

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

FOR OFFICE USE ONLY.

DD MM YY

--	--	--

Designation date

--	--	--	--	--	--

Site Reference Number

2. Date this sheet was completed/updated:

Designated: 01 December 1997

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

South Uist Machair and Lochs

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ;

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

57 18 50 N 07 20 00 W

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Benbecula

South Uist Machair and Lochs, which includes Lochs Druidibeg, a' Machair and Stilligarry, lies on the west coast of South Uist in the Outer Hebrides.

Administrative region: Western Isles / Na h-Eileanan an Iar

10. Elevation (average and/or max. & min.) (metres): **11. Area** (hectares): 5019.05

Min.	-1
Max.	38
Mean	6

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

South Uist Machair and Lochs Ramsar site is a complex site along the west coast of South Uist. This area is of outstanding importance for its transition of habitats from acidic moorland to the calcareous coastal plain, and for the transition from freshwater habitats to saltwater habitats. This complex includes outstanding examples of, moving seawards, relict woodland, moorland and blanket bog, large oligotrophic lochs, acidic blacklands, wet and dry machair with eutrophic machair lochs, freshwater marsh, saltmarsh, coastal dunes and sandy rocky shores. These areas are of outstanding importance for their populations of wintering and breeding waterfowl.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 2, 6

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

The site contains some of the finest examples of a continual gradient from marine to freshwater habitats and is of outstanding biological and geomorphological significance through containing the largest machair system in Britain.

Ramsar criterion 2

The site supports an assemblage of rare wetland plants and animals. The flora includes at least four Nationally Scarce vascular plants, slender naiad *Najas flexilis*, cowbane *Cicuta virosa*, slender-leaved pondweed *Potamogeton filiformis* and Baltic rush *Juncus balticus*. The fauna includes otter *Lutra lutra* and salmon *Salmo salar*.

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species regularly supported during the breeding season:

Ringed plover , *Charadrius hiaticula hiaticula*, 393 pairs, representing an average of 2.5% of the breeding in southern Scandinavia/Baltic, British Isles, N & E continental Europe; wintering in Europe, Med. & N Africa (Count as at 1995)

Dunlin , *Calidris alpina schinzii*, 382 pairs, representing an average of 3.5% of the breeding population (2000)
Baltic/UK/Ireland

Species with peak counts in winter:

Ringed plover , *Charadrius hiaticula*, 66 individuals, representing an average of 0.2% of the GB population (5 year peak mean 1998/9-2002/3)
Europe/Northwest Africa

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:
Atlantic

b) biogeographic regionalisation scheme (include reference citation):
Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	acidic, basic, shingle, sand, peat, nutrient-rich, nutrient-poor, metamorphic, gravel, pebble
Geomorphology and landscape	lowland, island, coastal, slope, crags/ledges, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), pools, intertidal rock

Nutrient status	eutrophic, mesotrophic, oligotrophic
pH	acidic, alkaline, circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Stornoway, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/stornoway.html) Max. daily temperature: 11.0° C Min. daily temperature: 5.6° C Days of air frost: 30.7 Rainfall: 1231.7 mm Hrs. of sunshine: 1216.8

General description of the Physical Features:

South Uist Machair and Lochs is a complex site of outstanding importance for its transition of habitats from acidic moorland to the calcareous coastal plain, and for the transition from freshwater to saltwater habitats. This complex includes outstanding examples of relict woodland, moorland and blanket bog, large oligotrophic lochs, acidic blacklands, wet and dry machair with eutrophic machair lochs, freshwater marsh, saltmarsh, coastal dunes and sandy and rocky shores.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

South Uist Machair and Lochs is a complex site of outstanding importance for its transition of habitats from acidic moorland to the calcareous coastal plain, and for the transition from freshwater to saltwater habitats. This complex includes outstanding examples of relict woodland, moorland and blanket bog, large oligotrophic lochs, acidic blacklands, wet and dry machair with eutrophic machair lochs, freshwater marsh, saltmarsh, coastal dunes and sandy and rocky shores.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

No special values known

19. Wetland types:

Inland wetland, Marine/coastal wetland

Code	Name	% Area
E	Sand / shingle shores (including dune systems)	34.8
Q	Saline / brackish lakes: permanent	14.9
U	Peatlands (including peat bogs swamps, fens)	13.4
Other	Other	12.8
O	Freshwater lakes: permanent	12
Tp	Freshwater marshes / pools: permanent	11.9
F	Estuarine waters	0.2

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

South Uist Machair & Lochs is a complex site along the west coast of South Uist, which is of outstanding importance for its transition of wetland habitats from blanket bog to calcareous coastal plain, and for the transition through freshwater to saltwater habitats. The site has outstanding examples of blanket bog, large oligotrophic lochs, acidic blacklands, wet and dry machair with machair lochs, freshwater marsh, saltmarsh, coastal dunes and sandy and rocky shores.

The machair areas include wet and dry machair, some of which is uncultivated. Together with the associated marsh, fen and eutrophic machair lochs the coastal plain supports a rich and diverse range of plant communities, including some locally or nationally scarce plants. The estuarine and brackish water habitats of the Howmore River, Loch Roag and the freshwater Loch Fada show one of the best examples of gradation from estuarine to freshwater habitats, along with associated gradation of flora and fauna, in Great Britain. Loch Bee is the largest brackish loch in the Western Isles and exhibits a gradation in salinity from freshwater to seawater. The coast, machair, lochs and blackland are of considerable ornithological importance for wintering and breeding birds.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Assemblage.

The site is internationally important because it supports the following Habitats Directive Annex I features:

- H1150 Coastal lagoons
- H1210 Annual vegetation of drift lines
- H2120 Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”)
- H2130 Fixed dunes with herbaceous vegetation (“grey dunes”)
- H2190 Humid dune slacks
- H21A0 Machairs
- H3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- H3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
- H3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.
- H3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation

Internationally important species occurring on the site:

- S1833 *Najas flexilis* Slender naiad (Habitats Directive Annex II species)

Nationally important species occurring on the site:

Higher Plants.

Potamogeton filiformis, *Cicuta virosa*, *Juncus baltica*

Lower Plants.

Chara spp.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Corn crake , <i>Crex crex</i> , Europe	15 individuals, representing an average of 2.5% of the GB population (5 year mean 1993-1997)
Little tern , <i>Sterna albifrons albifrons</i> , W Europe	24 apparently occupied nests, representing an average of 1.2% of the GB population (Seabird 2000 Census)

Species Information

Internationally important species occurring on the site.

S1355 *Lutra lutra* Otter (Habitats Directive Annex II species)

Nationally important species occurring on the site.

Invertebrates.

Bombus distinguendus, Lycia zonaria, Colletes floralis, Thanatophilus dispar

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Aesthetic
 Aquatic vegetation (e.g. reeds, willows, seaweed)
 Archaeological/historical site
 Environmental education/ interpretation
 Livestock grazing
 Non-consumptive recreation
 Scientific research
 Sport fishing
 Sport hunting
 Tourism
 Traditional cultural

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
National/Crown Estate	+	
Private	+	+
Public/communal	+	

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Collection of non-timber natural products: commercial	+	+
Collection of non-timber natural products: subsistence	+	+
Cutting of vegetation (small-scale/subsistence)	+	+
Fishing: commercial	+	+
Fishing: recreational/sport	+	
Shifting arable agriculture	+	
Rough or shifting grazing	+	+
Permanent pastoral agriculture	+	+
Hay meadows	+	+
Hunting: recreational/sport	+	
Sewage treatment/disposal	+	+
Mineral exploration (excl. hydrocarbons)	+	
Non-urbanised settlements	+	+
Military activities	+	

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?

Introduction/invasion of non-native animal species	1		+	+	+

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? YES

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
Special Protection Area (SPA)	+	
Site management statement/plan implemented	+	
Other	+	
Special Area of Conservation (SAC)	+	

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Fauna.

Research on effects of hedgehogs on breeding waders. Corncrake surveys (RSPB) annual.

Greylag goose breeding monitoring on Loch Druidibeg NNR.

Invertebrates: Survey of *Bombus distinguendus* in 1997 and ongoing.

Birds: Breeding wader surveys in 1983, 1993 and 2000, wintering wader survey 1994-95 and 2004. Various national British Trust for Ornithology surveys.

Flora.

Trial rabbit exclusion zones to gauge effects of grazing and burrowing on machair.

Freshwater vegetation surveyed in 1995. Machair vegetation surveyed 1995, 1988. Machair site condition monitoring (SCM) 2004. Lagoon SCM 2002.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There are interpretive panels, a reserve leaflet, and a limited number of guided walks for visitors and organised parties on the Loch Druidibeg NNR section of the site.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.

Land-based recreation:

Walking, including dog-walking, birdwatching and mammal watching occur, at a fairly low level, over much of the site, all year. The south-western corner of Loch Druidibeg has restricted access during the spring and summer, to reduce disturbance to breeding birds.

South Uist Estates shoot wildfowl over the part of the site they own. The season is from 1 September to 12 February inclusive.

Water-based recreation:

Shooting season 12 August-20 February.

Angling occurs from both shore and boat. Again this mainly occurs from April to September. It is restricted on Loch Druidibeg and no boats are allowed there.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Scottish Executive, Environment and Rural Affairs Department

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Scottish Natural Heritage, 2 Anderson Place, Edinburgh, EH6 5NP

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP, Davidson, NC & Buck, AL (eds.) (1997) *Coasts and seas of the United Kingdom. Regions 15 & 16. North-west Scotland: the Western Isles and west Highland*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

Booth, AB & Milne, F (1999) Western Isles corncrake habitat survey. (Contactor: Central Environmental Surveys.) *Scottish Natural Heritage Commissioned Report*, No. F99LC03

Boyd, JM (ed.) (1979) *The natural environment of the Outer Hebrides. Proceedings of the Royal Society of Edinburgh. Series B: Biological Sciences*, 77

Boyd, JM & Boyd, IL (1990) *The Hebrides. A natural history*. Collins, London (New Naturalist No. 76)

Bryan, A (1994) *The Minch review*. Scottish Natural Heritage, Stornoway

Connor, DW & Little, M (1998) Chapter 14. Outer Hebrides (MNCR Sector 14). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 371-383. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)

Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995-96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge

Dargie, TCD (1993) *Sand dune vegetation survey of Great Britain: a national inventory. Part II: Scotland*. Joint Nature Conservation Committee, Peterborough

Dargie, TCD (2000) Sand dune vegetation survey of Scotland: national report. *Scottish Natural Heritage, Commissioned Report*, No. F97AA401. www.snh.org.uk/pdfs/strategy/commreports/F97AA401.pdf

Ecology UK Ltd. (2005) North Uist Machair and Islands SPA and South Uist Machair and Lochs SPA: winter wader survey 2004. *Scottish Natural Heritage Commissioned Report*, No. 097 (ROAME No. F03LC05)

Johnston, R & Mudge, G (1996) *South Uist Machair & Lochs - Proposed SPA/RAMSAR Site (108A), Departmental brief*. Scottish Natural Heritage, Edinburgh (International Sites Series)

Johnston, R, Boyle, J & Quick, R (1995) *A survey of wintering waders on the west coast of the Uists in winter 1994-95*. Scottish Natural Heritage, Edinburgh (unpublished report)

Johnston, R, Murray, J & Shepherd, MA (1995) *Survey of breeding waders on Uist SSSIs*. Scottish Natural Heritage, Edinburgh

- May, VJ & Hansom, JD (eds.) (2003) *Coastal geomorphology of Great Britain*. Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 28)
- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough.
www.jncc.gov.uk/SACselection
- Ramsay, DL & Brampton, AH (2000) Coastal cells in Scotland: Cells 8 & 9 – The Western Isles. *Scottish Natural Heritage Research Survey and Monitoring Report*, No. 150
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Ritchie, W (1966) *The physiography of the machair of South Uist*. Unpublished PhD thesis, University of Glasgow
- Ritchie, W (1969) *The coastal geomorphology of North Uist*. University of Aberdeen, Department of Geography (O'Dell Memorial Monographs, No. 1)
- Ritchie, W (1971) *The beaches of Barra and the Uists. A survey of the beach, dune and machair areas of Barra, South Uist, North Uist and Berneray*. University of Aberdeen, Department of Geography, for Countryside Commission for Scotland, Perth. [Reprinted 2004 as *Scottish Natural Heritage Commissioned Report*, No. 047]
- Scottish Natural Heritage (199*) *Loch Druidibeg NNR Management Plan 1995-2000*. Scottish Natural Heritage South Uist Office, Stilligarry
- Scottish Natural Heritage (1998) *Machair*. Scottish Natural Heritage, Edinburgh (Scotland's Living Landscapes)
- Scottish Natural Heritage (2004) *Uist Wader Project webpages*. Scottish Natural Heritage, Edinburgh.
www.snh.org.uk/index/i-frame.htm
- Sullivan, C (1995) The carrion beetle *Thanatophilus dispar* at Loch Druidibeg NNR. *Scottish Natural Heritage Commissioned Report*, No. NW593 (unpublished report)
- Stewart, NF (2004) *Important stonewort areas. An assessment of the best areas for stoneworts in the United Kingdom*. Plantlife International, Salisbury
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.)
www.jncc.gov.uk/UKSPA/default.htm
- Thorpe, K, Dalkin, MJ, Fortune, F & Nichols, DM (1998) *Marine Nature Conservation Review Sector 14. Lagoons in the Outer Hebrides: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Weighell, AJ, Donnelly, AP & Calder, K (eds.) (2000) *Directory of the Celtic coasts and seas*. Joint Nature Conservation Committee, Peterborough

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: ramsar@ramsar.org