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Convention on Wetlands (Ramsar, Iran, 1971)

“Healthy wetlands, healthy people”

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**Further development of indicators of effectiveness of the
implementation of the Convention**

Explanatory note by the Secretariat

1. Further to the request by the 8th meeting of the Conference of the Parties (COP8) in Resolution VIII.26 and work by the Scientific and Technical Review Panel (STRP), COP9 welcomed an initial set of eight ecological “outcome-oriented” indicators for assessing the effectiveness of selected aspects of the Convention’s implementation, and it urged Parties to make good use of them as appropriate, adapting them as necessary to suit national conditions and circumstances. The eight indicators, which were detailed in Annex D to Resolution IX.1 (some being divided into subindicators), are:
 - A. The overall conservation status of wetlands
 - B. The status of the ecological character of Ramsar sites
 - C. Trends in water quality
 - D. The frequency of threats affecting Ramsar sites
 - E. Wetland sites with successfully implemented conservation or wise use management plans
 - F. Overall population trends of wetland taxa
 - G. Changes in threat status of wetland taxa
 - H. The proportion of candidate Ramsar sites designated so far for wetland types/features
2. The eight initial indicators were considered to be those that are currently feasible to implement with existing, or readily collectible, data and information. In several cases this information will consist of qualitative evaluations, which can yield valuable insights.
3. The geographic scale of data sources for the eight effectiveness indicators differs. Some of the indicators are designed to operate at supranational level and to be coordinated internationally, but may nevertheless draw upon data from site, basin/catchment, and/or national level. Others are designed for data collection at site, basin/catchment or national scale and then subsequent aggregation for analyses at larger spatial scales.
4. Fact sheets providing guidance for the application and operation of each of these indicators and subindicators were developed by the STRP and were provided at COP9 in the Annex to COP9 DOC.18. Further work was then foreseen to elaborate details concerning construction and operation of the indicators, including subindicators,

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processes and mechanisms for data collection, compilation, analysis, assessment, reporting, publishing and disseminating the results and conclusions generated. In Resolution IX.2, the STRP was tasked with establishing and implementing mechanisms for these activities.

5. The STRP work has required additional specialist expertise, and thus it has been undertaken to date largely under contract by the UNEP World Conservation Monitoring Centre. There have been additional advantages in this working arrangement, in that UNEP-WCMC also coordinates the GEF-funded Biodiversity Indicators Partnership in which the Ramsar Convention is a key partner; and so synergies and full compatibility across the respective work streams for BIP and Ramsar indicators have been assured. This has meant, however, that the rate of progress of the work has depended among other things on the availability of resources for funding and rolling forward the contract with UNEP-WCMC.
6. Close connections have also been maintained with discussions held within the Standing Committee on the development of the Ramsar Strategic Plan 2009-2014 and the “Key Result Areas” defined in the Plan as measures of its outcomes. The Plan comprises draft Resolution DR 1 tabled for adoption by COP10.
7. The Standing Committee at its 37th meeting in June 2008 received a brief update on the progress of the STRP’s indicators work since the time of COP9 (DOC. SC37-21), and in Decision SC37-25 the Committee “noted the progress on the development of indicators of effectiveness and encouraged the STRP to continue its work, noting too that information products on this matter will be prepared for COP10”.
8. As has been noted in Resolution IX.1 Annex D (paragraph 13), while various aspects of this work continue to be developed, the indicators in that Resolution are “available to Parties and others to use should they wish (using the fact sheets in COP9 DOC. 18) for assessments at national level. This will form part of the learning process in refining and focusing the future role and operations of the Convention”.
9. The STRP and UNEP-WCMC are continuing work on the following three items in particular:
 - a) an Implementation Plan (including costings) for the full implementation of the first tranche of indicators adopted under Resolution IX.1 Annex D;
 - b) updated fact sheets on these indicators following up on the sheets provided in Resolution IX.1 Annex D;
 - c) some initial indicator assessments for certain of those indicators for which existing data is readily available, as a demonstration example of presentation of indicator results (it is hoped, time permitting, that information on this will be provided to COP10 in a separate Information Paper).
10. Details of item a) as it stands at present are presented in the UNEP-WCMC report that forms the remainder of this Information Document. Attention is drawn to the fact that the implementation of several of the indicators relies on global processes and other institutions which are only able to undertake the functions envisaged if specific additional resourcing is available for that. Full delivery of what the COP has agreed for the Ramsar indicators therefore has budgetary implications and is funding-dependent.

11. For item c), the National Report Format for COP10 included a question which asked: “Does your country have information about the status and trends of the ecological character of wetlands (Ramsar sites and/or wetlands generally)? - if the answer is “yes”, does this information indicate that the need to address adverse change in the ecological character of wetlands is now greater, the same, or less than in the previous triennium, for (a) Ramsar sites (b) wetlands generally?”; and this is relevant to Indicators A and B. An analysis of the responses to this question, and consideration of the most effective way of presenting the results, is in progress.

12. The UNEP-WCMC report reproduced below gives:
 - examples of the types of “story-lines” that will be produced from the indicator results;
 - a re-cap of the implications for Contracting Parties of each of the indicator assessments that are foreseen;
 - recommendations for next steps and for addressing relevant issues in the further development of each indicator;
 - information on links to questions in the format for Contracting Party National Reports to COP10;
 - information on links to the indicators in the Biodiversity Indicators Partnership project referred to above, and to the Millennium Development Goals; and
 - proposals for a Coordination Plan for the implementation of the Ramsar indicators, including aspects relating to communications and dissemination of results.

**Updated information on progress in implementing the
Ramsar Convention indicators of effectiveness
– report from the UNEP World Conservation Monitoring Centre**

1) Ramsar Indicators of Effectiveness: “story-lines”

1. Indicator story-lines are intended to highlight the primary messages from indicator results and analyses concerning the status and trends in the conservation of Ramsar sites and wetlands in general. The following table gives an indication of potential story-lines for each of the eight Ramsar Indicators of Effectiveness (RIEs).

Table 1: Potential storylines for ecological outcome indicators

Indicators and sub-indicators	Plausible Story-lines
	Note that these are examples of what sort of story-line may come from the indicator assessments, and should not be quoted as factual assessment summaries
A: The overall conservation status of wetlands (i) Status and trends in ecosystem extent (ii) Trends in conservation status of wetlands –	The conservation status of wetlands globally is in decline. The extent of wetland ecosystems is decreasing on average worldwide mainly due to clearing and/or drainage of land for agricultural development and increases in human population, particularly in coastal zones. The extent of wetland ecosystems has declined by <i>X</i> amount in <i>Y</i> number of years. However, there are regional differences in the rate of change of wetland extent. Areas of greatest decline

qualitative assessment	<i>may</i> include the Mediterranean (e.g., due to changing climate and water extraction) and tropical mangroves (e.g., due to conversion for aquaculture). The extent of wetland ecosystems has declined by $W\%$ in X region, as opposed to $Y\%$ in Z region.
B: The status of the ecological character of Ramsar sites (i) Trends in conservation status of Ramsar sites – qualitative assessment	The ecological character of Ramsar sites is, on average, improving or remaining stable (though in some cases it is declining). This variation between sites is due in part to differences in the effectiveness with which Ramsar sites are managed (<i>indicator E</i>). Taken together with the results of <i>Indicator A</i> , this suggests that the conservation status of Ramsar sites is deteriorating less rapidly than that of wetland ecosystems that have not been designated as Ramsar sites. The extent of the wetland ecosystems contained within Ramsar sites has declined by $X\%$, compared with $Y\%$ in non-Ramsar wetlands, in Z number of years.
C: Water quality (i) Trends in dissolved nitrate / nitrogen concentration (ii) Trends in Biological Oxygen Demand (BOD)	Wetland water quality is declining. On average worldwide, wetland water quality has declined by $X\%$ over Y number of years with Biological Oxygen Demand (BOD) and concentrates of nitrates increasing. Some regions are more affected than others, for example, in W region, the concentration of nitrates in wetland water is on average X . By comparison the concentration in Y region is on average Z . Water quality is better in catchments containing Ramsar sites than those which do not mainly because of effective management of Ramsar wetlands as compared to non-designated wetland sites.
D: The frequency of threats affecting Ramsar sites (i) The frequency of threats affecting Ramsar sites – qualitative assessment	Ramsar sites are increasingly under pressure from a range of threats. Those threats increasing most rapidly include: agricultural intensification/expansion, construction of dykes and dams and industrialisation/urbanisation. The impact that such threats have on Ramsar sites will in part be affected by the site management effectiveness (<i>indicator E</i>). However, threats to wetlands are increasing less rapidly at Ramsar sites than non-Ramsar wetlands.
E: Wetland sites with successfully implemented conservation or wise use management plans (i) Trends in management effectiveness in Ramsar sites (ii) Management effectiveness in Ramsar sites – distribution of scores	The effectiveness with which Ramsar sites are managed varies greatly, with some Ramsar sites delivering considerable benefits for biodiversity conservation and human well-being and others less so. There are a number of case studies of good management from both developing and developed countries; however, regions where Ramsar sites receive the most effective management might include X and Y . Taking into consideration the predicted results from <i>Indicator A</i> and <i>Indicator B</i> , with this indicator it could be concluded that the ecological character of those Ramsar sites that are being managed effectively are not deteriorating compared to the Ramsar sites that are not effectively managed. Wetlands that are not designated Ramsar sites are in much further decline compared to Ramsar sites.
F: Overall population trends of wetland taxa (i) Status and trends of waterbird biogeographic populations	Waterbird populations are declining on average globally, at a rate of X . This decline in waterbird populations is not uniform worldwide and some regions are experiencing faster rates of decline, such as Latin America and Asia-Pacific (<i>to be determined</i>). For example, in region W , waterbird populations are declining at a rate of X , while in region Y they are declining at a rate of Z . However, not all waterbird populations are in decline, for example X , which has increased through effective management.
G: Changes in threat status of wetland taxa (i) Wetland Red List Index	Current trends show that wetland birds and amphibians are in decline. This is highlighted by the increasing number of species being given a Red List threat status (e.g., vulnerable, threatened or critically endangered). Wetland species are becoming increasingly threatened at a faster rate than the global average for species of all ecosystem types. Wetland amphibians are declining faster than wetland birds due to their tendency towards endemism and impacts of disease (to be confirmed).

<p>H: The proportion of candidate Ramsar sites designated so far</p> <p>(i) Coverage of the wetland biodiversity resource by designated Ramsar sites</p>	<p>Growth in protected areas has increased globally and an increasing proportion of wetland resources have been designated under Ramsar over time. The rate of designation of candidate Ramsar sites is increasing (to be confirmed), with the rate of designation of candidate Ramsar sites being faster in some regions than in others. In region W, X% of candidate Ramsar sites are designated per annum. In region Y, this figure is Z%.</p>
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2) Implications for Contracting Parties

2. The introduction of eight Ramsar Indicators of Effectiveness (RIEs) aimed at measuring the implementation effectiveness of the Convention in delivering ecological outcomes has some implications for Contracting Parties (CPs) in terms of the type of data that needs to be collected or is already being collected by Parties for Ramsar National Reports.
3. The National Report Form for COP10 allows the collection of data and information for some Ramsar Indicators of Effectiveness (RIEs). (See also Annex A – Links with the National Report Form).
4. The following two tables provide a summary of data that Parties should already be collecting for National Reports and the data that they would need to collect either via the National Report or by other means (Table 2). However, many of the indicators will use global datasets where possible to keep the burden of data collection to a minimum – therefore the tables are only indicative to show how data collected by Parties could be utilised.

Table 2: Data that Contracting Parties could provide, including through Ramsar National Reports

Indicator	Data that Parties should already be collecting for Ramsar National Reports	Other data that Parties could provide	Is a global dataset available?
A: The overall conservation status of wetlands	The COP10 National Report Form includes fields for national information on extent and status of coastal wetlands, peatlands and the wetlands baseline inventory.	National landcover and resource assessments potentially provide relevant data for this indicator.	A number of remote sensing datasets exist for calculating the extent of different wetland types.
B: The status of the ecological character of Ramsar sites	The COP10 National Report Form includes fields for information on status and trends of the ecological character of Ramsar sites and wetlands in general; this information indicates that the need to address adverse change in the ecological character of wetlands is now greater, the same, or less than the previous triennium; whether or not the measures required to maintain the ecological character of Ramsar sites defined and applied and whether or not the changes or likely changes (both positive and negative) in ecological character of Ramsar sites have been reported to the Ramsar Secretariat.	Parties should contribute to the development of criteria and guidelines, identify appropriate experts to participate in Ramsar site assessments, and implement assessments of national Ramsar sites using this approach. An inventory of Ramsar sites is required in each country. There are also links with specific National Report Form fields and to the information provided in the “conservation status” field of RISs (Information Sheets on Ramsar Wetlands) when they are updated.	A potential global dataset that could be used is BirdLife International’s Important Bird Areas database and regional datasets like those created for relevant MedWet activities.

Indicator	Data that Parties should already be collecting for Ramsar National Reports	Other data that Parties could provide	Is a global dataset available?
C: Water quality (i) Trends in dissolved nitrate / nitrogen concentration	The COP10 National Report Form includes fields for information on the quality and quantity of water available to, and required by, wetlands and the incorporation of wetland issues into national strategies for sustainable development, as well as the implementation of sectoral policies and measures taken to achieve water quality targets.	Many of the relevant data are collected by national monitoring programmes. Parties may consider maintaining and/or enhancing water quality monitoring programmes and mobilising the resulting data and metadata for this indicator.	The International Nitrogen Initiative holds a number of databases that can be used to help with calculations for this indicator.
(ii) Trends in Biological Oxygen Demand (BOD)	The COP10 National Report Form includes fields for information on the quality and quantity of water available to, and required by, wetlands and the incorporation of wetland issues into national strategies for sustainable development, as well as the implementation of sectoral policies and measures taken to achieve water quality targets.	Many of the relevant data are collected by national monitoring programmes. Parties may consider maintaining and/or enhancing water quality monitoring programmes and mobilising the resulting data and metadata for this indicator.	A global dataset for water quality is housed in the UNEP GEMS/Water database.
D: The frequency of threats affecting Ramsar sites	The COP10 National Report Form includes fields for information on national policies, strategies, and management responses to threats from invasive species.	To the extent that some Parties and their protected areas agencies are monitoring the threats acting within Ramsar sites and other protected areas, they can provide useful information for developing this indicator. Thus, the national reporting process if consistently applied could provide information on the threats affecting protected areas.	BirdLife's Important Bird Areas data is a potential source of a global dataset.

Indicator	Data that Parties should already be collecting for Ramsar National Reports	Other data that Parties could provide	Is a global dataset available?
E: Wetland sites with successfully implemented conservation or wise use management plans	The COP10 National Report Form includes fields for information on the incorporation of wetland issues into national strategies for sustainable development; the development of wise use wetland programmes and/or projects that contribute to poverty alleviation objectives, and food and water security plans; the establishment of cross-sectoral management committees at Ramsar sites and whether or not any assessment of wetland site management effectiveness has been carried out in the last triennium.	To the extent that some Parties and their protected areas agencies are monitoring management effectiveness within national protected areas systems, they can provide useful information for developing this indicator. In principle, information on the existence and status of management plans already forms part of both RISs and National Reports. Thus the national reporting process if consistently applied could provide information on trends in this aspect of management effectiveness. A simple assessment like that in the response section of the Important Bird Areas (IBA) monitoring framework could potentially be added to National Reports, but could prove problematic for countries with many Ramsar sites.	The World Database for Protected Areas contains information on the management effectiveness for different areas that have been assessed. Efforts would need to be made to ensure that all Ramsar sites are included in the database, and that there is information on management effectiveness.
F: Overall population trends of wetland taxa		The main datasets used for this indicator are not collected and reported at national scale, but are analysed at supranational biogeographic population and flyway scales. Where a national waterbird monitoring scheme exists which generates national status and trend information, Parties may have a role in ensuring that its results and analyses are made available to further inform the global, regional and flyway scale assessments.	There are a number of different global datasets that could be used to generate different subindicators, including the Living Planet Index, the Wild Bird Index, and population census data collected by Wetlands International.

Indicator	Data that Parties should already be collecting for Ramsar National Reports	Other data that Parties could provide	Is a global dataset available?
G: Changes in threat status of wetland tax		The process of evaluating the IUCN Red List status of species is open and participatory. For birds, for example, BirdLife (the Red List Authority) runs open-access web-based fora (www.birdlifeforums.org) where anyone can contribute information or comment on proposals to revise Red List evaluations for species, or suggest species whose categorisation requires review. Ramsar Parties are free to participate in that process.	The data for this indicator will be a subset of that used for the global Red List Indices. The RLI is based on assessments of extinction risk using the IUCN Categories and Criteria (IUCN 2001).
H: The proportion of candidate Ramsar sites designated so far		As indicated for indicator A, improvements in the availability of national wetland inventory information would make a significant contribution to the scope of implementation of this indicator.	Global datasets to be used include: remote sensing data and datasets identified for indicator A, the Ramsar Sites Information Service, and the World Database for Protected Areas.

3) Key recommendations for moving forward with implementation of the indicators

5. A number of specific recommendations on taking forward each of the Ramsar indicators is given in table 3 below.
6. Where possible, these steps will benefit from being closely allied to work being done to implement other relevant international indicator processes – including the 2010 Biodiversity Indicators, the Millennium Development Goals, and regional initiatives such as SEBI2010. Streamlining of indicator processes would enhance synergies between the initiatives and provide ease and economy of data collation and analysis. In some cases this streamlining will be relatively simple, where for example the Ramsar indicator is a ‘cut’ of a broader indicator (e.g., Ramsar indicator G is in effect a ‘wetland species cut’ of the Red List Index).

Table 3: Recommendations for taking forward the implementation of the Ramsar indicators

Indicator	Recommendations
A: The overall conservation status of wetlands	The main development requirement is for data collation. Specifically which datasets will be used and hence which wetland types the indicator can be used for.
B: The status of the ecological character of Ramsar sites	Criteria and guidance for the scoring system need to be developed based on the previously existing efforts, and further consultation about weightings and factors is needed.
C: Water quality <ul style="list-style-type: none"> • Trends in dissolved nitrate / nitrogen concentration 	Development of guidance on appropriate temporal and spatial aggregation of water quality data. Mobilisation of data from the water supply sector and linkage to data on population density, urbanisation, and Ramsar site distribution
<ul style="list-style-type: none"> • Trends in Biological Oxygen Demand (BOD) 	Development of guidance on appropriate temporal and spatial aggregation of water quality data. Mobilisation of data from the water supply sector and linkage to data on population density, urbanisation, and Ramsar site distribution. Development of additional subindicators, including trends in suspended sediments and occurrence of persistent organic pollutants (POPs) in surface water through reporting mechanisms under the Stockholm Convention, which will begin working in 2006. There appears to be a case for considering an amendment of this indicator to address “trends in dissolved oxygen” rather than BOD. This issue and the arguments for each alternative should be re-examined and a reasoned decision should be confirmed.
D: The frequency of threats affecting Ramsar sites	In the first instance it may only be possible for this indicator to show the absolute trend, but it should be developed further in due course in order to show whether threats are reducing relatively more than the trend for threats generally (e.g., in a country), and relatively more in relation to Ramsar sites than in relation to undesignated wetlands.
E: Wetland sites with successfully implemented conservation or wise use management plans	Criteria and guidance for the scoring system need to be developed based on existing efforts. Development of a harmonised approach that will enable the results of different management effectiveness assessments to be combined and compared, enabling datasets to be brought together for analysis. Including reassessed data sets in the analysis may enhance the indicator.

Indicator	Recommendations
F: Overall population trends of wetland taxa	Specification of precise types of analyses required from existing datasets; For waterbirds: Waterbird Population Estimates/the International Waterbird Census currently covers 33 families of waterbirds. Seabirds are not currently included, but it is planned to expand future WPEs to cover these, as well as wetland-dependent species in other families. Statistically valid trends, rather than 'best expert assessment', are likely to be possible for an increasing number of populations in the future. For other taxa: Possible future extension to subindicators for other taxa, e.g., amphibians; freshwater and marine turtles.
G: Changes in threat status of wetland taxa	The Red List Index methods are well developed. The main data requirement is to conduct reassessments of groups that have been comprehensively assessed (e.g., mammals, birds, amphibians, conifers, and cycads) and to try and expand the number of comprehensively assessed groups. Work is also required to develop methods to aggregate RLIs from different taxonomic groups assessed at different time points. This indicator may be enhanced in the future by (a) aggregating RLIs from different taxonomic groups; (b) incorporating additional comprehensively assessed taxonomic groups; and (c) expanding the implementation of the sampled approach by which a random sample of species are evaluated for the IUCN Red List from a set of taxa that are broadly representative of global biodiversity (with sufficient data it may be possible to disaggregate this to show trends in wetland species from the sample).
H: The proportion of candidate Ramsar sites designated so far	Spatial analysis methods are well developed. The main development requirement is for data collation, particularly of wetland extent for different types, as also required in Indicator A. Extent data can be obtained from national datasets and/or complemented by satellite images. This indicator may be enhanced in the future by including all wetland types and reassessed data sets in the analysis.

Annex A: Links with the National Report Form

Table A1 below indicates areas where there is thematic overlap between the National Report Form (NRF) questions and the RIEs, although it does not yet identify exact details of how they will feed in.

Table A1: Areas of thematic overlap between the RIEs and the NRF questions

Goal	Strategy	National Report Form questions	RIEs
1: Wise use of wetlands	1.1	Do you have information on the status and trends of the ecological character of wetlands (either Ramsar sites or wetlands generally)?	A: The overall conservation status of wetlands B: Status of the ecological character of Ramsar sites
	1.1	If you do have information on the status and trends of the ecological character of wetlands, does this information indicate that the need to address adverse change in the ecological character of wetlands is now greater, the same, or less than the previous triennium, for Ramsar sites and wetlands generally?	A: The overall conservation status of wetlands B: Status of the ecological character of Ramsar sites
	1.2	Has the quality and quantity of water available to, and required by, wetlands been assessed?	C: Water quality
	1.2	Have wetland issues been incorporated into national strategies for sustainable development?	E: Wetland sites with successfully implemented conservation or wise use management plans H: The proportion of candidate Ramsar sites designated so far
	1.2	Are wetland issues incorporated into water resources management and water efficiency plans?	C: Water quality E: Wetland sites with successfully implemented conservation or wise use management plans
	1.3	Have wise use wetland programmes and/or projects that contribute to poverty alleviation objectives and food and water security plans been developed?	E: Wetland sites with successfully implemented conservation or wise use management plans
	1.5	Have wetland restoration / rehabilitation programmes or projects been developed?	A: The overall conservation status of wetlands

Goal	Strategy	National Report Form questions	RIEs
	1.6	Are national policies, strategies, and management responses to threats from invasive species, particularly in wetlands, developed and implemented?	D: The frequency of threats affecting Ramsar sites
2: Wetlands of International Importance	2.3	Are the measures required to maintain the ecological character of Ramsar sites defined and applied?	B: The status of the ecological character of Ramsar sites
	2.3	Are cross-sectoral management committees established at Ramsar sites?	E: Wetland sites with successfully implemented conservation or wise use management plans
	2.3	Has any assessment of wetland site management effectiveness been carried out in the last triennium?	E: Wetland sites with successfully implemented conservation or wise use management plans
	2.4	Have changes or likely changes (both positive and negative) in ecological character of Ramsar sites been reported to the Ramsar Secretariat?	B: The status of the ecological character of Ramsar sites

Annex B: Linkages to 2010 biodiversity indicators and Millennium Development Goals

Several of the Ramsar subindicators have substantial linkages with the global biodiversity indicators being implemented under the 2010 Biodiversity Indicators Partnership. The indicators with the closest links to the 2010BIP indicators are A(i), C(i) and (ii), and G(i). There are also links between the global indicators and the Ramsar Indicators of Effectiveness (RIEs) D, E(i) and (ii), and F. The indicators without close links to the 2010BIP's global indicators are: A(ii) and B(i) (qualitative assessments of trends in conservation status of wetlands and Ramsar sites respectively), and H (proportion of Ramsar sites designated so far). The RIEs also have links with the indicators for the Millennium Development Goals, especially indicators 7.7 ("Proportion of species threatened with extinction") and 7.6 ("Proportion of terrestrial and marine areas protected"), which link to RIEs G(i) and H(i) respectively.

Table B1: Areas of overlap between RIEs and other indicator processes

RIE	2010BIP (Global)	SEBI2010 (Europe)	MDGs
A: The overall conservation status of wetlands (i) Status and trends in ecosystem extent (ii) Trends in conservation status of wetlands – qualitative assessment	➤ Trends in extent of selected biomes, ecosystems and habitats	➤ Trends in extent and composition of selected ecosystems in Europe ➤ Change in status of habitats of European interest	None
B: The status of the ecological character of Ramsar sites (i) Trends in conservation status of Ramsar sites – qualitative assessment	➤ Ecosystem integrity and ecosystem goods and services: connectivity / fragmentation of ecosystems	➤ Change in status of habitats of European interest ➤ Changes in patch size distribution of natural areas ➤ Status and trends in the fragmentation of river systems	None
C: Water quality (i) Trends in dissolved nitrate / nitrogen concentration (ii) Trends in Biological Oxygen Demand (BOD)	➤ Ecosystem integrity and ecosystem goods and services: water quality of freshwater ecosystems	➤ Nutrients in transitional, coastal, and marine ecosystems ➤ Water quality in freshwater	None

RIE	2010BIP (Global)	SEBI2010 (Europe)	MDGs
D: The frequency of threats affecting Ramsar sites (i) The frequency of threats affecting Ramsar sites – qualitative assessment	<ul style="list-style-type: none"> ➤ Trends in nitrogen deposition ➤ Trends in invasive alien species 	<ul style="list-style-type: none"> ➤ Critical load exceedance for nitrogen ➤ Alien and invasive alien species in Europe ➤ Impact of climate change on biodiversity: species abundance indicator 	None
E: Wetland sites with successfully implemented conservation or wise use management plans (i) Trends in management effectiveness in Ramsar sites (ii) Management effectiveness in Ramsar sites – distribution of scores	<ul style="list-style-type: none"> ➤ Protected areas management effectiveness 	<ul style="list-style-type: none"> ➤ N/a 	None
F: Overall population trends of wetland taxa (i) Status and trends of waterbird biogeographic populations	<ul style="list-style-type: none"> ➤ Trends in abundance and distribution of selected species 	<ul style="list-style-type: none"> ➤ Trends in abundance and distribution of selected species: European butterflies and common birds 	None
G: Changes in threat status of wetland taxa (i) Wetland Red List Index	<ul style="list-style-type: none"> ➤ Change in status of threatened species 	<ul style="list-style-type: none"> ➤ IUCN Red List for European Species ➤ Change in status of species of European interest 	<ul style="list-style-type: none"> ➤ MDG7: Ensure environmental sustainability 7.7 Proportion of species threatened with extinction and
H: The proportion of candidate Ramsar sites designated so far (i) Coverage of the wetland biodiversity resource by designated Ramsar sites	<ul style="list-style-type: none"> ➤ Coverage of protected areas and overlays with biodiversity ➤ Status of resource transfers: official development assistance in support of the Convention 	<ul style="list-style-type: none"> ➤ Trends in national establishment of protected areas ➤ Designated sites under the EU Habitats and Birds Directives ➤ Financing to biodiversity 	<ul style="list-style-type: none"> ➤ MDG7: Ensure environmental sustainability 7.6 Proportion of terrestrial and marine areas protected.

Annex C: Ramsar indicators – suggested Coordination Plan

Global oversight and support mechanisms

1. The Ramsar Indicators of Effectiveness (RIE) programme involves a sizeable suite of indicators that cover a broad range of topics and are being managed by institutions around the world. For the RIEs to be successful, it is essential that the work of these “Indicator Implementation Institutions” (IIIs) is sufficiently coordinated by the Ramsar Convention Secretariat itself, whilst allowing the IIIs to implement indicators that fulfil both their own mandate and that of Ramsar.

Management and support arrangements

2. The RIE programme should be managed by the Ramsar Convention Secretariat, with advice from the STRP, to ensure ongoing development of the indicators and timely delivery of results by IIIs.
3. The Secretariat will have responsibility for identifying and deciding on needs for any additional commissioned consultancy work during the process of implementing the RIEs and arranging for such work to be undertaken, such as the establishment of an indicator Coordination Unit.
4. The role of this Coordination Unit (CU) would be as follows:
 - a) to oversee the coordinated development and timely delivery of each indicator by relevant IIIs, and report on progress as appropriate to Ramsar Parties through the Standing Committee;
 - b) to act as the focal point of contact for IIIs with any questions or concerns regarding the RIE work or their relevant indicator(s), including acting as a support service for *ad hoc* technical troubleshooting and advice on the policy context for indicator delivery, as well as ensuring that clear decisions are taken and communicated as necessary on specific questions about methodological approach, etc.;
 - c) to act as the focal point of contact for all other parties with enquiries about the RIE work, and to respond to these enquiries as appropriate;
 - d) to produce a brief annual implementation plan on a continuing basis into the future, which for each year would signpost major result delivery milestones, any major workshops envisaged, the position on any service contracts, etc.
 - e) where necessary, to draw up contracts with partners for work to be carried out under the RIE project;
 - f) to establish intervals and deadlines for progress reports and other deliverables from partners;
 - g) where appropriate, to organise and attend meetings that enhance the coordinated delivery of the indicators, linkages between indicators, or linkages between the RIE work and related initiatives;
 - h) where appropriate, to work with possible donors to identify potential sources of funding for indicator-related activities;

- i) to communicate the Ramsar indicators and the results they produce to users and wider audiences, through the variety of formats identified in the “Proposals for indicator report products”; and
 - j) to arrange for contingency action (including negotiation of reassigned responsibilities) in the event that an III or distributed indicator team becomes unable to deliver its work, through loss of key individuals or other unforeseen changes in circumstances.
5. The role of the IIIs will include the following:
- a) development, implementation, and delivery of one or more indicators for monitoring the effectiveness of the Ramsar Convention for the conservation and wise use of wetlands;
 - b) compilation and production of indicator output materials, including publications and web-based products as appropriate, and timely delivery of results according to deadlines and targets set by the CU;
 - c) timely submission of progress reports to the CU, at intervals established and communicated at the onset of activities;
 - d) informing the CU of any changes to indicator development and implementation plans, changes in processes which feed in to the indicators (e.g., the Red List system or other external monitoring programmes) or any obstacles encountered;
 - e) attendance at meetings as appropriate;
 - f) ensuring and conducting consistent data collation and analysis (including data collection by collaborating organisations where appropriate), in accordance with the requirements of the relevant indicator(s) and the standards set by the CU;
 - g) collaboration with other IIIs, where appropriate, to ensure the streamlined implementation of the same or related indicators and coherence among the indicator set in general; and
 - h) fundraising as required to ensure successful and timely implementation and delivery of the indicator(s).

Liaison

6. Since many institutions are involved in the implementation of the RIE initiative, it is essential that there is good and frequent liaison between the Coordination Unit and the Indicator Implementation Institutions, and indeed among the IIIs themselves.
7. Mechanisms for successful liaison include:
 - a) regular (e.g., quarterly) e-mail updates from the CU to IIIs, including a summary of overall progress, any relevant meeting notifications, and links to Web pages where appropriate (e.g., those on related initiatives or links to IIIs’ publications, etc.);
 - b) annual or biannual meetings, where necessary and depending on availability of dedicated funds, bilaterally or all together or both, organised by the CU and attended by the IIIs and representatives of the Ramsar Convention Secretariat. Opportunities could be sought to link with the STRP’s calendar.

Synergising Outputs

8. Since the intention of the RIE work is that information on the effectiveness of the Convention should be available *inter alia* in time for Ramsar COPs, it is essential that IIIs work in synergy with one another, overseen by the CU, to ensure that indicator results are available for release in a timely fashion. This may provide a considerable challenge. Individual indicators' dates of delivery may vary according to the amount of development required, and in future there may also be other limiting factors such as data availability linked to the established cycles of relevant processes that generate it.
9. The CU can help to ensure synergy in the release of results and outputs by setting regular and frequent (e.g., quarterly or biannual) deadlines for the submission of indicator progress reports by IIIs, and following up promptly on any areas of concern regarding the timing of indicator delivery. Enhanced synergy between indicator development processes may also be obtained by the fostering of close relationships between IIIs working on similar or related indicators.
10. IIIs should adhere strictly to reporting deadlines set by the CU, and they should also be sure to report additional news and obstacles to the CU at other times as they arise.
11. Once progress reports and updated results have been submitted by IIIs, the CU can compile them and produce reports for presentation and distribution at COP and other relevant opportunities.
12. An account of the RIE work should be compiled as a case study of Convention implementation work, so that lessons learned and advances achieved can be broadcast to Ramsar audiences and other relevant audiences. This should ensure both that Ramsar's work in this area is fully recognised, and that it is fully capitalised upon as a learning experience.

Delivery timelines

13. A schedule of timelines for further development work, agreement milestones, links with meetings of other relevant international processes and reporting/collation/dissemination deadlines should be constructed. More detailed work plans will then fit in to this timing framework.

Annex D: Communication and dissemination

1. There is a need to produce and disseminate outputs that display the results of the Ramsar Indicators of Effectiveness (RIE) work to a wide range of users, as a mechanism for distributing information about both the effectiveness of the Convention and wetland conservation more broadly.
2. Target audiences for the RIEs include:
 - Contracting Parties of the Ramsar Convention (the key audience).
 - Ramsar experts / Scientific and Technical Review Panel.
 - Other biodiversity-related conventions (Secretariats and Parties), including CBD, CMS, UNCCD, etc.
 - Other indicator initiatives (global / regional), including the 2010 Biodiversity Indicators Partnership (2010BIP), SEBI2010, etc.
 - World Commission on Protected Areas (in particular regarding the indicator on management effectiveness of Ramsar sites).
 - Wetland and water resources managers.
 - Donors / funding agencies.
3. A number of options can be considered for the dissemination of the results of the RIEs. At a basic level there could be two categories of information for dissemination:
 - i) Information on Ramsar's indicator work, including reasons behind the work and methods. This would be aimed predominantly at the data community with a view to obtaining their support and input.
 - ii) Information on how effective Ramsar has been in conserving wetlands. This could take the form of a standard formal agenda paper for each COP (e.g., *Convention effectiveness report – update on Ramsar indicator findings for the triennium 20XX-20XX*).
4. For general outreach about the initiative, the best approach might be to develop a suite of communication tools, to help ensure that target audiences are reached by at least one of them. Some options for the components of this suite are as follows:
 - Hard-copy reports. There should be two editions of this (the second being an update of the first), which should be printed in time for and distributed at COP11 (2011) and COP12.
 - Electronic copy of these reports, uploaded onto the Ramsar Web site.
 - Factsheets on individual indicators or pairs/groups of indicators.
 - Leaflet containing summary and key messages.
 - CD-ROM containing electronic copies of all reports and factsheets – for ease of distribution and economy.
 - Pages on Ramsar Web site devoted to latest results from the indicators. These could be updated rather more often than the reports or factsheets, e.g., after any advances have been made.

5. The outputs and synthesis of the RIEs should be disseminated at Ramsar COPs and expert meetings, as well as in conjunction with other relevant conventions and indicator initiatives, for example at COPs of the Convention on Biological Diversity and meetings of the 2010 Biodiversity Indicators Partnership (2010BIP).
6. It is recommended that the main RIE reports (for publication in COP years) be given a similar style and format to the BirdLife publication *State of the World's Birds 2004*. However, the report should be published in portrait format (cf. landscape for *State of the World's Birds*) to enable easy storage. It is important to note that production of such publications is not cost-free, and therefore implementing this component of the indicators of effectiveness work will require resources.