there are major gaps. This has precluded accurate assessment of the size and distribution of the global wetland resource and its pattern of change (Mitsch et al 1994, Finlayson & van der Valk 1995a).

## 2 Global review of wetland resources

Shortcomings in the wetland information base have been debated at length within fora held by the Ramsar Convention on Wetlands and Wetlands International. This has resulted in a call for countries to undertake national wetland inventories (Davis 1993). Further, it has resulted in agreement on a specific action under the Convention's Strategic for 1997–2000 ([http://www.ramsar.org/key\\_strat\\_plan\\_e.htm](http://www.ramsar.org/key_strat_plan_e.htm)). Action 6.1.3 of the strategic plan is to:

utilise information from regional wetland directories, national scientific inventories of wetlands and other sources, to begin development of a quantification of global wetlands resources, as baseline information for considering trends in wetland conservation or loss.

A pledge of funding support to develop quantification of global wetland resources was made by the United Kingdom at the 6th Conference of the Contracting Parties of the Convention

(Brisbane 1996). Terms of reference for this review were developed by the Scientific Technical and Review Panel (STRP) of the Convention, and accepted at the 6th meeting of the STRP in Gland, Switzerland, 15–17 April 1997. These are given below while the agreed project description is attached in Annex 1.

The aims of the review are threefold:

1. To provide an overview of international, regional and national wetland inventories (including regional and national directories of important wetlands) as well as other general information on global wetland resources from publications, Ramsar Convention literature, and information collected by other institutions doing work on the same or related subject(s).
2. To provide recommendations for how to proceed to meet the objective as set out in Action 6.1.3 of the Ramsar Convention Strategic Plan for the current data holdings identified through 1 above.
3. To identify the priorities for either establishing, updating or extending wetland inventories so as to improve the accuracy with which the the global wetland resource can be quantified and described in future.

### 3 Methodology

#### 3.1 Project management

The review was undertaken by Wetlands International, and in particular its Wetland Inventory and Monitoring Specialist Group (WIMSG), acting as technical advisors to the Ramsar Convention. Work on the review began in late 1997 and a schedule was soon agreed to ensure a technical report on the outcomes of the review was presented to the 7th Conference of the Contracting Parties of the Convention (Costa Rica, May 1999).

The review was managed through a contract from the Ramsar Bureau with the International Co-ordination Unit of Wetlands International. The information collation and reporting was undertaken through four sub-contracts, as follows:

1. To the Environmental Research Institute of the Supervising Scientist (*eriss*), Jabiru, Australia, supporting Wetlands International's Wetland Inventory and Assessment Specialist Group. This contract was to undertake project co-ordination, compilation of information on supra-national wetland inventories, and preparation and production of the final global report.
2. Three sub-contracts to Wetlands International regional licensees/sub-licensees to undertake compilation of national inventory information and compilation of regional reports for each of the Ramsar regions, and the supply of these to *eriss* for compilation of the global analysis. Sub-contracts were as follows:
  - Wetlands International–Africa, Europe, Middle East (Wageningen, The Netherlands) covering Western Europe, Eastern Europe, Africa and the 'Middle East' part of the Asia Ramsar region
  - Wetlands International–Americas (Ottawa, Canada) covering North America and Neotropics regions
  - Wetlands International–Oceania (Canberra, Australia), covering Oceania and the bulk of the Asia regions.

Terms of Reference for each of the sub-contracts are appended in Annex 2 and contact points listed in table 1.

**Table 1** Contact points and project personnel from each of the sub-contractors

Institution	Contact Point	Project Officer
Wetlands International–International Coordination Unit	Nick Davidson	n/a
Environmental Research Institute of the Supervising Scientist	Max Finlayson	Abbie Spiers
Wetlands International–Africa, Europe, Middle East	Scott Frazier	Nathalie Stevenson
Wetlands International–Oceania	Roger Jaensch	Doug Watkins
Wetlands International–Americas	Ian Davidson	Rob Vanderkam

To ensure consistency of regional inventory review procedures by sub-contractors, a Technical Specification was developed by the International Co-ordination Unit and agreed by all partners. The Technical Specification (Annex 3) was designed to clarify and expand on the regional analysis requirements as set out in the original project outline (Annex 1). It formed part of each sub-contract.

The contract called for the establishment of a project Steering Committee, to be comprised of representatives of each of the Ramsar Bureau, the Wetlands International partners, the United Kingdom Government (as the source of the project funds) and invited experts (table 2). The Steering Committee’s role was to review progress and outputs, and facilitate access to information held in databases, libraries and other information sources. The Steering Committee communicated largely by electronic mail with one meeting in a workshop in Dakar, Senegal, during November 1998 to review the draft final outputs.

**Table 2** Members of the project steering committee

Name	Institution
Bill Phillips	Bureau of the Ramsar Convention on Wetlands, Gland, Switzerland
Brij Gopal	Jawaharlal Nehru University, New Delhi, India
David Stroud	Joint Nature Conservation Council, Peterborough, United Kingdom
Douglas Taylor	Somerset County Council, Taunton, United Kingdom
Geoff Cowan	Department of Environment, Pretoria, South Africa
Ian Davidson	Wetlands International–the Americas; Ottawa, Canada
Luis Naranjo	Universidad del Valle, Cali, Colombia
Martine Michou	International Geosphere Biosphere Program – Data and Information System; Toulouse, France
Max Finlayson	Environmental Research Institute of the Supervising Scientist, Jabiru, Australia
Nick Davidson	Wetlands International–International Coordination Unit; Wageningen, The Netherlands
Roger Jaensch	Wetlands International–Oceania; Canberra, Australia
Scott Frazier	Wetlands International–Africa, Europe, Middle East; Wageningen, The Netherlands
Stuart Phinn	University of Queensland, Brisbane, Australia

### 3.2 Finances

The initial contract was for SFR 71 675. This was considered by all parties involved to be an absolute minimum for undertaking this project satisfactorily. Therefore the project was linked to existing work already planned by Wetlands International under the Biodiversity Conservation Information Systems initiative (funded by NORAD). This enabled a far more comprehensive review to be made for the Eastern European, Western European and African regions than was possible for the other regions.

The BCIS project is developing good practice guidance and proposals for wetland inventory and assessment tools which will follow-up the work under this project, and it is therefore highly appropriate to link these two projects. The 'BCIS Wetlands Pilot Project' also held a workshop in Dakar, Senegal, in November 1998 and effectively provided an additional SFR 20 000 towards the costs of attendance at the workshop being run for the global review project. Wetlands International–Africa, Europe, Middle East also launched a project in Europe (funded by RIZA of the Netherlands) that contributed information to support the European component of the project.

Participation in the Dakar workshop was also boosted by a further SFR 4000 from the Ramsar Bureau. The project also received support from Environment Australia and *eriss* through work to review and develop further approaches for wetland inventory at different scales across the continent of Australia.

Payments from the Ramsar Bureau to Wetlands International–ICU were SFR 50 000 on signing the contract, with the remaining SFR 21 675 payable on completion of the contract. Sub-contract payments were as follows:

- *eriss* – SFR 39 950, with half payable on signing of contract and half on contract completion. This included SFR 4700 for the costs of the project workshop and SFR 2350 for report production.
- **Wetlands International–Africa, Europe, Middle East (AEME)** – SFR 7050, with SFR 5000 payable on signing of contract and the remainder on contract completion.
- **Wetlands International–Oceania** – SFR 11 750, with SFR 5875 payable on signing of contract, SFR 4875 on satisfactory supply of regional inventory analyses, and the remainder on contract completion.
- **Wetlands International–Americas** – SFR 11 750, with SFR 5875 payable on signing of contract, SFR 4875 on satisfactory supply of regional inventory analyses, and the remainder on contract completion.

SFR 1175 was retained by Wetlands International–ICU as a contribution towards the costs of project administration and communications.

### 3.3 Schedule

After the contracts were signed work began on each of the regional reviews. Each of the sub-contractors had three months to produce a draft review for all regions being considered. Given the overall schedule and the period of contracted time work on the regional reviews began at different times in 1998: Wetlands International–Oceania and *eriss* project work began in February 1998, Wetlands International–Africa, Europe, Middle East began in March, and Wetlands International–Americas in May. The sub-contracts required delivery of regional inventory listings and regional analyses to *eriss* by end of April 1998 (Oceania and Americas) and end of July 1998 (Africa, Europe, Middle East). The later supply date for

Africa, Europe, Middle East analyses was agreed owing to the large amount of inventory material known to exist for these regions, coupled with the need for linkage with the RIZA-funded European inventory project to ensure completion of this part of the project.

These draft reports were discussed at the workshop held in Dakar, Senegal, on 7 November 1998. Following this workshop a revised schedule and priority tasks were agreed in order to deliver the final report for distribution at the May 1999 Ramsar CoP7.

The project description called for hard copies (ring-bound) of the full report to be available for consultation by Contracting Parties at the May 1999 Ramsar CoP7. Copies of the full report were also made available for supply to CoP7 conference delegates in electronic (CD-ROM) form. A summary of the report was translated into French and Spanish for distribution with the documentation prior to the 1999 CoP7. These documents were supported by a progress report in June 1998.

### **Data recording**

Initial tasks focused on the development and agreement between project partners of definitions of inventory categories (eg regional, national and international) and which team handled each category, on the detail of the scope and procedures for identifying inventory sources, and for the compilation and handling of inventory information. This was essential to ensure that a) duplication of effort was avoided (for example where a regional (supra-national) inventory contains national inventory summaries), and b) compilation and handling of information was as consistent as possible between regional partners. This required substantial dialogue between the project teams, and a considerable amount of testing of planned procedures against the wide variety of types of wetland inventory being identified.

To compile standard national (and equivalent) inventory information in a form suitable for undertaking regional analyses of inventory scope and quality and coverage, and to produce estimates of the size and character of the wetland resource, four component data and information handling elements were developed in line with the project specification. These are as follows:

1. A *Wetland Inventory Assessment Sheet*, designed to permit rapid assessment and compilation of information on each identified inventory, and to compile summary information about the wetland resource contained in each inventory. An example is given in Annex 4. To ensure consistency of coding of each information field a set of guidelines for the completion of entries was developed (Annex 5).
2. A *Wetland Inventory Assessment Database*, based on the fields developed in the assessment sheet, for electronic compilation of information about each wetland inventory. Database structure, fields and coding are given in Annex 6. To permit its use by the different partners it was necessary to develop the database in both FoxPro and Microsoft Access software formats, in such a way that the material for the final report could be subsequently compiled into one format (Access). Information compiled in this database formed the basis for the regional and international analyses required of the project. The populated database formed a substantial part of the final report in electronic format.
3. A *Bibliographic database* for each inventory reference (fields are listed in Annex 7). (In future a link may be established between references in this database and the bibliographic reference included in the wetland inventory database.)
4. A *Meta-database*, to permit compilation of details of inventory information sources that are not in a report format (eg map sheets, atlas studies, posters, collations of photos/images). This was expected to provide a catalogue of sources (analogous to the

bibliographic database) unlike the inventory database which contains actual data and information extracted from the inventories. The meta-database structure is given in Annex 8.

To facilitate common entry of bibliographic and meta-data information an attempt was made to make these two databases available to the regional project teams on the World Wide Web. Due to problems with multiple access to servers this was not successful and the regional and global review teams reverted to individual databases with standardised fields, as originally envisaged.

## 4 Outputs

The outcomes of the regional and global reviews are presented in two forms on the CD-ROM. First, the summary report that was translated into French and Spanish and circulated to all official national delegations at CoP7 is presented. This is a collation of the principle issues that were presented in the regional and global reviews and elaborated during the workshop in Dakar. Members of the Steering Committee provided comment on a draft version. An acknowledged copy of the summary has also been included in a report by the IGBP-DIS. A short report on the project is available in the Wetlands International newsletter *Wetlands* (7 May 1999).

The individual regional and global reviews are presented along with the separate inventory and bibliographic databases that were compiled for each. These should be referred to when checking information for each of the regions considered. The Asian regional review is presented as two individual reports (and databases) with 14 countries being treated in the report labelled 'Middle East' and the remaining countries of Asia being treated in the report labelled 'Asia', with the exception of Russia which is contained within the Eastern European report.

The global-scale review is an analysis of inventory material available at the supra-national and continental scales. In this respect there is some overlap with some of the regional reviews. However, given that the latter focus primarily on national and sub-national inventory scales we are not concerned about such overlap. Our objective was to undertake as complete an analysis as possible given the budget and time frame.

The major recommendations from the combined reviews are presented in the summary report (available on the CD-ROM and hardcopy versions and also will be available from the World Wide Web page of the Ramsar Wetland Convention – <http://www.ramsar.org/>). We also refer readers to the individual reports for details and bibliographic sources.

Finally, we recognise that we have not been able to identify and collate all inventory sources during the time-frame and resourcing of this study. However, as wetland inventory is an ongoing component of wetland management and wise use, we anticipate further additions to the databases developed during this study so as to enhance the coverage of information on worldwide wetland inventory. We also draw the reader's attention to the recommendation that the Ramsar Convention supports the development of a central repository for wetland inventory information.

Readers are encouraged to send details (as per the information fields outlined in the accompanying databases – see Annexes 4–8) and copies of sources missing from our analyses and all further wetland inventory work at the national, supra-national and international scales to the following addresses:

Co-coordinator, Wetlands Inventory & Monitoring Specialist Group  
C/- Environmental Research Institute of the Supervising Scientist  
Locked Bag 2  
Jabiru, NT 0886, Australia  
e-mail [enquiries@eriss.erin.gov.au](mailto:enquiries@eriss.erin.gov.au)

Science Coordinator, Wetlands International  
International Co-ordination Unit  
Wetlands International, Wageningen  
PO Box 471  
6700 AL Wageningen  
The Netherlands  
e-mail [icu@wetlands.agro.nl](mailto:icu@wetlands.agro.nl)

Inventory information at the national and sub-national scale could also be sent to the above addresses and to the relevant regional Wetland International licensee:

Wetlands International–Africa Europe Middle East  
PO Box 7002  
6700 CA Wageningen  
The Netherlands  
e-mail [post@wetlands.agro.nl](mailto:post@wetlands.agro.nl)

Wetlands International–Americas  
7 Hinton Avenue North, Suite 200  
Ottawa  
Ontario K1Y 4P1  
Canada  
e-mail [wia@wetlands.org](mailto:wia@wetlands.org)

Wetlands International–Asia Pacific  
3A37 Kelana Centre Point  
Kelana Jaya, No 3 Jalan SS7/19  
47300 Petaling Jaya, Selangor  
Malaysia  
e-mail [wiap@wiap.nasionet.net](mailto:wiap@wiap.nasionet.net)

In conclusion we reiterate that this project presents an initial assessment only of the global wetland resource. We have acknowledged the uneven nature of the assessments that have been undertaken of each of the seven Ramsar regions and encourage others to help fill these gaps and complete the analyses with materials that we may have not unearthed and with new and improved wetland inventory.

Further wetland inventory is required before we have an adequate record of the extent and status of the world's wetland resource. This study provides a basis for further work through recommended procedures and the provision of databases and bibliographic sources.

## References

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## **Annex 1 Project description**

### **Global review of wetland resources**

*Project proponent:* Wetlands International, Wetland Inventory and Monitoring Specialist Group

*Project supervisor/coordinator:* Dr CM Finlayson, *eriss*

*Budget:* SFR 71 675

*Duration:* October 1997 – May 1999

### **Background**

1. The Scientific Technical and Review Panel (STRP) of the Ramsar Wetlands Convention was requested to develop terms of reference for a Global Review of Wetland Resources. This was in response to a pledge of funding support made at the 6th Conference of the Contracting Parties of the Convention by the United Kingdom Government. The terms of reference for the global review were accepted at the 6th meeting of the STRP in Gland, Switzerland, 15–17 April 1997.
2. The review will contribute to meeting the objective of Action 6.1.3 of the Ramsar Convention Strategic Plan 1997–2002, to: ‘utilise information from regional wetland directories, national scientific inventories of wetlands and other sources, to begin development of a quantification of global wetlands resources, as baseline information for considering trends in wetland conservation or loss’.
3. The Wetland Inventory and Monitoring Specialist Group (WIMSG) of Wetlands International proposes to undertake this review and will bring together the combined experience, expertise and information holdings of the regionally based Wetlands International staff and associated technical specialists.

### **Aims**

4. Based on the terms of reference the project will:
  - 4.1. Provide an overview of international, regional and national wetland inventories (including regional and national Directories of important wetlands) as well as other general information on global wetland resources from publications, Ramsar Convention literature, and information collected by other institutions doing work on the same or related subject(s);
  - 4.2. Provide recommendations for how to proceed to meet the objective as set out in Action 6.1.3 of the Ramsar Convention Strategic Plan for the current data holdings identified through aim 4.1 above; and
  - 4.3. Identify the priorities for either establishing, updating or extending wetland inventories so as to improve the accuracy with which the the global wetland resource can be quantified and described in future.

## **Project management**

### **Organisation of technical work**

5. The WIMSG is a voluntary network, established by Wetlands International, to provide expert advice and support to program development in the field of wetland inventory and monitoring. It is co-ordinated by Dr Max Finlayson (Australia) and Dr Luis Naranjo (Colombia). WIMSG has the support of the three regional offices of Wetland International: Asia Pacific (Kuala Lumpur, Malaysia); Americas (Ottawa, Canada); and Africa, Europe, Middle East (Wageningen, Netherlands).
6. The WIMSG will provide the focal point for the project under the supervision of Dr Finlayson. A project Steering Committee will be established and will comprise a representative from each of the regional offices of Wetlands International, the Ramsar Convention Bureau, a UK representative, and selected experts. This Committee will review progress and outputs and will facilitate access to information held in databases, libraries and other information sources. The Group will communicate largely by electronic mail, but will meet once in a workshop in late 1998 to review the final outputs.
7. Apart from this workshop (provisionally planned for November 1998, in Senegal) no international travel is foreseen, due to budgetary limitations. However, advantage will be taken of meetings of the Ramsar STRP and Wetlands International to advance the development of the project.
8. Direct coordination and supervision of the project will be provided by Dr Finlayson who will, through his host agency – the Environmental Research Institute of the Supervising Scientist (*eriss*) – in Jabiru, Australia, take responsibility for the completion of the project and submission of the report to the Ramsar Convention Bureau. Through the aegis of *eriss*, Dr Finlayson will contract one person to undertake the primary tasks of the review, including liaison and contact with Wetlands International offices and other information sources. The nature of the contract will be discussed with the person engaged and will be in line with accepted public procedures adopted by *eriss*.
9. That part of aim 4.1 of the review concerning regional analysis of wetland inventories will be undertaken through subcontracts to the three regional headquarters of Wetlands International, who are best placed to obtain the regional information.
10. The report will be prepared by the contracted person in consultation with the Steering Committee and submitted to the Ramsar Convention Bureau by 31 January 1999 by Dr Finlayson on behalf of the WIMSG. The summary of the final report will be distributed with the documentation for the Costa Rica Conference.

### **Administration and funding**

11. The project will be funded primarily by the money pledged by the United Kingdom Government to the Ramsar Convention. A contract will be signed between Wetlands International (on behalf of the WIMSG) and the Ramsar Convention Bureau. Subcontracts will then be arranged by Wetlands International to *eriss* and the three regional offices of Wetlands International.
12. The budget of SFR 71 675 is considered an absolute minimum for undertaking this project satisfactorily. Therefore the project will be linked to existing work already planned by Wetlands International under the BCIS initiative (funded by NORAD), which will provide additional SFR 20 000 towards the costs of the workshop. The BCIS project aims to develop a proposal which will follow-up the work proposed under this project,

and it is therefore highly appropriate to link these two projects. Wetlands International — Africa, Europe, Middle East is also launching a project in Europe (funded by RIZA of the Netherlands) which will contribute information to support the European component of the project. *eriss* will make available normal communications and office facilities and the supervisory time of Dr Finlayson, and will take responsibility for completion of the report and a detailed financial acquittal. These links and in-kind support will be recognised in the project acknowledgments.

## **Project tasks**

13. Each of the terms of reference will be addressed separately and combined into a summary report. Sources of information other than reference materials will be collated and listed in a meta-database which will indicate the nature of the material, its location and means by which it can be accessed.
14. Each of the aims is addressed below.
  - 14.1 Provide an overview of international, regional and national wetland inventories (including regional and national Directories of important wetlands) as well as other general information on global wetland resources from publications, Ramsar Convention literature, and information collected by other institutions doing work on the same or related subject(s).
    - 14.1.1 A comprehensive literature search will be conducted to determine the extent and distribution of wetland area and, where figures exist, the rate and extent of wetland loss presented. Reports prepared for the Ramsar Convention and Wetlands International, plus maps and databases held by national and international agencies will be consulted.
    - 14.1.2 Analysis of the data will include an examination of the means of calculating wetland area (including definitions and classifications) and, where possible, the reliability and age of the data. Access to key libraries and information services will be critical for this analysis and will provide the basis for further addressing the terms of reference given below. A bibliography and meta-database will be prepared.
    - 14.1.3. A (Ramsar) regional analysis will be conducted from the three regional headquarters of Wetlands International, to summarise the countries and regions covered by wetland inventories in tabular and/or data matrices. These will display:
      - wetland types (and definition) covered in each inventory;
      - data/information fields contained within each inventory;
      - means of collecting, collating and storing the data;
      - methods, means and frequency of updating the inventory;
      - possible use of satellite and remote sensing data in the updating process.

Staff at the regional headquarters of Wetlands International are already involved in numerous wetland inventory projects in their respective regions, and are thus well placed to collate this disparate information. Regional summaries will be provided and key points presented.

- 14.1.4 Modern communication media and library services will provide an initial data source with support from the regional offices of Wetlands International.
- 14.2 Provide recommendations for how to proceed to meet the objective as set out in Action 6.1.3 of the Ramsar Convention Strategic Plan for the current data holdings identified through aim 14.1 Above.
- 14.2.1 The above analyses and collation will be used to ascertain the availability and types of information on — the location and areal extent of wetland types; the benefits and values provided by wetlands; the extent of wetland loss and degradation; land tenure and management structures in place or proposed; and the extent and adequacy of updating programs in place or proposed. Regional summaries will be provided with key points presented.
- 14.2.2 The regional analyses will be collated and used to provide information on preferred options for obtaining standardised approaches for wetland inventory, covering data/information fields; means of collecting, collating and storing the data; methods and means of updating the inventory; and, where possible, regional or national priority areas.
- 14.3 Identify the priorities for either establishing, updating or extending wetland inventories so as to improve the accuracy with which the the global wetland resource can be quantified and described in future.
- 14.3.1 The analysis of wetland inventory and data handling procedures will be assessed to determine options for future data management. These options will be based on predicted needs, the existence and adequacy of national and regional inventories, and the mechanics and costs of obtaining, storing and updating such a data resource.

### **Timescale and outputs**

15. The project will commence in October 1997, once the contract is signed and a schedule for payments and progress reviews is agreed.
16. A comprehensive (ring-bound) report will be produced by WIMSG with the joint logos of Wetlands International and the Ramsar Convention, with acknowledgment to the United Kingdom Government and other supporting agencies and initiatives (eg NORAD, RIZA, *eriss*).
17. The report will contain global and regional analyses with specific summaries and recommendations. This will be supported by a bibliography and a meta-database in internationally acceptable electronic formats. Where possible the analyses will be presented with the assistance of maps and diagrams that could form the basis of a CD-ROM or WWW presentation to supplement the report and enhance access to the data resource.
18. A summary of the report should be ready by 31 December 1998 for translation into French and Spanish and distribution with the documentation for the 1999 Conference of the Contracting Parties. Hard copies of the full report will be made available for consultation during the Conference; copies of the full report will be available also on diskettes for supply to conference delegates.

19. Follow-up to the project may be sought through the BCIS initiative on wetlands assessment, which is being led by Wetlands International, but other possible avenues will also be considered.

<b>BUDGET (SFR)</b>		
Salary – project officer	(6 months over project period)	32 900
Regional Subcontracts	(11 750 Americas; 11 750 AP; 7050 AEME)	30 550
Workshop		4 700
Admin/communications		1 175
Report		2 350
Total		71 675

## Annex 2 Sub-contract terms of reference

### Global Review of Wetland Resources

#### Terms of Reference

The overall contract is between Wetlands International and the Ramsar Convention Bureau. Work is being undertaken through four sub-contracts from Wetlands International:

- one to *eriss*, Australia, to co-ordinate the work and compile and deliver the report;
- one to each Wetlands International regional HQ to compile and supply to *eriss* the regional inventory analysis part of the work.

Direct co-ordination and supervision of the work will be undertaken by Dr Max Finlayson (as co-ordinator of Wetland International's Wetland Inventory and Monitoring Specialist Group) through *eriss*.

Wetlands International's International Co-ordination Unit (contact point Dr Nick Davidson) is responsible for the overall financial management of the sub-contracts, and ensuring progress reporting, including financial reporting, as required to the Ramsar Convention Bureau.

#### Terms of Reference

##### **Dr CM Finlayson (acting as co-ordinator of the Wetlands International Wetland Inventory and Monitoring Specialist Group [WIMSG]), *eriss***

To undertake the co-ordination and supervision of the Global Review of Wetlands Resources, as set down in the attached project specification, and specifically to:

1. Be responsible for the timely completion of the project and submission of the report (including detailed statement of accounts) to the Ramsar Convention Bureau, as set out in the project specification, clause 14;
2. Establish a project Steering Committee and co-ordinate its input;
3. Co-ordinate and lead a project workshop, provisionally planned for Senegal in November 1998;
4. Appoint and supervise a person to undertake the primary tasks of the review, including *inter alia* liaison and contact with Wetlands International offices and other information sources; analysis of international wetland inventories (as defined in the Technical Specification); and compilation of the final report;
5. Prepare a specification (including technical details of the formats for the supply of information) and timetable for the (Ramsar) regional analyses to be undertaken by each Wetlands International regional licensee, and agree this with the contract officer in each regional licensee;
6. Provide guidance to each Wetlands International regional licensee for the handling and supply of information where Wetlands International and Ramsar regional boundaries are not coincident;

7. Co-ordinate and liaise with Wetlands International staff undertaking and supervising each of the regional analyses;
8. Prepare a progress report (in format agreed between Wetlands International and Ramsar Convention Bureau) for April 1998; and a summary of the final report by 31 December 1998;
9. Manage the funding allocated to the project workshop (SFR 4700) so as to ensure attendance, so far as is practicable, by project officers and members of the project Steering Committee;
10. Obtain copyright clearance for the use of any material (eg maps and charts), other than those supplied in the regional analyses, for which copyright is held by another person or organisation.
11. Prepare and produce the final project report, as specified in the project specification, for delivery to the Ramsar Convention Bureau by 31 January 1999.

## **Terms of Reference**

### **Wetlands International–Africa, Europe, Middle East**

1. To undertake a (Ramsar) regional analysis of wetland inventories in the Wetlands International–Africa, Europe, Middle East region as set out in clauses 14.1.3 and 14.1.4 of the project specification, and in the attached technical specification. Analyses to cover all of the Africa, Western Europe and Eastern Europe Ramsar regions, and parts of the Asia Ramsar Region.
2. To compile and supply this information to the *eriss* project officer undertaking the primary tasks of the review, in a format or formats established by and agreed with the project co-ordinator and following the outline Technical Specification set out below.
3. Where Wetlands International regional coverage and Ramsar regions differ, to supply the information to the *eriss* project officer in a form of coverage permitting later compilation by Ramsar region.
4. To advise the *eriss* project officer of supra-regional and international wetlands inventories.
5. To supply the regional analyses information to a timetable established by and agreed with the project co-ordinator. Unless otherwise agreed with the project co-ordinator, regional analyses should be completed and supplied by 31 July 1998.
6. For any material (eg maps and charts) included in the regional analysis supplied to the *eriss* project officer for which copyright is held by another person or organisation, to obtain copyright clearance for its use.
7. To supply the *eriss* project officer with a list of acknowledgements for the regional analysis, for inclusion in the final report.
8. To provide information on progress to the project co-ordinator for inclusion in a summary progress report to Ramsar Bureau in April 1998.
9. To ensure presentation of the regional assessment at the project workshop, provisionally scheduled for Senegal, November 1998.
10. To comment on the interim and final draft project reports.

## Terms of Reference

### Wetlands International–Asia-Pacific (Oceania office)

1. To undertake a (Ramsar) regional analysis of wetland inventories in the Wetlands International–Asia-Pacific region as set out in clauses 14.1.3 and 14.1.4 of the project specification. Analyses to cover all of the Oceania Ramsar region, and the major parts of the Asia Ramsar Region.
2. To compile and supply this information to the *eriss* project officer undertaking the primary tasks of the review, in a format or formats established by and agreed with the project co-ordinator and following the outline Technical Specification set out below.
3. Where Wetlands International regional coverage and Ramsar regions differ, to supply the information to the *eriss* project officer in a form of coverage permitting later compilation by Ramsar region.
4. To advise the *eriss* project officer of supra-regional and international wetlands inventories.
5. To supply the regional analyses information to a timetable established by and agreed with the project co-ordinator. Unless otherwise agreed with the project co-ordinator, regional analyses should be completed and supplied by 31 May 1998.
6. For any material (eg maps and charts) included in the regional analysis supplied to the *eriss* project officer for which copyright is held by another person or organisation, to obtain copyright clearance for its use.
7. To supply the *eriss* project officer with a list of acknowledgements for the regional analysis, for inclusion in the final report.
8. To provide information on progress to the project co-ordinator for inclusion in a summary progress report to Ramsar Bureau in April 1998.
9. To ensure presentation of the regional assessment at the project workshop, provisionally scheduled for Senegal, November 1998.
10. To comment on the interim and final draft project reports.

## Terms of Reference

### Wetlands International–Americas

1. To undertake a (Ramsar) regional analysis of wetland inventories in the Wetlands International–Americas region as set out in clauses 14.1.3 and 14.1.4 of the project specification. Analyses to cover all of the Neotropics and North America Ramsar regions.
2. To compile and supply this information to the *eriss* project officer undertaking the primary tasks of the review, in a format or formats established by and agreed with the project co-ordinator and following the outline Technical Specification set out below.
3. Where Wetlands International regional coverage and Ramsar regions differ, to supply the information to the *eriss* project officer in a form of coverage permitting later compilation by Ramsar region.
4. To advise the *eriss* project officer of supra-regional and international wetlands inventories.

5. To supply the regional analyses information to a timetable established by and agreed with the project co-ordinator. Unless otherwise agreed with the project co-ordinator, regional analyses should be completed and supplied by 31 May 1998.
6. For any material (eg maps and charts) included in the regional analysis supplied to the *eriss* project officer for which copyright is held by another person or organisation, to obtain copyright clearance for its use.
7. To supply the *eriss* project officer with a list of acknowledgements for the regional analysis, for inclusion in the final report.
8. To provide information on progress to the project co-ordinator for inclusion in a summary progress report to Ramsar Bureau in April 1998.
9. To ensure presentation of the regional assessment at the project workshop, provisionally scheduled for Senegal, November 1998.
10. To comment on the interim and final draft project reports.

## Annex 3 Technical specification — regional analyses

### Global Review of Wetland Resources

#### Technical specification – regional analyses of wetland inventories

*Note. Parts of this specification may be changed by agreement between the project partners as the project develops.*

#### Geographical coverage

1. Throughout this specification *Region* refers to the area covered by a Wetlands International regional licensee. Where the reference is to a region as covered by the Ramsar Convention this is referred to as *Ramsar Region*.
2. Each Wetlands International region will compile inventory information (national and sub-regional inventories) for their region. For the Americas this is straightforward, as the Wetlands International region covers two whole Ramsar Regions (Neotropics and North America). The boundary between the Wetlands International–Africa, Europe, Middle East (AEME) and Wetlands International–Asia-Pacific is more complex. Here parts of the AEME coverage in the Middle East lies within the Asia Ramsar Region (note that all of Russia is covered by AEME and is treated as part of the Eastern Europe Ramsar Region). Inventory information for these parts of the Asia Ramsar Region will be compiled by AEME, with Asia Ramsar Region information to be supplied separately (see 3 below). This will then be combined (by the *eriss* project officer) with the information for the bulk of the Ramsar Asia Region that will be compiled by Wetlands International Asia-Pacific.
3. The final report will be structured by the seven Ramsar Regions, and this should be kept in mind by each Wetlands International regional office in compiling the national and regional inventory material. Where an inventory covers more than one Ramsar region (even if both Ramsar regions lie wholly within one Wetlands International region), the tabulations and summaries should, therefore, provide information separately for each Ramsar region (wherever it is possible to separate such information), as well as a summary for the whole inventory.
4. Summaries of international inventories (ie inventories covering major supra-national areas) will be covered by *eriss*, and so will not appear in the national/regional reviews. The final report will, however, need to consider both scales of inventory in its overall analysis. Wetlands International project staff should, therefore, notify the *eriss* project officer of any such inventories about which they are aware, as soon as possible after the start of the project.

#### Software

5. The key software requirements are for compatibility. Preferred format for text and tabulations is MS Word6 (or an earlier Word version, but **not** Word7).
6. For any material to be supplied in database format, the field name format and content should be that listed in paragraph 8, unless otherwise agreed in advance with the *eriss* project officer. Preferred database format is Access, with Paradox or Dbase if Access is not available.

7. All electronic material supplied to the *eriss* project officer should be virus-checked before supply. A note confirming the results of the check and the virus-checking software used should accompany the material supplied.

**Structure and content of inventory summaries**

8. **Wetland inventories.** For each national or regional inventory, a summary of information about the inventory should be compiled (and supplied preferably as an MS Word table or Access database, format to be agreed with the *eriss* project officer) under the following basic headings:

Topic heading	database field-name
• Ramsar region(s) covered by the inventory	Ramsar_region
• the country (or countries) covered by the inventory	Country
• the date(s) done	Date
• lead agency responsible and contact addresses etc	Agency
• other agencies involved	Agency_other
• geographic region covered (eg province, biogeographical zone, national)	Geog_region
• methods used (eg collation of existing information, ground-based analysis, remotely sensed imagery which includes air-photos and videography)	Method
• details of maps (scale, availability, date source such as topographical series or digital or ...)	Maps
• types of wetlands covered (coded according to Ramsar types where possible) and definitions used	Wetland_type Wetland_definition
• categories of information (eg wetland extent, status, values, benefits) included	Info_category
• method of data/info storage – is the inventory available in hard copy, word processing files or databases, and is it accessible (and by whom) on internet?	Data_storage
• monitoring and means of updating the inventory	Monitor_update

9. **Wetland extent and status.** For each inventory, compile a standard summary of wetland extent and status, to include:
  - extent of wetlands (best estimates of areas based on existing Ramsar classes where possible);
  - overall status of wetlands (extent of loss and degradation and major threats identified);
  - information on wetland values and benefits.
10. **Bibliography.** All information sources identified should be recorded, with each report being listed in a bibliography based on a standard reference citation style, to be supplied by *eriss* project officer. This may be presented as an MS Word file or, preferably, as an MS Access database.
11. **Maps and other less regular sources of information** should be recorded in a meta-database format (ref. project clause 14.1.2). A list of fields for recording the information will be supplied by the *eriss* project officer. Any maps supplied should be either in hardcopy or ARCVIEW or ARCINFO formats, by agreement with the *eriss* project officer.

12. **Regional summary of inventory status.** A Ramsar Regional Summary of wetland inventory status should also be compiled and provided in text and tabular form, following the headings listed in 8 above. Where a Wetlands International region is compiling information for only part of a Ramsar Region the summary supplied to *eriss* should be for that part of the Ramsar Region.
13. **Regional status of wetlands.** A Ramsar Regional Summary of wetland status should be compiled, following the headings listed in 9 above. Where a Wetlands International region is compiling information for only part of a Ramsar Region the summary supplied to *eriss* should be for that part of the Ramsar Region.
14. **A Conclusion and Recommendations** section should be added for each Ramsar Region (see project clauses 14.2 and 14.3). This should summarise the extent and competence of inventories in the region and provide recommendations for extension and/or updating as well as recording/reporting formats. Where a Wetlands International region is compiling information for only part of a Ramsar Region the conclusions and recommendations to *eriss* should be for that part of the Ramsar Region.

## Annex 4 Wetland Inventory Assessment Sheet

1. Reference Details	
Ramsar region(s):	Reference Number:  / / / /
	WI location:
List 3-letter UN codes for countries included in the study:	
Title of Inventory:	
Full Name of Author(s)/Correspondent:	
Publication reference details: <span style="float: right;">or "in development/ in process"</span>	
Wetland Inventory Directory? Y / N	Date of Publication:
Publication Type: (tick/circle as appropriate)	
Academic  Peer review Journal Peer review Book Chapter in a book  Conference  Presentation/Keynote address Article in proceedings  Governmental or Agency  Internal Report Publication Other	NGO  Report Formal Publication Consultancy Report Practitioner material Newsletter Periodical Database Manual /Software  Other (specify)
State language used: <span style="float: right;">English summary available? Y / N / ?</span>	
If not a publication, how has the info been obtained? eg pers. comm	

2. Data availability (circle and enter details as appropriate)	
<b>Data custodian:</b>	<b>Contact details:</b>
Full name of data custodian/organisation	
not known	
not applicable	
<b>Format of inventory material</b>	
Paper	WWW pub. (provide URL)
Word Processed File (specify)	GIS (specify)
Database (specify)	
Personal communication	Map(s)
<b>Circulation</b>	
Published	Restricted
Interdepartmental	Unrestricted
Internal	Other
<b>Data Storage</b>	
paper text	database (specify)
paper maps	other electronic (specify)
part of GIS (specify)	digitised maps
<b>3. Implementing Agency:</b> (tick/circle as appropriate)	<b>4. Funding Sponsor</b> (tick/circle as appropriate)
NGO: Int'l / Nat'l / Sub-Nat'l / Local	NGO: Int'l / Nat'l / Sub- Nat'l / Local
GO: Int'l / Nat'l / Sub-Nat'l / Local	GO: Int'l / Nat'l / Sub-Nat'l / Local
Private	Private
Academic Institution	Academic Institution
Consultancy	Other (specify)
Other (specify)	Unknown
Unknown	
<b>Name:</b>	<b>Name:</b>

<b>5. Objectives</b> (NB not mutually exclusive)	
Are the objectives explicitly stated? Y / N / ?	
<b>Main issues being addressed:</b>	
International designation	Wetland products (eg forestry, water reservoir)
Inventory/baseline	Wetland services
Biodiversity	Geographical/jurisdictional/scale
Academic / research	Public education
Landuse planning	Other (please specify)
<b>6. Definitions - Wetlands and Classification</b>	
<b>Is a definition of wetlands:</b>	<b>Wetland Classification:</b>
explicit	Ramsar Wetland Type classification used?
inferred	Y / N / variable / ?
nil	Not applicable? Y / N / ?
<b>Was the Ramsar definition used? Y / N / ?</b>	Other classification (specify)
<b>If not Ramsar please give details:</b>	<b>Source of variability:</b>
	definition of wetland type
	between sites
	other
<b>7. Basis of Study/Wetland Inclusion</b> (circle as appropriate and provide details where possible)	
<b>Does the wetland include all wetlands or just a sample?</b>	all / sample
<b>If sample, what was the basis of selection? ( ie what 'filter' was used)</b>	
<i>NB not mutually exclusive</i>	
Political boundary / Geographical (eg Africa)	
Land cover / Remotely sensed data	
"Situation" / Landform (coastal, inland, upland, lowland, etc)	

Suprahabitat / System (eg estuarine, lacustrine, marine, fresh)	
Habitat (eg saltmarsh, peat, mangrove)	
Floral/faunal groups (eg crocodile/bird/etc breeding ground)	
Climate (eg wetlands in arid areas)	
Function (eg wetlands as storm buffers)	
Hydrology (eg permanently flooded wetlands)	
Biodiversity Value	
Cultural value	
Artefact of data collation	
Other	
<i>Details:</i>	
<b>8. Temporal Scale of Study</b>	
Not applicable (eg review/collation)	
<b>Discrete survey</b>	<b>Material updated on ad-hoc basis</b>
Date (range) of data collection/collation	Purpose of update:
Has the Inventory been updated? Y / N / ?	add sites
Any plans to update inventory? Y / N / ?	review status
	other
	unknown
<b>Ongoing survey/program</b>	<b>Frequency/periodicity of survey regimen:</b>
Start date:	Current status
	open
	closed
Planned duration (in yrs/mths):	unknown

9. Methods (circle as appropriate)	
<b>Data collection methods:</b> collation /review ground survey remote sensing not stated	<b>Extent of ground survey</b> total partial (details?) none unknown
<b>Details of remotely sensed data</b>	
Satellite	map product
Aerial Photo	LIDAR
Video	Radar
Not provided	Satellite imagery used? (eg LTM, SPOT etc)
<b>Spatial resolution :</b>	<b>Data ground truthed?    Y / N / ?</b>
<b>10. Inventory Synthesis</b>	
<b>Summary given?</b> Y / N / ?	
<b>Total area covered by Inventory:</b> (ha) / not available	
<b>Extent of wetlands given?</b> Y / N / ? / partial	
<b>Total extent of wetlands covered (ha)</b>	
<b>Number of sites:</b>	
<b>Areas by class?</b> Y / N / ? <i>Give details: (list area covered for each class)</i>	
<b>Estimate or summary of wetland loss provided?</b> <i>(Give details)</i>	

**For site based inventories please assess the info fields shown below and circle those which are included in the inventory. For non-site based inventories assess only numbers 7-26**

- |                              |  |
|------------------------------|--|
| 1. Geographical coordinates  | 14. Noteworthy fauna                         |
| 2. Map of site included?     | 15. Social and cultural values               |
| 3. Justification of criteria | 16. Land tenure/ownership                    |
| 4. General location          | 17. Current land use                         |
| 5. Ramsar Criteria           | 18. Adverse Factors                          |
| 6. Compiler                  | 19. Conservation measures taken              |
| 7. Area                      | 20. Conservation measures proposed           |
| 8. Overview                  | 21. Current scientific research & facilities |
| 9. Wetland Type              | 22. Current conservation education           |
| 10. Physical features*       | 23. Current recreation and tourism           |
| 11. Hydrological values      | 24. Jurisdiction                             |
| 12. Ecological features      | 25. Management authority                     |
| 13. Noteworthy flora         | 26. Bibliographical references               |

**Attribute score 0 - 5 against field numbers 1-26 above according to approximate frequency of inclusion within the inventory or information source**

- |                                |                        |
|--------------------------------|------------------------|
| (5) always (100%)              | (2) sometimes (26-50%) |
| (4) most of the time (76-99%)  | (1) rarely (<25%)      |
| (3) commonly included (51-75%) | (0) never              |

<b>11. Overall status of wetlands</b>							
<b>Description of status of wetlands included?</b> Provide as much detail as possible (append sheet where necessary)							
<b>12. Values and benefits</b>							
<b>Description of values and benefits included?</b> <table border="0"> <tr> <td>(5) always (100%)</td> <td>(2) sometimes (26-50%)</td> </tr> <tr> <td>(4) most of the time (76%-99%)</td> <td>(1) rarely (&lt;25%)</td> </tr> <tr> <td>(3) commonly included (51-75%)</td> <td>(0) never</td> </tr> </table>		(5) always (100%)	(2) sometimes (26-50%)	(4) most of the time (76%-99%)	(1) rarely (<25%)	(3) commonly included (51-75%)	(0) never
(5) always (100%)	(2) sometimes (26-50%)						
(4) most of the time (76%-99%)	(1) rarely (<25%)						
(3) commonly included (51-75%)	(0) never						
Provide a summary (or append sheet where necessary)							
<b>Date of form completion:</b>							
<b>Completed by:</b>							

**Space for additional information  
or to continue where insufficient space in previous sections...**

## Annex 5 Guidelines for completion of Wetland Inventory Assessment Sheets

### Reference Details

#### 1. Ramsar Region

Simply enter which region(s) are covered by the inventory material. [Africa – **afri**; Asia – **asia**; Eastern Europe – **eur**; Western Europe – **weeu**; Neotropics – **neot**; North America – **noam**; Oceania – **oce**]

#### 2. Reference number

The system we have devised is to reference material using 4 sets of codes as follows:

*Set one: at the spatial level*

Global – **glo**; supra-regional – **spr**; Regional – **reg**; sub regional – **sbr**; national – **nat**; subnational – **sbn**.

*Set two: Wetlands International / **eriss** office reference code:*

[aeme, amer, aspa, ocep, eriss]

*Set three: filing number*

3 digit number allocated as material is inventoried (ie 001, 002, 003). Each Office to determine its own system for filing.

*Set four: library reference number*

Office library reference number (if applicable).

#### 3. Countries/nations covered in the Inventory

Use the UN 3 letter country codes to identify country covered in the inventory. (<ftp://ftp.ripe.net/iso3166-countrycodes>).

#### 4. WI / ERISS location

Each Office to determine eg shelf, library, filing cabinet, personal copy with NJS etc (especially useful for large documents which are too big for filing, or are oversize, or in the library). See table below for examples.

*eg the following references would be referenced as shown in the table below:*

1. International Lake Environment Committee Foundation (ILEC) and United Nations Environment Programme (UNEP) 1988 (status ongoing). *Survey of the State of World Lakes, database*. ILEC Foundation, Kusatsu, Shiga, Japan.  
Located at <http://www.ilec.or.jp/database/database.html>
2. Scott DA (ed) 1995. *A Directory of Wetlands in the Middle East*. IUCN, Gland, Switzerland, and IWRB, Slimbridge, United Kingdom.
3. Hughes RH & Hughes JS 1992. *A Directory of African Wetlands*. IUCN/UNEP/WCMC, Gland, Switzerland, and Cambridge, United Kingdom.
4. Scott DA 1980. *A preliminary inventory of wetlands of international importance for waterfowl in west Europe and northwest Africa*. IWRB Special Publication No 2, IWRB, Slimbridge, United Kingdom.
5. Sheppard R 1993. *Ireland's wetland wealth*. Irish Wildbird Conservancy, Dublin.

6. Department of Lands 1974. *Report on wetlands of international and national importance in the Republic of Ireland*. Forest and Wildlife Service, Dublin.

(see ref Above)	Set one	Set two	Set three	Set four	WI – location
	Spatial level	Office	Filing number	Library ref. #	
1	glo	aeme	001	–	eg of entry in Global cabinet + WWW
2	spr	aeme	001	7549	NJS shelf + WI lib
3	reg	aeme	001	1839	NJS shelf + WI lib
4	spr	aeme	002	7563	WI-lib
5	n	aeme	001	7243	National cabinet + WI lib
6	n	aeme	002	7981	National cabinet + WI lib

### 5. Title of Material

Name used to refer to the Inventory (usually the formal name of the Inventory).

### 6. Full name of authors or correspondent

Use *eriss* Standards. Correspondent is for example a personal communication.

### 7. Publication details

Should be entered as would appear in a reference list (use *eriss* Standards). Reference should be entered as required for publications including author, date, title of article/report journal, Journal title and volume, page numbers etc. Also publisher, place of publication and ISBN if book. The reference details should also be entered separately into the bibliographic database as supplied by *eriss*. If current plans to put biblio database on the WWW emerge then it is best to ensure that the reference details are complete in both the assessment form and the biblio database.

Enter either text (publication details) or code if in process/development **-in-devt**

### 8. Wetland Inventory Directory? Y / N

Is the information presented on a site by site basis (eg Wetlands of the Middle east), or is an overview presented without specific reference to sites referenced with co-ordinates?

### 9. Date of Publication

As appears in the reference details. For digital information use last update.

### 10. Publication Type

At the very least we should be able to describe the information to a primary level (ie Academic, NGO, GO, consultancy), but it would also be good to break this down further to a secondary level (eg peer review book, journal etc). Practitioner material is material primarily produced for people involved in ‘managing’, and doing, as opposed to researchers and for the government.

Peer review Journal – **journ**; Peer review Book – **book**; Chapter in a book – **chapt**; Conference presentation/Keynote address – **presn**; Conference article in proceedings – **proce**; Govt/Agency/Internal Report – **govrp**; Govt/Agency publication – **govot**; NGO report – **ngorp**; NGO formal publication – **ngopb**; Consultancy report – **consl**; Practitioner newsletter

– **news1**; Practitioner periodical – **perio**; Database Manual – **dbman**; Database software – **dbsof**; Other – **other**.

#### 11. Language used

We intend to incorporate items obtained in different languages where possible. Use first three letters of the language. If the publication is bi/tri lingual then use codes for each.

#### 12. English Summary

Is an English summary available **Y/N**. Only complete this if publication is not in English.

#### 13. Other Information

If not a publication, how has the information been obtained? eg pers. comm. There may be occasions where we have obtained information from a telephone call or a letter or similar detailing the existence of an inventory.

### Data availability

#### 14. Data Custodian

#### 15. Contact Details

#### 16. Inventory Format

Paper – **paper**; Word processed file – **wordp**; Database – **dbfil**; Personal communication – **persc**; WWW publication – **wwwweb**; GIS – **gisys**; Map – **mapfo**.

#### 17. Circulation

Published – **publi**; Interdepartmental – **idept**; Internal – **intrn**; Restricted – **rstri**; Unrestricted – **unres**; Other – **other**.

#### 18. Data Storage

Format/Storage: eg overview of World Ramsar sites – the inventory material is a book, but the data storage is both on paper and electronically (database). Also when Scott receives requests for information on Ramsar sites, he gives them information usually on paper, but the information is held electronically using coded fields on the Ramsar database.

Paper text – **paper**; Paper maps – **map-p**; Part of GIS – **ingis**; Database – **datab**; Digitised maps – **map-d**; Other electronic – **elect**.

### Implementing Agency

#### 19. Implementing Agency

This is not really crucial, but we thought it could be included easily and may yield some useful information. Who is doing/did the work? Government departments? Academic institutions? NGOs?

NGO international – **ngo-I**; NGO national – **ngo-n**; NGO subnational – **ngo-s**; NGO local – **ngo-l**; International governmental organisation – **gov-i**; Government national – **gov-n**; Government subnational – **go-sn**; Government local – **gov-l**; Private – **privt**; Academic institution – **acadm**; Other – **other**; Unknown – **unkno**.

#### 20. Name of Implementing Agency

## Funding Sponsor

### 21. Funding Sponsor

ie who is paying/paid for it?

NGO international – **ngo-I**; NGO national – **ngo-n**; NGO subnational – **ngo-s**; NGO local – **ngo-l**; International governmental organisation – **gov-i**; Government national – **gov-n**; Government subnational – **gov-sn**; Government local – **gov-l**; Private – **privt**; Academic institution – **acadm**; Other – **other**; Unknown – **unkno**.

### 22. Name of Sponsoring Agency

## Objectives

### 23. Are the objectives explicitly stated? Y / N

### 24. Main Issues being addressed in the Inventory

In this section we are attempting to categorise the motivation for the inventory. This may not be easy to categorise. The inventories that come first to mind, such as potential ‘Ramsar’ wetlands, would be categorised as ‘biodiversity’ inventories.

Biodiversity-research – **bio-res**; Biodiversity-baseline – **bio-bas**; Biodiversity-monitoring – **bio-mon**; Biodiversity-repeat survey/surveillance – **bio-sur**; Biodiversity-management tool – **bio-man**; Wetland products – **wetprod**; Geographical – **geograf**; Other – **otheris**; Public-education – **pub-edu**; Research-other – **oth-res**.

## Wetland Definitions and Classifications

This will provide information on which classification systems are commonly in use. Is the Ramsar system widely used, or is it Cowardin’s system, or something else? If the answer is simply that 1001 different systems are in use, this is useful information in itself.

### 25. Is a definition of wetlands explicitly stated?

Yes, no, inferred.

### 26. Was the Ramsar definition used? Y/N

### 27. Wetland Classification

State the classification scheme used to determine wetlands types:

Ramsar – **ramsar**; Other – **other**; Not Applicable – **notapp**.

Ramsar wetland types can be found at: [http://www.iucn.org/themes/ramsar/key\\_ris\\_types.htm](http://www.iucn.org/themes/ramsar/key_ris_types.htm)

### 28. Other classification (specify)

text field

### 29. Source of variability:

Source of variability: We are trying to establish whether consistent classification systems are not being used needs some more thought.

If the answer is variable (the question is dependant on the question above) then we were trying to ascertain whether the variability was simply due to use of several classification schemes/different definitions of wetland types, or sites etc.

## **Basis of Study/Wetland Inclusion**

Almost all inventories contain only a sample of the wetlands in the study area. This question seeks to identify the ‘filters’ that were used to identify wetlands to be included in the Inventory. Eg. was it coastal wetlands? Important wetlands for bird habitat? Freshwater wetlands? Wetland extent?

‘Land cover/remotely sensed data’ and ‘political/geographical boundary’ eg of latter eg where wetlands of Africa, or wetlands of Namibia etc, where the boundary of the study is set by geographic boundaries (this is what we meant by political boundary, eg for those cases which are sub national but say eg provincial boundaries).

### **30. All wetlands or just part? all / part**

#### **31. If sample, what was the basis of selection?**

Land Cover/Remotely Sensed Data – **rs-landc**; Political/geographical boundary – **boundary**; Landform – **landform**; Suprahabitat / System – **system**; Habitat – **habitat**; Faunal or floral groups – **flo-faun**; Climate – **climate**; Function – **function**; Hydrology – **hydrolog**; Biodiversity value – **biovalue**; Cultural value – **culture**; Artefact of data collation – **artefact**; Other – **other**.

#### **32. Text for details of ‘other basis’**

## **Temporal Scale of Study**

This question assesses the temporal scale of the inventory program (ie was it a one off study or part of an ongoing program). It would also be interesting to examine planned durations vs real duration, do projects fold before completion, do they take much longer to complete than originally thought? This information is likely to be difficult to verify and/or obtain, but we can see how it goes. In most cases, the answer may well be ‘unknown.’ Most important is to identify which are discrete one-off surveys from those which are/were continuing over a period of time. May be difficult to identify a cut off point between one off (which takes ~3 years to complete) and an ongoing study which runs for 3 years and stops. The decision will ultimately lie with the aims of the study.

When the study is part of an ongoing program, are surveys carried out annually, 5 yearly and/or randomly, etc. Current status is whether the program is still running or whether it has now finished. If the start date was, for example, 1990 and the planned duration was 10 years but the program is now closed, then we learn that the program folded before completion. That was the logic behind it. And also to be able to assess how much inventory work is carried out by either on-off surveys or programs which only run a specified number of years and then stop or permanent programs.

#### **33. Not applicable**

eg review of data/collation of data or mix of several dates.

#### **34. Discrete survey**

#### **34. Date (range) of data collection/collation**

#### **36. Has the inventory been updated?**

Y / N / ?

**37. Any plans to update the inventory**

Y / N / ?

**38. Material updated on ad-hoc basis**

**39. Purpose of update**

addsites – **add**; review status – **rev**; other – **oth**; unknown – **unkno**.

**40. Ongoing survey/program**

**41. Start date:**

**42. Planned duration (in yrs/mths):**

**43. Frequency/periodicity of survey regime:**

**44. Current status:**

Is the Inventory ongoing – **Open**; or has the project been completed – **Closed**; or unknown – **unkno**.

**Methods**

**45. Data collection methods**

Collation/review – **collate**; Ground survey – **grounsur**; Remote sensing – **remote**; Unknown – **unknown**.

*If ground survey, give further details (#46)*

*If remote sensing, give further details (#47)*

**46. Extent of ground survey**

**47. Details of remotely sensed data**

Satellite – **satel**; Aerial photo – **aerial**; Video – **video**; LIDAR – **lidar**; Radar – **radar**; Satellite imagery – **s-imagry**; Not provided – **unknown**.

**48. Spatial resolution**

‘Spatial Resolution’ eg when satellite imagery is used, whether the pixel size is 10x10 m or 10x100 m or 100x100 m and so on. This depends on the sensor used, eg SPOT, LTM etc. Or if a video, what is the smallest object that can be discerned, ie a person-sized object, a car-sized object etc. If an aerial photo, it would refer to the smallest object discernible, NOT the scale ie 10:1000000 etc.

**49. Was the Inventory ground truthed? Y / N**

total; partial; none; unknown.

**Inventory Synthesis**

**50. Summary given?**

**51. Extent of wetlands given?**

**52. Total extent of wetlands covered (ha)**

**53. Number of sites**

**54. Areas by class?**

If wetlands are described in classes of some sort, are they inventoried in this way? If so provide details (eg freshwater wetlands – 2000 ha, marine wetlands – 7000 ha etc).

**55. Details of area by class**

text field

**56. Estimate/summary of wetland loss?**

We thought that there were just too many possibilities for information fields and decided that it would be best to have something to compare with. Therefore we suggest that we indicate *if* and *how often* these are included in the material which we examine. From there we will be able to see which ones are commonly used and we will be able to assess how comparable the Ramsar information fields are with those actually being used, ie are the information fields in use of any relation to the Ramsar information fields? Perhaps later it may be possible to assess what other information is commonly included.

**57. Details of wetland loss**

text field

**Information fields included in inventory**

Attribute score 0 – 5 against field numbers 1–26 above according to approximate frequency of inclusion within the inventory or information source

- (5) always (100%)
- (4) most of the time (76–99%)
- (3) commonly included (51–75%)
- (2) sometimes (26–50%)
- (1) rarely (<25%)
- (0) never

**58. Geographical coordinates**

**59. Map of site included?**

**60. Justification of criteria**

**61. General location**

**62. Ramsar Criteria**

**63. Compiler**

**64. Area**

**65. Overview**

**66. Wetland type**

**67. Physical features**

eg geology; geomorphology; origins – natural or artificial; hydrology; soil type; water quality; water depth; water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate.

**68. Hydrological values**

**69. Ecological features**

- 70. Noteworthy flora
- 71. Noteworthy fauna
- 72. Social and cultural values
- 73. Land tenure/ownership
- 74. Current land use
- 75. Adverse factors
- 76. Conservation measures taken
- 77. Conservation measures proposed
- 78. Current scientific research and facilities
- 79. Current conservation education
- 80. Current recreation and tourism
- 81. Jurisdiction
- 82. Management authority
- 83. Bibliographical references

### **Overall status**

In most cases it will not be possible to state what protection status the area covered in the source material has, unless the material is, for instance, a 'directory of wetlands of international importance' or listing of Ramsar sites in a country etc. However, please enclose a summary of information available which can be flagged (though not included in the meta-database) for re-examination at a later date.

- 84. Are summary comments made the overall status of wetlands?
- 85. Notes from comments in inventory

### **Values and benefits**

State whether any information is provided (yes or no) and provide summary details. Information will be flagged (though not included in the meta-database) and can be re-examined at a later date. If assessing an inventory covering several sites with individual entries, we suggest that we indicate *if* and *how often* details of the values and benefits are included in the material which we examine.

- 86. Are summary comments made about the overall status of wetlands?
- 87. Notes from comments in inventory

### **Compilation Notes**

- 88. Name of Compiler
- 89. Date of compilation

## Annex 6 Wetland Inventory Assessment database fields

Field Name	Type	Size	Question	Code words	3/6/98 Codes
			<b>1. Reference Details</b>		
1 RAMSAR_REG	Text	4	Ramsar region	Africa, Asia, Eastern Europe, Western Europe, Neotropics, North America, Oceania	afri, asia, eeur, weeu, noam, ocea, neot
2 REFER_NUMB	Text	20	Reference Number	(geo. scope)(Office)(number)(library reference code)	glo spr reg sbr nat sbn, aeme amer aspa ocep erris
3 STATESINCL	Text	180	Countries Covered	Use National code/s	
sub_nation	Text	25	If sub-national, then describe geographic coverage	Text	
4 WI_LOCATIO	Text	20	WI / ERISS location	Text	
5 INV_TITLE	Text	180	Title of Inventory	Text	
6 AUTHORNAME	Text	100	Full Name of Author(s) / Correspondent:	Text	
7 PUB_DETAIL	Text	200	Publication details	Text (or "in development")	(text) or in-devt
8 DIRECTORY	Logical	1	Wetland Inventory Directory?	Y / N	y, n
9 PUBL_DATE	Date	8	Date of Publication:	Year	
10 PUBL_TYPE	Text	10	Publication Type:	A-Peer review Journal, A-Peer review Book, A-Chapter in a book, Conf-Presentation/Keynote address, Conf-Article in proceedings, Govt/Agency-Internal Report, Govt/Agency-Publication, Govt/Agency-Other, NGO-report, NGO-Formal publication, Consultancy report, Practitioner-newsletter, Practitioner-periodical, Database Manual /Software, Other	journ, book, chapt, presn, proce, govvp, govpb, govot, ngorp, ngopb, consl, newsl, perio, dbman, dbsof, other
11 LANGUAGE	Text	7	State language used:	Text	
12 ENG_SUMMRY	Logical	1	English summary available?	Y / N	y, n

Annex 6 Wetland Inventory Assessment database fields (continued)

Field Name	Type	Size	Question	Code words	3/6/98 Codes
13 OTHER_INFO	Text	100	If not a publication, how has the info been obtained?	Personal communication, ??	
			<b>2. Data availability</b>		
14 CUSTODIAN	Text	100	Full name of data custodian/organisation	Text	
15 CONTACT_DT	Text	200	Contact details	Text	
16 INV_FORMAT	Text	30	Format of inventory material	Paper, Word Processed File, Database, Personal communication, WWW pub, GIS, Map	paper, wordp, dbfil, persc, wwwweb, gisys, mapfo
17 CIRCULATIO	Text	10	Circulation	Published, Interdepartmental, Internal, Restricted, Unrestricted, Other	publi, idept, intrn, rstri, unres, other
18 DATA_STORE	Text	20	Data Storage	Paper text, paper maps, part of GIS, database, digitised maps, other electronic	paper, map-p, ingis, map-d, datab, elect
19 IMPLAGENCY	Text	25	<b>3. Implementing Agency</b>	NGO-I, NGO-N, NGO-SN, NGO-L, GO-I, GO-N, GO-SN, GO-L, Private, Academic Institution, Other, Unknown	ngo-i, ngo-n, ngo-s, ngo-l, gov-i, gov-n, go-sn, gov-l, privt, acadm, other, unkno
20 AGENT_NAME	Text	200	Name	Text	
21 FUND_SPONS	Text	25	<b>4. Funding Sponsor</b>	NGO-I, NGO-N, NGO-SN, NGO-L, GO-I, GO-N, GO-SN, GO-L, Private, Academic Institution, Other, Unknown	ngo-i, ngo-n, ngo-s, ngo-l, gov-i, gov-n, go-sn, gov-l, privt, acadm, other, unkno
22 SPONS_NAME	Text	200	Name	Text	
			<b>5. Objectives</b>		
23 EXPL_OBJEC	Logical	1	Are the objectives explicitly stated ?	Y / N / ?	y, n, ?
24 MAINISSUES	Text	50	Main issues being addressed:	Biodiversity-research, Research-other, Biodiversity-baseline, Biodiversity-monitoring, Biodiversity-repeat survey/surveillance, Biodiversity-management tool, Wetland Products, Geographical, Landuse Planning, Other	bio-res, bio-bas, bio-mon, bio-sur, bio-man, wetprod, geograf, land-up, oth-res, pub-edu, otheris
			<b>6. Definitions – Wetlands and Classification</b>		

Annex 6 Wetland Inventory Assessment database fields (continued)

Field Name	Type	Size	Question	Code words	3/6/98 Codes
25 WETLAN_DEF	Text	3	<u>Is a definition of wetlands explicitly stated ?</u>	explicit, inferred, nil	explicit, inferred, nil
26 RAMSAR_DEF	Text	1	Was the Ramsar definition used?	Y / N / variable	y, n, variable
27 WET_CLASSI	Text	10	<u>Wetland Classification:</u>	Ramsar, Other, Not Applicable	ramsar, other, not_app
28 CLASSNOTES	Text	200	Other classification (specify)	Text	
29 VARIABILIT	Text	20	Source of variability:	Definition of wetland type, between sites, other	
			<b>7. Basis of Study/Wetland Inclusion</b>		
30 ALL_OR_PRT	Text	10	All wetlands or just part?	All / Part	all, part
31 SAMPLE_BAS	Text	20	If sample, what was the basis of selection?	Land Cover/Remotely Sensed Data, Political/geographical Boundary, Landform, Suprahabitat / System, Habitat, Faunal or Floral Groups, Climate, Function, Hydrology, Biodiversity Value, Cultural value, Artefact of data collation, Other	rs-landc, boundary, landform, system, habitat, flo-faun, climate, function, hydrolog, biovalue, culture, artefact, other
32 OTHER_BASI	Text	50	<i>Text for Other</i>	Text	
			<b>8. Temporal Scale of Study</b>		
33 NOT-APPLC	Text	2	<u>Not applicable (eg review/collation)</u>		
34 DISCR_SURV	Text	1	<u>Discrete survey</u>	Y / N	y, n
35 DSURV_RANG	Date	16	Date (range) of data collection/collation ?	Dates	
36 DSURV_UPDT	Text	1	Has the Inventory been updated?	Y / N / U	y, n, u
37 DSURV_PLAN	Text	1	Any plans to update	Y / N / U	y, n, u
38 AH_UP_SURV	Text	1	<u>Material updated on ad-hoc basis</u>	Y / N / U	y, n, u
39 UPDAT_PURP	Text	10	Purpose of update	Add sites, review status, other, unknown	add, rev, oth, unkno
40 CURR_SURV	Text	1	<u>Ongoing survey/program</u>	Y / N / U	y, n, u
41 START_DATE	Date	8	Start date: Year	Year	

Annex 6 Wetland Inventory Assessment database fields (continued)

Field Name	Type	Size	Question	Code words	3/6/98 Codes
42 PL_DURATION	Text	10	Planned duration (in yrs/mths):	Years / U	(text) u
43 UPDAT_FREQ	Text	10	<u>Frequency/periodicity of survey regimen:</u>		
44 CURRSTATUS	Text	10	Current status:	Open / Closed / U	open, closed, unkno
			<b>9. Methods</b>		
45 DATA_METHO	Text	30	<u>Data collection methods:</u>	Collation /review, ground survey, remote sensing, not stated	collate, grounsur, remote, unkno
46 GRND-SURV	Text	10	<u>Extent of ground survey?</u>	Text	total, partial, none, unkno
47 RS_DETAILS	Text	50	<u>Details of remotely sensed data</u>	Satellite, Aerial Photo, Video, LIDAR, Radar, Satellite imagery, Map Product, Other, Not provided	satel, aerial, video, lidar, radar, s-imagry, unkno
48 SCALE_RESO	Text	20	Spatial resolution	Text (see Guidelines)	
49 GROUND_TRU	Text	1	Was the Inventory ground truthed?	Y / N	y, n,u
			<b>10. Inventory Synthesis</b>		
50 INV_SUMMAR	Text	1	Summary given?	Y / N / U	y, n, u
51 AMOUNT_WET	Text	1	Extent of wetlands given?	Y / N / U	y, n, u
52 WETLAND_HA	Numeric	10	Total extent of wetlands covered (ha)	Number of ha	
53 WET_SITES	Numeric	10	Number of sites	Number	
54 AREA_CLASS	Text	1	Areas by class?	Y / N / U	y, n, u
55 AREA_CATEG	Text	200		Text	
56 WET_LOSS	Text	1	Estimate/summary of wetland loss?	Y / N / U	y, n, u
57 LOSS_NOTES	Text	200	Additional notes on wetland loss	Text	y, n, u
58 GEO_COORDS	Numeric	1	Geographical coordinates		0, 1, 2, 3, 4, 5
59 MAP_PROVID	Numeric	1	Map of site included?		0, 1, 2, 3, 4, 5
60 GEN_LOCATI	Numeric	1	Justification of criteria		0, 1, 2, 3, 4, 5

Annex 6 Wetland Inventory Assessment database fields (continued)

	<b>Field Name</b>	<b>Type</b>	<b>Size</b>	<b>Question</b>	<b>Code words</b>	<b>3/6/98 Codes</b>
61	COMPILER	Numeric	1	General location		0, 1, 2, 3, 4, 5
62	RAM_CRITER	Numeric	1	Ramsar Criteria		0, 1, 2, 3, 4, 5
63	CRIT_JUSTI	Numeric	1	Compiler		0, 1, 2, 3, 4, 5
64	AREA	Numeric	1	Area		0, 1, 2, 3, 4, 5
65	OVERVIEW	Numeric	1	Overview		0, 1, 2, 3, 4, 5
66	WET_TYPE	Numeric	1	Wetland type		0, 1, 2, 3, 4, 5
67	PHYSFEATUR	Numeric	1	Physical features		0, 1, 2, 3, 4, 5
68	HYDROFEATU	Numeric	1	Hydrological values		0, 1, 2, 3, 4, 5
69	ECOLFEATUR	Numeric	1	Ecological features		0, 1, 2, 3, 4, 5
70	NOTEWFLORA	Numeric	1	Noteworthy flora		0, 1, 2, 3, 4, 5
71	NOTEWFAUNA	Numeric	1	Noteworthy fauna		0, 1, 2, 3, 4, 5
72	SOCULTVALU	Numeric	1	Social and cultural values		0, 1, 2, 3, 4, 5
73	LANDTENURE	Numeric	1	Land tenure/ownership		0, 1, 2, 3, 4, 5
74	LANDUSES	Numeric	1	Current land use		0, 1, 2, 3, 4, 5
75	THREATS	Numeric	1	Adverse factors		0, 1, 2, 3, 4, 5
76	CONSERVED	Numeric	1	Conservation measures taken		0, 1, 2, 3, 4, 5
77	CSV_PROPOS	Numeric	1	Conservation measures proposed		0, 1, 2, 3, 4, 5
78	RESEARCH	Numeric	1	Current scientific research and facilities		0, 1, 2, 3, 4, 5
79	CONSRV_EDU	Numeric	1	Current conservation education		0, 1, 2, 3, 4, 5
80	REC_TOURIS	Numeric	1	Current recreation and tourism		0, 1, 2, 3, 4, 5
81	JURISDICTI	Numeric	1	Jurisdiction		0, 1, 2, 3, 4, 5
82	MANAG_AUTH	Numeric	1	Management authority		0, 1, 2, 3, 4, 5

Annex 6 Wetland Inventory Assessment database fields (continued)

Field Name	Type	Size	Question	Code words	3/6/98 Codes
83 REFERENCES	Numeric	1	Bibliographical references		0, 1, 2, 3, 4, 5
84 OVERSTATUS	Text	1	<b>11. Overall status of wetlands</b>		
85 STATUSNOTE	Text	200	Description of status of wetlands included?	Text	
			<b>12. Values and benefits</b>		
86 VALUE_BENE	Text	1	Description of values and benefits included?	Y / N / U	y, n, u
87 VALUE_NOTE	Text	200		Text	
88 ENTRY_BY	Text	20	<b>13. Completed by</b>	Text	
89 ENTRY_DATE	Date	8	Date of form completion	Year	

## Annex 7 Wetland Inventory Bibliography fields

*Note. A standard bibliography entry system was established by **eriss** for bibliographic entry by all project teams, to assist compatibility in final report compilation.*

ITEM NUMBER	Automatic entry number
AUTHOR/S	
EDITOR/S	
TITLE	Title of paper or book
SOURCE	Title of source of paper(where relevant), eg book, journal
SERIES	Title of series (where relevant)
EDITION NUMBER	
VOLUME	
PART	
DATE	Date of publication
PUBLISHER	
LOCATION PUBLISHED	If several publishers at different locations, may just enter the first location listed
PAGE NUMBERS	Example: 223–267
CONFERENCE DETAILS	If ‘source’ is the proceedings of a conference
CITED IN	Where the ref has been used in other publications – can be a useful search tool. May refer to another Item Number in the database
ADDED AUTHORS	For other than the main author/s, eg illustrators and translators
AUTHOR AFFILIATION	Name of organisation, department, etc
SUBJECT DESCRIPTION	Key words and phrases in the reference
	NOTES – Less formal than ‘Subject Description’ field, for any extra comments about the reference, its authors, its subject matter, further work, etc

## Annex 8 Wetland Inventory Metadatabase fields

An illustration of the meta-data fields that were designed for the *WWW* version of the meta-database, but note that little non-report format data were located through the regional analyses.



