



MAL008 - Is-Salini

Description

Is-Salini Special Area of Conservation (SAC) is found within Salini Bay, which is located on the northeast coast of Malta between Naxxar and St. Paul's Bay. Is-Salini is one of the last remaining salt marshes in the Maltese Islands. It is characterised by an estuary whereby sea water meets and mixes with rainwater originating from a complex of valley systems leading to Is-Salini. The Salini estuary is dynamic and dependent on the build-up of dead sea grass foliage. The consistent presence of freshwater makes this marshland unique to other similar habitats in the Maltese Islands and consequently the marshland supports several endemic species as well as a relatively large number of rare, endangered, and/or locally threatened species. It is the largest extant marshland in the Maltese Islands, though it used to be considerably larger before parts of it were reclaimed for health reasons, for salt harvesting, or for agriculture. Other parts of the site were later built over or afforested and turned into a recreational area (Kennedy Grove).

One of the major features in the area is the seventeenth century salt harvesting complex, which was built in the inner reaches of Salina Bay and is now flanked on all except the seaward side by the remnants of the original marshland, which has been restricted to a canal-like feature, known as Is-Sokkorsu.

The habitats of importance in this SAC (listed in the Habitats Directive under Annex I) include:

- Coastal lagoons (Habitat 1150*);
- Large shallow inlets and bays (Habitat 1160);
- Salicornia (Twiggy Glasswort) and other annuals (plants that complete their lifecycle within one year) colonising mud and sand (Habitat 1310);
- Mediterranean salt meadows (subject to flooding by sea water) (Habitat 1410);
- Mediterranean and thermo-Atlantic halophilous scrubs perennial vegetation of marine saline muds (Habitat 1420);
- Garrigue/phrygana dominated by the Shrubby Kidney Vetch and Wild Thyme (Habitat 5410); and
- Southern riparian galleries and thickets which are dominated by Tamarisk trees and Chaste trees growing along the valley watercourse (Habitat 93D0).

The salt marsh is highly diverse in habitat composition and it is often difficult to distinguish between the different habitat types. Despite the number of habitat types recorded, however, it should be noted that Salini has been subjected to continual significant disturbance, which has obliterated the character of the original communities.

Is-Salini was known to be the only or one of few remaining localities in the Maltese Islands for a number of plant species such as the Marsh Couch, Beaked Tassel Pondweed, Saltmarsh Bindweed, Slender sea hard-grass, and the Drooping Broomrape. It is also ecologically important for the fauna it supports. Most of these are typical of salt marsh areas and some have only been recorded at this site including molluscs, arthropods, moths and other invertebrates. The Tas-Sokkorsu canal is an important habitat for the brackish water native fish, the Killifish, an Annex II species (Habitats Directive).

Notably, is-Salini provides ideal habitat for migratory bird species. In addition, a small breeding population of the Reed Warbler makes use of the reed bed at this site.

A number of activities exert pressure on the ecology of the site. The site experienced significant negative effects with the development at Ta' Mattew as a result of which, the freshwater spring as well as garrigue habitat were lost. Other interventions in more recent years have included the dredging and removal of the sediment that had accumulated in the southern branch of the canal over the years. This action resulted in the removal of certain vegetation communities inside and along the banks of the canal. This would also have impacted on the blue carbon storage of the site.

Other pressures include impacts from agricultural runoff which is likely to be causing eutrophication of the watercourse as

well as potential contamination from pesticides. Issues related to site abandonment have also impacted the site including dumping, vandalism, disturbance to accessible areas such as the reed bed and the introduction of invasive and non-native plant species. Poaching and trapping also result in negative impacts.

General information

Basic information

Wetland location:	Marine/Coastal
Wetland type:	Artificial
Natural / Artificial:	Saline
Area (Ha):	14.10
Hydrological interaction with other wetland:	Yes - M.052/M.019/M.030/M.026/M.020
Water salinity:	Brackish (5.0-18.0 g/l)
Fresh water entry:	Catchment area (precipitation)
Surface water runoff:	Other
Open water area (%):	76 - 95
Hydroperiod:	Permanent

Geographic information

Census district:	Northern
Island:	Malta
Local council:	San Pawl Il-Bahar
Coordinates (WGS84):	14.422650 E - 35.946000 N

Biological significance

Biological significance:	High
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Ramsar wetland types

Ramsar type	Coverage (%)
5 -- Salt exploitation sites; salt pans, salines, etc.	

Property status

Public

Protection statuses & other designations

Protection status

Protection status category	Protection status subcategory	Site name	Code	Coverage (%)	Legislation
National	Area of Ecological Importance	Sigar f'Kennedy Grove, is-Salini, limiti ta' San Pawl il-Bahar u n-Naxxar	14777	22	Development Planning Act (Act VII of 2016)
National	Area of Ecological Importance/Site of Scientific Importance	Bur salmastru, Xaghri, Masgar u Steppa fis-Salini, limiti ta' San Pawl il-Bahar u n-Naxxar	194409	100	Development Planning Act (Act VII of 2016)
National	Bird Sanctuary	Il-madwar ta' Kennedy Grove u s-Salini	194412	100	Environment Protection Act (Act I of 2016)
International	Special Areas of Conservation - International Importance	Is-Salini	330719	99	Environment Protection Act (Act I of 2016)
International	Special Protection Areas	Il-Bahar ta' madwar Ghawdex	555589829	7	Environment Protection Act (Act I of 2016)
International	Transitional waters	Is-Salini	MT TW 01	100	Water Framework Directive

CDDA protection status

CDDA code	Category
MT01	Area of Ecological Importance
MT02	Area of Ecological Importance/Site of Scientific Importance
MT03	Bird Sanctuary
MT11	Special Areas of Conservation - International Importance
MT13	Special Protection Areas

Ecosystem Services, Activities & Impacts

Ecosystem Services

Type of Ecosystem service	Ecosystem service	Scale of Benefit	Importance
Cultural services	Cultural heritage		
Cultural services	Recreation and tourism		
Regulatory services	Erosion regulation		
Regulatory services	Flood hazard regulation		
Regulatory services	Storm hazard regulation		
Regulatory services	Water purification		
Supporting services	Nutrient cycling		
Supporting services	Provision of habitat		

Activities on wetland

Activities	Intensity
010 = Habitat conservation	High
020 = Resource conservation	High
030 = Species conservation	High
040 = Land restoration	High
161 = forest planting	Low
243 = trapping poisoning poaching	Low
340 = Salt works	High
610 = Interpretative centres	High
830 = Canalisation	High
910 = Silting up	High
952 = eutrophication	High

Activities on drainage basin

Activities	Intensity
010 = Habitat conservation	Low
020 = Resource conservation	Low
030 = Species conservation	Low
040 = Land restoration	Low
100 = Cultivation	High
110 = Use of pesticides	High
120 = Fertilisation	High
130 = Irrigation	High
161 = forest planting	Medium
220 = Leisure fishing	Low
243 = trapping poisoning poaching	Low
401 = continuous urbanisation	High
430 = Agricultural structures	Low
502 = roads motorways	High
710 = Noise nuisance	High
810 = Drainage	High

Impacts

Impact type	Intensity
FCP = Introduction of animal pests	
PS- = Sewage pollution	

Habitats & Vegetation

Habitat types

Habitat types	Coverage (%)
1150 * Coastal lagoons	76 - 95
1160 Large shallow inlets and bays	5 - 25
1310 Salicornia and other annuals colonizing mud and sand	5 - 25
1410 Mediterranean salt meadows (Juncetalia maritimi)	5 - 25
1420 Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	5 - 25
92D0 Southern riparian galleries and thickets (Nerio-Tamaricetea and Securinegion tinctoriae)	5 - 25

Vegetation types

Vegetation type	Coverage (%)
Ammophilous	
Emergent	
Halophytic	
Other	
Shrubby / Arborescent	
Submerged	
Wet meadow	

Species

Flora

Species	Dominance	Reference
Arthrocnemum macrostachyum		
Arundo donax		
Asparagus aphyllus		
Aster squamatus		
Atriplex prostrata		
Atriplex sp. indet,		
Avena sterilis		
Calystegia sepium		
Capparis orientalis		
Chenopodium album		
Cressa cretica		
Cynodon dactylon		
Elymus flaccidifolius		
Equisetum ramosissimum		
Hordeum leporinum		
Jacobaea crithmoides		
Juncus acutus		
Juncus subulatus		
Lolium spp.		
Lythrum junceum		
Melilotus messanensis		
Orobanche cernua		

Parapholis filiformis		
Phalaris minor		
Phragmites australis		
Polygonum aviculare		
Polypogon monspeliensis		
Populus alba		
Portulaca oleracea		
Potentilla reptans		
Ruppia maritima		
Salicornia ramosissima		
Salsola soda		
Suaeda maritime		
Suaeda vera		
Tamarix Africana		

Fauna

Mammals	Presence in wetland	References
Erinaceus algirus (Lereboullet, 1842)		
Myotis blythii (Tomes, 1857)		
Pipistrellus pipistrellus (Schreber, 1774)		
Plecotus austriacus (Fischer, 1829)		
Suncus etruscus (Savi, 1822)		

Birds	Population	Nesting status	References
Circus aeruginosus (Linnaeus, 1758)			
Pandion haliaetus (Linnaeus, 1758)			
Anas acuta (Linnaeus,1758)			
Anas clypeata (Linnaeus,1758)			
Anas crecca (Linnaeus, 1758)			
Anas penelope (Linnaeus, 1758)			
Anas platyrhynchos (Linnaeus, 1758)			
Anas querquedula (Linnaeus, 1758)			
Anas strepera (Linnaeus, 1758)			
Anser albifrons (Scopoli, 1769)			
Aythya ferina (Linnaeus, 1758)			
Aythya marila (Linnaeus, 1758)			
Aythya nyroca (Güldenstädt, 1770)			
Cygnus olor (Gmelin, 1789)			
Marmaronetta angustirostris (Ménétriés, 1832)			
Netta rufina			
Tadorna ferruginea (Linnaeus, 1764)			
Tadorna tadorna (Linnaeus, 1758)			
Apus affinus (JE Gray, 1830)			
Apus apus (Linnaeus, 1758)			
Apus pallidus (Shelley, 1870)			
Actitis hypoleucos (Linnaeus, 1758)			
Alca torda (Linnaeus, 1758)			
Alle alle (Linnaeus, 1758)			
Arenaria interpres (Linnaeus,1758)			
Calidris alba (Pallas, 1764)			
Calidris alpina (Linnaeus, 1758)			
Calidris canutus (Linnaeus, 1758)			
Calidris ferruginea (Pontoppidan, 1763)			
Calidris maritima (Brünnich, 1764)			
Calidris minuta (Leisler, 1812)			
Calidris temminckii (Leisler, 1812)			
Charadrius alexandrinus (Linnaeus, 1758)			
Charadrius dubius (Scopoli, 1786)			

Charadrius hiaticula (Linnaeus, 1758)		
Chlidonias niger (Linnaeus, 1758)		
Chlidonias hybrida (Pallas, 1811)		
Chroicocephalus genei (Linnaeus, 1766)		
Fratercula arctica (Linnaeus, 1758)		
Gallinago gallinago (Linnaeus, 1758)		
Gallinago media (Latham, 1787)		
Gelochelidon nilotica (Gmelin, 1789)		
Glareola pratincola (Linnaeus, 1766)		
Haematopus ostralegus (Linnaeus, 1758)		
Himantopus himantopus (Linnaeus, 1758)		
Larus fuscus (Linnaeus, 1758)		
Larus michahellis (Pallas, 1811)		
Larus minutus (Pallas, 1776)		
Larus ridibundus (Linnaeus, 1766)		
Limosa limosa (Linnaeus, 1758)		
Lymnocyptes minimus (Brünnich, 1764)		
Numenius arquata (Linnaeus, 1758)		
Numenius tenuirostris (Vieillot, 1817)		
Phalaropus lobatus (Linnaeus, 1758)		
Philomachus pugnax (Linnaeus, 1758)		
Pluvialis squatarola (Linnaeus, 1758)		
Recurvirostra avosetta (Linnaeus, 1758)		
Scolopax rusticola (Linnaeus, 1758)		
Sterna sandvicensis (Latham, 1787)		
Sternula albifrons (Pallas, 1764)		
Tringa erythropus (Pallas, 1764)		
Tringa glareola (Linnaeus, 1758)		
Tringa nebularia (Gunnerus, 1767)		
Tringa ochropus (Linnaeus, 1758)		
Tringa stagnatilis (Bechstein, 1803)		
Tringa totanus (Linnaeus, 1758)		
Vanellus vanellus (Linnaeus, 1758)		
Xenus cinereus (Güldenstädt, 1775)		
Ardea alba (Linnaeus, 1758)		
Ardea cinerea (Linnaeus, 1758)		
Ardea purpurea (Linnaeus, 1766)		
Ardeola ralloides (Scopoli, 1769)		
Botaurus stellaris (Linnaeus, 1758)		
Bubulcis ibis (Linnaeus, 1758)		
Bubulcis ibis (Linnaeus, 1758)		
Ixobrychus minutus (Linnaeus, 1766)		
Nycticorax nycticorax (Linnaeus, 1758)		
Platalea leucorodia (Linnaeus, 1758)		
Plegadis falcinellus (Linnaeus, 1766)		
Streptopelia decaocto (Fridvaldszky, 1838)		
Alcedo atthis (Linnaeus, 1758)		
Merops apiaster (Linnaeus, 1758)		
Upupa epops (Linnaeus, 1758)		
Cuculus canorus (Linnaeus, 1758)		
Coturnix coturnix (Linnaeus, 1758)		
Fulica atra (Linnaeus, 1758)		
Gallinula chloropus (Linnaeus, 1758)		
Porphyryla martinica (Linnaeus, 1756)		
Porzana parva (Scopoli, 1769)		
Porzana porzana (Linnaeus, 1766)		
Porzana pusilla (Pallas, 1776)		
Rallus aquaticus (Linnaeus, 1758)		

Acrocephalus arundinaceus (Linnaeus, 1758)		
Acrocephalus melanopogon (Temminck, 1823)		
Acrocephalus schoenobaenus (Linnaeus, 1758)		
Acrocephalus scirpaceus (Hermann, 1804)		
Acrocephalus scirpaceus (Hermann, 1804)		
Anthus campestris (Linnaeus, 1758)		
Anthus cervinus (Pallas, 1811)		
Anthus novaseelandiae (Gmelin, 1789)		
Anthus pratensis (Linnaeus, 1758)		
Anthus trivialis (Linnaeus, 1758)		
Cecropis daurica (Laxman, 1769)		
Cettia cetti (Temminck, 1820)		
Cisticola juncidis (Rafinesque, 1810)		
Delichon urbicum (Linnaeus, 1758)		
Emberiza calandra (Linnaeus, 1758)		
Emberiza schoeniclus (Linnaeus, 1758)		
Erithacus rubecula (Linnaeus, 1758)		
Ficedula albicollis (Temminck, 1815)		
Ficedula hypoleuca (Pallas, 1764)		
Ficedula parva (Bechstein, 1792)		
Hippolais icterina (Vieillot, 1817)		
Hirundo rustica (Linnaeus, 1758)		
Lullula arborea (Linnaeus, 1758)		
Luscinia megarhynchos (C.LinnaeusBrehm, 1831)		
Luscinia svecica (Linnaeus, 1758)		
Motacilla alba (Linnaeus, 1758)		
Motacilla cinerea (Tunstall, 1771)		
Motacilla flava (Linnaeus, 1758)		
Muscicapa striata (Pallas, 1764)		
Oenanthe hispanica (Linnaeus, 1758)		
Oenanthe oenanthe (Linnaeus, 1758)		
Oriolus oriolus (Linnaeus, 1758)		
Passer hispaniolensis (Temminck, 1820)		
Phoenicurus ochruros (S.G. Gmelin, 1774)		
Phoenicurus phoenicurus (Linnaeus, 1758)		
Phylloscopus bonelli (Vieillot, 1819)		
Phylloscopus collybita (Vieillot, 1817)		
Phylloscopus sibilatrix (Bechstein, 1793)		
Phylloscopus trochilus (Linnaeus, 1758)		
Prunella modularis (Linnaeus, 1758)		
Remiz pendulinus (Linnaeus, 1758)		
Riparia riparia (Linnaeus, 1758)		
Saxicola rubetra (Linnaeus, 1758)		
Saxicola torquatus (Linnaeus, 1766)		
Sturnus vulgaris (Linnaeus, 1758)		
Sylvia atricapilla (Linnaeus, 1758)		
Sylvia borin (Boddaert, 1783)		
Sylvia cantillans (Pallas, 1764)		
Sylvia communis (Latham, 1787)		
Sylvia melanocephala (J.F. Gmelin, 1789)		
Turdus iliacus (Linnaeus, 1766)		
Turdus philomelos (C.LinnaeusBrehm, 1831)		
Phalacrocorax aristotelis (Linnaeus, 1758)		
Phalacrocorax carbo (Linnaeus, 1758)		
Phoenicopterus roseus (Pallas, 1811)		
Jynx torquilla (Linnaeus, 1758)		
Podiceps cristatus (Linnaeus, 1758)		
Podiceps nigricollis (C.Linnaeus Brehm, 1831)		

Tachybaptus ruficollis (Pallas, 1764)		
Calonectris diomedea (Scopoli, 1769)		
Hydrobates pelagicus (Linnaeus, 1758)		
Puffinus mauretanicus (Lowe, 1921)		
Puffinus yelkouan (Acerbi, 1827)		
Asio flammeus (Pontopiddan, 1763)		
Otus scops (Linnaeus, 1758)		

Reptiles	Presence in wetland	References
Chalcides ocellatus (Forskal, 1775)		
Chamaeleo chamaeleon (Linnaeus, 1758)		
Coluber viridiflavus carbonarius (Bonaparte, 1833)		
Hemidactylus turcicus (Arnold, 1980)		
Podarcis filfolensis maltensis (Mertens, 1921)		
Tarentola mauritanica (Linnaeus, 1758)		
Zamenis situla (Linnaeus, 1758)		

Amphibians	Presence in wetland	References
Discoglossus pictus (Otth, 1837)		

Fishes	Presence in wetland	References
Aphanius fasciatus (Valenciennes, 1821)		

Invertebrates	Presence in wetland	References
Pisaura maderiana (Kulczyński, 1895)		
Neaetha membroso (Simon, 1868)		
Tetragnatha extensa (Linnaeus, 1758)		
Cyclodinus constrictus (Curtis, 1838)		
Cyclodinus humilis (Germar, 1824)		
Acupalpus elegans (Dejean, 1829)		
Anisodactylus virens winthemi (Dejean, 1829)		
Pogonus chalceus (Marsham, 1802)		
Achenium striatum (Latreille, 1804)		
Brachygluta globulicollis aubei		
Anisolabis maritima (Bonelli, 1832)		
Labidura riparia (Pallas, 1773)		
Nemotelus anchora (Loew, 1846)		
Ligyrocoris spp.		
Mesostenus grammicus (Gravenhorst, 1829)		
Eumenes dubius (Saussure, 1852)		
Oecogonia delluccai		
Megacraspedus lativalvellus (Amsel, 1954)		
Agdistis melitensis (Amsel, 1954)		
Apatema fasciata melitensis (Stainton, 1859)		
Symmoca melitensis (Amsel, 1954)		
Orthetrum brunneum (Fonscolombe, 1837)		
Gammarus aequicauda (Martynov, 1931)		
Heleobia (Semisalsa) stagnorum (Gmelin, 1791)		
Hydrobia acuta (Draparnaud, 1805)		
Hydrobia ventrosa (Montagu, 1803)		
Tudorella melitensis (G.B. Sowerby II, 1843)		
Melanoides tuberculata (O. F. Müller, 1774)		
Trochoidea spratti (L. Pfeiffer, 1846)		
Muticaria macrostoma (Cantraine, 1835)		

References

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Representative Image & Map



