

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

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 and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
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:

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Designation date

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Site Reference Number

“The integrated waste management in Baalbek Caza – AID 9350: ”Italian Corporation/Ministry of Environment

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2. Date this sheet was completed/updated:

15/09/2011

3. Country:

Lebanon

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Deir el Nouriyeh cliffs of Ras Chekaa

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

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
b) 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

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
ii) the boundary has been extended ; or
iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or
ii) the area has been extended ; or
iii) the area has been reduced**

** **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:

Refer to Annex III of the *Explanatory Note 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) a hard copy (required for inclusion of site in the Ramsar List): ;
ii) an electronic format (e.g. a JPEG or ArcView image) ;
iii) a GIS file providing geo-referenced site boundary vectors and attribute tables .

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.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

34° 18' 40.25" N
35° 41' 30.57" E

9. General location:

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

Ras El Chekaa is located on the northern shore in the Province of Batroun, Republic of Lebanon. It constitutes the convent of Deir el Nouriyeh, the proposed reserve area, as well as the villages of Hajar and Hamat.

10. Elevation: (in metres: average and/or maximum & minimum)

208 m

11. Area: (in hectares)

Deir el Nouriyeh cliffs of Ras Chekaa covers an area of 700 ha

12. General overview of the site:

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

The cape of Ras Chekka is the first piece of scenically attractive coastline one meets on a journey north of Beirut. It contains a mosaic of woodland and olive groves, with an undisturbed maquis on the escarpments. Woodland and scrubland as a whole forms just 6 % of the land area in Lebanon, and 6-10 % of the Batroun district(UNEP, 1996) , indicating the rarity value of such landscapes.

This wetland serves two main purposes, one being economic (agriculture and fishing) and the other being religious and touristic (the convent of Deir El Nouriyeh).The marine and coastal ecosystems of Ras El Chekaa, a limestone headland, remain varied and diverse. It contains widespread and diverse marine species and fish communities. It also contains a unique turtle site, submarine springs sites, as well as important archaeological remains and coastal landscapes. In terms of biodiversity importance, the area is significant because of its position as a coastal headland on a significant Middle East bird migratory route, and the habitats it provides for migrating passerines.

13. Ramsar Criteria:

Tick the box under 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). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

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).

Criteria 2 : Deir el Nouriyeh cliffs of Ras Chekaa constitutes a nationally and regionally significant turtle nesting area. The species recorded are: Green Turtle (*Chelonia mydas*) and Loggerhead Turtle (*Caretta caretta*) are listed on CITES Appendix 1.

Criteria 4 : Deir el Nouriyeh cliffs of Ras Chekaa is a significant turtle nesting site.

Criteria 8 : Deir el Nouriyeh cliffs of Ras Chekaa is a spawning and nursery site for many fish species.

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:

Particularly Deir el Nouriyeh cliffs of Ras Chekaa is located along the coast, where summers are hot and humid. Temperatures may reach above 38°C in the daytime and below 16°C at night.

Deir el Nouriyeh cliffs of Ras Chekaa is a limestone headland, mainly cultivated with olive trees. Moreover, one of the main features is the presence of cliff maquis which is developed on the north side of the convent. The vegetation is dense, thus providing an open habitat for a number of herbaceous species. Towards the lower levels of the cliff maquis, bushes are shaped by the prevailing winds and salt spray, this is known as the *Thermophilus Quercus calliprinos* vegetation community (a Thermo-Mediterranean forest type).

In addition to the cliff maquis found in Deir el Nouriyeh cliffs of Ras Chekaa, there is an extensive area of evergreen oak woodland, with the presence of ferns and fungi flora.

b) biogeographic regionalisation scheme (include reference citation):

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.

Climate:

Lebanon has a Mediterranean climate, humid in the wet season and sub-tropical in the dry season. Along the coast, summers are hot and humid, with little or no rain. Heavy dews form, which are beneficial to agriculture. The daily range of temperature is not wide, although temperatures may reach above 38°C (100°F) in the daytime and below 16°C (61°F) at night. At night the wind direction is reversed, blowing from the land out to sea. The summers have a wider daily range of temperatures and less humidity.

Geology and geomorphology :

Deir el Nouriyeh cliffs of Ras Chekaa is a sequence of massive pale Miocene limestone capping a thick sequence of Late Cretaceous and early Tertiary pale chinks. The chinks are a soft, easily eroded unit and the whole headland is thus unstable and liable to slide even under normal conditions. The steepest cliffs are to be found on the north and west facing sides of Ras Chekaa. A relatively flat wedge of land is to be found on the western edge of the convent. The shoreline of Ras Chekaa is rocky and devoid of sand. A horizontal platform (c. 10 m wide at Hannouch) separates the supralittoral and infralittoral zones.

Hydrology :

The Chekaa area consists of important karst submarine springs; they are located between 25 and 1500m from the coastline. The presence of submarine freshwater springs off the coast at Ras Chekaa is thought to enhance the biodiversity of the waters. This group of submarine springs is the discharge area of the karst aquifer that takes place within the Cenomano-Turonian limestone (600 m thick).

17. Physical features of the catchment area:

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

The catchment area of the Chekaa submarine springs, called Chekka-Rachine catchment, covers an area of about 700 km². Its boundaries are in North the area of El Ayoun, western with the contact between Turonian limestone and Tertiary layers, and in South by the Nahr El Joz valley.

18. Hydrological values:

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

19. Wetland Types**a) presence:**

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

D – A – Zk – Y

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.

VEGETATION/HABITATS :

Cliff maquis: On the north side of the convent of Deir el Nouriyeh, the cliff maquis is best developed. The vegetation is dense on all but the least stable slopes, a few paths attached to the convent, and the ledge of the Ottoman road. This latter- area provides an open habitat for a number of herbaceous species that may otherwise have a much more restricted occurrence in the area . These include Cyclamen and Narcissus species. The shrubland is dominated by the evergreen oak with an average height of approximately 3m, but reaching 4 or 5m in some places . Other abundant shrubby species are the lentisc *Pistacia lentiscus*, spiny broom *Calycotome villosa*, Spanish broom *Spartium junceum* and *Poterium spinosum* . The carob *Ceratonia siliqua* is present but more scattered . At the lower levels the bushes are shaped by the prevailing winds and salt spray, with a streamlined and leafless seaward profile. This is the Thermophilous *Quercus calliprinos* vegetation community, a Thermo-Mediterranean forest type. The second type of this series is the Carob-Lentiscus series dominated by the lentisc . This is also represented in the region, forming a narrow coastal strip north of Batroun.

Woodland: Both on the top of Ras Chekaa and in the narrow valley running down from the village of Hamat are extensive areas of evergreen oak woodland. Belonging to the same vegetation formation described above, they differ in having a proper *Quercus calliprinos* tree canopy reaching heights of 6-10 m. The understory is open, with *Laurus nobilis* and *Ruscus aculeatus* amongst the shrubs present. There are ferns growing in the rocks, and an interesting fungi flora in the autumn. The reason for the oaks attaining maturity as trees and not shrubs is not certain, but may be the result of a combination of relative shelter

from the prevailing winds and a lack of goat grazing, which tends to create bushes rather than trees out of this species.

Olive orchards : The main agricultural activity of Ras Chekaa is olive growing, and the terraced groves have trees of old age and hold interest as low-intensity farming habitats. The ground is stony and tilled in most areas, in others with a better terra rossa soil which may be cultivated in places.

Deir el Nouriyeh cliffs of Ras Chekaa consists of terrestrial fauna and flora as well as marine fauna and flora.

The fauna consists of the following:

- Birds : 20 species
- Fish : more than 40 species
- Turtles : 2 species
- Benthonic macro fauna: recorded on the rocky sea bed
- Sponges: 2 species

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, 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.*

Terrestrial flora

In Deir el Nouriyeh cliffs of Ras Chekaa, the flora is poorly studied. However, studies revealed the presence of 24 species, though the true diversity will be considerably more. The plants are listed below:

Trees and shrubs :

Quercus calliprinos, Hypericum thymifolium, Pistacia lentiscus, Laurus nobilis, Ceratonia siliqua, Myrtus communis, Spartium junceum, Dittichia viscosa, Calycotome villosa, Ruta (graveolens), Asparagus acutifolius, Phillyrea media, Poterium spinosum, Cistus creticus, Stachys distans, Pistacia palaestina, Rhamnus punctata, Brtomus syriacus, Styrax officinalis, Cercis siliquastrum, Dryopteris libanotica, Philyria media, Smilax aspera, Rubia, peregrina, Asplenium adiantum, Asparagus acutifolius, Clematis cirrhosa, Hypericum serpyllifolium, Helichrysum sanguineum, Fumana thymifolia, Dactylis glomerata, and Lotus corniculatus .

Climbers :

Smilax aspera, Clematis cirrhosa, Rubia peregrina

Herbs :

Cyclamen sp, Bellis perennis, Urginea maritime, Crithmum maritimum, Ranunculus sp, Narcissus sp, Hyparrhenia hirta, Taraxacum sp, Hyparrhenia hirta, Andropogon distachyas

Marine Flora:

Algae:

Coralina elongata, Dictyosphaeria sp, Padina pavonica.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, 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 :

Deir el Nouriyeh cliffs of Ras Chekaa is an important area for migrating passerines. There are many species of existing birds in this wetland however, the most common species are the following: White Pelican *Pelecanus onocrotalus*, Red-rumped Swallow *Hirundo daurica*, House Martin *Delichon urbica*, Wren *Troglodytes troglodytes*, Blackbird *Turdus merula*.

Fish:

Deir el Nouriyeh cliffs of Ras Chekaa contains 16 different fish species where Damselfish and Bogue are the most abundant species. Commercial fish species appear in good abundance. Moreover, the fish community is characterized by predominance species consisting of mainly juvenile.

The species are the following :

Anguilla anguilla, *Arnoglossus laterna*, *Atherina (Heptisetia) boyeri*, *Balistes carolinensis*, *Boops boops*, *Dentex dentex*, *Dentex macropthalmus*, *Dicentrarchus labrax*, *Dicentrarchus punctatus*, *Diplodus annularis*, *Diplodus sargus sargus*, *Diplodus vulgaris*, *Epinephelus aeneus*, *Epinephelus guaza*, *Lichia amia*, *Lithognathus mormyrus*, *Liza aurata*, *Merluccius merluccius*, *Mugil cephalus*, *Mullus barbatus*, *Mullus surmuletus*, *Oblada melanura*, *Orcynopsis unicolor*, *Pagellus acarne*, *Pagellus erythrinus*, *Pagrus pagrus pagrus*, *Sarda Sarda*, *Sardina pilchardus*, *Sardinella aurata*, *Sarpa salpa*, *Scomber japonicus*, *Scomber scombrus*, *Seriola dumerili*, *Serranus cabrilla*, *Sparus aurata*, *Sphyraena sphyraena*, *Spondylisoma cantharus*, *Trachurus Mediterraneanus*, *Trachurus trachurus*, *Umbrina cirrosa*, *Xiphias gladius*.

23. Social and cultural values:

a) 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:

Agriculture:

The practiced agricultural activities in Deir el Nouriyeh cliffs of Ras Chekaa are the cultivation of olives and some arable cultivation on the property of the convent.

On the abandoned terraces of the convent, some grazing activities are practiced.

Tourism & religion:

Deir el Nouriyeh cliffs of Ras Chekaa is known to be a touristic site due to the presence of the monastery (convent) of Saidet El Nouriyeh. The story behind the monastery is fascinating and attracts visitors from all over Lebanon. The monastery of Saidet El Nouriyeh was built in year 300 AD by King Theodosius the Great after the figure of Virgin Mary appeared on him and saved his boat from drowning during a storm at sea. In 1911, a new monastery was built on the top of Chekaa to facilitate visits since the path leading to the old monastery was rugged and dangerous to visitors.

The original Ottoman road serves as a ledge of less than a kilometre where the French-built road which superseded, it cuts through a tunnel. The ledge makes an attractive walk with views down to the sea below and across the bay to the North. Along this road, many resorts are located where activities such as swimming take place.

Fishing:

Fishing activities are taking place, however there is no effective fishery management in the Chekaa area. Fishers throughout the area have noted a rapid decline in abundance of several fisheries species, and the disappearance of others. Besides, there is a large number of seasonal fishermen from other areas who have no knowledge of local fishing traditions that promote sustainability. This uncontrolled activity as

well as the lack of enforced management is leading to the erosion of the biodiversity, ecological integrity and fisheries wealth of the area.

Water springs:

In the Chekaa area, the presence of submarine freshwater springs off the coast at Ras Chekaa is thought to enhance the biodiversity of the waters.

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?

If Yes, tick the box and 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:

a) within the Ramsar site:

The cliffs of Ras El Chekaa as well as the agricultural area around the convent are a private property belonging to the convent of Saidet El Nouriyeh.

The marine part of the wetland is owned by the Lebanese government.

b) in the surrounding area:

The surrounding area of Ras El Chekaa are the convent of Saidet el Nouriyeh (private property including the proposed reserve area) and the villages of Ouajh El Hajar and Hamat (public and private property).

25. Current land (including water) use:

a) within the Ramsar site:

The main agricultural use of the cape is the cultivation of olives. Some arable cultivation is practised on the property of the convent .

b) in the surroundings/catchment:

Some agriculture and fishing activities exist in the area surrounding the convent.

A few small industries were present on the narrow coastal wedge to the west of the headland; the salt pans there were abandoned.

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

a) within the Ramsar site:

The impacts of human activities are damaging the site leading to consequent erosion of the beauty, biodiversity and fisheries wealth of the area. Further activities include:

- The construction of hotels and cafeterias within the area is damaging the beauty of the site and disturbing the ecosystem due to increased litter and no proper management.
- The combination of overfishing and unsustainable fishing methods are threatening the medium to long term sustainability of the local fishery, as well as the integrity of the ecosystem.

b) in the surrounding area:

- Pollution within the area of Ras El Chekaa region fall into three categories:
 - Factories: cement and chemical factories have a huge impact on the marine environment as well as the human health;
 - Litter: the very high density of litter at hotels is an indicator of the lack of organised waste disposal in the region;
 - Oil: originate entirely from ships.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

- Ramsar site (No.: 979)
- Wetland of International Importance by Ramsar (1999)

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

No management plan exists for Deir el Nouriyeh cliffs of Ras Chekaa.

d) Describe any other current management practices:

Not applicable.

28. Conservation measures proposed but not yet implemented:

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

Not applicable

29. Current scientific research and facilities:

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

Currently, a “Survey of the Proposed Marine Protected Area at Chekaa” is being executed within the activities of the IUCN/aecid project in collaboration with the Ministry of Environment entitled: “Supporting the Management of Important Marine Habitats and Species in Lebanon”.

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

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

31. Current recreation and tourism:

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

- Visitors that come to the convent
- All sea activities: swimming, fishing etc...

32. Jurisdiction:

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

Deir el Nouriyeh cliffs of Ras Chekaa is geographically located in the city of Batroun, North Lebanon.

Deir El Nouriyeh cliffs of Ras Chekaa is under the mandate of the Ministry of Environment – Service of Natural resources.

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.

The convent of Saidet El Nouriy

34. Bibliographical references:

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

- Draft preliminary result of the project entitled “Survey of the Proposed Marine Protected Area at Chekaa”.
- Old RIS
- Field visit to the site in 2011.

Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
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