Assessment of Requirements
of
UK Policy-Makers
for
International Nature Conservation
Information

October 2001

EXECUTIVE SUMMARY

The objective of the Rationalisation of International Nature Conservation Information Systems (RINCIS) Project is to review international information networks relevant to nature conservation, with the aim of improving the use of these international information sources and services in national policy development.

This report is the first of the three principal outputs of the project, and marks the completion of Phase 2 (on 4 October 2001). The primary focus of this Phase was to determine the current uses and needs of UK policy-makers for international nature conservation information. The report results from an extensive consultation process with a wide range of UK government stakeholders involving a number of workshops conducted in July and August along with structured interviews and discussions. A total of five half-day workshops were conducted in various locations, three hosted by DEFRA and one each by Scottish Natural Heritage and JNCC. Participation in the Workshops included the relevant government Departments, Non-Departmental Government Bodies, devolved authorities and nature conservation NGOs. In total 40 individuals were consulted from 20 organisations.

The objectives of the Workshops were:
- To provide participants with an insight into the principal sources of nature conservation information currently available, their strengths, weaknesses and future directions.
- To learn from participants what information sources are currently being used, how the information is used in policy development and decision making, and what barriers and gaps are perceived.

Six primary uses of international information sources and networks were identified:
- Informing the UK position on international policy issues
- Implementation of international obligations in response to MEAs
- Meeting international reporting requirements
- Implementing enforcement measures
- Assessing emerging issues, status comparison
- International comparisons for setting national priorities

The primary groups of information sources identified are:
- The Convention secretariats
- International NGO networks and repositories
- Species status reference sources
- Taxonomic reference sources
- Information collections related to "sites"
- General Policy and programme implementation sources
- European sources

A number of issues and problems were identified that restrict the effective use of international data sources and networks. The most significant can be classified as:

Gaps and overlaps - Some key gaps identified:
- Information on sustainable use and markets for biodiversity
- Information on national implementing legislation, strategies and measures in other countries.
- Case studies, good practices and "lessons-learned" in countries with comparable situations.
- Early warning of emerging issues and policy developments, especially in the EU.

Quality and reliability, appropriateness for policy - In spite of targeted programmes of harmonisation and integration over a number of years, there continues to be a gap between scientific observation and the need for integrated predictive cause-and-effect information needed by national decision makers.

Need for harmonisation and integration - A major concern of policy makers is the need for information to be comparable and compatible – i.e. capable of being integrated and summarised. This raises a number of issues regarding the requirements of stakeholders for increased harmonisation to enable useful interpretation in a policy context, with implications not only for harmonisation of the information *per se*, but also for methods and means of information management and analysis.

Workshop participants were asked to give their views on how best the proposed "Reference Guide" could serve their needs. There was a wide divergence of views, although one particular theme dominated - that is the need to ensure that the reference guide must be continuously updated. Preferences for delivery mechanism varied from "must be on paper" to a "virtual library" presentation. The conclusion was drawn that a wed-based service was required, with the capacity to produce paper and CD-ROM outputs. A host service provider will be needed and options, such as the UK Clearing House Mechanism, will be examined in the next phases.

The need for improved harmonisation and "interoperability" on a number of fronts is well recognised. Some 20 initiatives to improve harmonisation and integration of nature conservation information and the operations of the related MEAs have been identified. A number of concerns were raised about these initiatives, including:

- Is there sufficient collaboration between these efforts?
- Which initiatives are really suitable for enhancing policy-making as opposed to science or the administration of treaties?
- Are the right things being harmonised? For example are there steps to enable the assessment of the effectiveness of MEAs in terms of environmental improvement rather than counting activities?
- Is there too much emphasis on achieving standardisation and complete scientifically correct answers, rather than pragmatic interoperability – for example with taxonomies?
- Is there sufficient attention to harmonisation of classification systems and terminology and other standards required to make data and information compatible?
- What is the value and purpose of multi-designated protected areas, and how can approaches and information management be better harmonised?

The next Phases of the project are aimed at addressing these questions by examining some of the key information sources and networks, and the array of initiatives to harmonise, streamline and integrate. In particular, insight and resolution of confusion and uncertainty is sought in the following clusters of initiatives:

- Taxonomy, species lists
- Global treaty harmonisation and synergy programmes
- Harmonisation and integration of site related information
- Global information networks
- Enabling and supporting harmonisation efforts
- Harmonisation of reporting

The priority questions for the next phases are therefore:
- What are the strengths and weakness of these initiatives?
- Which of these initiatives are the most viable and worthy of support?
- How can the UK strategically influence the direction of these harmonisation efforts and foster effective international collaboration?

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1. INTRODUCTION

1.1. Background

The overall objective of the Rationalisation of International Nature Conservation Information Systems (RINCIS) Project is to review international information networks relevant to nature conservation, with the aim of improving the use of these international information sources and services in national policy development.

More specifically, the project aims to:
- compile information on international information networks and services that deliver information relevant to nature conservation and biodiversity
- critically assess the information holdings and analysis capacities of such agencies in the context of the needs of policy making bodies of the UK Government
- provide guidance on the most effective and efficient use of existing information sources for policy development
- provide recommendations on approaches that may be taken for increasing synergies in the delivery of information
- evaluate and make recommendations on the information organisations and networks that most merit future support and investment in the context of UK Government needs

There will be three principal outputs of the project:
- an *Assessment of the Needs* of UK policy-making bodies for biodiversity information
- a *Reference Guide* to international nature conservation information sources and networks
- a series of *Recommendations* on how to rationalise the information sources and identify those most worthy of support and investment

The project is organised in a series of logically connected steps, grouped into five major Phases as follows:

1. *Planning, fact-finding and preliminary analysis*
2. *Needs analysis of UK Government policy makers*
3. *Information gathering and in-depth analysis of relevant international nature conservation information systems*
4. *Assessment and development of recommendations on approaches to rationalisation*
5. *Preparation and presentation of the Reference Guide and reports.*

This report is the first of the three principal outputs, and marks the completion of Phase 2. It results from an extensive consultation process with UK government stakeholders involving a number of workshops, structured interviews and discussions.

1.2. Approach

1.2.1. Overview

Information on the requirements of UK Policy-Makers was collected in three ways:
- Review of policy documents (and other documents) of relevant departments and agencies
- A series of small Workshops hosted by the Department for Environment, Food and Rural affairs (DEFRA) and other agencies
- Structured interviews with key stakeholders, and discussions with others on opportunistic occasions - such as international meetings and conferences.

1.2.2. The Workshop process

The Workshops were held during July and August, 2001 in various locations as follows:

19 July 2001	*London*	*hosted by DEFRA*
16 Aug 2001	*London*	*hosted by DEFRA*
21 Aug 2001	*Bristol*	*hosted by DEFRA*
23 Aug 2001	*Edinburgh*	*hosted by SNH*
29 Aug 2001	*Peterborough*	*hosted by JNCC*

The stated objectives of the Workshops were:

- To provide participants with an insight into the principal sources of nature conservation information currently available, their strengths, weaknesses and future directions.
- To learn from participants what information sources are currently being used, how the information is used in policy development and decision making, and what barriers and gaps are perceived.

In addition the meetings served to obtain feed-back on the requirements and ideal delivery mechanism for the proposed Reference Guide.

Workshop participants were those who use international information sources and services to support policy development, national decision-making, development of legislation or regulation, and the implementation of international treaties, EC Directives and other international measures.

Annex 1 lists the criteria that were developed for the organisations and individuals who should participate.

Annex 2 provides a compendium of the summary notes from the five Workshops, including a typical agenda.

1.2.3. Other interviews and discussions

It was not possible for all relevant organisations to participate in the workshop process, so additional on-site interviews were conducted, as well as discussions at other fora in the UK and abroad. Topics discussed paralleled the agenda of the Workshops. These interviews particularly focussed on DEFRA and JNCC.

In addition comment and feedback was solicited and received by email.

Annex 3 lists **all** the organisations and individuals contacted through the workshops and other discussions.

1.2.4. Questionnaire

The Workshops have provided considerable insight into the use of, and requirements for, international information in policy development and implementation. In order to confirm that the Workshop participants were representative, a simple check-box questionnaire on the use of selected information sources was circulated participants as well as wider audience of stakeholders (a total of 132). Responses were received from 31 individuals at the time of writing of this report, and will help develop the Reference Guide and set priorities for future analysis and review steps in the Project.

Annex 4 contains a copy of the questionnaire, and Annex 5 a summary of the questionnaire returns.

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2. THE NATURE CONSERVATION POLICY PROCESS IN THE UK

The goal of this project is ultimately to improve nature conservation policy making and implementation in the UK. It is therefore useful to consider the elements of the current policy process in order to identify where improvements in international information harmonisation will be beneficial, and to provide a framework for developing strategic recommendations in later Phases of the project. This section identifies the principal elements, drivers and process flows.

2.1. Overview

The nature conservation policy process in the UK involves a number of governmental and non-governmental elements, and operates both reactively (e.g. in response to EC Directives) and proactively (to develop national policy for the benefit of civil society and to forward UK interests). There is no one central authority governing nature conservation (no "Department of Nature Conservation"), but rather policy implementation rests with a number of Departments and Agencies. Recent devolution of central government powers have vested some responsibility for nature conservation policy to the authorities of England, Scotland, Wales and Northern Ireland, although not to the extent of a "federal state" such as Germany.

2.2. Principal elements

2.2.1. Legislation

The principal acts through which nature conservation policy is implemented are the Wildlife and Countryside Act (1981), and the Environmental Protection Act (1990). In some cases there is separate legislation for the devolved authorities, like the Wildlife (Northern Ireland) Order and Nature Conservation and Amenity Lands (NI) Order.

The UK is also subject to EC legislation, of which the most significant in this context are the EC Directive on the Conservation of Wild Birds, and the EC Habitat and Species Directives. These are implemented mainly through national regulation under existing legislation, such as the Conservation (Natural Habitats etc.) Regulations under the Wildlife and Countryside Act.

The UK is a party to an number of Multi-lateral Environmental Agreements (MEAs) that require or imply the need for national actions, policies and legislation, and other obligations. The most significant of these in the context of nature conservation are:

- Convention on Wetlands of International Importance (Ramsar Convention)
- World Heritage Convention
- Convention on International Trade in Endangered Species (CITES)
- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
- Convention on Migratory Species (Bonn Convention) and related Agreements (ASCOBANS, Eurobats, and AEWA)
- Convention on Biological Diversity (CBD)

A more complete list may be found in Annex 6.

2.2.2. Statutory organisations

Much of the responsibility for policy advice to the Government in these areas, and for the implementation of nature conservation policy and the provisions of the above legislative framework, falls to DEFRA. Other relevant Departments include Her Majesty's Customs and Excise (responsible for enforcement of CITES import restrictions), the Department for International Development (DfID), the Foreign and Commonwealth Office (FCO), and the Department for Heritage, Culture and Sport.

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Under the Environmental Protection Act a number of government-funded "Agencies" (Non-Departmental Public Bodies or NDPBs) were created for the constituent parts of the United Kingdom. These bodies are responsible for information gathering, policy advice, and direct programmes of work to implement nature conservation policy and legislation. They are as follows:

- English Nature
- The Countryside Agency
- The Countryside Council for Wales (CCW)
- Scottish Natural Heritage (SNH)
- (Northern Ireland) Environment Heritage Service (EHS).

- The Joint Nature Conservation Committee (JNCC) serves to co-ordinate the activities of the four devolved agencies: English Nature, CCW, SNH and the Northern Ireland EHS.

The primary functions of JNCC are to advise ministers on the development of nature conservation policies in the UK and internationally, and to establish common standards throughout Great Britain and Northern Ireland for nature conservation monitoring and assessment. This makes JNCC the primary source of scientific advice to DEFRA and other departments on nature conservation.

2.2.3. NGOs and land owners

Major land owners influence UK nature conservation policy through their land use practices and land stewardship. NGOs exercise influence through advocacy that reflects the views of large memberships. The National Trust is one of the most significant land owners in this regard, and the RSPB is both a significant land owner and effective lobbyist.

2.3. Process flows and drivers

There is no one "process" that would typify the development of nature conservation legislation, regulation, or policy in the UK. While only sovereign countries (and their constituent parts) can enact national legislation, the need for new or amended policy may be driven by a number of different forces internationally and within the country. Policy drivers (in order of importance as deduced from the Workshops) include:

- EC Directives
- EC policies and programmes
- European regional conventions and treaties
- Global conventions and treaties
- National economic and political priorities
- National social pressures (public opinion as expressed through NGOs, advocacy groups, lobbies, etc)
- International social pressure (e.g. advocacy of the UN, other international agencies and international NGOs).

The process elements include issue awareness, issue assessment (including scientific assessment), public consultation, policy option development, policy implementation (legislation, regulation, programmes of work) and monitoring of effectiveness. The process would normally be a continuous loop with these elements operating in the above order - but the starting point and the initiative may begin from a number of sources - such as from a national NGO or lobby, UK involvement in international fora (such as the UN), the proposed accession to a treaty, an EC policy proposal made from a member country, and so on.

However the "issue awareness" may originate, the Government will normally designate a lead department (usually DEFRA for nature conservation matters). The lead department will seek the partnership of relevant related departments, seek scientific assessment and policy feasibility advice

from the "Agencies"- principally through JNCC - and engage in public consultation e.g. through national NGOs. This results in policy proposals for consideration of the government, and briefing for UK representatives to the EC, treaty governing bodies.

Throughout the policy development process, international information sources and networks are employed (with varying degrees of success) to inform the process on obligations, science, issues, and measures taken by other countries. The following sections provide an assessment of the current use of international sources and networks.

3. PRINCIPAL USES OF INTERNATIONAL NATURE CONSERVATION INFORMATION

Information is required at various points in the policy making process as noted above, and the results of the consultation process indicated that the information uses can be categorised into 5 broad headings based on the intended use of the information. These are given in the sections below, along with examples of use in each case.

3.1. Informing the UK position on international policy issues

The information is used to develop the UK position regarding emerging international policy proposals - such as new MEAs, or Directives, or extensions and modifications to existing measures. The information is used as briefing support for UK representatives on drafting committees and official international bodies.

Example:
EC proposal on sustainable hunting of birds (under the Birds Directive)

DEFRA sought scientific information on the impact on species populations from JNCC, international sources such as Birdlife International, and on public opinion from international NGOs such as RSPB, in order to advise official delegates to the EC.

Example:
Accession to the CBD

Broad consultation was required for this umbrella treaty – hence an inter-departmental committee was struck. Information was sought from a broad range of international sources, including, IUCN, WCMC, UN agencies, and international NGOs.

3.2. Implementation of international obligations in response to MEAs

Once the UK has become a party to a multi-lateral agreement actions must be taken to meet the specified and implied obligations.

Example:
CBD

The obvious implied obligation was for a national Biodiversity Action Plan (BAP). Information needs included guidance on the form and content of a BAP, plans and strategies of other countries, international interpretations of Convention articles.

Example:
Implementation of CMS obligations to prevent the taking of annexed species.

Information sought included guidance on species definitions from IUCN and WCMC Species databases, range state definitions, decisions under CMS Agreements (from CMS Secretariat), and measures taken in other countries (e.g. hunting and fishing regulations).

3.3. Meeting international reporting requirements

Most MEAs require regular national reports on the implementation of the treaty. Compilation of these can be burdensome and there are clear overlaps in the demands of the different instruments.

Example:
Reporting to the CBD

Information sought to respond to the reporting requirements includes, reporting instructions and interpretations from the CBD secretariat, access to reports of other countries, issue assessment and global status information on species, habitats, social and economic matters (such as "equitable sharing of benefits").

3.4. Enforcement measures

Example:
Enforcement of import restrictions on plants and animals under CITES

HMCE uses the WCMC species databases, and Royal Botanic Gardens, Kew, for reference on species identification, the CITES Secretariat for competent authorities (for permits), identification guides and IUCN-Traffic for trends and intelligence.

3.5. Assessing emerging issues, status comparison

Example:
Assessing global trends towards sustainable development

The DEFRA Sustainable Development Unit uses the UN-CSD information service (on occasion) and scans a wide range of web sources of national governments and international NGOs to identify actions, policies in other countries to inform UK Sustainable Development Strategy.

Example:
Comparing relative state of nature conservation in Scotland to Europe

Through a surveillance and monitoring process, SNH have established a number of measures of conservation status and natural quality for Scotland. They are currently seeking to compare these measures to the conservation status in European countries. This will require information from European national sources, and international agencies – available through EIONET, the EEA, Eurostat, the EC Clearing House Mechanism, and so on.

3.6. International comparisons for setting national priorities

National priorities and policies must be developed in a context that considers the regional and global picture. Thus it is necessary to seek information on species status and populations, protected areas and site designation specifics, global and regional issues and that impact on the UK.

Example:
Development of UK Biodiversity Action Plan

A multi-departmental initiative, this required information on the global population and international status of endangered and threatened species, especially with regard to endemism,

so as to set priorities for species conservation and habitat protection and rehabilitation programmes in the UK. Information sources included the IUCN "Red Books", and databases of Wetlands International and Birdlife International.

4. CURRENTLY USED INTERNATIONAL SOURCES

4.1. Overview

Because of the devolved "agency" structure of NDPBs, Government Departments do not frequently make use of international information sources and networks. Instead, information synthesis and advice is sought from the NDPBs, such as the Royal Botanic gardens, form the Agencies, and from JNCC which is the main provider of such information. The principal exception to this is the use of information sources specific to responsibilities under particular MEAs (e.g. CITES) where access to the information services of the convention secretariat is common. Typically this is related to obtaining policy and process information, such as meeting agendas and related background papers, national reports, official resolutions, decisions and minutes, etc. Reference may also be made to official EC sources, the EEA, and the IUCN Environmental Law Centre for information on the policy and legal context. Scientific advice and assessment is normally obtained through the Agencies. The Agencies are the principal users of international sources and networks.

4.2. Groups of information sources

The Workshops provided information that allowed the identification of major groups of most frequently accessed information sources:

- The Convention secretariats
- International NGO networks and repositories (such as Wetlands International, Birdlife, IUCN)
- Species status reference sources (such as UNEP-WCMC Species Databases, RBG-Kew, ICLARM-FishBase)
- Taxonomic reference sources (such as Web-of-Life, Species 2000)
- Information collections related to "sites" including the World Database of Protected Areas database, Natura 2000 sites, and site-designation treaty services (such as WHC, Ramsar, and Bern)
- General Policy and programme implementation sources (such as the CSD, UN System-wide Earthwatch, the CBD Clearing House, WRI, IISD, WWF, UNEP)
- European sources (such as ECNC, EEA, and the European Commission DGs)

Several agencies, and especially JNCC, mentioned the use of very specialised sources and networks - for example regarding a single species or group. These are often held or co-ordinated by individual interested scientists or academics.

Most of these sources are routinely accessed through the Internet, although some sources normally deliver printed outputs (such as IUCN-ELC), and a great deal of printed material is often collected at official MEA meetings. A least one Department indicated that access to the Internet was difficult.

Many workshop participants also referred to trusted experts, contacts and world authorities for information.

Surprisingly perhaps, rather little use seems to be made of metadata services (such as the UNEP Metadatabase, CEISIN, EEA Catalogue of Data Sources) or of referral services such as INFOTERRA. Bibliographic and abstracting services were principally used to find a likely "expert" to contact regarding particular issue or species.

Statistical databases that might be of use for indicators and comparisons are not used frequently (FAO, Eurostats, OECD, etc), and there was little awareness and no use of the "Global Observing Systems" - Global Terrestrial Observing System (GTOS), Global Oceans Observing System (GOOS), and Global Climate Observing System (GCOS).

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, and Annex 6 a summary of the results of the information sources questionnaire.

4.3. The Top Ten sources

To augment the views obtained from the Workshops, particularly with regard to obtaining more specifics as to information sources currently used, a questionnaire was circulated to participants as well as wider audience of stakeholders. A total of 132 questionnaires were circulated by email. At the time of writing of this report responses had been received form 31 individuals. While this is a relatively poor return (there may be more to come) it served to confirm the general impressions obtained through the Workshops, that the primary sources were the Convention Secretariats and their web-sites, and European co-ordinating sources.

Based on the analysis of the questionnaire returns the following are the 10 most frequently used sources (no relative order implied):

- Bern Convention Secretariat and web-site
- Convention on Biological Diversity Secretariat – main web-site
- Convention on Biological Diversity Clearing House Mechanism web-site
- Convention on the Conservation of Migratory Species (CMS) Secretariat and web-site
- Ramsar Convention Bureau web-site
- EUROPA - The European Union Online
- European Commission, DG-Environment web-site
- UNEP-World Conservation Monitoring Centre (UNEP-WCMC) web site
- European Centre for Nature Conservation (ECNC) web site
- WWF International web site

It is noticeable that the majority of these sites are connected with major Multilateral Environmental Agreements (MEAs). This is perhaps a reflection of the UK's membership and active involvement in biodiversity conservation at the international level through these and numerous other MEAs. Also significant is the number of European-related information sources that figure in this list. Participants in the workshops stated that Europe was a major driver for the UK and this is reflected in the responses to the questionnaire. The NGO web sites relate to organisations with quite varied portfolios of work relating to biodiversity conservation. Both ECNC and WWF are involved in work that spans many sectors and countries. This is also true of the activities in which UNEP-WCMC is involved that are both international in geographic scope and broad-based within the domain of nature conservation.

From the above it could be inferred that policy makers are interested in information concerning international and regional initiatives that directly concern them, and that they also favour sources offering more generalised nature conservation information with links to more specific information.

The two most frequently visited web-sits appear to be :

- European Commission, DG-Environment site
- EUROPA - The European Union Online

An important issue regarding information provided online is the frequency with which this information is updated. This frequency may be intimately related to actual changes in the information

itself. From the above information taken from the questionnaires it might be inferred that EU web sites are frequently visited because they are frequently updated, and that this frequent updating is necessary because of the constant evolution of EC law and policy relating to nature conservation.

Of the sources suggested on the questionnaire the following were the least visited (all returns indicated "never"):

- Earthtrends, The Environmental Information Portal
- Global Terrestrial Observing System (GTOS)
- Infoterra Global Environmental Information Exchange Network

There are probably several reasons why these web sites have never been visited by the small sample of policy makers questioned. It may be that these sites, which focus on nature conservation at the global level, do not provide useful information for national level policy makers. It may also be possible that the policy makers questioned were unaware of these sites, as some respondents stated that they had been previously unaware of several of the information sources included in the questionnaire. Also, some indicated in comments that they did not have the time to seek information sources beyond those pertaining to their immediate area of expertise.

Annex 4 shows a sample of the blank questionnaire form, and Annex 5 provides a summary of the questionnaire returns.

5. PROBLEMS AND ISSUES IN INFORMATION USE

This section presents the problems and issues associated with the use of international nature conservation information identified through the Workshops and other consultations. The points are extracted and summarised from the workshop session summaries and from interview notes – thus a summary of summaries. For more detail and context, please refer to the specific Workshop summaries in Annex 2.

5.1. Gaps and overlaps

Although vast amounts of nature conservation information is held in international databases and networks, it is recognised that there are some significant gaps. Key requirements are as follows:

- High level information on focal points, and stakeholders, with details of who is responsible for what in other countries.

- Personal contacts are very important to policy makers. A contacts database, that not only includes key posts but also key named individuals, with some system for updating and maintenance, would be particularly useful for keeping in contact with those policy makers who are frequently changing posts.

- Information is needed on sustainable use and understanding markets for biodiversity and environmental commodities, such as tourism or forestry, with forewarning of developments in these markets.

- Information on legislation, particularly national implementing legislation in other countries.

- Up-to-date information on and better access to, the text of national strategies, with details of what each strategy covers and its status.

- There is a need for increased access to and effective use of case studies and good practices and "lessons-learned" (good and bad) in other countries with comparable situations.

- Information on the activities being undertaken by other countries, in particular those that share environmental characteristics with parts of the UK would be extremely useful. This should include case studies (both successful and unsuccessful), and information on best practice.

- Species identification aids - not just information on the scientific and common names of species but also the appearance of particular species look like when traded including information on the common forms of trade (parts, derivatives, typical products, trade names).

- Information on "policy drivers", for instance emerging social issues and as reflected in pressure from NGOs and political directions.

- European level information is needed, particularly prior information of policy developments and information on linkages.

- Information on and from NGOs including data holdings, strategies and agendas, and advocacy of best practice.

- National reports and other information submitted to MEAs should be made much more accessible and searchable by topic or content keyword

- Supplementary materials submitted to convention secretariats by national governments (including cases studies and site reports) should be indexed and made available.

- Information on international funding sources with an environmental search engine

5.2. Quality and reliability, appropriateness for policy

As early as the UN International Forum on Environmental Information in 1991, there have been concerns about the appropriateness of information for policy making. In spite of targeted programmes of harmonisation and integration, there continues to be a gap between scientific observation and the need for integrated predictive cause-and-effect information needed by national decision makers. The following indicate some of the main issues raised:

- Information should be targeted and made accessible for policy makers who may not be conservationists or experts in the field to which the information relates. Practitioners require a different type of information to policy makers.

- It is important to know the source of the data or information. Advice on the quality and accuracy, the motives and the usefulness (in a policy context) of each information source, provided by either users or a third party would be useful.

- Information for policy makers should be presented in a summary form rather than in full. Policy makers are unlikely to read long documents.

- Information is needed on sustainable use and understanding markets for biodiversity and environmental commodities, and the interactions, such as tourism or forestry, with forewarning of developments in these markets.

- The Reference Guide should link only to those information sources that are kept up to date and have quality management. At the same time account should be taken of information sources whose updating frequency is linked to international processes such as reporting cycles, conferences of parties or seasonal variations.

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5.3. Need for harmonisation and integration

A major concern of policy makers is the need for information to be comparable and compatible – i.e. capable of being integrated and summarised. One participant summarised the situation well with "The norm is for data not to be comparable rather than for it to be comparable". This raises a number of issues regarding the requirements of stakeholders for increased harmonisation to enable useful interpretation in a policy context. This has implications not only for harmonisation of the information *per se*, but also for methods and means of information management and analysis.

- In general, information from different sources is often incomparable and incompatible. Increased harmonisation is needed of nomenclature, standards and terminology.

- An integrated species list for all appropriate international conventions (e.g. CMS, CITES) with standardised terminology and glossary of terms (multilingual) should be created.

- Linkages and harmonisation of the UN CSD Web site and national sustainable development sites.

- Convention web sites should be made compatible, kept up to date and respond to user needs, particularly the needs of those involved in implementation activities.

- Information held by secretariats and the European Commission should be made available rather than just disappearing into a black hole. Report formats should be developed so as to facilitate this.

- National reporting requirements should be harmonised to ease the burden on parties of reporting.

- It is important to find ways of linking national policies and information systems to international obligations (particularly European) so that obligatory reports to international instruments are of use to the implementation of national policy.

- Increasingly there is demand from policy-makers for indicators or measures of "conservation status", "countryside quality" or "sustainability". There is therefore a need for access to information on international developments of indicators, and accepted measures.

- Need for improved harmonisation and interoperability of classification systems and nomenclature e.g. for habitats, vegetation, biotopes, etc

- Harmonisation of data collection is needed to ensure comparability, e.g. harmonisation of the Natura 2000 monitoring requirements and the Ramsar monitoring requirements. For other Conventions investigate the extent to which the data for one can answer the questions posed by another.

- Several organisations/secretariats call for case studies and thematic reports (OECD, CBD, CSD), it would be useful to have an integrated approach to accessing these case studies and best practices.

- It would be useful to co-ordinate the development of indicators at the UK level as well as with Europe. Similarly for nomenclatures and classifications which differ, a common framework would be easier, perhaps taking into account classifications used by others elsewhere.

- Different definitions for the same thing may be used at the national level, for example definitions of forests that differ across the EU member states.

- It would be beneficial if this project could stimulate the international collaboration and co-operation that will lead to harmonisation. At the moment everyone is selling a product and trying to be different.

- Better linkages to sustainable development, and indicators of sustainable utilisation, quality of landscape, rural quality, quality of life etc

- Harmonisation of reporting obligations to MEAs and directives is badly needed. Such harmonisation could lead to effective "modular reporting", that is, allowing for modules or "information packets" to be prepared that serve the needs of multiple conventions.

- Integrating training, awareness raising and mobilisation of civil society with policy development and reporting

- Interoperability of species lists through the Species Dictionary and consistent taxonomies

- Provide an integrated, cross-referenced system of bibliographic and abstracted databases, and other resources, such as the relevant discussion groups and list servers.

5.4. User Requirements for the Reference Guide

Workshop participants were asked to give their views on how best the proposed Reference Guide could serve their needs. There was a wide divergence of views, although one particular theme dominated - that is the need to ensure that the reference guide must be continuously updated. Preferences for delivery mechanism varied from "must be on paper" to a virtual library presentation consisting only of hot-links to other web-sites.

The following points are summarised from the discussions:

Update and maintenance
- Extremely important to consider how to keep it up to date - one way is to allow participants to update their own metadata If constant updating is possible some very useful data can be included in the reference guide.
- A paper version of the guide would not be ideal. How will the guide be kept up to date and maintained? Even of it consist only of a series of signposts there is a need to maintain it.
- Not only should the reference guide be kept up to date, it should link only to those information sources that themselves are kept up to date. At the same time account should be taken of information sources whose updating frequency is linked to international processes such as reporting cycles, conferences of parties or seasonal variations.

Quality
- Develop a pre-determined system for assessing the validity and/or value of the information contained in sources
- There should be a limit as to what information is trusted based on the accuracy and quality of this data.
- The Guide must indicate the underlying quality of the information, original intent, nature of "peer review" of information
- There can be sloppy quality control on some web sites – no proof reading or checking. All sites should be closely reviewed for quality.

Web delivery
- An HTML format guide would be preferred, using weblinks/hotlinks
- If the Reference Guide is a website, could provide a mechanism for people to add sites that they found useful.

- An online guide would be most useful, with facts about each web site and also opinion on the usefulness of the site, and the reliability of the information.
- A one-stop shop reference guide, giving directions to information sources, rather than holding information itself, would be very useful.
- An HTML format is preferable, but account should be taken of how the guide will look if it is printed out.
- The Reference Guide should be Web-based service, essentially metadata
- In the extreme, the Reference Guide could be nothing but hot-links

Search modes
- Could an environmental search engine be created, searching through a library of likely sources with key headings – a kind of virtual library?
- There is a need to find a way to capture searches in the system, so that after the first person has spent two hours finding something, subsequent people searching for the same thing can find it much quicker.
- Important to indicate the temporal scope of the information (e.g. CORINE Biotopes - useful but now out-dated)
- Important to keyword with controlled vocabulary, as well as allow full text searching
- Searchable by geographic criteria useful - consider the National Geospatial Data Framework (NGDF) as model of how to do spatial searches.
- Information should be categorised so as to avoid information overload.
- Care should be taken that the reference guide does not perform in the same way as a search on the Internet. The reference guide should be a manageable size.
- A search box may not be useful, headings, themes and sub-headings might be more useful for some users. Groups of information sources rather than keywords would be better.
- The UK Biodiversity web site has provided keywords, listed hierarchically, could this serve as a common nomenclature?

Paper
- A paper based document with links built in would be useful. The guide should be designed so that a paper document can be produced with consideration of how it would look if printed out.
- If the Reference Guide is in the form of a searchable CD-Rom, not everyone has the facilities to use it. A desk reference on paper would be useful.
- A paper copy is required. It could be updated every 2-3 years, with more regular updates on the web.
- A downloadable document in PDF format is a common solution to web-based information distribution.

General
- Consider UK Clearing House as possible mechanism for Reference Guide
- Should be widely accessible, not just to "gsi" (i.e. Government Departments and Agencies)
- It may be that the reference guide cannot be delivered by this project, but an organisation like the EEA could do it. Questions raised by the project may never get answered
- It is noted that little use is made currently of metadatabases, so the Reference Guide must be clearly focussed on meeting the needs of the intended users

5.5. Issues arising from harmonisation initiatives

The need for improved harmonisation and "interoperability" on a number of fronts is well recognised. Some 20 initiatives to improve harmonisation and integration of nature conservation information and the operations of the related MEAs have been identified (see Annex 7).

A number of concerns were raised:

- Is there sufficient collaboration between these efforts, or do they sometimes operate at cross purposes?

- Which initiatives are really suitable for enhancing policy-making as opposed to science or the administration of treaties. For instance, in harmonising reporting are conventions considering how to make the information more useful for national planning and implementation, rather than facilitating secretariat "business"?

- Are the right things being harmonised? For example are there steps to enable the assessment the effectiveness of MEAs in environmental results rather than activities?

- Is there too much emphasis on achieving standardisation and complete scientifically correct answers, rather than pragmatic interoperability – for example with taxonomies?

- Is there sufficient attention to harmonisation of classification systems and terminology and other standards required to make data and information compatible?

- How do State-of the Environment studies relate to the development of indicators and measures of "conservation status", "landscape quality", and "sustainable development"?

- What is the value and purpose of multi-designated protected areas, and how can approaches and information management be better harmonised?

In short - how can the harmonisation efforts be harmonised?

6. NEXT STEPS AND ISSUES TO ADDRESS

The next Phases of the project are aimed at looking in-depth at some of the key information sources and networks, and at the array of initiatives to harmonise, streamline and integrate.

In particular, insight and resolution of confusion and uncertainty is sought in the following clusters of initiatives:

- Taxonomy, Species lists
  E.g. GBIF, Species 2000, All Species Inventory, BioNet, etc

- Global treaty harmonisation and synergy programmes
  E.g. the "Rio Treaties" harmonisation, "biodiversity convention" synergies, UNEP harmonisation pilot projects

- Harmonisation and integration of site related information
  E.g. related to Natura 2000, Ramsar, WHC, Bern, CMS, MAB, etc

- Global information networks
  GTOS, UNEP-Net, World Data Centres, BCIS, ENRIN, etc

- Enabling and Supporting harmonisation efforts
  Terminology, classification systems, indicators, etc

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- Harmonisation of Reporting
  UNEP, EU, EEA, UN-CSD, etc

- Programmes aimed at increased accessibility of case studies and best practices
  (no examples at this time)

The priority questions for the next phases are therefore:

- What are the strengths and weakness of these initiatives?

- Which of these initiatives are the most viable and worthy of support?

- How can the UK strategically influence the direction of these harmonisation efforts and foster effective international collaboration?

The revised RINCIS Programme of Work to address these questions can be found in the *Progress Report, Phases 1 and 2, October 2001.*

RINCIS
Assessment of Requirements
of
UK Policy-Makers
for
International Nature Conservation Information

ANNEXES

October 2001

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ANNEX 1 - Criteria for Participation of Organisations and Individuals in the Workshops

A. Criteria for identifying appropriate organisations for participation in Workshops

General: Organisations that use international environmental information in support of policy development or implementation

1. National focal points for international agreements and programmes relating to nature conservation
2. Organisations providing support to implementation of these international agreements and programmes
3. Organisations developing national strategies and policy recommendations with regard to the environment and sustainable development
4. Organisations developing legislation and regulation with regard to the environment and sustainable development
5. Organisations responsible for liaison with the EU, EEA, OECD, and other international organisations with regard to the environment and sustainable development
6. Organisations whose work is influenced by international agreements and programmes on nature conservation, and who need to take these into account
7. Departments and other organisations providing development support to Governments in other countries

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B. Criteria for identifying appropriate officials for participation in the Workshops

General: Participants should be senior officials who use or have a need to use international information sources on nature conservation, particularly for national policy development or implementation

The participant should have one or more of the following characteristics:

1. Be a focal point or responsible for liaison with one or more MEAs
2. Develop or propose policies or strategies that require international nature conservation information
3. Currently use international sources or networks for nature conservation information
4. Draft legislation or otherwise be involved with legal aspects of the environment or nature conservation that may require international information sources
5. Oversee the management of protected areas that have international designations
6. Make applications to international bodies for designation of protected areas
7. Responsible for preparing reports or fulfilling other information obligations under MEAs

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ANNEX 2 - Compendium of Summary Notes of RINCIS Workshops

During July and August, 2001 the RINCIS project held a series of Workshops with a range of stakeholders to gain insight into the current uses, problems and needs associated with international information on nature conservation - in the context of policy making and the implementation of international policies and treaties.

The Workshops were held in various locations as follows:

Thurs July 19, 2001	*London*	*hosted by DEFRA*
Thurs Aug 16, 2001	*London*	*hosted by DEFRA*
Tues Aug 21, 2001	*Bristol*	*hosted by DEFRA*
Thurs Aug 23, 2001	*Edinburgh*	*hosted by SNC*
Wed Aug 29, 2001	*Peterborough*	*hosted by JNCC*

The following pages provide summary notes on the meetings.

Typical Workshop Agenda

Workshop on International Nature Conservation Information Sources and Needs
Great Minster House, London
19 July 2001

AGENDA

PART I - Current International Framework for Nature Conservation Information
10:30-11:30

1. Welcome and introduction of participants

2. Brief overview of the project - *Ian Crain*

3. Introduction to nature conservation information for policy - *Ian Crain*

4. Current moves to harmonise and streamline - *Jerry Harrison*

5. Preliminary assessment of information sources - *Ian Crain*

PART II - Interactive Sessions
11:30-12:30

6. Introduction, examples, and questions to be addressed - *Jerry Harrison*

7. How information is used in policy development and decision making - all participants

8. International information sources and networks currently used - all participants

lunch break 12:30-13:30

13:30-14:30

9. How can the Reference Guide be most useful? - *all participants*

10. Solutions Sought - priorities for recommendations - *all participants*

PART III - Summation
14:30-15:00

11. Focus, summarisation, and future directions
    - Principal needs for improved information
    - Priorities for sources to be further investigated and assessed
    - future steps in the project and how to maximise participation and benefits

PART IV - Informal Discussion - optional
15:00- ...

Small group discussions with the project team as desired to explore needs, opportunities, and specific guidance on next steps and project priorities

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Workshop on International Nature Conservation Information Sources and Needs

Department for Environment, Food and Rural Affairs
Great Minster House, London
19 July 2001

SUMMARY NOTES

Participants:

Guy Clarke – HM Customs and Excise
Chris Miller – HM Customs and Excise
Aphrodite Korou – DEFRA (Sustainable Development Unit)
Jim Ellis – CEFAS
Kerry ten Kate – Royal Botanic Gardens, Kew
Mark Jackson – Royal Botanic Gardens, Kew

Jeremy Harrison – UNEP-WCMC
Karen Simpson – UNEP-WCMC
Ian Crain – The Orbis Institute

Current sources and how information is used in policy development and decision-making:

HMCE:
- Information is used for enforcement – the specifics of the law (CITES and EC legislation) and of the relevant CITES Appendices are required, as well as identification guides. Information is supplied to DEFRA regarding seizures and intelligence gathered.
- The distinction was made between information (such as details of seizures and other actions) and "intelligence". Intelligence refers to information of use in establishing enforcement strategies and priorities. Examples would include information on markets for prohibited species (size and location), emerging trends (including social and fashion trends) likely to affect trade, poaching and illegal taking information (where), seizure information from other jurisdictions.
- The CITES Secretariat provides useful historical information, but is not found to be up-to-date. It provides a list of Competent Authorities (e.g. for issuing permits) but this is not terribly useful. It has started to send out Thematic Notes on what is happening which may prove useful, but it is difficult for the CITES Secretariat to provide detailed information without offending some member countries.
- Sources currently used include CITES web-site and published documentation, reference manuals, specific contacts and trusted colleagues in enforcement authorities of other countries.
- Experts at Kew are used for species identification where needed. Kew's orchid checklists are very useful.

Botanic Gardens, Kew:
- Kew experts are a regular part of the UK delegation to the CBD and SBSTTA, and advise the UK government on strategies and science.
- If nothing is known about a subject at all, a government list of so-called experts is used as a starting point.
- Uses the IUCN Law Centre to see what laws and legal sources there are in a country.
- Kew is developing a web-based tool which will provide information on major land owners (trusts, governments, churches), with links to their websites.

DEFRA, Sustainable Development Unit:
- Provides policy advice on issues related to sustainable development, and on the implementation of international and European policy and legislation.

- The UN Commission for Sustainable Development website is not used a great deal – not considered to be up-to-date. Different sites are used to locate different types of information, based on a regular scan. There is no specific formal list of sites that are checked regularly. It is achieved through knowledge of "good" sites and of emerging issues.
- Sustainable development search engines are of dubious value.
- They have developed a UK Sustainable Development website that has sections on European and International policies and activities, most recent scientific and political developments. In general, the website promotes best practices, and points to relevant items on sustainable development elsewhere. It is intended for global use and is not a directory. An associated discussion group has been developed.
- "ENDS" have back-issues of their magazines in a searchable database.
- The Unit has developed a sustainable development research network with the Universities of Westminster and Edinburgh. It provides integrated information which might be useful as an example.

CEFAS:
- Provides advice to various departments with respect to fisheries and marine biodiversity.
- When looking for information on a topic, would look at the literature and then ring someone who is known in that subject area. Much reliance placed on known experts and personal contacts.
- "BIDS" is useful, as is the British Library who order anything they do not hold through inter-library loans.

Recommendations on making the Reference Guide most useful:

HMCE:
- Develop a pre-determined system for assessing the validity and/or value of the information being provided.
- Information is needed on quotas, points of export, etc. In the reference guide, there should be some indication of whether this type of information is included. Would prefer more direct information.
- If the Reference Guide is in the form of a searchable CD-Rom, not everyone has the facilities to use it. A desk reference on paper would be useful.

Botanic Gardens, Kew:
- Could develop questions as indicators to assess the quality of the information (e.g. who put together the information? was it independently verified?)
- If the Reference Guide is a website, could provide a mechanism for people to add sites that they found useful.
- If the Reference Guide is a website, need good design. Part of the usefulness of a site is determined by how far it can be accessed from another site.
- Need to include "BioPlan".
- Should provide information not just for the converted, but also for those making decisions. Need to confer with users, but also to industry, energy producers, local government, planning people, those involved in transport and agricultural policy, etc.
- Information is needed on the sustainable use, markets and economic value of biodiversity

DEFRA Sustainable Development Unit:
- Would use the Reference Guide to identify sites that are relevant to sustainable development, both for research purposes and to provide advice.
- Could address questions through the site (as a discussion forum).

CEFAS:
- If other databases were added to the Reference Guide, in the future they could be threatened with removal if they are not kept up-to-date.
- A paper copy is required. It could be updated every 2-3 years, with more regular updates on the web.

Issues, problems and areas where harmonisation and synergies are needed:

HMCE:

- Often those who deal with enforcement use different terminology.
- Need to find some way to share information and intelligence and get the "big picture".
- Would be useful to have a list of people with enforcement knowledge/experience around the world.
- Would be useful to know in advance the details specified in laws of other countries.
- An update of the CITES identification guide on the web would be useful, with photos (rather than drawings).
- In addition it is important to know not only what something looks like in the wild, but also how it is commonly traded (parts, powders, products), trade names, etc.
- Need to be able to identify the national focal points and statutory authorities for enforcement
- Consistency between CITES species list, and EC lists, definitions

Botanic Gardens, Kew:
- Information is needed on sustainable use and understanding markets for biodiversity. Need input from the private sector and industry associations.
- Need to pull together all stakeholders and join together all those involved in such a way that they understand each other.
- Need to find a means to locate the focal points for different Agreements/Conventions in each country.
- Need to locate/identify where people fit into the global picture, identify focal points and stakeholders.
- To identify someone with knowledge in a particular field, a government list of experts is a starting point. But it must be kept up-to-date.
- Would like to see an integrated, cross-referenced system of bibliographic and abstracted databases. A list of list servers would be useful.
- Need standardised terminology. It would be useful to have a source indicating how words are being used.
- Would like to see all legal texts on-line.
- Although convention secretariats should be encouraged to promote implementation, lateral input is required from other sources to manage data.
- Would be useful to find up-to-date national strategies.

DEFRA Sustainable Development Unit:
- Not all countries have government-maintained sustainable development websites.
- Wants integrated sites between industry and government.
- Want to find new ways of working and to be able to find up-to-date national strategies.
- Information on how to improve monitoring and reporting
- CSD website (or similar) needs information on best practices, case studies etc.
- Need place to find strategies and action plans, national reports

CEFAS:
- Need standardised terminology.
- Would be useful to be able to search by sea area to find what conventions/agreements apply in particular areas.

Suggestions for additional participants:

Natural History Museums of Scotland and Wales
Marine Conservation Society
WWF (Sally Nicholson)
Zoological Society
Zoological Federation
ICES (their scientists would be users)
John Innis Centre (provide some policy advice on crops)

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RIIB
NIAB – National Institute of Agricultural Botany
(Martin Smith and John Tillson can identify who they use when deciding policy)
Nick Mabey and Anabel Mallens of FCO.

Suggestions for additional sources for Reference Guide:

IIED – International Institute for Environment and Development (UK)
IOPE
International Association of Plant Genetic Resources
National Criminal Information System (statutory authorities)
Oceanography institutes
BIDS – Bath Information and Data Services
KIB -
EC Wildlife Trade Reference Database
IISD – International Institute for Sustainable Development
Human Development Report
Sustainable Development Resource Network (UK) Dr. Malcolm Eames
STARS at Grid Arendal
ICES – International Council for the Exploration of the Sea
International Plan of Action for Sharks
Sea Mammal Research Centre
Marine Life Information Network (MarLIN) (Keith Hiscock)
Marine Bird Association
BioPlan

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Summary of information needs:

Big Picture – Find ways to provide and share information on what fits where at the highest level. Information on legislation, focal points, stakeholders and experts is also needed, with details of who is responsible for what. Networks to link experts might be helpful.

Understanding – Information is needed on sustainable use and understanding markets for biodiversity and environmental commodities, such as tourism or forestry, with forewarning of developments in these markets.
.
Legislation – Provide information on legislation, particularly national implementing legislation in other countries and international treaties.

Bibliography/list servers – Provide an integrated, cross-referenced system of bibliographic and abstracted databases and a list of list servers.

Integrated species list – Create an integrated species list for all appropriate international conventions (e.g. CMS, CITES) with standardised terminology and glossary of terms (multilingual).

National Sustainable Development Web sites – Including CSD web sites and a list of national sustainable development sites with links.

Recommendations to Convention etc web sites – Sites should be up to date and respond to user needs, particularly the needs of those involved in implementation activities (Note, particular relevance to CITES enforcement).

Strategies Access – Provide up to date information on and better access to the text of national strategies, with details of what each strategy covers and its status.

Species Identification – Not just information on the scientific and common names of species but also what particular species look like and how these species are traded (parts, powders, products, trade names).

Workshop on International Nature Conservation Information Sources and Needs

Department for Environment, Food and Rural Affairs
Eland House, London
16 August 2001

SUMMARY NOTES

Participants:

Richard Ferris – Forestry Commission, Forest Research, Woodland Ecology Branch
Simon Foster – DFID, Environmental Policy Department
Sharon Laws – DFID, Environmental Policy Department
Sandy Moss – FCO, Environment Protection Department
Geoff Jasinski – DEFRA – FISH IIB
Mike Pienkowksi – UK Overseas Territories Conservation Forum (UKOTCF)
Gillian Dare – Overseas Territories Department
Richard Partington – The Countryside Agency
Simon Rowley – DTI, Office of Science and Technology

Jeremy Harrison – UNEP-WCMC
Tim Johnson – UNEP-WCMC
Alistair Taylor – UNEP-WCMC

Current sources and how information is used in policy development and decision-making:

UKOTCF
- UK Overseas Territories have produced a database concerning biodiversity conservation. This database currently contains information on strategic conservation priorities, sources of information on a range of conservation issues, and a database of projects and potential projects. This information can be accessed online. The information was gathered through a process of consultation with the overseas territories. Limited resources mean that not all the information gathered is publicly accessible. Each record consists of a basic summary page of key information, with web links to further specialist sources, which will change more often.
- Searching with global search engines often results in thousands of hits, most of which are useless.

Overseas Territories Department
- Different people use different terms to describe the same thing. Using the wrong term may mean you fail to find the information you want or find only part of it.

FCO
- It takes too long to find information and contacts.

DFID
- Global search engines are useful if you know where to start. Different search engines can produce different results.
- DFID makes use of information on the policies of other agencies in order to establish more integrated working methods. Much of this information comes through personal contacts and through meetings attended by other departments.
- In the area of poverty reduction personal links are formed at meetings so that information can be exchanged on the lines other agencies are taking and their policies.

DEFRA
- Work on closer collaboration between government departments is underway.

Countryside Agency
- Almost no online information is used; the main source of information is the library.
- There is a great deal of information regarding protected areas but it is impossible to get hold of. This information should be made accessible.
- EUROPARC attempted to introduce an expertise database and exchange mechanism for those working in protected areas management. The database contained details of who was doing what in Southwest England. However it did not prove very valuable. Few users took the time to use the new system and instead continued to use their old networks of contacts and information sources.

Recommendations on making the Reference Guide most useful:

UKOTCF
- Could an environmental search engine be created, searching through a library of likely sources with key headings – a kind of virtual library?
- There is a need for contacts information. Currently this is erratically generated and includes both official and unofficial sources. A system for checking whether named individuals still occupy certain key posts is needed with provision for updating this information.
- Partners and centres could be used to pull in data and supply information. This could include attributed opinions (capturing rumour and attributing it).
- Although the reference guide is stated to be for "policy-makers" it is practitioners that a great deal of information is aimed at. The information is more of a practical rather than a policy nature.
- It would be useful to know which individuals occupy which key posts. This is difficult to achieve given the quite frequent rotation of civil servants. It would also be useful to know whom the key individuals are, i.e. the people who get things done regardless of which post they are in.
- Most useful would be taking the information that is available and making it understandable to policy-makers.
- There is a need to find a way to capture searches in the system, so that after the first person has spent two hours finding something, subsequent people searching for the same thing can find it much quicker.
- The way information is presented is important. Summary information is easier to deal with than starting directly from key documents

Overseas Territories Department
- Information should be targeted and made accessible for those people it is aimed at. Policy makers are not conservationists and may not be as computer literate as the information providers
- The policy advisors who use information to generate advice may well not be experts in the particular field to which the information relates.
- Information is needed on sources of funding and expertise. Information on model legislation and implementing activities would also be useful. This might include examples of successful sustainable development projects.
- Basic information is needed on "who does what" across government departments. Currently information on contacts is inherited from predecessors and taken with you from post to post. It is often difficult to build a new set of contacts in the short term. There is a need to know, within government, who to contact.
- Although experts should know key people in their particular field, the target audience for a database of experts should be those who are not experts but who need access to expertise networks.
- It would be useful to be able to search for other people's experiences in areas related to conservation.
- There is a need to know what the underlying motivation is of certain information sources, i.e., whether they have an official mandate or are unofficial research efforts by NGOs or other research institutes.

FCO
- Information on how other countries implement conventions would be interesting.
- Will this be the mother of all reference guides? How can it be narrowed down and who will decide what to include?
- There should be a limit as to what information is trusted based on the accuracy and quality of this data.
- If constant updating is possible some very useful data can be included in the reference guide.

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DFID
- Information should be categorised so as to avoid information overload. Huge documents are not useful, single sheets containing targeted key information are easier to deal with.
- Access to scientific papers, such as those held by BIDs and research material on various topics, searchable by subject and author, would make the guide very useful.
- The reference guide should help cut down on the time currently wasted while searching for information.
- Useful to know where money is being spent on projects and where there might be geographical, political or thematic gaps in conservation activities.
- With only restricted time available to read documents, the length of these documents is important. A 2 page document is much more likely to be read than a 20 page documents.

DEFRA
- Could provision be made for adding your own sources and information to any service?
- Could the reference guide be used to list sources and what they do?
- Will publications be listed?
- Care should be taken that the reference guide does not perform in the same way as a search on the Internet. The reference guide should be a manageable size.
- It may be useful to know what other people are doing in order to be ready for changes, for example in international agreements.

Countryside Agency
- There is a need for information on trends and future issues and the best approach to influencing policy development
- It's useful to know who to link up with in order to discuss or establish joint policies.

Forestry Research
- Shared records of web sites used might be useful
- There should be different levels of information, the most detailed being a full dataset, with other levels containing either a subset or a summary of this information.
- Could RINCIS serve as a hub mechanism, a framework for improving data access that directs technophobes in the right direction through an easy access front-end?
- A review section so that users could provide feedback on the system would be useful.

Issues, problems and areas where harmonisation and synergies are needed:

Overseas Territories Department
- Can terminology be harmonised? What about multilingual terminology? Ideally a multilingual thesaurus would be used. (GEMET?)
- There are many different reference guides. What is needed is one directory of web guides and funding sources with an environmental search engine.
- The Science Research Council has an annual directory of people working in particular fields. This might be a useful starting point for a guide to important individuals.

FCO
- Any product should be more than just a link. An overview, "the big picture", of how these information sources and conventions fit together could be provided.

DFID
- There is a need for tools to locate information and the means to get hold of this information.
- Could peer review be used to verify the quality of data on the Internet?

DEFRA
- Filtering and targeting should be used to avoid duplication and information overload
- Might an umbrella organisation be needed for all government departments?
- Information feeds should be maintained. The "it was on email" problem should be avoided.

Countryside Agency

- A directory of the big picture is needed with links to commitments and what they mean, as well as the issues they address.
- Is there a proposal of who should keep the information clean and up to date?
- Does the scope of "Nature Conservation Information" as used by this project, include landscape conservation information? If so this might be an opportunity to consolidate the various definitions of "landscape" currently used.

Forestry Research
- What information do customers/end users need about data? What format should it be in so as to facilitate access? Is there a need to know where information has come from and what is the detail, quality and reliability of this information? It is important to know the source. There is not enough consultation with end users.
- Spatial data is sometimes a hybrid compiled from several data sets that may have been individually modified. It is important to know the history of the individual sources of data and how they have been modified in order to assess the reliability of the final product

Suggestions for additional sources for Reference Guide:
- UK Overseas Territories Conservation Forum database

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Summary of information needs:

Big Picture – Find ways to provide and share information on what fits where at the highest level. Information on legislation, focal points, stakeholders and experts is also needed, with details of who is responsible for what. Networks to link experts might be helpful.

Targeting – Information should be targeted and made accessible for those people it is aimed at. Policy makers may not be conservationists or experts in the field to which the information relates. Practitioners will require a different type of information to policy makers.

Quality – It is important to know the source of data, the quality and accuracy of this data and the motives behind its collection.

Presentation – Information should be presented in a summary form rather than in full. Policy makers are unlikely to read long documents.

Understanding – Information is needed on sustainable use and understanding markets for biodiversity and environmental commodities, such as tourism or forestry, with forewarning of developments in these markets.

Contacts – Personal contacts are very important to policy makers. A contacts database, that not only includes key posts but also key named individuals, with some system for updating and maintenance, would be particularly useful for those policy makers who are frequently changing posts.

Implementing activities – Information on the activities being undertaken by other countries, and by other government departments working overseas, including case studies, would be extremely useful.

Workshop on International Nature Conservation
Information Sources and Needs

Department for the Environment, Food and Rural Affairs
Temple Quay House, Bristol
21 August 2001

SUMMARY NOTES

Participants:

Richard Hepburn – DEFRA – GWD
Alistair Ferguson – Environment Agency, Environmental Strategy Directorate
Robert Ford – DEFRA – CITES and zoo policy
Linda Smith – DEFRA – EWD, Habitat Conservation and Ramsar
Debbie Jackson – DEFRA – EWD, Scientific Advisers Unit
Neale Oliver – DEFRA - EWD Natura 2000 Team

Ian Crain – The Orbis Institute
Tim Johnson – UNEP-WCMC
Alistair Taylor – UNEP-WCMC

Current sources and how information is used in policy development and decision-making:

DEFRA – GWD
- DEFRA relies on JNCC for advice
- Need to know what information is most reliable.
- For some MEAs (CMS) reports are never available in time for analysis or comparison. National Reports may be left behind at the conference of the parties rather than taken home.
- National reports are a way for NGOs to monitor the activities of countries, as they are public.
- Some other sources include English nature, Wetlands International and WWF.
- It can be very difficult to obtain information on activities in other countries. It has not been possible to get a full European view.
- Is it possible to have a Europe-wide survey of the quality of information available?

DEFRA – EWD
- The biggest questions go to JNCC, which operate as government advisors, interpreting data, EWD deals with lesser ad hoc questions and may provide a quick briefings to senior officials and politicians.
- EWD uses UNEP-WCMC for information and statistics on species status and also uses both the JNCC site and the ETCNC site.
- EWD's work is more species and habitat focussed, so information sources such as WRI and FAO are not used.
- Some reporting formats are not conducive to qualified answers, e.g. the Ramsar Yes/No tick boxes.
- Reports provided to the European Commission must be in electronic format.
- Use their own sources for the purposes of implementing directives. Not aware of the activities other countries but very interested if other countries are doing things differently.
- There used to be a European forum for discussing the implementation of directives.
- Implementing activities may be revised in the light of what other countries are doing. However the Commission does not encourage discussion with other countries and does not provide feedback when informed of national implementing activities.

DEFRA – CITES
- DEFRA relies heavily on JNCC/Kew to come up with good science. Other sources used include the CITES Secretariat as well as organisations like Traffic International, IUCN, and UNEP-WCMC. Reports from

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many sources are used, after being debated in a public forum, to generate policy. Politics can be more of a driver than science.

- A problem is that there is no structure to policy-making. The UK may take the lead in certain areas, but only because we have the political will.
- Data is used in developing proposals for CITES. NGOs raise concern about an issue, scientists verify and confirm these concerns using scientific data. Scientists are very closely involved in criteria review and to a certain extent drive policy. This is not so much the case for the International Whaling Convention where politics may outweigh science.
- At CITES COP new issues emerge and information is supplied by supporting NGOs.
- The message of pragmatic NGOs may be obscured by the messages put forward by protectionist NGOs.
- Policy can be a pure emotive reaction to popular issues resulting in a protectionist government policy on these issues and sometimes pressure on other countries.
- A lot of research is commission for the purposes of informing policy

Environment Agency

- Little biodiversity information is used. That which is used relates to England and Wales, and the regulation of pressures. The two main arenas for information use are conservation, in which JNCC is the main source of information, and Europe, where EIONET is used. In relation to the aquatic environment other sources such as Waternet are used.
- The Environment Agency provides information to the European Environment Agency (EEA) for the purposes of state of the environment reporting. The Agency is tending to operate as a data warehouse, trying to provide consistent information.
- The Agency's role is that of influencing and providing information rather than using information. However if information is provided in a useful format the Agency may switch to being a net user. For example regarding the Water Directive, it is important to know what European partners think. However it is not currently possible to get this information from either EIONET or Waternet.
- More than just a list of species is needed in terms of information. In the area of linking regulatory activities with indicators and target setting there is much work to be done. This is not the same type of information that JNCC is asking for.
- Expected to give good advice to DEFRA on such issues as ecological quality targets

Wildlife Crime Inspectorate

Recommendations on making the Reference Guide most useful:

DEFRA – EWD

- A reference guide would be useful given the dispersed and fragmented nature of information sources. An online guide would be most useful, with facts about each web site and also opinion on the usefulness of the site, and the reliability of the information.
- Either a third party or, over time, users could point out failings with particular sites.
- Difficult to predict types of queries without knowing what's out there.
- A search box may not be useful, headings, themes and sub-headings might be more useful for some users. Groups of information sources rather than keywords would be better.
- The UK Biodiversity web site has provided keywords, listed hierarchically, could this serve as a common nomenclature? EUNIS has not been successful because it was not promoted, and CORINE was similarly unsuccessful.
- If the reference guide had a broader scope might it become unmanageable? If the reference guide is not carefully focussed it will be pointless and we may as well just use the Internet as is. It would be better to produce a high quality product with a more limited scope.

DEFRA – CITES

- It would be useful to have hotlinks to other sites. Would there be a search engine or category searches only?
- Much of CITES is species, geography and biology related, and so queries would reflect this. Also queries might be taxonomic, geographic and bibliographic.
- It is difficult to produce global policy without global agreements on common data standards.

Environment Agency
- How intelligent would the reference guide be? NBN software can query multiple databases using intelligent software and search engines.

DEFRA -GWD
- Comments in the light of government policy could be useful, and closer to users.

Issues, problems and areas where harmonisation and synergies are needed:

DEFRA – GWD
- Is a "one stop shop" for UNEP treaties possible in practice?
- Funding and future plans are big issues, especially regarding projects we might want to put money into.
- We need to be pointed to funding sources with information about availability. This information would also be useful for convention secretariats.

DEFRA – EWD
- It might be easier to produce a reference guide that points people in the right direction for information rather than providing all the information itself. This must be backed up by standards.
- It's very difficult to know what's out there and whether it is comprehensive. The major gap in information is actually knowing what there is available.
- A major problem is pulling data together to make a coherent picture. Comparisons are difficult.
- It is important that data comes in a useable format. National reports to Convention Secretariats should not just vanish into a black hole. Secretariats are in the best position to specify the format of reports and therefore to collect and deal with them.
- There are problems with completeness and compatibility of information resources. It is also difficult to know about the quality of information, how recently it was updated and its accuracy. Peer review could play an important role in addressing these problems.
- The norm is for data not to be comparable rather than for it to be comparable.
- A catalogue of data sources would be useful
- It would be interesting to see different types of information included.
- Information needed about sources includes: who maintains, quality -good for what purpose, quality - evidence of peer review, aims and objectives.

DEFRA – CITES
- Information harmonisation is needs, is this beyond the scope of this project? Will this project do no more than identify gaps?
- Information should be easy to access; a "one stop shop" is an attractive proposition but is it realistic? Other priorities are funding and taxonomy.
- Need for improved harmonisation of classification systems and nomenclature

Suggestions for additional sources for Reference Guide:

- WWF may be more experienced in the international context and holds a significant pool of information.

Summary of information needs:

Compatibility and comparability – Information from different sources is often incomparable and incompatible. Increased harmonisation is needed of nomenclature, standards and terminology.

Quality – Information on the quality, accuracy and usefulness of each information source, provided by either users or a third party would be useful.

Availability – While there may well be gaps in the information that is available, there is more significantly a lack of knowledge about what information is available. A reference guide, perhaps in the form of a catalogue of data sources, might address this

Distribution – Information held by secretariats and the European Commission should be made available rather than just disappearing into a black hole. Report formats should be developed so as to facilitate this.

Implementing activities – Information on the activities being undertaken by other countries, and by other government departments working overseas, including case studies, would be extremely useful.

Policy drivers – While accurate, accessible, useable and up to date scientific information is an important policy driver, it should be recognised that pressure from NGOs and political will are also very important drivers, sometimes independently of scientific data.

One Stop Shop – A one-stop shop reference guide, giving directions to information sources, rather than holding information itself, would be very useful.

Workshop on International Nature Conservation
Information Sources and Needs

Scottish Natural Heritage
12 Hope Terrace, Edinburgh
23 August 2001

SUMMARY NOTES

Participants:

Dr. Marion Hughes – Scottish Natural Heritage (SNH)
Scot Mathieson – Scottish Environment Protection Agency (SEPA) – Director Communications
Cameron Easton – Scottish Executive, Ecological Advisers Unit
Vicky West – Forestry Commission, Statistics Unit
Mike Dudley – Forestry Commission, International Policy

Ian Crain – The Orbis Institute
Alistair Taylor – UNEP-WCMC

Current sources and how information is used in policy development and decision-making:

SNH
- SNH's role extends beyond nature conservation to landscapes, recreation, amenity values and sustainable development. An example is SNH's work concerning the impacts of the Common Agricultural Policy on landscape and biodiversity in Scotland.
- Priorities are set in the light of priorities at the European level. Work in non-European areas is in decline.
- Devolution has had a big effect and has generated a need for prior warning of developments in Europe. SNH is liasing with other countries such as Finland over the designation of sites. Other collaborative activities include sharing information about species management techniques, case studies, and the exchange of species for the purposes of reintroduction.
- Conservation issues may be translated into funding schemes and SNH is keen to know about grant schemes for species identified in Biodiversity Action Plans.
- SNH's activities are driven by the availability of resources, the requirements of the Scottish Executive and Scottish Parliament and statutory requirements.
- SNH is responsible for giving advice, for example a report on different approaches to landscape issues that contributed to the development of national park legislation.
- The Common Agricultural Policy has a significant impact on SNH's work. SNH needs to know about related activities in other countries and international developments affecting European policies, such as the WTO.
- Priority issues for SNH are requests from the Scottish Executive and Scottish Parliament, and SNH's own Corporate Strategy, backed up by a 20 year Natural Heritage Programme that includes policies focussing on natural heritage.
- SNH follows a pro-active approach to seeking information, which is very different to just gathering information.
- Information relating to the implementation of international conventions may come from the European Union as well as from the convention secretariats.
- The information source used depends on the topic under consideration, or the specific species or policy involved. SNH has its own species experts. JNCC's role is that of nature conservation co-ordination at the UK level.
- JNCC was recently contracted to EEA to assess the information needs of international conventions.
- Interest in indicators is increasing. Indicators should be useful and relevant, and standardised/harmonised regionally.

SEPA
- SEPA's work is directed by the Scottish Parliament and Executive. The biggest drivers being EC Directives in the areas of water management, pollution control etc.
- A major international area is Natura 2000. However SEPA is almost never asked to gather international information. Only national information, at the Scottish and UK levels, is of direct interest.
- International trends in the areas of coastal management, wetland use and management is of interest for the purposes of policy support. Information from the EEA and European Commission is used and recently information from Wetlands International/Ramsar.
- Specific examples of information requests are inquiries regarding the reintroduction or translocation of species as part of aquatic BAPs. These inquiries are usually passed straight on to SNH.
- SEPA will be taking a greater interest in the international level, for example the world-wide decline in amphibian species and its implications for Scotland. At present however 99% of SEPA's day to day data needs are fulfilled by national sources.
- A great deal of work has been carried out on indicators, it would be very interesting to see what other countries are doing in this area.
- Areas of interest are indicators, coastal zone management, best practice, processed information and reports that have been published, preferably in downloadable format.
- A lot of top-down information comes from international NGOs such as WWF in the form of advocacy for best practice.

Scottish Executive
- The important issue is providing information relating to the implementation of international agreements. The information required will address what we need to do in Scotland, what are the status and trends of conservation in Scotland itself
- At the international level, the information that is of interest relates to the global significance of species present in Scotland
- The internationally available information that may be interesting to the Scottish Executive may sometimes be information previously provided by the Scottish Executive to the United Nations.
- The SE do not set out to gather information, but rather rely on information inputs from supporting agencies and NGOs.
- Work that concerns information for biodiversity conservation has almost nothing to do with the Convention on Biological Diversity. It is mainly oriented to the requirements of the UK BAP, and the implementation of the BAP using the information gathered to set priorities for Scotland.
- Indicators can be useful, however although many are created in the UK, Scottish ministers may decide to ignore these and develop their own.
- The European Environment Agency is looking into what it considers useful for Scotland. However the Scottish Executive may well look elsewhere, as it has a different agenda to the Agency and a more conservative outlook.
- SNH and SEPA supply supporting information to the Scottish Executive. Historically this was DETR/DEFRA's role. The exact nature of the relationship between DEFRA and Scotland has not yet been stabilised following devolution.

Forestry Commission
- International Policy Department acts as a filter for information, passing on useful information to policy makers. They are expected to have taken everything into account and may be challenged by NGOs such as WWF
- There is recognition by some international conventions that a lot should happen at the local level.
- Convention Secretariat web sites are very useful, as is the CSD web site and the UNFF forestry site.
- There is a need to know about issues, although translating international issues for local people may be very difficult.
- The Forestry Commission works with DEFRA and DFID on forestry issues.
- A European perspective on forestry is very useful and helps with establishing a co-ordinated EU line on forest policy. With the CBD there is less co-ordination. The EU line filters down into national policy through EC Directives.

- It is important to look at sectors outside of forestry within the context of the CBD. Some foresters can be very insular.
- The UN can seem to lack co-ordination, with a multitude of agendas. UK issues need to be on that agenda but unless you are actually engaged in UN processes they can seem very distant.
- There is a need to hard sell international developments to policy-makers. The EC does this to a certain extent through EC legislation.
- A great deal of personal contact goes on between forest managers and people negotiating the agreements. This is an important interface for the exchange of information.
- Reporting obligations are key as to where the burden of gathering information falls. The obligations dictate what information is being called for. E.g. FAO's Forest Resource Assessment 2000 – a single questionnaire that replaced the multiple questionnaires emanating from ITTF and OECD and was less of a burden on policy makers. Will this information be useful for policy-makers?
- Forestry Commission is involved in efforts to create a collaborative partnership between FAO, ITF and other forest organisations.
- Forestry statistics are mainly used to provide data about the UK to European organisations. This data may be used for the purposes of comparisons.

Recommendations on making the Reference Guide most useful:

SNH
- A paper version of the guide would not be ideal. How will the guide be kept up to date and maintained? Even of it consist only of a series of signposts there is a need to maintain it.
- We should look to integrate all issues not just nature conservation alone.
- In Europe integration is now important. There is a need for links to integrated environment developments in Europe including the Cardiff strategy, a European Council Strategy that addresses biodiversity.
- It would be useful to know which other countries are facing similar issues/problems to us. Could the reference guide be interrogated in this way?
- Ed Mackey is working on the TRENDS report, which reviews how trends in the UK relate to trends in other countries in Europe.

SEPA
- An HTML format guide would be preferred, using weblinks/hotlinks.
- A downloadable document in PDF format is a common solution to web-based information distribution.
- Web links to press releases would also be useful.
- Might the guide take the form of a database of networks? If I want to find the common name of a species, the reference guide should tell me where to go to find it.
- What will be the raw material? The information itself or a summary of the information?
- Scottish data is now looked at separately by the EEA.

Scottish Executive
- Prefers not to use the Internet. A paper based document with links built in would be useful. The guide should be designed so that a paper document can be produced with consideration of how it would look if printed out.
- It is difficult to define typical queries. We don't know what we want until we need it.
- Might it be useful to define some types of users? UN/National/Governmental/Agencies/off the wall enquiries?
- Social and landscape issues should be included with nature conservation.
- Policy-makers are not very interested in taxonomy, but in what works in terms of policy measures. Taxonomic information is targeted at a different type of user.
- Geography is being recognised as important following devolution in Scotland. In the area of biodiversity, DEFRA has accepted that devolution has happened and instead of UK targets, country based targets are being used.
- Civil servants are now asking about Scotland's position within a wider international context, not just within the context of the UK.

Forestry Commission
- Even if you maintain the links, you need to check whether the web sites to which you are linking are being updated, and you must make subjective judgements about what you are linking to.
- There can be sloppy quality control on some web sites – no proof reading or checking. Although how the document looks when printed out should be considered, editing with internet tools is easier than with a document, so a balance is needed.
- Do not want to have to go through 20 pages of search results in order to find information. The structure of the reference guide is important, what people will use it, what issues will they be using it to address? Protected areas/forests, CBD/Ramsar?
- The guide should start from a broad viewpoint and then narrow down.
- There may be some overlaps with the social aspects of conservation in some areas.
- The English are now following the approach used in Scotland (SNH) with the creation of DEFRA
- All policies should take biodiversity and sustainable development into account. The information that is needed should include, as well as international information, access to information on case studies, both those with positive and negative outcomes.
- Policy-makers have their own personal networks for acquiring information, the reference guide should create links to new networks.
- It may be that the reference guide cannot be delivered by this project, but an organisation like the EEA can. Questions raised by the project may never get answered.
- The Forestry Commission has always collected data separately for Scotland, and aggregated this with other data to generate a UK figure.

Issues, problems and areas where harmonisation and synergies are needed:

SNH
- Harmonisation of data collection is needed to ensure comparability, e.g. harmonisation of the Natura 2000 monitoring requirements and the Ramsar monitoring requirements. For other Conventions, can the data for one answer the questions posed by another?
- Several organisations/secretariats call for case studies and thematic reports (OECD, CBD, CSD).
- The European Commission is a big data gatherer. Also the Scottish Parliament Information Centre (SPICe)
- SNH is prioritising work using the work programme of DG Environment. Northern Ireland tends to deal with what comes to them in a reactive way, as resources are not sufficient for a more proactive stance. They do get involved in cross-border international work with the Republic of Ireland and work towards an all Ireland view.

Scottish Executive
- UK National Reports to Ramsar Secretariat tell me nothing as a user, but the site reports are fascinating. However it is these which are the most difficult to get hold of.
- NGOs should be involved in creating the reference guide. They hold data and play an important role in setting the agenda, e.g. IUCN, WWF, RSPB, Birdlife International etc.
- The information requirements of the Scottish parliament may be very different to those of the Scottish Executive.
- It would be useful to co-ordinate the development of indicators at the UK level. Similarly for nomenclatures and classifications which differ, a common framework would be easier, perhaps taking into account classifications used by others elsewhere.
- Different definitions for the same thing may be used at the national level, for example definitions of forests that differ across the EU member states.

Forestry Commission
- Some websites are updated on a cyclical basis, which may reflect a data gathering cycle, e.g. national reporting. This should be taken into account when deciding whether or not to include a web site in the reference guide.
- Will harmonisation mean reducing everything to the lowest common denominator? Data holding organisations need to co-operate and collaborate. It might be worth looking at where international

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organisations do collaborate currently. Harmonisation is the end result of collaboration – organisations need to work together.

- At different levels within the policy-making structure, people need different types of information. We need site reports, and protected areas management information.
- Can this project benefit both the UK and the international community by creating the collaboration and co-operation that will lead to harmonisation. At the moment everyone is selling a product and trying to be different.
- Regarding harmonisation activities, the information I want is what work is being done and who is working on it.
- How can we make sense of what's out there? The guide may need to be arbitrary but must also be consistent in order to help the reader.

Summary of information needs:

Compatibility and comparability – Information from different sources is often incomparable and incompatible. Some form of harmonisation is needed of nomenclature, classification, standards and terminology.

Updating – Not only should the reference guide be kept up to date, it should link only to those information sources that themselves are kept up to date. At the same time account should be taken of information sources whose updating frequency is linked to international processes such as reporting cycles, conferences of parties or seasonal variations.

Implementing activities – Information on the activities being undertaken by other countries, in particular those that share environmental characteristics with Scotland, would be extremely useful. This should include case studies (both successful and unsuccessful), information on best practice and reports that can be downloaded.

Europe – European level information is needed, particularly prior information of policy developments and information on linkages. The EU is an important driver of policy in the UK and it is important to have an EU perspective on conservation issues.

Format – An HTML format is preferable, but account should be taken of how the guide will look if it is printed out.

National Reporting – National reporting requirements should be harmonised to ease burdens on parties, reports should include information that is relevant to national useful to policy-makers so that the reports can serve multiple purposes.

NGOs – NGOs should be involved in setting up the reference guide. They play an important role in setting the agenda for nature conservation and advocating best practice and may also hold important data.

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Workshop on International Nature Conservation Information Sources and Needs

Joint Nature Conservation Committee
Monkstone House
City Road, Peterborough PE1 1JY
29 August 2001

SUMMARY NOTES

Participants:

Paul Rose - Joint Nature Conservation Committee (JNCC)
James Williams - Joint Nature Conservation Committee (JNCC)
Cynthia Davies - Centre for Ecology and Hydrology (CEH)
Keith Porter - English Nature
Dr. James Munford - National Biodiversity Network

Alistair Taylor – UNEP-WCMC
Dr. Ian Crain – The Orbis Institute

Current sources and how information is used in policy development and decision-making:

JNCC:
- JNCC is primary support agency for policy development for DEFRA, as well as collating and analysing information for reporting requirements, national and international.
- The scope includes marine and coastal areas and extends to indicators.
- Now recognised that policy makers want information, more so than in the past. JNCC often called upon to defend reports and recommendations with supporting information.
- Policy decision makers ask in effect "what information have you got" (on a particular subject), "What can you get, and at what cost?" Therefore there is a great need to know about available information sources
- There is a need to consider linkages of national information collection and international reporting obligations, and not have reports being an end in themselves.
- Information is used for targeting of national programmes, e.g. agricultural subsidies, or estimating consequences, e.g. of invasive species
- A broad range of sources are used including EEA, and UNEP-WCMC, and a great number of specialised sources (e.g. species specific) including academics, experts, NGOs and so on
- Information is needed on methods (best practices) of information collection
- Information now used (e.g. for Ramsar and AEWA) to set targets and then assess against targets.
- To tackle issues need to know approaches and implementation mechanisms of other countries and make better use of case studies and European experience, especially in like countries.
- With regard to indicator development DG-Research may be more important than DG-Environment

National Biodiversity Network:
- Principal drivers for infraction requirements are national, to deal with national issues.
- Decision makers often prefer not to have the background information, especially if it conflicts with political directions. That is, policy is not normally information driven, but results from public pressure rather than international issues. "The art of the possible"

- Information is needed for "reporting" (i.e. monitoring), but again this is driven largely by national needs.
- One main push is Habitats Directive, hence SSSI system is moving towards a European site description.

English Nature:
- Politicians are looking for general indicators of "countryside quality" as well as measures at all designated sites. Problem may be that indicators show declining quality of existing sites - when the correct action would be to move the site with changing ecology (e.g. due to climate change) to continue to protect the ecosystem.
- What is needed is indicators that show where change is occurring related to primary sites and specified Annex species and so on.
- Important to use international information to support national goals
- DEFRA want to be able to set national targets that are attainable - like 95% of sites having "favourable conservation status" by 2005. Need scenarios

Centre for Ecology and Hydrology:
- Sponsors national programme of site monitoring (ECN)
- Challenge is to integrate national and international information - using information that currently exists. EEA to use EuNIS for reporting (descendent of CORINE).
- Important to be able to put national information in international (European) context. Provides advice to various departments with respect to fisheries and marine biodiversity.

Recommendations on making the Reference Guide most useful:

JNCC:
- Reference Guide should be Web-based service, essentially metadata
- Extremely important to consider how to keep it up to date - one way is to allow participants to update their own metadata
- In the extreme, the Reference Guide could be nothing but hot-links
- Important to indicate the temporal scope of the information (e.g. CORINE Biotopes - useful but now out-dated)
- Make accessible by policy area and by convention or directive
- Important to keyword with controlled vocabulary, as well as allow full text searching
- Searchable by geographic criteria useful - consider NGDF as model of how to do spatial searches. Also note "Magic" - DEFRA standards for spatial data.
- Should be widely accessible, not just to "gsi".
- JNCC is primary support agency for policy development for DEFRA, as well as collating and analysing information for reporting requirements, national and international.
- Search capacity is essential but must be simple to use
- Use of a "web-crawler" to find additional useful sites is possible
- Should link with more detailed level of information i.e. to databases where relevant
- Guide must indicate the underlying quality of the information, original intent, nature of "peer review" of information
- Consider UK Clearing House as possible mechanism for Reference Guide

Issues, problems and areas where harmonisation and synergies are needed:

- More availability of and ability to use case studies
- Consolidation/integration of methodologies and good practices
- Means to identify emerging issues and early warning - avoiding contradictory objectives "protecting things others are killing off".
- Harmonisation and interoperability of classification systems - for habitats, vegetation, biotopes, etc
- Harmonisation of reporting so that national information serves international obligations
- Better linkages to sustainable development, and indicators of sustainable utilisation, quality of landscape, rural quality, quality of life etc
- Improved access to information on how other countries implement obligations
- Harmonisation of reporting obligations - to allow modular reporting
- Integrating training, awareness raising and mobilisation of civil society with policy development and reporting
- Interoperability of species lists through the Species Dictionary (NBN)

Suggestions for additional participants:

Institute of Biology
Linean Society
IEEM Natural History Museums of Scotland and Wales
Johanes Vogel
Ministry of Defence - Div C-Aldershot
WWF
RSPB
Birdlife
Private Sector - e.g. Shell

Suggestions for additional sources for Reference Guide:

IIED – International Institute for Environment and Development (UK)

Summary of information needs:

Specialised Information Sources - JNCC require and make use of many specialised information sources, for instance experts or networks organised by academics on single species or groups. These sources are important for assessing the status of particular species, or policy implementation issues.

Quality – Information on the quality, accuracy and usefulness (in a policy context) of each information source, provided by either users or a third party would be useful.

Policy Drivers - Policy drivers are largely national, and hence information needs are also national, although must be adapted to meeting international obligations.

Linkages - It is important to find ways of linking national policies and information systems to international obligations (particularly European) so that obligatory reports to international instruments are of use to the implementation of national policy.

Increased Use of Case Studies - There is a need for increased access to and effective use of case studies and good practices and "lessons-learned" (good and bad) in other countries with comparable situations.

Information for Indicators - Increasingly there is demand form policy-makers for indicators or measures of "conservation status", "countryside quality" or "sustainability". There is therefore a need for access to information on international developments of indicators, and accepted measures.

Accessibility and Sustainability - The "Reference Guide" should be a widely available web-based service, with a management process that ensures constant up-date and maintenance.

Availability of National Reports - National reports and other information submitted to MEAs should be made much more accessible - rather than a "black hole" from which nothing can be retrieved. national submissions

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ANNEX 3 - Organisations and People Consulted

Organisation	Name
Royal Society for the Protection of Birds (RSPB)	Alistair Gammell Dr David W Gibbons
CEFAS	Jim Ellis
Centre for Ecology and Hydrology (CEH)	Cynthia Davies
DEFRA - Biodiversity Convention and Darwin Initiative	Marian Jenner Jonathan Tillson
DEFRA - CITES and Zoo Policy	Robert Ford
DEFRA - European Wildlife Division (EWD)	Linda Smith Neale Oliver Debbie Jackson
DEFRA - FISH IIB	Geoff Jasinski
DEFRA - Global Wildlife Division (GWD)	Richard Hepburn Robert Vagg
DEFRA - Sustainable Development Unit	Aphrodite Korou
DFID - Environmental Policy Department	Simon Foster Sharon Laws
DTI - Office of Science and Technology	Simon Rowley
English Nature	Keith Porter
Environment Agency - Environmental Strategy Directorate	Alistair Ferguson
FCO - Environment Protection Department	Sandy Moss
Forestry Commission - Forest Research, Woodland Ecology Branch	Richard Ferris Mike Dudley Vicky West
HM Customs and Excise	Guy Clarke Chris Miller
Joint Nature Conservation Committee (JNCC)	Paul Rose Dr Tony Weighell Steve Gibson Lawrence Way James Williams
National Biodiversity Network	Dr James Munford
Overseas Territories Department	Gillian Dare
Royal Botanic Gardens, Kew	Kerry ten Kate Mark Jackson
Scottish Environment Protection Agency (SEPA)	Scot Mathieson
Scottish Executive - Ecological Advisers Unit	Cameron Easton
Scottish Natural Heritage (SNH)	Dr Marion Hughes Edward MacKey
The Countryside Agency	Richard Partington
UK Overseas Territories Conservation Forum (UKOTCF)	Mike Pienkowksi

ANNEX 4 - Information Sources Use Questionnaire

DEFRA – RINCIS Project Questionnaire

The recent Workshops have provided us with considerable insight into the usage of international information sources. To follow up in more detail to assist with developing the Reference Guide and to set priorities for future steps we would appreciate it if you could indicate your usage of the following information sources, by checking the boxes in this form. Please feel free to comment on your use of the information source or on the source itself.

Also, if there are any significant sources you use that are not listed here, please add them at the end.

African Eurasian Migratory Waterbird Agreement (AEWA), Secretariat homepage	☐ Frequently ☐ Rarely ☐ Never Comments
Agreement for the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous zone in the North and Baltic Seas (ACCOBAMS), Secretariat homepage	☐ Frequently ☐ Rarely ☐ Never Comments
Agreement on the Conservation of Bats in Europe (EUROBATS), Secretariat homepage	☐ Frequently ☐ Rarely ☐ Never Comments
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS), Secretariat homepage	☐ Frequently ☐ Rarely ☐ Never Comments
Association for Biodiversity Information (ABI) homepage	☐ Frequently ☐ Rarely ☐ Never Comments
Bern Convention Secretariat homepage	☐ Frequently ☐ Rarely ☐ Never Comments

Biodiversity Conservation Information System (BCIS) web site	☐ Frequently ☐ Rarely ☐ Never Comments
BioNet International	☐ Frequently ☐ Rarely ☐ Never Comments
Botanic Gardens Conservation International (BGCI) web site	☐ Frequently ☐ Rarely ☐ Never Comments
Convention on Biological Diversity, Secretariat – Information Service	☐ Frequently ☐ Rarely ☐ Never Comments
Convention on Biological Diversity, Clearing House Mechanism (CHM)	☐ Frequently ☐ Rarely ☐ Never Comments
Convention on International Trade in Endangered Species(CITES) Secretariat	☐ Frequently ☐ Rarely ☐ Never Comments
Convention on the Conservation of Migratory Species of Wild Animals (CMS) Secretariat	☐ Frequently ☐ Rarely ☐ Never Comments
DIVERSITAS	☐ Frequently ☐ Rarely ☐ Never Comments
Earthtrends, The Environmental Information Portal	☐ Frequently ☐ Rarely ☐ Never Comments

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IUCN/UNEP ECOLEX	☐Frequently ☐Rarely ☐Never Comments
EUROPA, The European Union Online	☐Frequently ☐Rarely ☐Never Comments
European Commission, Development Directorate General web site	☐Frequently ☐Rarely ☐Never Comments
European Commission, Environment Directorate General web site	☐Frequently ☐Rarely ☐Never Comments
European Community Clearing-House Mechanism (ECCHM)	☐Frequently ☐Rarely ☐Never Comments
European Environment Agency (EEA) web site	☐Frequently ☐Rarely ☐Never Comments
European Environment Information and Observation Network (EIONET)	☐Frequently ☐Rarely ☐Never Comments
European Topic Centre on Nature Protection and Biodiversity	☐Frequently ☐Rarely ☐Never Comments
FAO – online Biodiversity Information	☐Frequently ☐Rarely ☐Never Comments

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FAO – online Fisheries Information	☐Frequently ☐Rarely ☐Never Comments
Global Biodiversity Information Facility (GBIF)	☐Frequently ☐Rarely ☐Never Comments
Global Environment Facility web site	☐Frequently ☐Rarely ☐Never Comments
Global Forest Information Service	☐Frequently ☐Rarely ☐Never Comments
Global Terrestrial Observing System (GTOS)	☐Frequently ☐Rarely ☐Never Comments
Infoterra Global Environmental Information Exchange Network	☐Frequently ☐Rarely ☐Never Comments
International Institute for Environment and Development (IIED) Resource Centre	☐Frequently ☐Rarely ☐Never Comments
International Institute for Sustainable Development (IISD) "Linkages"	☐Frequently ☐Rarely ☐Never Comments
International Species Information System	☐Frequently ☐Rarely ☐Never Comments

International Tropical Timber Organisation (ITTO) web site	☐ Frequently ☐ Rarely ☐ Never Comments
International Whaling Commission (IWC), Secretariat web site	☐ Frequently ☐ Rarely ☐ Never Comments
OECD Online	☐ Frequently ☐ Rarely ☐ Never Comments
Ramsar Convention Secretariat web site	☐ Frequently ☐ Rarely ☐ Never Comments
UK Overseas Territories Conservation Forum (UKOTCF) Information Database	☐ Frequently ☐ Rarely ☐ Never Comments
UNEP-World Conservation Monitoring Centre (UNEP-WCMC) web site	☐ Frequently ☐ Rarely ☐ Never Comments
United Nations Educational Scientific and Cultural Organisation (UNESCO) web site	☐ Frequently ☐ Rarely ☐ Never Comments
UNESCO World Heritage Centre	☐ Frequently ☐ Rarely ☐ Never Comments
United Nations Framework Convention on Climate Change (UNFCCC) web site	☐ Frequently ☐ Rarely ☐ Never Comments

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World Bank, Environment and Development Division web site	☐ Frequently ☐ Rarely ☐ Never Comments
World Resources Institute (WRI) web site	☐ Frequently ☐ Rarely ☐ Never Comments
European Centre for Nature Conservation (ECNC) web site	☐ Frequently ☐ Rarely ☐ Never Comments
Birdlife International web site	☐ Frequently ☐ Rarely ☐ Never Comments
Centre for International Environmental Law (CIEL) web site	☐ Frequently ☐ Rarely ☐ Never Comments
Wetlands International web site	☐ Frequently ☐ Rarely ☐ Never Comments
WWF International web site	☐ Frequently ☐ Rarely ☐ Never Comments
Please feel free to suggest additional information sources that should be included in the Reference Guide	

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ANNEX 5 - Summary of Questionnaire Returns

132 questionnaires were dispatched by email. At the time of writing (04 October 2001) 31 responses had been received.

The following table summarises the returns received using a from similar to the original questionnaire (Annex 4).

The "Top 10" and those least used are highlighted in bold.

African Eurasian Migratory Waterbird Agreement (AEWA), Secretariat homepage	Frequently – 1 Rarely - 3 4
Agreement for the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous zone in the North and Baltic Seas (ACCOBAMS), Secretariat homepage	Frequently – 1 Rarely – 3 4
Agreement on the Conservation of Bats in Europe (EUROBATS), Secretariat homepage	Frequently – 1 Rarely - 7 8
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS), Secretariat homepage	Frequently - 1 Rarely - 5 6
Association for Biodiversity Information (ABI) homepage	Rarely - 1 1
Bern Convention Secretariat homepage	**Frequently – 3** **Rarely – 9** **12**
Biodiversity Conservation Information System (BCIS) web site	Rarely - 4 4

BioNet International	Rarely – 2 2
Botanic Gardens Conservation International (BGCI) web site	Rarely - 1 1
Convention on Biological Diversity, Secretariat – Information Service	**Frequently – 2** **Rarely – 11** **13**
Convention on Biological Diversity, Clearing House Mechanism (CHM)	**Frequently - 1** **Rarely - 9** **10**
Convention on International Trade in Endangered Species(CITES) Secretariat	Frequently - 4 Rarely – 5 9
Convention on the Conservation of Migratory Species of Wild Animals (CMS) Secretariat	*Frequently - 2* **Rarely – 8** **10**
DIVERSITAS	Frequently – 1 Rarely - 1 2
Earthtrends, The Environmental Information Portal	*Never*
IUCN/UNEP ECOLEX	Frequently – 1 Rarely - 7 8

EUROPA, The European Union Online	**Frequently - 7**
	Rarely – 7
	14
European Commission, Development Directorate General web site	Rarely – 3
	3
European Commission, Environment Directorate General web site	**Frequently - 6**
	Rarely - 8
	14
European Community Clearing-House Mechanism (ECCHM)	Frequently – 2
	Rarely – 2
	4
European Environment Agency (EEA) web site	Frequently - 1
	Rarely - 7
	8
European Environment Information and Observation Network (EIONET)	Rarely - 6
	6
European Topic Centre on Nature Protection and Biodiversity	*Rarely - 9*
	9
FAO – online Biodiversity Information	Frequently – 1
	Rarely – 2
	3
FAO – online Fisheries Information	Frequently – 1
	Rarely - 2
	3

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Global Biodiversity Information Facility (GBIF)	Rarely – 2
Global Environment Facility web site	Frequently - 1 Rarely – 2 3
Global Forest Information Service	Rarely – 1 1
Global Terrestrial Observing System (GTOS)	**Never**
Infoterra Global Environmental Information Exchange Network	**Never**
International Institute for Environment and Development (IIED) Resource Centre	Frequently – 1 Rarely – 3 4
International Institute for Sustainable Development (IISD) "Linkages"	Frequently – 1 Rarely – 2 3
International Species Information System	Rarely – 1 1
International Tropical Timber Organisation (ITTO) web site	Rarely - 1 1

International Whaling Commission (IWC), Secretariat web site	Frequently – 4 Rarely – 1 5
OECD Online	Rarely – 5 5
Ramsar Convention Secretariat web site	**Frequently – 1** **Rarely – 10** **11**
UK Overseas Territories Conservation Forum (UKOTCF) Information Database	Frequently – 1 Rarely – 5 6
UNEP-World Conservation Monitoring Centre (UNEP-WCMC) web site	**Frequently – 3** **Rarely - 8** **11**
United Nations Educational Scientific and Cultural Organisation (UNESCO) web site	Rarely - 4 4
UNESCO World Heritage Centre	Rarely - 5 5
United Nations Framework Convention on Climate Change (UNFCCC) web site	Rarely - 6 6
World Bank, Environment and Development Division web site	Frequently - 1 Rarely - 1 2

World Resources Institute (WRI) web site	Frequently – 1 Rarely – 1 2
European Centre for Nature Conservation (ECNC) web site	**Frequently - 1** **Rarely – 9** **10**
Birdlife International web site	Rarely – 9 9
Centre for International Environmental Law (CIEL) web site	Rarely - 3 3
Wetlands International web site	Rarely - 7 7
WWF International web site	**Frequently – 2** **Rarely – 8** **10**

Analysis

Top 10 most visited information sources:

- Bern Convention Secretariat and web-site
- Convention on Biological Diversity Secretariat – main web-site
- Convention on Biological Diversity Clearing House Mechanism web-site
- Convention on the Conservation of Migratory Species (CMS) Secretariat and web-site
- Ramsar Convention Bureau web-site
- EUROPA - The European Union Online
- European Commission, DG-Environment web-site

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- UNEP-World Conservation Monitoring Centre (UNEP-WCMC) web site
- European Centre for Nature Conservation (ECNC) web site
- WWF International web site

It is noticeable that the majority of these sites are connected with major Multilateral Environmental Agreements (MEAs). This is perhaps a reflection of the UK's membership and active involvement in biodiversity conservation at the international level through these and numerous other MEAs. Also significant is the number of European related information sources that figure in this list. Participants in the workshops stated that Europe was a major driver for the UK and this is reflected in the responses to the questionnaire. The NGO web sites relate to organisations with quite varied portfolios of work relating to biodiversity conservation. Both ECNC and WWF are involved in work that spans many sectors and countries. This is also true of the activities UNEP-WCMC is involved in which are both international in geographic scope and broad-based within the domain of nature conservation.

From the above it could be inferred that policy makers are interested in information concerning international and regional initiatives that directly concern them, and that they also favour sources offering more generalised nature conservation information sources with links to more specific information.

Most frequently visited web sites:

- European Commission, DG-Environment web-site
- EUROPA, The European Union Online

An important issue regarding information provided online is the frequency with which this information is updated. This frequency may be intimately related to actual changes in the information itself. From the above information taken from the questionnaires it might be inferred that EU web sites are frequently visited because they are frequently updated, and that this frequent updating is necessary because of the constant evolution of EU law and policy relating to nature conservation.

Least visited web-sites:

- Earthtrends, The Environmental Information Portal - (Never)
- Global Terrestrial Observing System (GTOS) – (Never)
- Infoterra Global Environmental Information Exchange Network – (Never)

There are probably several reasons why these web sites have never been visited by the small sample of policy makers we questioned. It may be that these sites, which focus on nature conservation at the global level, do not provide useful information for National level policy makers. It may also be possible that the policy makers we questioned were unaware of these sites. Some respondents stated that they had been previously unaware of several of the information sources included in the questionnaire, and some also said that they did not have the time to seek information sources beyond those pertaining to their immediate area of expertise.

ANNEX 6 - Summary of Treaties and Initiatives Relevant to UK Policy

I
Treaties Related to Nature Conservation Relevant to the UK
(Ordered by Date of Adoption)

Title	Date of Adoption	Place of Adoption	UK Signature	UK Ratification	Entry into Force
Convention and Statute on the Regime of Navigable Waterways of International Concern	20.04.1921	Barcelona, Spain		02.08.1922	31.10.1922
Convention Relative to the Preservation of Fauna and Flora in their Natural State	08.11.1933	London, UK	08.11.1933		14.01.1936
International Convention for the Regulation of Whaling (ICRW)	02.12.1946	Washington, DC, USA	02.12.1946	17.06.1947	10.11.1948
Agreement for the Establishment of the Asia-Pacific Fishery Commission (APFIC) (under the FAO)	26.02.1948	Baguio, Philippines	28.02.1949[1]		28.02.1949
Convention on the International Maritime Organization (IMO)	06.03.1948	Geneva, CH	06.03.1948		17.03.1958
Statutes of the International Union for Conservation of Nature and Natural Resources (as amended)	05.10.1948	Fontainebleau, France			1967
Agreement for the Establishment of a General Fisheries Council for the Mediterranean (under the FAO; operative mechanism: General Fisheries Commission for the Mediterranean)	24.09.1949	Rome, Italy			20.02.1952
Convention for the Establishment of the European and Mediterranean Plant Protection Organisation (under the FAO)	18.04.1951	Paris, France	18.04.1951		01.11.1953
International Plant Protection Convention (under the FAO)	06.12.1951	Rome, Italy	06.12.1951	07.09.1953	03.04.1952
Plant Protection Agreement for the South-East Asia and Pacific Region (under the FAO)	27.02.1956	Rome, Italy	29.03.1956	03.12.1956	02.07.1956
Protocol to the International Convention for the Regulation of Whaling (under the ICRW)	19.11.1956	Washington, USA	19.11.1956		04.05.1959
Convention on the Continental Shelf (The 1958 Law of the Sea Conventions were largely superseded by the 1982 UNCLOS)	29.04.1958	Geneva, Switzerland	09.09.1958	11.05.1964	10.06.1964
Convention on the High Seas (The 1958 Law of the Sea Conventions were largely superseded by the 1982 UNCLOS)	29.04.1958	Geneva, Switzerland	09.09.1958	14.03.1960	30.09.1962
Convention on Fishing and Conservation of the Living Resources of the High Seas (The 1958 Law of the Sea Conventions were largely superseded by the 1982 UNCLOS)	29.04.1958	Geneva, Switzerland	09.09.1958	14.03.1960 or 30.09.1962	20.03.1966
North-East Atlantic Fisheries Convention (superseded by the Convention on future Multilateral Cooperation in North-East Atlantic Fisheries)	24.01.1959	London, UK		Withdrawals: 31.12.1977	27.06.1963
The Antarctic Treaty [part of the Antarctic Treaty System (ATS)]	01.12.1959	Washington, USA	01.12.1959	31.05.1960[2]	23.06.1961
Fisheries Convention	09.03.1964	London, UK			15.03.1966

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Title	Date of Adoption	Place of Adoption	UK Signature	UK Ratification	Entry into Force
Agreed Measures for the Conservation of Antarctic Fauna and Flora (part of the ATS)	02.06.1964	Brussels, Belgium			01.11.1982
Convention for the International Council for the Exploration of the Sea [operative mechanism: International Council for the Exploration of the Sea (ICES)]	12.09.1964	Copenhagen, Denmark	12.09.1964	04.05.1965	22.07.1968
International Convention for the Conservation of Atlantic Tunas (under the FAO)	14.05.1966	Rio de Janeiro, Brazil	No	No	21.03.1969
Convention on the Conservation of the Living Resources of the South-East Atlantic (under the FAO)	23.10.1969	Rome, Italy	No	No	24.10.1971
Protocol to the Convention for the International Council for the Exploration of the Sea	13.08.1970				
Convention on Wetlands of International Importance Especially as Waterfowl Habitat (The Ramsar Convention)	02.02.1971	Ramsar, Iran	06.09.1973	05.01.1976	21.12.1975
Convention for the Conservation of Antarctic Seals (part of the ATS)	01.06.1972	London, UK	09.06.1972	10.09.1974	11.03.1978
Convention for the Protection of the World Cultural and Natural Heritage (under UNESCO)	23.11.1972	Paris, France		29.05.1984	17.12.1975
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	03.03.1973	Washington, USA	03.03.1973	02.08.1976	01.07.1975
Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and Belts	13.09.1973	Gdansk, Poland			28.07.1974
Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention). New title: Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	16.02.1976	Barcelona, Spain			12.02.1978
Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries [supersedes the International Convention for the Northwest Atlantic Fisheries (Washington, 08.02.1949), which was terminated on 02.08.1979]	24.10.1978	Ottawa, Canada			01.01.1979
Council Directive on the conservation of wild birds (79/409/EEC) (The 'Birds Directive')	02.04.1979	Luxembourg			
Convention on the Conservation of Migratory Species of Wild Animals (CMS)	23.06.1979	Bonn, Germany	23.06.1979	01.10.1985	01.11.1983
Convention on the Conservation of European Wildlife and Natural Habitats (The Bern Convention)	19.09.1979	Bern, Switzerland	19.09.1979	28.05.1982	01.06.1982
Convention on the Conservation of Antarctic Marine Living Resources (part of the ATS)	20.05.1980	Canberra, Australia	11.09.1980	31.08.1981	07.04.1982
Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries [supersedes the North-East Atlantic Fisheries Convention (London, 24 January 1959)]	08.11.1980	London, UK			17.03.1982
Convention for the Conservation of Salmon in the North Atlantic Ocean	02.03.1982	Reykjavik, Iceland			01.10.1983

Title	Date of Adoption	Place of Adoption	UK Signature	UK Ratification	Entry into Force
Protocol Concerning Mediterranean Specially Protected Areas (under the Barcelona Convention). New title: Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean	03.04.1982	Geneva, Switzerland			23.03.1986
United Nations Convention on the Law of the Sea (UNCLOS)	10.12.1982	Montego Bay, Jamaica		25.07.1997	16.11.1994
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (The 'Cartagena Convention')	24.03.1983	Cartagena de Indias, Colombia	Yes	Yes[3]	11.10.1986
International Tropical Timber Agreement (ITTA)	18.11.1983	Geneva, Switzerland	29.06.1984	18.09.1984	01.04.1985
Convention for the Protection of the Natural Resources and Environment of the South Pacific Region	24.11.1986	Noumea, New Caledonia	16.07.1987	No	18.08.1990
Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (under the 'Cartagena Convention')	18.01.1990	Kingston, Jamaica	18.01.1990		18.06.2000
Protocol on Environmental Protection to the Antarctic Treaty (The Madrid Protocol) (part of the ATS)	04.10.1991	Madrid, Spain	19.11.1991		Not yet
Agreement on the Conservation of Bats in Europe (EUROBATS) (under CMS)	04.12.1991	London, UK	04.12.1991	09.09.1992	16.01.1994
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) (under CMS)	17.03.1992	New York, USA	16.04.1992	13.07.1993	29.03.1994
Convention on the Protection of the Marine Environment of the Baltic Sea Area (under HELCOM)	09.04.1992	Helsinki, Finland			17.01.2000
Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) (The 'Habitats Directive')	21.05.1992	Brussels, Belgium			10.06.1992
Convention on Biological Diversity (CBD)	05.06.1992	Rio de Janeiro, Brazil	12.06.1992	03.06.1994	29.12.1993
The Forest Principles (Non-Legally Binding Instrument) (under UNCED)	13.06.1992	Rio de Janeiro, Brazil			
Convention for the Protection of the Marine Environment of the North-East Atlantic ('OSPAR Convention')	22.09.1992	Paris, France	22.09.1992	1900	25.03.1998
United Nations Convention to Combat Desertification (UNCCD or CCD)	17.06.1994	Paris, France	14.10.1994	18.10.1996	26.12.1996
Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (under CMS)	16.06.1995	The Hague, Netherlands	23.09.1996		01.11.1999
Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks	04.08.1995	New York, USA	27.06.1996		
Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) (under CMS)	24.11.1996	Monaco			01.06.2001

Title	Date of Adoption	Place of Adoption	UK Signature	UK Ratification	Entry into Force
The Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC)	01.12.1996	Caracas, Venezuela			02.05.2001
Memorandum of Understanding Concerning Conservation and Measures for Marine Turtles on the Atlantic Coast of Africa (under CMS)	29.05.1999	Abidjan, Côte D'Ivoire			
Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their Habitats of the Indian Ocean and South-East Asia (under CMS)	June 2000	Kuantan, Malaysia			
The European Landscape Convention	20.10.2000	Florence, Italy			
Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean	20.04.2001	Windhoek, Namibia	20.04.2001[4]		
Agreement on the Conservation of Albatrosses and Petrels (ACAP) (under CMS)	19.06.2001	Cape Town, South Africa			

[1]Acceptance
[2]OS/CP: Original signatory/Consultative party
[3]Including Cayman Islands, Turks and Caicos Islands, and the British Virgin Islands.
[4]On behalf of St. Helena and its dependencies, Tristan Da Cuhna and Ascension Island.

II
Initiatives and Programmes
on the Conservation of Biological and Landscape Diversity in Europe
(Preliminary)

Title	Secretariat/Focal Point	Aims
Baltic Sea Joint Comprehensive Environmental Action Programme (under the Helsinki Convention)	Helsinki Commission (HELCOM)	To improve the quality of the Baltic Environment, for example, by the designation of marine and coastal protected areas.
Mediterranean Action Plan (MAP) (under the Barcelona Convention)	UNEP	To improve the quality of the Mediterranean environment by implementing the Barcelona Convention 1976, including through a Protocol on Specially Protected Areas. To protect the environment and to foster development in the Mediterranean Basin.
MedSPA (under the Barcelona convention)	UNEP	To provide special protection for endangered Mediterranean species and habitats vital for their conservation.
World Conservation Strategy and the subsequent Strategy for Sustainable Living (Caring for the Earth)	IUCN, UNEP, WWF	To provide a strategic conservation framework and practical guidance to all nations in order to (1) maintain essential ecological processes and life support systems; (2) preserve genetic diversity; and (3) ensure the sustainable utilization of species and ecosystems.
Agenda 21	UNCED	Outlines priorities and guidelines aimed at sustainable development, to be implemented at the national level.
Man and Biosphere Programme	UNESCO	To develop, within the natural and social sciences, a basis for the rational use and conservation of the resources of the biosphere, through such measures as the creation of a worldwide network of Biosphere Reserves.
European Conservation Strategy	Council of Europe	To provide governments with the basis for developing policies to safeguard and manage natural resources.
Pan-European Ecological Network (EECONET)	Council of Europe	To develop a Europe-wide ecological network for the conservation of nature (To be implemented within the ministerial process of the Pan-European Biological and Landscape Diversity Strategy).
Environment Programme for Europe	UNECE, EU, UNEP, IUCN	To prepare the intergovernmental environmental programme for Europe, following Dobrís and Lucerne.
European Nature Conservation Year (ENCY) 1995	Council of Europe	To develop a public awareness campaign in 1995 on "conservation outside protected areas".
European Network of Biogenetic Reserves	Council of Europe	To conserve representative examples of Europe's habitats, biocenoses and ecosystems through a network of biogenetic reserves.
IUCN Parks for Life: Action for Protected Areas in Europe	IUCN	To ensure an adequate, effective and well managed network of protected areas in Europe.
Fifth Environmental Action Programme (1992)	European Commission DG XI	The EU's programme of policy and action on the environment and sustainable development.
CORINE Information System	European Environment Agency	EU system to develop a database on European environment, including for nature conservation.

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Title	Secretariat/Focal Point	Aims
Environmental Action Programme for Central and Eastern Europe (1993-1995)	Task Force established by Ministers with EU, OECD, World Bank, and EBRD	Endorsed by the Ministerial Conference Lucerne 1993 to promote environmental protection measures in central and eastern Europe.
Ecological Bricks for our Common House of Europe Initiative	C/o European Ecological Movement, Global Challenges Network	To promote the establishment of 18 transboundary protected areas.
Green Lungs of Europe (1993)	Institute of Sustainable Development	Based on Poland's experience, to create sustainable development zones in Belarus, Estonia, Latvia, Lithuania, Poland, Russia and Ukraine.
Environment Programme for the Danube River Basin	Task Force for the Programme	To conserve the Danube River Basin.
Black Sea Action Plan	UNEP, UNDP, World Bank	Environmental protection programme for the Black Sea region.
Ministerial Conference on the North Sea	Danish Ministry of the Environment	To protect the North Sea ecosystem.
MEDPAN	European Investment Bank. World Bank	To strengthen links between managers of protected areas.
MedWet	European Commission DG XI	To conserve Mediterranean wetlands.
Mediterranean Technical Assistance Programme (METAP)	World Bank. European Investment Bank	2nd Phase of the European Programme for the Mediterranean, to reverse present environmental degradation.
Nicosia Charter (1990)	European Commission	To provide closer co-operation on sustainable development in the Euro-Mediterranean region, including nature conservation.
Arctic Initiative	Working group on the Conservation of Arctic Flora and Fauna	To prepare a common Arctic Environmental Protection Strategy.
Nordic Arctic Conference	C/o Nordic Council of Ministers	Environmental protection of the Arctic region.
Danube River Basin Global Environment Facility (GEF) Programme (1991)	World Bank	Environmental protection for the Danube River.
Danube Delta Biodiversity GEF Project	World Bank	To protect the Danube Delta ecosystems.
Agreement on the Protection of the Rhine against Chemical Pollution	International Commission for the Protection of the Rhine (ICPRP)	To protect the Rhine from chemical pollution.
Ministerial Declaration on the Sixth Trilateral Governmental Conference on the Protection of the Wadden Sea	The Common Wadden Sea Secretariat	To co-ordinate the conservation of the Wadden Sea
NATURA 2000	European Commission	To establish a network of protected areas throughout the European Union, designed to maintain both the distribution and abundance of threatened species and habitats.

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Title	Secretariat/Focal Point	Aims
The Action Plan for the Conservation of Marine Turtles in the Mediterranean (RAC/SPA)		
The Pan-European Biological and Landscape Diversity Strategy	Council of Europe, UNEP	To establish an international framework for co-operation for consolidating and extending existing schemes and programmes in the conservation field.
The Emerald Network	Council of Europe	To implement a network of Areas of Special Conservation Interest (ASCI). For EU member States Emerald network sites are those of the Natura 2000 network (The Emerald Network constitutes the prolongation in the non-EU and in the EU-accessing countries of the Natura 2000 Network launched by the European Commission in application of the "Birds" and "Habitats" Directives)
The Action Plan for The Conservation of Cetaceans in the Mediterranean Sea (Within the framework of the Mediterranean Action Plan; under the Barcelona Convention); (superseded by the 1996 ACCOBAMS agreement)		To protect and conserve cetacean habitats, including feeding, breeding and calving grounds; and to protect, conserve and make possible the recovery of cetacean populations in the Mediterranean Sea Area.
The Action Plan for the Conservation of marine vegetation in the Mediterranean Sea (Under the Barcelona Convention)		To ensure the conservation of macroscopic marine vegetation species and vegetal assemblages in the Mediterranean by implementing management and legal protection measures. To avoid loss and degradation of the seagrass meadows, and of other vegetal assemblages of importance for the marine environment, as marine habitats that are essential to the survival of many Mediterranean species, and to keep them in favourable conservation status; To ensuring the conservation of marine vegetal assemblages that could be considered natural monuments.

ANNEX 7 - Current Moves to Harmonise and Streamline Information Sources and Services

Commission for Sustainable Development

At their sessions during 1994-1997, the Inter-Agency Committee on Sustainable Development (IACSD) discussed the issue of harmonising national reporting. They concluded that the issue was difficult to address for a number of reasons relating to whether the report was voluntary or binding in nature, variations in periodicity and the nature of the information requested. IACSD recommended that the next step that needed to be taken was to streamline the requests for information that were being made to national governments.

For some years the Commission has made every effort to encourage countries to submit their reports on the implementation of Agenda 21 in electronic format, and provides guidelines and forms for completion. The information received through the reporting process is compiled in the UN system-wide sustainable development website, where information can be accessed on a country-by-country or issue-by-issue basis. In addition to this, an interactive database on national information is being developed to facilitate submission of national reports to future CSD sessions as well as to optimise the use of national reports and therefore the exchange of information.

UNDP and the Rio Agreements

In 1997, UNDP convened an expert meeting to explore ways to create synergy between and among the Rio Agreements. This meeting was based on two fundamental principles developed in consultation with participants and stakeholders, including representatives of the Secretariats of and Parties to the instruments:
- a recognition of potential synergies among the instruments must be an integral part of the planning process and implementation for each; and
- strengthening and building in-country capacity is essential to the producing synergy in the implementation of the agreements.

Working Group 4 covered the issue of information and reporting requirements, and recommended a number of key actions for national and international attention. Subsequently UNEP fostered semi-annual meetings to further explore synergies. (See UNEP below)

UNEP Feasibility Study

In 1998 the five global biodiversity-related treaty secretariats and UNEP commissioned the then World Conservation Monitoring Centre to undertake a feasibility study to identify opportunities for harmonising information management between the treaties. The study considered approaches towards development of a harmonised information management infrastructure for the treaties within their existing defined mandates. Its purpose was to consider how the secretariats could improve effectiveness and efficiency in gathering, handling, disseminating and sharing information, and the secretariats have made some follow-up since that study was completed. The study recommended a range of actions incorporated into this paper.

UNEP

The UNEP Division of Environmental Conventions convenes regular meetings of convention secretariats to promote co-ordination between them, and has also organised several expert meetings on collaboration and inter-linkages. UNEP's five priorities for work in this area are: promoting information exchange amongst secretariats; strengthening collaboration amongst the conventions' scientific and technical bodies; revitalising support to the regional seas conventions and action plans; making international trade and environmental regimes more compatible; and streamlining national

reporting. UNEP produces a *Synergies* bulletin twice a year, which aims to promote collaboration on environmental treaties.

UNEP Environment and Natural Resources Information Network (ENRIN)

This programme helps to build capacity for making the environmental assessments needed for state of the environment reporting. It promotes co-operative networks at the regional level that can serve as conduits for the flow of data and information needed for regional and global assessments, policy making and planning.

UNEP Pilot Projects

In October 2000, UNEP convened a workshop to explore ideas for a more harmonised approach to national reporting to international agreements and to develop pilot projects for testing these ideas at national and international levels. The workshop was attended by representatives of eight convention secretariats, eight countries and several international organisations involved in exploring the potential synergies between international agreements and programmes.

Following the recommendations of the workshop, UNEP is implementing a series of national pilot projects to assess different approaches to harmonised reporting for the global biodiversity-related treaties. These pilot projects will cover: consolidated reporting to a range of agreements; modular reporting approaches; and the link between reporting to international agreements and the state of environment reporting process. An additional pilot project will address information management to support delivery of reports, and assess the support that might be valuable from regional organisations.

UNEP Biodiversity Planning Support Programme workshop

In May, UNEP and the Foundation for International Environmental Law and Development convened a workshop on "Legislative Complementarity and Harmonisation of Biodiversity-related MEAs". The workshop was attended by representatives of the CBD and other biodiversity-related treaties, and nine countries. The objective of the workshop was to discuss key areas of overlap and synergy between the biodiversity-related conventions, as part of a programme to:
- facilitate a harmonised, integrated and cost-effective approach to implementing the CBD and other biodiversity-related conventions at the national level;
- contribute to improving policy, legal and administrative co-ordination at national level in order to comply effectively with international obligations; and
- publish and dissemination of a set of best practice guidelines on co-ordinated implementation of biodiversity-related conventions at national level.

United Nations University

The UNU and its partners have convened two conferences (one global, one regional) to assist in the development of a synergistic and co-ordinated approach to environmental policy making that takes account of existing inter-linkages between environmental issues. The objectives were to:
- create awareness at the public, governmental and intergovernmental levels of the importance of synergies and co-ordination between MEAs; survey existing initiatives;
- foster discussion and interaction among international institutions, scholars and other relevant stakeholders who can co-operate to identify and examine opportunities; and
- identify concrete mechanisms, next steps and feasible win-win paths to move forward on this important issue.

UNEP WCMC

The main outputs were recommendations on the promotion of inter-linkages between MEAs in the areas of harmonisation of information systems and information exchange, finance, issue management, scientific mechanisms, and synergies for sustainable development.

European Environment Agency

The EEA is working on a range of projects that are looking at reporting obligations and mechanisms at national and community level. These include the following:

The EEA Reporting Obligations Database currently under development aims to inventory all obligations, both legal and moral, resulting from reporting requirements and expectations as a categorised and key-worded series of questions or information elements requested.

As part of EIONET, the EEA is testing mechanisms for compilation of information from multiple sources over the Internet, particularly for use in "state of environment" type reporting for the European region.

Streamlining Project: The EEA is also working on a project which aims to streamline reporting mechanisms for the 64 environmental agreements to which the European Community itself is party.

Convention secretariats

The secretariats of the global biodiversity-related treaties are aware of the need to increase access to the information that they manage, and to streamline and harmonisation information management and reporting. For example:

CMS: Over the years CMS and its various agreements have developed approaches to reporting and information management that, although similar, are not integrated. The CMS Secretariat is now leading efforts to synthesise and integrate the information contained in the national reports provided to the secretariats, and is developing a more integrated approach to reporting on migratory species. CMS is also following Ramsar in moving towards reporting more closely linked to the strategic plan. The more thorough synthesis of the national reports is also leading to a helpful review of implementation.

CBD: The CBD Secretariat has taken a lead in ensuring that not only are all the reports submitted to the secretariat available online, there are also search tools that facilitate access to the information that the reports contain. In addition, the second round of national reports are formatted to provide a checklist of those actions that a Contracting Party is obliged or requested to undertake as a result of Convention Articles or conference decisions, moving away for a text-based report to a questionnaire.

Ramsar: For many years the Ramsar Convention Bureau has provided Parties with clear guidance on how to prepare national reports. In 1999, 107 out of a possible 110 Parties submitted national reports (three were exempt), and all of these reports are available online. The guidelines have evolved over the years, and now focus tightly on the strategic plan. The latest version of the reporting tool is now also being developed as a planning tool for implementation of the strategic plan at the national level.

CITES: CITES has provided "Guidelines for the Preparation and Submission of CITES Annual Reports" since 1994 (comprehensively revised in 1999), and is now exploring how the quality of annual reports might be improved, how the data might be better presented and used, and how to ensure timely submission. The Secretariat has begun studying the submission rates and contents of biennial reports, with a view to developing guidelines for these reports too.

World Heritage: The World Heritage Convention has only recently begun a periodic reporting process, and is currently reviewing the results of regional reports for Africa and the Arab states, with a

view to learning from what has been done so far. Experiments are beginning on reporting using web templates, and some discussion has been entered into on linking this to management of information on individual sites on the Internet.

Regional seas conventions

Nairobi Convention: The Contracting parties to the Nairobi Convention, meeting in May 2000 to assess progress in implementation of the CBD Jakarta Mandate in the Eastern Africa region, compiled information country-by-country on the action taken. Their report, and the process used in compiling it, was presented as a potential model for all regional seas conventions and action plans to report to CBD on progress made in the implementation of the Jakarta Mandate.

Cartagena Convention: Discussions on reporting will take place at the next meeting of the Scientific and Technical Advisory Committee. The value of integrating the SPAW Protocol reporting process with the reporting to other biodiversity-related treaties is well understood, and consideration will be given to the formats and processes used by at least CBD, Ramsar and CMS and how to integrate with these approaches.

State of Environment reporting

The EEA, UNEP GRID Arendal and the Danish National Environmental research Institute have collaborated on development of the *State of the Environment Reports Information System* covering the Pan-European region. This is an Internet based information service providing an overview of SoE documents (paper reports, Internet versions and policy related products) developed by each country. The service also provides an overview of environmental issues and sectors treated in SoE reports, and information can be accessed by either issue or country in a similar manner to the UN system-wide sustainable development website.

Global Biodiversity Information Facility (GBIF)

The Global Biodiversity Information Facility (GBIF) has been established through an intergovernmental process with the aim of increasing access to the vast quantities of global biodiversity data, especially that which exists in museums and herbaria. The agreed programme priorities of GBIF are to: create an Internet-based catalogue of known names of species; digitise data on species information in museums and herbaria; create interoperability of databases and search engines for accessing these data; and build capacity in nations for implementation of GBIF. GBIF is essentially a scientific facility, and UNEP anticipates working alongside GBIF members in developing species information databases. Specifically, UNEP seeks, in co-operation with GBIF members, to enhance the quality and quantity of species-specific information available to convention secretariats and to contracting parties in support of implementation. This should also allow better and more uniform approaches to taxonomy, and taxonomic listings.

ECOLEX

Initially a collaboration between IUCN and UNEP, and now involving FAO, this Internet-based information service provides access to basic legal and adherence information on all of the environmentally-relevant international agreements (both global and regional). However this information is not linked to other information relevant to each of the agreements, and does not provide links to the websites of the convention secretariats. Also, at present, ECOLEX only includes international agreements and provides no links to the national legislation implementing each agreement within each country. Consideration needs to be given to how the existing service can be extended to serve the needs of convention secretariats and contracting parties.

World Database of Protected Areas

The UNEP World Conservation Monitoring Centre is working with other UN agencies (particularly UNESCO and FAO) and with IUCN on a project to compile information on the world's protected areas in a way that meets the information needs of a wide range of agreements and programmes. A key issue is the rationale behind multiple labelling of sites under Conventions and Agreements – there appears to be room for a more strategic approach here. This work is based on an ECOSOC resolution, and has the backing of the Ecosystem Conservation Group.

CBD- Clearing House Mechanism

The Convention on Biological Diversity has established a "clearing-house mechanism" to ensure that all governments have access to the information and technologies they need for their work on biodiversity. The clearing-house is co-ordinated by the Executive Secretary and overseen and guided by an Informal Advisory Committee (IAC) set up by the Parties to the Convention. In addition, a network of national focal points for the mechanism is being established to address matters relating to technical and scientific co-operation. The clearing-house seeks to increase public awareness of Convention programmes and issues. It is establishing an Internet-based system to facilitate greater collaboration among countries through education and training projects, research co-operation, funding opportunities, access to and transfer of technology, and repatriation of information.

UNEP Biodiversity Data Management Project

The United Nations Environment Program (UNEP), in collaboration with the then World Conservation Monitoring Centre (WCMC), designed and submitted to the Global Environment Facility (GEF) the project proposal entitled "Biodiversity Data Management Capacitation in Developing Countries and Networking Biodiversity information (BDM)" in 1994. The long-term objective of the project was to enhance the capacity of developing countries in data management to support the implementation of the Convention on Biological Diversity (CBD) by improving the availability of reliable, up-to-date scientific information to support biodiversity management and planning in developing countries. The project sought to build the information management capacities of nations through the provision of support to national organisations generating and maintaining biodiversity data. The project was completed in 1998, although follow-up actions are planned.

Inter-American Biodiversity Information Network (IABIN)

The Inter-American Biodiversity Information Network is a recent intergovernmental initiative to promote greater co-ordination among Western Hemisphere countries in collecting, sharing and using environmental information. IABIN is an initiative of the Summit of the Americas on Sustainable Development and was mandated as Initiative 31 of the Action Plan resulting from the December 1996 Summit in Bolivia. The Inter-American Committee on Sustainable Development (CIDS) of the Organization of American States endorsed IABIN in a resolution passed in October 1999. As of August 2001, twenty-six countries in the Americas have designated official IABIN Focal Points to co-ordinate national efforts to implement the network.

IABIN works closely with other regional and global biodiversity information networking initiatives, including the Global Biodiversity Information Facility, the North American Biodiversity Information Network, and the Clearing-House Mechanism of the Convention on Biological Diversity. IABIN will continue to establish co-operative linkages with other regional and global initiatives such as GBIF

Species 2000

The Species 2000 Programme was established by the International Union of Biological Sciences (IUBS), in co-operation with the Committee on Data for Science and Technology (CODATA) and the International Union of Microbiological Societies (IUMS) in September 1994. It was subsequently

endorsed by the UNEP Biodiversity Work Programme 1996-1997, and associated with the Clearing House Mechanism of the UN Convention on Biological Diversity.

The aim of the Species 2000 project is to create a uniform and validated index to the world's known species for use as a practical tool in inventorying and monitoring biodiversity world-wide. This will enable users world-wide to verify the scientific name, status and classification of any known species through species checklist data drawn from an array of participating databases. The service will be made available as part of the Clearing House Mechanism under the United Nations Convention on Biological Diversity

UNEP-Net ("REDLANDS Initiative")

The United Nations Environment Programme (UNEP) has launched its Environment Network Web site, UNEP.Net. UNEP.Net intends to deliver authoritative environmental information from a broad range of information and data providers committed to making their information freely available to the whole spectrum of users of environmental information.

In addition to its own data sets, UNEP.Net uses data published through ESRI's Geography Network www.geographynetwork.com) and data from the European Environment Agency, World Conservation Union, U.S. Geological Survey, and World Wildlife Fund. Application development was provided by Conservation International, the World Wildlife Fund, and ESRI.

The site provides a forum for scientific and technical peer review, as well as insights on environmental issues to the global community. It facilitates the exchange of ideas, information, and data.

All Species Inventory

"All Species" is a new organisation, established in 2000, that will attempt to catalogue every living species on earth within one generation (25 years). This survey, which will include microbes, will enlist the support and co-operation of scientific organisations around the world. The survey hopes to address the ever-slippery issue of deciding which varieties are species or subspecies or mere variants, and to overcome the sheer physical hurdles of surveying such areas as the Congo, the Amazon, the Deep Oceans, the Coral Reefs, Soil and Benthic Sediments, and Islands (oceanic and continental).

ANNEX 8 - Draft Reference Guide to International Data Sources and Services

This Annex is not provided in paper form at this time.

It can be downloaded from the project web-site: www.unep-wcmc.org/conventions/RINCIS.