

Ramsar Sites Information Service

Annotated List of Wetlands of International Importance

38 Ramsar Site(s) covering 296,708 ha

Cap Ghir-Imsouane

Site number: 2373 | Country: Morocco | Administrative region: Région Souss-Massa Area: 6,800 ha | Coordinates: 30°42'33"N 09°50'19"W | Designation dates: 16-04-2019

View Site details in RSIS

The Site comprises a coastal strip at the foot of the High Atlas mountain range, with two areas of biological and ecological interest: Cape Ghir and Tamri. It covers a wide range of marine, estuarine and terrestrial habitats influenced by the Atlantic Ocean and also the Mediterranean Sea and the Sahara, with an exceptionally rich biodiversity and a high rate of endemism. The wetland lies on the East Atlantic flyway, and provides a nesting and wintering site for many migrant Palearctic birds. The globally endangered northern bald ibis (*Geronticus eremita*) nests there, and more than 20% of its global population is divided between this Site and the National Park of Souss-Massa. At least four species endemic to the Maghreb are also well represented. The Site hosts at least 40 reptile and amphibian species, including about ten endemic west Saharan species including the toad *Bufo brongersmai* and the gecko *Quedenfeldtia moerens*. Many of the plants are endemic, and the rate of endemism exceeds 30% in some of the terrestrial habitats (coastal cliffs, euphorbia and argan formations). Drought, the main threat, leads to scarcity of food and water resources. The Site is located in the coastal zone of the Arganeraie Biosphere Reserve, and in addition to its conservation importance, it has educational and ecotourism potential.

Haut Oued Lakhdar

Site number: 2372 | Country: Morocco | Administrative region: Région de Beni Mellal-Khénifra (Province d'Azilal)

Area: 2,200 ha | Coordinates: 31°39'29"N 06°26'15"W | Designation dates: 16-04-2019

View Site details in RSIS

The Site includes Aït Bou Guemmaz and Aït Boualli Aifsir, two upper tributaries of the Lakhdar wadi on the northern slopes of the Central High Atlas, at or above 1,350 metres in altitude. It includes the main streams of the wadis and their springs, as well as the steep valley sides covered with forest or pre-forest vegetation. It is one of the rare permanent mountain river ecosystems in North Africa that is still in a natural or semi-natural state. The sustained water flow in summer makes the Site a biodiversity and conservation hotspot, with many species endemic to the local area or to North Africa. The valleys are marked by manually irrigated orchards and fields of cereals which rise to the upper limit of permanent water. The Site is rich with fish, reptiles, and mammals; there are endemic species such as the Atlas dwarf viper (*Vipera monticola*) and threatened species such as the globally vulnerable Atlas barbel (*Luciobarbus ksibi*) and the endangered Barbary macaque (*Macaca sylvanus*). The local communities have built up traditional knowledge related to water management and agro-pastoral practices. Various stakeholders manage the Site and its flood zones. It is also a Site of Biological and Ecological Interest, and almost the whole Site is integrated into the M'Goun UNESCO Global Geopark.

Littoral de Jbel Moussa

Site number: 2381 | Country: Morocco | Administrative region: Tanger-Tétouan-Al Hoceima

Area: 500 ha | Coordinates: 35°54'37"N 05°26'W | Designation dates: 16-04-2019

View Site details in RSIS

The Site consists of a stretch of coastline with two mountains separated by a valley (Oued El Marsa) on the southern shore of the Strait of Gibraltar, where the Atlantic meets the Mediterranean. The wetland's marine and coastal cliff ecosystems are rich in fauna (at least 175 taxa) and flora. It is an important area for the passage of sea turtles, birds (raptors and passerines) and mammals, and as a spawning ground for several fish species. It is home to some 24 rare or notable fish, and threatened species of anthozoa such as *Corallium rubrum* or *Ellisella paraplexauroides*. Notable terrestrial mammals include the endangered Barbary macaque (*Macaca sylvanus*). Subjected to strong winds, the cliffs are sparsely vegetated, by plants including endemics such as *Stauracanthus boivinii* and *Rupicapnos africana*. The coastline also has great landscape value, and cultural value in the agglomeration of Belyounech, which still retains vestiges of a prosperous medieval town. The Site is also a UNESCO Biosphere Reserve.

Assif Mgoun

Site number: 2376 | Country: Morocco | Administrative region: Région de Drâa-Tafilalet Area: 1,400 ha | Coordinates: 31°33'21"N 06°13'51"W | Designation dates: 16-04-2019 View Site details in RSIS

The Mgoun river in the High Atlas is a tributary of Oued Dr'a, the largest river to emerge from the mountain range's southern slope. The Site consists of the permanent central stretch of the river and its temporary upstream extension, as well as four small permanent tributaries. Its diverse habitats, at the southern limit of the Palearctic ecozone, support a rich biodiversity and many endemic species. It hosts more than 100 species of aquatic arthropod, including ten endemic species; and rare or endemic vertebrates including three fish species, one reptile, one bird and three mammals. The hydrologically-stable high-altitude cold springs and brooks provide ideal conditions for the reproduction of endemic fish such as Draa trout (*Salmo multipunctata*) and Draa barbel (*Luciobarbus lepineyi*) and about 20 aquatic or semi-aquatic plant species. The riverbank vegetation is composed of water plants such as buttercups, Phragmites and Typha, and trees and shrubs such as laurel, tamarisk and willow. This vegetation and the neighbouring orchards and cliffs attract some 40 bird species, of which about 15 breed there. The traditional irrigation practices of local communities add social and cultural values to this wetland and enhance hydrological processes. The Site is part of a large mountainous territory that has received the UNESCO Geopark status.

Assifs Ahançal-Melloul

Site number: 2378 | Country: Morocco | Administrative region: Région de Beni Mellal-Khénifra (Province

d'Azilal)

Area: 1,385 ha | Coordinates: 31°59'55"N 06°07'54"W | Designation dates: 22-05-2019

View Site details in RSIS

The Site comprises the rivers (wadis) of Ahançal and Melloul, between 800 and 2,000 metres altitude in the the Central High Altas. The wadis have dug very deep valleys, overlooked by mountains of up to 4,000 metres in height. The Ramsar Site follows the course of these wadis and the adjacent rocky escarpments covered by forest or scrub. Beyond lie flatter orchards and fields, irrigated in a traditional way. The rivers are fed by several temporary tributaries and spring waters, and snowmelt in early spring, and so enjoy permanent flow which is relatively unaffected by droughts or hydraulic developments. The Site is thus one of the few remaining nearnatural free-flowing mountain river ecosystems in the Maghreb. It contributes to the preservation of at least two endemic or threatened species, the Atlas barbel (*Luciobarbus ksibi*) and the Barbary macaque (*Macaca sylvanus*). The Site also hosts wintering ground birds such as the meadow pipit (*Anthus pratensis*). In addition to their ecological value, these habitats offer landscapes of great rarity in North Africa. Local communities have developed traditional knowledge related to the management of this wetland. The wadis are slightly impacted by livestock watering; other human activities, such as agriculture, tourism, and fisheries, could affect the ecological character of the Site. A development and management plan, which includes some conservation measures, is being implemented.

Lagune et barrage de Smir

Site number: 2380 | Country: Morocco | Administrative region: Région de Tanger-Tétouan-Al Hoceima Area: 837 ha | Coordinates: 35°41'48"N 05°22'02"W | Designation dates: 22-05-2019 View Site details in RSIS

The Site consists of a coastal marshy lagoon on the small coastal alluvial plain of the Smir wadi (river), and a reservoir less than ten kilometres upstream. The lagoon is a Mediterranean estuarine ecosystem, which is rare in Morocco. The Site is home to diverse plant and animal life, as evidenced by the presence of 13 algal species and nearly 90 vascular plants and some 165 vertebrate species, including eight amphibians, 22 reptiles, 35 mammals and about 100 migratory waterbirds. There are threatened species such as the common pochard (*Aythya ferina*) and the North African fire salamander (*Salamandra algira*). The Site lies on the East Atlantic flyway, and is a key stop for about 60 species of Western Palearctic waterbirds during their passage and also over the winter. Its three main wetland types (marine and coastal, continental and human-made) provide a wide range of ecosystem services for surrounding populations. Despite the few threats to its ecological character, measures are being implemented to improve water quality and monitor birds.

Lacs d'Imouzzer du Kandar

Site number: 2374 | Country: Morocco | Administrative region: Province administrative : Province d'Ifrane

Centre administratif proche : Imouzzer du Kandar, Commune de Dayet 'Awwa

Area: 512 ha | Coordinates: 33°35'23"N 04°59'02"W | Designation dates: 16-04-2019

View Site details in RSIS

This Site consists of three karst lakes, 'Awwa, Ifrah and Hachlaf, near the town of Imouzzer Kandar in the Middle Atlas. They are among the most southerly lakes of the Western Palearctic ecozone. They combine a wide range of habitats which support a great diversity of flora and fauna. The 50 or more bird species include 33 wintering waterbirds, some of them threatened including the common pochard (*Aythya ferina*) and the white-headed duck (*Oxyura leucocephala*). The wetland is a particularly important wintering place for this latter species, which finds refuge in these lakes when its other breeding sites on the plain of Saïss are insufficiently submerged. A forest cover dominated by Atlas cedar (*Cedrus atlantica*) and holm oak (*Quercus rotundifolia*) protects against soil erosion. The lakes replenish and are fed by the underlying aquifer, although these exchanges have declined due to droughts over the last three decades. Site management lies with different authorities depending on ownership status and the type of resource (forest area, marine area). A management plan is being prepared as of 2019. A cultural festival promotes the traditional values of the Site and the surrounding region.

Côte Aftissate-Boujdour

Site number: 2377 | Country: Morocco | Administrative region: Laâyoune-Sakia El Hamra (Province de Boujdour, Commune de Jraifia)

Area: 11,700 ha | Coordinates: 25°48'10"N 14°35'59"W | Designation dates: 16-04-2019

View Site details in RSIS

The Site covers some 50 kilometres of coastline to the south of the town of Boujdour. A 70-metre-high sea cliff overlooks a continuous low-lying furrow separated from the ocean by a beach and mobile dunes. It is at the southern limit of the Palearctic ecozone, while coastal upwelling shapes its hydrological and sedimentary dynamics, its productivity and its climate. The wetland provides a stopover point for Palearctic seabirds, waders and land migrants, especially passerines. In winter, species such as the lesser black-backed gull (*Larus fuscus*) are present in populations greater than 1% of their biogeographic populations. The dry areas of the Site, strongly influenced by the ocean, are home to several endemic and rare species such as the endemic gecko *Saurodactylus brosseti*. The Site features relatively densely-vegetated steppes featuring endemic or rare plant species including *Anacyclus maroccanus*, *Bupleurum dumosum* and *Pallenis teknensis*. The Site's marine resources provide sustainable income for the local communities; conservation measures are proposed to minimize the potential threats and also to ensure local livelihoods.

Oued Assaquia Al Hamra à La'youne

Site number: 2382 | Country: Morocco | Administrative region: La'youne-Assaqia Al Hamra Area: 9,500 ha | Coordinates: 27°08'07"N 13°12'27"W | Designation dates: 16-04-2019 View Site details in RSIS

The Site covers the entire lower valley of Assaqia Al Hamra; it consists of four large areas, including a swamp and an estuary. A sandy dam keeps the wetland particularly close to its natural character, as it helps to recharge the aquifer of the Foum El Wad. The Site plays an important role in the life cycle of Western Palearctic water birds, as a migratory stopover and wintering area. It hosts threatened water birds such as the marbled teal (*Marmaronetta angustirostris*) and the common pochard (*Aythya ferina*). The wetland hosts up to 25 or more species of water birds in all, which often number a few thousand individuals; their number approached 15,000 in 2014 and exceeded 20,000 wintering individuals in 2008. The Site includes the three main Ramsar wetland types (marine and coastal, inland and human-made) and provides a wide range of ecosystem services for nature and surrounding populations. In addition to its ornithological importance, the Site hosts scientific and educational activities as well as leisure and tourism. It does not have a management plan; however bird species are monitored.

Assifs Réghaya-Aït Mizane

Site number: 2371 | Country: Morocco | Administrative region: Région Marrakech Area: 830 ha | Coordinates: 31°09'39"N 07°56'15"W | Designation dates: 16-04-2019

View Site details in RSIS

The Site is located on the northern slope of Jbel Toubkal, the highest mountain in North Africa. It includes a permanent river, Oued Réghaya, and further upstream a fresh and fast-flowing mountain stream, Assif n'Aît Mizane, each classified among the Sites of Biological and Ecological Interest of Morocco. The land cover varies as it descends, from woody steppe on mountain schist to a dense forest and Mediterranean shrublands overlooking the lower stretch. The rocky course of the river features water- and riverbank plants, innumerable cultivated terraces and orchards. This permanent river ecosystem, very rare in North Africa, is rich in wildlife. There are at least 42 aquatic or semi-aquatic plant species; 70 aquatic invertebrates, of which at least 20 are endemic to the locality; 90 species of riparian invertebrates, and at least 15 species of regionally rare vertebrates, such as the endemic threatened fish *Luciobarbus issenensis*. The social and cultural importance of the Site relates to local practices including a traditional irrigation management model. The Site is threatened by the presence of invasive species as well as by water abstraction and recreational and tourism activities. A monitoring plan is proposed for water quality, birds and other animal species.

Côte des Bokkoyas

Site number: 2379 | Country: Morocco | Administrative region: Région de Tanger-Tetouan-Al Hoceima,

Province d'Al Hoceima

Area: 5,530 ha | Coordinates: 35°12'36"N 04°07'29"W | Designation dates: 16-04-2019

View Site details in RSIS

The Site, located on the Mediterranean at the Eastern end of the central Rif mountain range, is composed of a long series of sea cliffs interrupted by valleys, and the adjacent marine waters. In an arid region, the cliffs are home to a fairly well-preserved rock plant community rich in endemic, rare and threatened species. The shallow and clear coastal waters are very conducive to the development of coral reefs; this coastline is known for its red coral (*Corallium rubrum*). It is also home to rare invertebrate species including anthozoa, echinoderms, molluscs and crustaceans. Côte des Bokkoyas also hosts populations of breeding birds such as osprey (*Pandion haliaetus*), whose colony is one of the largest in the Mediterranean with a dozen pairs. The Ramsar Site shelters a large number of threatened species, both terrestrial and marine, such as the dusky grouper *Epinephelus marginatus* and the loggerhead turtle *Caretta caretta*. With its ecological value, the Bokkoyas massif was classified as a National Park (Al Hoceima National Park), including the coastal marine margin. The Site has a management plan and a monitoring plan for animal and plant communities.

Merja de Fouwarate

Site number: 2324 | Country: Morocco | Administrative region: Région Rabat-Salé-Kénitra Area: 460 ha | Coordinates: 34°15'53"N 06°32'34"W | Designation dates: 12-01-2018 View Site details in RSIS

This shallow swamp on the northeastern edge of Kénitra is the last remnant of a once-extensive wetland in the Gharb plain. It lies at the outlet of Oued Fouwarate, a tributary of the lower Oued Sebou, and serves as a vital year-round habitat for waterbirds. Over 60 species use the site for nesting, stopovers, and wintering, with populations exceeding 20,000 during migration and winter months. Several rare and threatened species contribute to its high conservation value, including the white-headed duck (*Oxyura leucocephala*), marbled teal (*Marmaronetta angustirostris*), ferruginous duck (*Aythya nyroca*), red-knobbed coot (*Fulica cristata*), and Eurasian curlew (*Numenius arquata*). In the 1990s, the site was nearly dry and severely degraded, but hydrological improvements in the early 2000s restored aquatic vegetation, which now covers up to 30% of the area and provides essential nesting habitat. Scattered tamarisk, acacia, and eucalyptus trees further enhance the Site's biodiversity. Despite its rich biodiversity, the marsh lacks strong legal protection beyond its designation as a Site of Biological and Ecological Interest. Its peri-urban location makes it vulnerable to habitat loss from drainage, filling, urban expansion, and pollution. However, it has potential for environmental education and sustainable tourism, which could support conservation efforts.

Barrage Mohammed V

Site number: 1472 | Country: Morocco | Administrative region: Nador Area: 5,000 ha | Coordinates: 34°37'07"N 02°57'05"W | Designation dates: 15-01-2005 View Site details in RSIS

Barrage Mohammed V. 15/01/05; Nador; 5,000 ha; 34°41'N 002°57'W. Site of Biological and Ecological Interest. The site consists of a reservoir from a dam that was built in 1967 on the Moulouya River, situated in an arid valley with several gorges, where the most common plant type is tamarisk, while on the upstream side eucalyptus abounds. The site constitutes an important refuge area for waterfowl in both summer, when members of Fulica atra and Tadorna casarca nest in the area, and winter, when 40 species frequent the site, with an average of more than 25,000 individuals. The reservoir also hosts the east Moroccan endemic barb, Barbus moulouyensis. The site provides the city of Nadur with potable water and allows the irrigation of 60,000 ha of land in the areas of Bou Areg and Triffa. The dam also contributes to hydropower generation and is a fishing site. No significant factors threaten the site. Ramsar site no. 1472. Most recent RIS information: 2005.

Moyenne Dr'a

Site number: 1482 | Country: Morocco | Administrative region: Ouarzazate Area: 45,000 ha | Coordinates: 30°20'28"N 05°52'15"W | Designation dates: 15-01-2005 View Site details in RSIS

Moyenne Dr'a. 15/01/05; Ouarzazate, Zagora; 45,000 ha, 30°29'N 006°21'W. Site of Biological and Ecological Interest, Permanent Hunting Reserve. The site is composed of six units within two artificial habitats: the reservoir of the AI Mansour Ad-Dahbi dam, situated just downstream of the confluence of two rivers, and six oases with irrigated palm plantations along the course of the Dr'a River. More than 20 bird species winter or nest in the area of the dam, while about 100 other bird species rely on the oases' palm plantations. The site is an important refuge for migratory species, especially sparrows on the Trans-Saharan route, which utilize this site for resting before and after crossing the desert. Common mammals in the area, some of which are rare in Morocco, include the Fennec Fox, the North African striped weasel, African wildcat, the Common Genet and Common Otter. Several reptile species increase the area's biodiversity, together with the genetic resources associated with the date palms and other cultures in the area. The main services of the site fishing in the reservoir, hydropower, provision of drinking water supply, and water extraction for agriculture (palm and fruit trees, henna, cereals). The area has been deeply affected by the agricultural developments in the area and excessive water extraction, which have caused a fall in riparian biodiversity. Ramsar site no. 1482. Most recent RIS information: 2005.

Sebkha Bou Areg

Site number: 1484 | Country: Morocco | Administrative region: Nador

Area: 14,000 ha | Coordinates: 35°09'41"N 02°50'59"W | Designation dates: 15-01-2005

View Site details in RSIS

Sebkha Bou Areg. 15/01/05; Nador; 14,000 ha; 35°10'N 002°51'W. The largest lagoon on the Mediterranean southern shore, with a length of 24km and a width of 7.5km, separated by the sea by a system of sand dunes. It is a micro-tidal lagoon system with high biodiversity levels and acts as a wintering site for migratory birds, and as spawning and feeding ground for several fish species. Among the variety of life forms, one can find 13 fish species, nine mollusks, two cephalopods and two crustaceans. Bird species which nest here include the Water Rail, the Little Tern, the Pied Avocet and the Slender-billed Gull. Agriculture, fishing and salt production are the main activities to be found. Aquaculture is also practiced by the Moroccan Society for Ostreiculture (MAROST) and concentrates among others on the royal sea-bream, Japanese shrimp, and two oyster varieties. The main threats to the site are pollution by the activities taking place in the surroundings. Conservation measures are being proposed but none are in place thus far. Ramsar site no. 1484. Most recent RIS information: 2005.

Sebkhat Imlili

Site number: 2323 | Country: Morocco | Administrative region: Région de Dakhla-Oued Eddahab Area: 1,774 ha | Coordinates: 23°14'54"N 15°55'32"W | Designation dates: 12-01-2018

View Site details in RSIS

The Site is a relic of an original Saharan aquatic system, which bears witness to the recent tropical past of the extreme south of Morocco. The sebkha (salt flat) is in an area of limited and irregular rainfall over ten kilometres from the Atlantic Ocean. In its northern part are more than 160 permanent water pockets. The water is salty or hypersaline, but the pockets are home to aquatic flora and fauna with origins in marine, stagnant freshwater and flowing freshwater environments. Notably, these include a locally endemic fish of the *Cichlidae* family, which is related to the Guinean tilapia *Coptedon guineensis*, and some rare plant species. About 50 species of birds visit the site more or less regularly, especially migrants attracted by its greenery and water-related features.

Complexe du bas Loukkos

Site number: 1475 | Country: Morocco | Administrative region: Tanger-Tétouan-Al Hoceima Area: 6,630 ha | Coordinates: 53°47'18"N 29°29'47"E | Designation dates: 15-01-2005 View Site details in RSIS

This complex of wetlands is made up of estuaries, salt flats, salt pans, freshwater marshes with abundant aquatic plants, and flooded areas in the lower reaches of the Loukkos wadi. The complex is bordered by irrigated farmland, notably rice fields that have replaced wetlands which have been drained. At the river's mouth, extensive salt pans dominate the landscape; however, most are now abandoned, with only a few remaining operational. This unique wetland is home to the rare swamp iris (*Iris pseudoacorus*) and provides a vital habitat for the European otter (*Lutra lutra*), a species listed under CITES Appendix I. The Site supports critically endangered species such as the European eel (*Anguilla anguilla*) and various threatened waterbird species, including the marbled teal (*Marmaronetta angustirostris*), purple heron (*Ardea purpurea*) and crested coot (*Fulica cristata*). The Site also delivers essential ecosystem services, such as supplying drinking water to the local community and providing natural flood control. The site is also valued for recreational activities such as hunting and fishing, for its cultural heritage, and for its role in scientific research.

Embouchure de l'oued Dr'a

Site number: 1477 | Country: Morocco | Administrative region: Guelmim-Oued Noun Area: 19,110 ha | Coordinates: 28°34'18"N 11°02'20"W | Designation dates: 15-01-2005 View Site details in RSIS

The Site lies at the northern edge of the Western Sahara where Oued Dr'a, Morocco's largest Atlantic wadi, flows into the ocean. Draining vast areas of the Grand Atlas and Anti-Atlas Mountains, it forms a wide, steep-sided corridor with a sandy bottom. The channel meanders through small dunes covered with bushy vegetation before entering a steep valley bordered by high cliffs and opening into the coastal plateau. The Site also includes coastal waters, cliffs, and a sandy beach north of the wadi. It offers critical habitat for vulnerable species, including the houbara bustard (*Chlamydotis undulata*), Audouin's gull (*Ichthyaetus audouinii*) and marbled teal (*Marmaronetta angustirostris*). Beyond its ecological value, the area supports local livelihoods through fishing and tourism. However, habitat degradation and human disturbance pose growing threats. Strengthening conservation measures is essential to preserving biodiversity and ensuring long-term sustainability.

Merja Sidi Boughaba

Site number: 207 | Country: Morocco | Administrative region: Rabat-Salé-Kénitra Area: 650 ha | Coordinates: 34°14'09"N 06°40'39"W | Designation dates: 20-06-1980

View Site details in RSIS

Merja Sidi Boughaba is a coastal wetland featuring a permanent brackish and freshwater lagoon surrounded by emergent vegetation. It is fed by groundwater and separated from the Atlantic Ocean by a stabilised dune system covered with Mediterranean scrub. The site supports diverse aquatic life, including a rich phytoplankton and algal flora, and sustains traditional fishing practices. It is an important breeding and staging ground for waterbirds, including the globally near-threatened marbled teal (Marmaronetta angustirostris). The wetland also serves as a centre for conservation education through its eco-museum. However, it faces challenges such as habitat degradation and water pollution. Conservation efforts focus on maintaining its ecological integrity while maintaining sustainable use.

Oued Tizguite

Site number: 2375 | Country: Morocco | Administrative region: Région: Fès-Boulemane, Province d'Ifrane Area: 600 ha | Coordinates: 33°31'13"N 05°05'27"W | Designation dates: 16-04-2019 View Site details in RSIS

This Site on the northern edge of the Middle Atlas limestone plateau covers part of Ifrane National Park. It hosts a variety of freshwater habitats, including springs, permanent and temporary streams, waterfalls and irrigation canals. Its rich vegetation includes two threatened plant species: the globally vulnerable Atlas daisy (Anacyclus pyrethrum) and the nationally vulnerable English yew (Taxus baccata). The area supports a diverse range of wildlife, with approximately 200 aquatic animal species. Notable examples include endemic insects such as the stonefly Protonemura dakkii and the caddisfly Agapetus dolichopterus, as well as amphibians such as common toad, reptiles such as false smooth snake, birds such as common pochard, and mammals such as Eurasian otter. Despite its ecological significance, Oued Tizguite faces challenges such as reduced water flow caused by abstraction and upstream developments, as well as pollution caused by people occupying the riverbed area during the summer. Conservation efforts are managed through a collaboration between public and private actors, and focus on improving hydrology, soil quality and bird monitoring to address these threats and sustain the Site's ecological integrity.

Sebkha Zima

Site number: 1485 | Country: Morocco | Administrative region: Marrakech-Safi Area: 530 ha | Coordinates: 32°05'01"N 08°40'04"W | Designation dates: 15-01-2005

View Site details in RSIS

This saline endorheic lake supports a range of organisms adapted to hypersaline conditions, including two rare endemic plants, the sebkha glasswort (Halopelis amplicauli) and the sand spurry (Spergularia tenuifolia). The Site provides important wintering and breeding habitats for waterbirds, including significant populations of marbled teal (Marmaronetta angustirostris), ruddy shelduck (Tadorna ferruginea), and greater flamingo (Phoenicopterus roseus). It also plays a crucial role in recharging the groundwater table. Salt extraction is a key economic activity, supplying the cities of Marrakech and Safi and providing employment. However, this has led to extensive habitat transformation. Other pressures include livestock farming and ranching.

Zones humides de Souss-Massa

Site number: 1487 | Country: Morocco | Administrative region: Souss-Massa Area: 2,830 ha | Coordinates: 30°11'35"N 09°38'16"W | Designation dates: 15-01-2005

View Site details in RSIS

This wetland complex within the Souss-Massa National Park consists of two separate areas featuring diverse habitats, including dunes, freshwater and brackish marshes, coastal waters, sandy beaches and rocky shores. The Site is also designated as a Permanent Hunting Reserve. Originally identified to protect the endangered northern bald ibis (Geronticus eremita), of which 7% of the biogeographic population is present, the Site has since been recognized as an important refuge for over 270 bird species, including the marbled teal (Marmaronetta angustirostris). Agriculture dominates the landscape, particularly banana plantations and livestock farming, while ecotourism and coastal tourism are also significant. However, urban pollution and disturbance from both local people and tourists pose growing threats to the wetland's ecological integrity.

Zones humides de l'oued El Maleh

Site number: 1486 | Country: Morocco | Administrative region: Casablanca-Settat Area: 450 ha | Coordinates: 33°30'06"N 07°19'50"W | Designation dates: 15-01-2005 View Site details in RSIS

This wetland complex in the city of Mohammedia is recognized as a Site of Biological and Ecological Interest. It consists of two distinct ecosystems: a littoral swamp and salt steppe at the estuary of the El Maleh River, and a small reservoir located 30 kilometres upstream. The site serves as a crucial refuge for migratory and wintering birds, including the marbled teal (*Marmaronetta angustirostris*). The reservoir plays a key role in supporting agriculture and fishing in the region while also contributing to flood control. However, sedimentation has significantly reduced its water volume, and the canalization of parts of the estuary has failed to prevent destructive flooding events. The estuary is used for environmental education, with school programmes raising awareness of wetland conservation. Despite its ecological importance, the Site faces severe pollution from surrounding chemical, mechanical and electrical industries, as well as hydrological alterations due to canal construction.

Marais et côte du Plateau de Rmel

Site number: 1481 | Country: Morocco | Administrative region: Rabat-Salé-Kénitra et Tanger-Tétouan-Al

Hoceima

Area: 600 ha | Coordinates: 34°59'08"N 06°13'51"W | Designation dates: 15-01-2005

View Site details in RSIS

This Site features diverse ecosystems, including three freshwater coastal lakes, a sandy beach, inter-dunal marshes and irrigated areas. It provides critical habitat for threatened species such as the marbled teal (*Marmaronetta angustirostris*) and European eel (*Anguilla anguilla*), along with endemic reptiles and amphibians. The Site is a key wintering area for the lesser black-backed gull (*Larus fuscus*), supporting over 1% of its biogeographical population. Beyond its value for migratory birds, it sustains a variety of wildlife. However, agricultural activities pose significant threats, including groundwater depletion, reduced river flows, and eutrophication. Pollution from pesticides and fertilizers further endangers its ecological balance, underscoring the urgent need for conservation and sustainable management to protect its biodiversity.

Embouchure de la Moulouya

Site number: 1478 | Country: Morocco | Administrative region: Oriental

Area: 2,340 ha | Coordinates: 35°05'55"N 02°21'41"W | Designation dates: 15-01-2005

View Site details in RSIS

The Site is the estuary and floodplain complex of the Maghreb's biggest Mediterranean river. It features diverse habitats, including estuarine, marine, lacustrine, riverine, and palustrine systems, along with a coastal dune belt. It is a crucial stopover for migratory birds crossing the region's arid landscapes, offering refuge in its *Tamarix*-dominated vegetation. Its landscape includes six to seven kilometres of river channel bordered by alluvial *Tamarix* forests, semi-temporarily flooded salt marshes, and a marine strip extending 6 km offshore. Key species include Moussier's redstart (*Phoenicurus moussieri*), marbled teal (*Marmaronetta angustirostris*), and Audouin's gull (*Ichthyaetus audouinii*). The wetlands also support rare and endemic fish species, which use the estuary for spawning and nursery grounds during seasonal migrations. The estuary regulates water dynamics by storing floodwaters, which help reduce groundwater salinity. Nonetheless, its hydrology has changed significantly due to extreme floods over the past century. A now-abandoned aquaculture complex is also part of the Site. It is a very promising Site for ecotourism and conservation efforts. Despite its high ecological and aesthetic value, it faces pressures from habitat degradation caused by sand and gravel extraction, wetland conversion, and declining water quality from agricultural runoff, waste disposal, and reduced flood flows.

Complexe du bas Tahaddart

Site number: 1476 | Country: Morocco | Administrative region: Tanger-Tétouan-Al Hoceima Area: 10,690 ha | Coordinates: 35°36'22"N 05°57'25"W | Designation dates: 15-01-2005 View Site details in RSIS

The Complexe du bas Tahaddart is a vast wetland complex on the Atlantic slope of the Tingitane Peninsula. The Site receives water from tidal flows and rainfall, with its hydrology heavily influenced by the Ibn Battota and Al Hachef reservoirs. The landscape is characterized by three primary habitat types: coastal marine waters, estuaries, and inland open waters and marshes. The Site is a vital habitat for various waterbirds, including the Eurasian wigeon (*Anas penelope*), the collared plover (*Charadrius alexandrinus*), the greater flamingo (*Phoenicopterus roseus*) and the endangered great bustard (*Otis tarda*). It also delivers critical ecosystem services, such as supplying drinking water to local communities and providing water for agriculture and livestock. The site is also used for recreational activities such as hunting and fishing, holds cultural heritage value and supports scientific research.

Cap des Trois Fourches

Site number: 1473 | Country: Morocco | Administrative region: Oriental

Area: 5,640 ha | Coordinates: 35°25'41"N 02°59'21"W | Designation dates: 15-01-2005

View Site details in RSIS

The Site is situated on the Mediterranean Sea at the eastern edge of the Rif Mountains, about 30 kilometres north of the city of Nador. It is known for its volcanic geology that influences the chemical environment of the coastal waters, fostering rich biodiversity. The Site supports threatened species such as the globally vulnerable loggerhead turtle (*Caretta caretta*), fin whale (*Balaenoptera physalus*) and Mediterranean monk seal (*Monachus monachus*). It also provides vital habitats for fish such as the black limpet (*Cymbula nigra*) and dusky grouper (*Epinephelus marginatus*), along with waterbirds such as the storm petrel (*Hydrobates pelagicus*) and Audouin's gull (*Ichthyaetus audouinii*), the latter being protected under CMS Appendix I. The wetlands here offer critical ecosystem services, including groundwater recharge, water storage and water supply for agriculture and industry. The Site is also used for recreational fishing and hunting, and is valued for its cultural heritage and as a centre for scientific research.

Oasis du Tafilalet

Site number: 1483 | Country: Morocco | Administrative region: Drâa-Tafilalet

Area: 15,300 ha | Coordinates: 31°36'47"N 04°22'40"W | Designation dates: 15-01-2005

View Site details in RSIS

The Site is a vast wetland complex which includes a network of oases, the reservoir of the historic Hassan Ad-Dakhil dam, small rivers, irrigation channels and marshes. The Site is part of a UNESCO Biosphere Reserve and is recognized as a Site of Biological and Ecological Interest. It serves as an important wintering site for migratory birds, particularly sparrows and the globally vulnerable Houbara bustard (*Chlamydotis undulata*) and the near-threatened marbled teal (*Marmaronetta angustirostris*). Agriculture is a dominant activity alongside sheep farming. Water management remains a critical challenge, as the dam's regulation of downstream flows has led to seasonal river desiccation, exacerbated by increasing abstraction for irrigation and human consumption. Additionally, prolonged droughts over the past two decades and high evaporation rates have contributed to widespread soil salinization, posing further ecological and agricultural concerns.

Lacs Isly-Tislite

Site number: 1480 | Country: Morocco | Administrative region: Drâa-Tafilalet

Area: 270 ha | Coordinates: 32°12'41"N 05°34'01"W | Designation dates: 15-01-2005

View Site details in RSIS

These two lakes lie at over 2,200 metres elevation in the Parc National du Haut Atlas Oriental (National Park of the Western High Atlas), within the high Atlas Mountains, making them the second and third highest lakes in North Africa. Particularly deep and among the few non-eutrophic lakes in Morocco, they are of karstic or pseudo-karstic origin, positioned at the southern limit of the Palearctic region. Surrounded by steppe vegetation, the lakes are fed by snow melt and play a crucial role in groundwater recharge. Local activities include livestock grazing and sport fishing, particularly in summer. However, threats such as illegal fishing, overgrazing, and organic pollution from livestock and washing activities endanger the Site's ecological balance. Biodiversity is a key feature, with the globally near-threatened European otter (*Lutra lutra*), listed under CITES Appendix I, among the species present. Given its ecological importance and role in local livelihoods, sustainable management is essential to mitigate emerging threats and ensure long-term conservation.

Baie de Khnifiss

Site number: 209 | Country: Morocco | Administrative region: Laâyoune-Sakia El Hamra Area: 26,310 ha | Coordinates: 43°30'17"N 04°35'23"E | Designation dates: 20-06-1980 View Site details in RSIS

The Baie de Khnifiss is a complex system of interconnected habitats, including the Khnifiss lagoon, the sebkhas (salt flats) of Tazra and Mzeira, a large seasonal lake (daya La'wina), bordered by cliffs and steep sand dunes, the normally dry riverbed of Oued Awedri, and the adjacent marine coastline. Dune formations occasionally block water flow, making breaches rare. The lagoon is highly productive due to oceanic upwellings, supporting diverse flora and fauna, including the globally vulnerable marbled teal (*Marmaronetta angustirostris*). It also provides habitat for waterbirds such as the red knot (*Calidris alba*) and bar-tailed godwit (*Limosa lapponica*). The Site is a vital stopover for migratory birds along the East-Atlantic Flyway. Despite its ecological importance, habitat degradation and hydrological changes pose increasing threats. Strengthening conservation efforts is essential to preserving biodiversity and supporting migratory species.

Baie d'Ad-Dakhla

Site number: 1470 | Country: Morocco | Administrative region: Dakhla-Oued Ed-Dahab Area: 61,010 ha | Coordinates: 23°45'54"N 15°49'58"W | Designation dates: 15-01-2005 View Site details in RSIS

The Baie d'Ad-Dakhla is a 37-kilometre long bay, separated from the Atlantic Ocean by a dune system, featuring intertidal seagrass beds, algal plains, and salt and sand pans. It hosts high botanical diversity, including rare, vulnerable, and endemic species of the Macaronesian, Moroccan, and Saharan regions. It supports the vulnerable dwarf eelgrass (*Zostera noltii*), which provides habitat for over 120 mollusc species, including the endemic crustacean *Cerapopsis takamado*, and 41 fish species. The bay marks the northernmost range of the Atlantic humpback dolphin (*Sousa teuszii*) and is Morocco's second most important wintering site for migratory waterbirds, with nearly 60,000 birds recorded between 1995 and 2000. Key species include the Caspian tern (*Hydroprogne caspia*), the lesser black-backed gull (*Larus fuscus*) and the ringed plover (*Charadrius hiaticula*). Fishing and tourism drive the local economy, but expansion of these and other activities threatens the Site, particularly through pollution. A harbour under construction 12 km away may disrupt its hydrological and sedimentary balance. While no formal management plan exists, efforts are underway to establish conservation and aquaculture zones to ensure the site's long-term sustainability.

Barrage Al Massira

Site number: 1471 | Country: Morocco | Administrative region: Casablanca-Settat et Marrakech-Safi Area: 12,810 ha | Coordinates: 32°26'57"N 07°32'31"W | Designation dates: 15-01-2005 View Site details in RSIS

The Barrage Al Massira is Morocco's second-largest dammed reservoir and lies in a semi-arid zone along the steep Oum Er-Rbia valley. This deep lake with winding edges, islets, and peninsulas is fed solely by the Oum Er-Rbia River. The reservoir serves as an important habitat for waterfowl, including rare and endangered species; during the summer, it supports around 20 waterbird species, with 15 nesting there. Notably, it hosts Africa's only known nesting site for the black-headed gull (*Chroicocephalus ridibundus*), with 20 breeding pairs documented. Beyond its ecological importance, the reservoir plays a critical role in providing water for irrigation, drinking and fish farming, and in controlling floods and generating hydropower. Barrage Al Massira is Morocco's most significant inland fishing site, producing 90 tons of fish annually from seven species, with official fishing permits capped at 12 per year. However, challenges such as illegal fishing, pollution, and disturbances during the nesting season emphasize the urgent need for effective conservation and management to safeguard its ecological and economic value.

Aguelmams Sidi Ali - Tifounassine

Site number: 1468 | Country: Morocco | Administrative region: Fès-Meknès et Drâa-Tafilalet Area: 1,060 ha | Coordinates: 33°04'53"N 05°01'11"W | Designation dates: 15-01-2005 View Site details in RSIS

This Site within the Provinces of Ifrane and Khénifra is also designated as a Biological and Ecological Reserve and a Permanent Hunting Reserve. It includes three high-altitude wetlands at elevations between 1,900 and 2,100 metres, which are fed by snowmelt and springs. As one of the southernmost lacustrine mountain ecosystems within the temperate paleo-arctic bioregion, the wetlands provide a crucial wintering site for migratory birds including the ruddy shelduck (*Tadorna ferruginea*) and crested coot (*Fulica cristata*). The Site also supports regionally unique invertebrate species. The area's karst system plays a vital role in groundwater recharge, benefiting the local biodiversity including species such as the genet (*Genetta genetta*), jackal (*Canis aureus*) and red fox (*Vulpes vulpes*). Key activities in the area include livestock grazing, tourism and aquaculture. However, the Site faces significant threats such as water extraction, overgrazing and pollution. Conservation efforts led by NGOs are actively addressing these challenges.

Archipel et dunes d'Essawira

Site number: 1469 | Country: Morocco | Administrative region: Marrakech-Safi Area: 1,520 ha | Coordinates: 31°29'49"N 09°46'25"W | Designation dates: 15-01-2005 View Site details in RSIS

This Site is the largest coastal archipelago on Morocco's Atlantic shoreline. It boasts diverse landscapes including low, dense woodlands, as well as herbaceous vegetation and nitrate-rich plant species, particularly around the historical walls found on the largest island. The ecological significance of the Site is shaped and enhanced by the prevalent upwelling of nutrient-rich deep ocean water. It is home to several endemic plant species, such as red juniper (*Juniperus phoenicea*) and *Searsia albida*, alongside rare and endangered animals such as Eleonora's falcon (*Falco eleonorae*) and Manuel's skink (*Chalcides manueli*). The wetlands play a crucial role in local climate regulation and coastline stabilization, and supports hunting, fishing, as well as cultural and scientific activities. With its rich biodiversity, distinctive morphology and ecological importance, the Site stands out as a priority for conservation and research.

Lac d'Afennourir

Site number: 208 | Country: Morocco | Administrative region: Fès-Meknès

Area: 280 ha | Coordinates: 33°16'43"N 05°14'59"W | Designation dates: 20-06-1980

View Site details in RSIS

Located in the central Middle Atlas Mountains within Ifrane National Park, Afennourir Lake is a 280-hectare mountain wetland at almost 1,800 metres altitude. It consists of the lake and surrounding wet grassland, situated on a flat graben floor bounded by steep (up to 35%) limestone ridges. The upper watershed is covered by cedar and holm oak, while lower slopes transition from steppe vegetation to grasslands. The valley floor contains fine deposits from Quaternary basaltic filling. The lake relies on surface runoff and snow melt, making it highly sensitive to climate change and water withdrawals, especially in summer. Its shallow depth, along with evaporation and infiltration, contributes to water loss and affects its balance. When full, the lake overflows into a semi-permanent stream feeding the Tigrigra wadi, emphasizing the need for protection against pollution and over-exploitation. The Site supports migratory waterbirds such as the crested coot (*Fulica cristata*) and ruddy shelduck (*Tadorna ferruginea*), as well as other waterfowl and aquatic plants. It also provides essential drinking water for the Ait Mouli community and their livestock.

Complexe de Sidi Moussa-Walidia

Site number: 1474 | Country: Morocco | Administrative region: Casablanca-Settat Area: 5,350 ha | Coordinates: 32°53'08"N 08°51'30"W | Designation dates: 15-01-2005

View Site details in RSIS

The Sidi Moussa-Walidia wetland complex, on the Atlantic coast in Al Jadida Province, is made up of a chain of discrete wetlands separated from the ocean by a belt of active dunes that extends some 50 kilometres from the village of Sidi El Abed to the small town of Walidia. The complex includes two lagoons and four marshes and salt pans. To the east, the furrow is flanked by a hillside rising up to 80 metres. It is a key habitat for many noteworthy species, such as the Moroccan spadefoot toad (*Pelobates varaldii*) and various waterbirds such as the gull-billed tern (*Gelochelidon nilotica*), black-winged stilt (*Himantopus himantopus*), black-crowned night-heron (*Nycticorax nycticorax*) and the endangered marbled duck (*Marmaronetta angustirostris*). The wetlands also provide drinking water to local communities and water for livestock and agriculture. The Site is a centre for recreation (hunting and fishing) as well as a cultural heritage site and modern scientific research centre, highlighting its socioeconomic and ecological significance.

Merja Zerga

Site number: 206 | Country: Morocco | Administrative region: Rabat-Salé-Kénitra Area: 7,300 ha | Coordinates: 34°49'59"N 06°17'05"W | Designation dates: 20-06-1980

View Site details in RSIS

The Merja Zerga is a large coastal lagoon formed in a depression between sand dunes, separated from the Atlantic Ocean by a quaternary sandstone bar covered with loose dune sand. A break at its northern edge creates a wide channel that connects it directly to the ocean. The lagoon spans nine kilometres in length and 5 km in width, covering about 40 km², with depths exceeding two metres in the channel. It is a key economic resource, supporting traditional fishing and expanding agriculture. It also provides critical habitat for threatened species such as the Moroccan spadefoot toad (*Pelobates varaldii*) and European eel (*Anguilla anguilla*). Since 1951, residents have had fishing rights, though oversight remains with local authorities rather than the national forestry administration. Nonetheless, increasing irrigation, excessive water extraction, and pesticide use threaten its ecological balance. Additional pressures include poaching, egg collection, and harvesting of rushes. Uncontrolled habitat degradation underscores the urgent need for sustainable management to balance economic development with conservation and ensure the lagoon's long-term viability.

Embouchures des oueds Chbeyka-Al Wa'er

Site number: 1479 | Country: Morocco | Administrative region: Tantan

Area: 8,000 ha | Coordinates: 28°14'27"N 11°40'38"W | Designation dates: 15-01-2005

View Site details in RSIS

Embouchures des oueds Chbeyka-Al Wa'er. 15/01/05; Tan Tan; 8,000 ha; 28°14'N 011°42'W. The estuaries of three temporary rivers that arise in the Moyen Atlas mountain range and run through deep gorges before reaching the coast, where one can find sandy beaches, cliffs and dunes. Salt steppes with the endangered Sarcocornia perennis plant species in the upstream area of the site, where the rivers are wider, act as an important refuge for migratory birds, among which the most significant are the Lesser Black-backed Gull (Larus fuscus), Audouin's Gull (Larus audouinii), and the Common Scoter (Melanitta nigra). Fishing camps are common in the area, as the waters are rich thanks to upwelling, while tourism is also on the increase due to the area's beauty. Both activities are a cause of disturbance to the birds and of solid waste pollution. The area has been proposed as a Site of Biological and Ecological Interest. Ramsar site no. 1479. Most recent RIS information: 2005.