Executive Summary

The State Party
The Republic of Iraq

The Administrative Governorates
The Governorates of Al Muthanna, Dhi Qar, Maysan and Al Basrah

Name of the Nominated Property
The Ahwar of Southern Iraq and the Relict Landscape of the Mesopotamian Cities

Textual Description of the Property

*The Ahwar of Southern Iraq and the Relict Landscape of the Mesopotamian Cities*is a mixed serial heritage property located in the southern region of the Republic of Iraq. The nominated property comprises seven components, four of which are natural with associated cultural values whereas the three other components are cultural. The natural components include the Huwaizah, Central, East and West Hammar Marshes while the cultural components comprise the Archaeological Cities of Uruk and Ur together with Tell Eridu Archaeological Site.

The northern, northeast and northwest areas of the property are located within the governorates of Al Muthanna, Dhi Qar and Maysan in the proximity of the three main urban centers of the three governorates namely, As Samawah (Al Muthanna), An Nasiriyah (Dhi Qar) and Al Amarah (Maysan). To the south, the property is located within theAl Basrah governorate towardsthe Shatt Al Arab River.

With regards to the natural components, the Huwaizah Marshes are located within the governorate of Maysan to the east of the Tigris River. Huwaizah is bordered to the east and southeast by the international boundary with Iran, to the south and southwest by the Al BasrahGovernorate's administrative boundary, and to the north and west by the administrative boundary of Maysan Governorate. The Huwaizah Marshes represent the northeast corner of the property. The Central Marshes extend between the Governorates of Maysan and Dhi Qar between the Euphrates and Tigris Rivers. They are bordered by the Euphrates to the south, the Tigris and the administrative boundary of

AlBasrahGovernorate to the east (western Al Qurna sub-district), the city of Al Amarahto the north, and the city of An Nasiriyah to the west. The East Hammar Marshes are entirely located within Al BasrahGovernorate more specifically to the north of Al Basrah City. They are bordered to the east and northeast by the Shatt Al Arab, to the north by the Euphrates, to the northwest by the West Hammar component and to the south and southwest by the Zubair Plateau. The West Hammar Marshes lie fully within the Dhi QarGovernorate southwest of An NasiriyahCity. They are bordered to the north by the Euphrates, to the east by the East Hammar Marshes and to the south by the Zubair Plateau and the General Drainage Channel separating the plateau from the southern desert in the east.

As for the cultural components, the Uruk Archaeological City is located within Al MuthannaGovernorate some 33km east of As SamawahCity. The Ur Archaeological City is located in the Governorate of Dhi Qar 18km southwest of An Nasiriyah. Tell Eridu Archaeological Site is also located in Dhi Qar some 36km southwest of An Nasiriyah.

Coordinates and Size of the Property

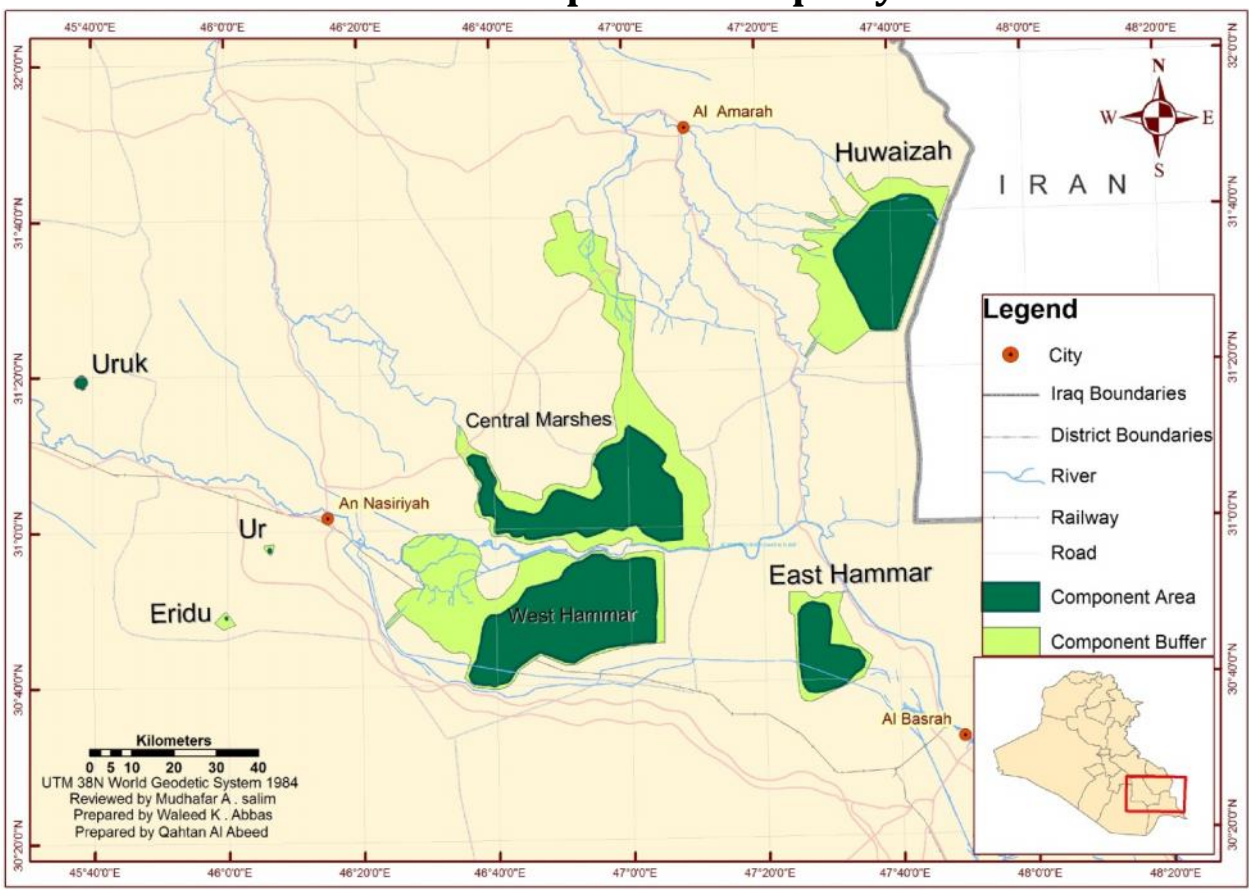
Centre Point Coordinates of the Property Components

ID n°	Name of the component	Governorate(s)	Coordinates of the central point	Map n°
1	The Huwaizah Marshes	Maysan	N 31 33 44 E 47 39 28	1.5
2	The Central Marshes	Dhi Qar, Maysan	N 31 05 07 E 47 03 15	1.6
3	The East Hammar Marshes	Al Basrah	N 30 50 30 E 46 41 03	1.7
4	The West Hammar Marshes	Dhi Qar	N 30 44 21 E 47 26 19	1.8
5	Uruk Archaeological City	Al Muthanna	N 31 19 27 E 45 38 14	1.9
6	Ur Archaeological City	Dhi Qar	N 30 57 47 E 46 6 11	1.10
7	Tell Eridu Archaeological Site	Dhi Qar	N 30 49 01 E 45 59 45	1.11

Size of the Property Components and Their Associated Buffer Zones

Id n°	Name of the component part	Governorate(s)	Area of nominated component of the property (ha)	Area of the buffer zone (ha)	Map n°
1	The Huwaizah Marshes	Maysan	48,131	42,561	1-5
2	The Central Marshes	Dhi Qar , Maysan	62,435	83,958	1-6
3	The East Hammar Marshes	Al Basrah	20342	12,721	1-7
4	The West Hammar Marshes	Dhi Qar	79,991	68,403	1-8
5	Uruk Archaeological City	Al Muthanna	541	292	1-9
6	Ur Archaeological City	Dhi Qar	71	317	1-10
7	Tell Eridu Archaeological Site	Dhi Qar	33	1,069	1-11
Total area of the property and buffer zones			211,544	209,321	

General Map of the Property



Statement of Outstanding Universal Value

The Ahwar of Southern Iraq and the Relict Landscape of the Mesopotamian Cities is a serial mixed property for natural and cultural heritage. It comprises seven components, four of which are natural and three cultural. The natural components embrace significant cultural values as well. The property extends through the four governorates of Al Basrah, Maysan, Dhi Qar and Al Muthanna within the deltaic alluvial plain of the Tigris and Euphrates Rivers over a total area of 210,898.91 ha. An additional 207,643.04 ha are proposed for inclusion in the buffer zone. The sea level variation and the climatic changes in southern Iraq over the past 7,000 years played a significant role in influencing the geographical location of the Ahwar (or Marshlands) which moved southeastward some 4,000 years ago.

The archaeological sites of Uruk, Ur and Eridu form the three cultural components of the property and were originally situated within the marshy landscape of the deltaic plan. Between the 4th and 3rd millennia BCE, they developed into some of the most significant urban centers of southern Mesopotamia and saw the origin of writing, monumental architecture, and complex technologies and societies. Their remains offer a complete testimony to the growth and achievements of southern Mesopotamia urban centers and societies, and to their outstanding contribution to the history of the Ancient NearEast and mankind as a whole. Topographical and architectural elements, together with archaeological evidence and an important corpus of cuneiform texts, document the economic and symbolic role of the wetland resources and landscape for the cultures of ancient southern Mesopotamia. The regression of the Arabian Gulf and the shifting of the marshes' location contributed to the decline of these cities. Today the mudbrick ruins of Uruk, Ur and Eridu are dominated by the remains of ziggurats towering above the arid but striking landscape of the desiccated plain as testimonies of the antiquity and achievements of southern Mesopotamian cultures and of the impact of the unstable deltaic landscape upon the rise and fall of their large urban centers.

The natural components of the property are the Ahwar of southern Iraq as we know them today and which were formed around 3,000 years ago. Fed by the branches of the Tigris and Euphrates, in addition to extremely low winter rainfall and subsequent floods, the Huwaizah, Central, East and West Hammar Marshes constitute the four natural components of the property. The Ahwar are one of the world's most important freshwater ecosystems situated within an extremely arid environment with some of the highest evaporation and transpiration levels, and some of the lowest levels of rainfall. They can be considered a "wetland island in a vast ocean of desert". The Ahwar embrace a mosaic of habitats critical for a significant number of taxa, including globally threatened and range-restricted species and isolated populations, thus creating a site of global caliber in terms of species of conservation priority. The grand mosaic of the four natural components of the property is an exceptional example of ongoing ecological and biological processes in the development and adaptation of terrestrial, fresh and salt water ecosystems and communities of various taxa of an endemic and restricted range nature. The Ahwar are a vast habitat and refuge for many of the viable populations of taxa of high biodiversity and conservation, particularly bird and fish species. Furthermore, they comprise the last

stopover area for millions of migrating birds before entering the vast Arabian Desert. This testifies to the paramount importance of the Ahwar for biodiversity conservation. Their unique hydrological system is in itself an outstanding natural phenomenon, representing a wetland that fluctuates in size in a seasonal manner. The Ahwar have developed an amazing ecological resilience, particularly after their drastic destruction during the second half of the last century and their re-flooding at the beginning of the new millennium. Furthermore, the property contains highly important and significant habitats for in-situ conservation of biological diversity, including those containing threatened species of high conservation and scientific importance. Finally, three of the natural components of the property include several dozen small archaeological mounds that testify to the history of human occupation in the Ahwar.

On the basis of these qualities, the State Party proposes to inscribe the property under criteria (iii), (v), (ix), and (x).

Eridu, Uruk and Tell Ur are protected under the Iraqi Law of Antiquities and Heritage and designated as archaeological sites. Management plans ensuring the continuous protection and conservation of their outstanding universal values will be implemented as of 2014. All their major archaeological and architectural features are contained within the boundaries of the property, ensuring that each component part bears a complete significance and contributes to expressing the outstanding universal value of the property as a whole. Considering the particulars of mudbrick architecture, the conditions of integrity and authenticity as regards the material and substance are considered to be met by the visible presence of a series of emblematic public buildings, particularly four ziggurats. Authenticity in form and design is also well retained in its relations to the urban layout. As regards location and setting, and considering that the marshes moved southeastward through space and time, the conditions of authenticity are considered to be met by including in the property the ancient cities of Ur and Uruk together with Tell Eridu in conjunction with the Huwaizah, Central, East Hammar and West Hammar Marshes. These bear highly significant ecological, historical and scientific values and, as such, offer the closest living representation of the conditions in which the earliest and longest-lived cities formed in alluvial Mesopotamia.

The four natural components of the property and their associated corridors and buffer zones are of sufficient size to adequately support all key natural values including the ongoing ecological and biological processes occurring in its terrestrial, water and marshland ecosystems. Two of the four natural components have an existing legal designation. Existing legal frameworks in relationship to the Ahwar are well developed with the national nature conservation bylaw endorsed by the government cabinet. The maintenance and improvement of the conservation status of the Ahwar is of high national priority, and the conservation measures (both in place and in preparation) are all geared towards the maintenance and promotion of the outstanding universal value. The key factors addressed in the legal and management frameworks for the four natural components of the property are related to fluctuating water quality and quantity, illegal hunting and fishing, harvesting of vegetation cover, and oil extraction. The evaluation of such challenges is undertaken by the Ministry of Environment and other national and

international partner organizations, and has currently revealed that such constraints are of limited impact on the key natural heritage values and attributes.

World Heritage Criteria and Their Justification

Criterion (iii)

The remains of the Mesopotamian cities of Uruk and Ur together with Tell Eridu offer a complete testimony to the growth and subsequent decline of southern Mesopotamian urban centers and societies from the Ubaid and Sumerian periods until the Babylonian and Hellenistic periods. The three cities were major religious, political, economic and cultural centers which emerged and grew during a period of profound change in human history. They bear witness to the full repertoire of the contribution of southern Mesopotamian cultures to the development of ancient Near Eastern urbanized societies and the history of mankind as a whole: the construction of monumental public works and structures in the form of ziggurats, temples, palaces, city walls, and hydraulic works; a class structured society reflected in the urban layout which included royal tombs and palaces, sacred precincts, public storehouses, areas dedicated to industries, and extensive residential neighborhoods; the centralized control of resources and surplus which gave rise to the first writing system and administrative archives; and conspicuous consumption of imported goods. This exceptionally creative period in human history left its marks across place and time.

Uruk – originally situated southwest of the ancient Euphrates River bed, now dry, and on the edges of a marsh – was the biggest settlement in ancient Iraq and the main force of urbanization in southern Mesopotamia in the 4th millennium BCE. Its archaeological remains illustrate the several phases of the city's growth and decline, the architectural evolution and sophistication of public buildings, and the spatial organization of a vast and complex city with its sacred precincts encircling monumental temples – including two ziggurats, residential quarters organized by professions, and a canal system that recently earned the city the name of "Venice in the desert". Uruk developed a full-time bureaucracy, military, and stratified society where writing first came about. The earliest texts known to humanity were found in the Eanna, the temple precinct of the goddess Inanna. *TheGilgamesh Epic*, the earliest literary text, also originated in Uruk, likely as a reflection of the city's power and influence which extended to the whole Mesopotamian world and far beyond.

Ur, compared in a Sumerian religious hymn to "a bull standing in the wet reeds", was the most important Sumerian port on the Arabian Gulf connecting southern Mesopotamia with trade partners as far as India. The capital of Sumer during the 3rd millennium BCE, Ur evolved the most centralized bureaucratic administration the world had yet known and used written records on an unprecedented scale. The more than 80,000 cuneiform tablets uncovered to date on the site give a unique insight into the Mesopotamian world and highlight the importance of the wetland environment for the economy, belief system and literature. Objects from the Royal Tombs of Ur and the city's monumental architectural

remains – particularly its famed ziggurat, but also temples, royal palaces and tombs – stand as emblems of the wealth, power, and sophistication of the Sumerian civilization at its height which continued to be remembered and celebrated by the Babylonians and the Assyrians.

Eridu, which Mesopotamian tradition considered the oldest city in the world predating the Flood, developed in a small depression around a temple built on an islet surrounded by a lagoon. Throughout Mesopotamian history, its temple complex, which later developed into a ziggurat, remained a major religious center and provided the mythical paradigm for the divine foundation of cities around a temple built over a body of freshwater, and for the function of cities as primarily cultic centers. Eridu, which name stood for its E-abzu temple to the freshwater god Enki-Ea, was considered by the Sumerians as the place where kingship originated, and remained a source of knowledge and wisdom into late Mesopotamian Antiquity. Perched on the tell, the remains of the ziggurat and the sacred mound that underlies it, where eighteen successive temples were built over a period of 3,000 years, represent the most ancient and best documented testimony of the origin and development of sacred cities and religious architecture in southern Mesopotamia.

Criterion (V)

The remains of the ancient cities of Uruk, Ur and Eridu – today in the desert but originally situated near freshwater marshes which receded or became saline before drying up – best exemplify the impact of the unstable deltaic landscape of the Tigris and Euphrates upon the rise and fall of large urban centers in southern Mesopotamia. Testimonies of this relict wetland landscape are found today in the cities' topography as traces of shallow depressions which held permanent or seasonal marshes, dry waterways and canal beds, and settlement mounds formed upon what were once islets surrounded by marsh water. Architectural elements, archaeological evidence and an important corpus of cuneiform texts further document how the landscape of wetlands – beside providing these urban centers with natural resources used for building, fuel, food and agriculture and with water transportation – contributed to shaping the religious beliefs, cultic practices, and literary and artistic expressions of successive cultures in southern Mesopotamia. As the Arabian Gulf regressed to the south during the 2nd and 1st millennia BCE, the landscape of wetlands moved to the southeast of the deltaic plain where new settlements developed. The contemporary Ahwar of Southern Iraq bear a strong cultural significance as they offer the closest living representation of the environmental context which fostered the development of the first cities and complex societies in the region, and fashioned the worldview of Mesopotamian cultures. The association of the contemporary Ahwar with some of the most prominent and best documented ancient urban centers of southern Iraq allows for understanding the unique ancient cultural landscape of alluvial Mesopotamia where cities were islands embedded in a marshy plain.

Criterion (ix)

Ongoing Ecological Processes: The proposed site contains outstanding examples representing ongoing ecological and biological processes in the evolution and development of terrestrial, fresh and salt water ecosystems and communities of various taxa. The case for the outstanding universal value of the Ahwar under criterion ix is based on four primary arguments:

Inland delta ecosystem functioning in an extremely hot and arid environment

The Ahwar of southern Iraq may be the largest-scale (> 200,000 ha) wetland ecosystem that is located in the most arid environment globally. The grand mosaic of the four natural components of the property is an exceptional example of ongoing ecological processes which reflect this extreme and harsh environment, particularly regarding the following attributes:

- Almost complete dependence on riverine influx and negligible direct contribution of precipitation on-site to the water budget; this contributes to the largely external factor driving this ecosystem and pronounced seasonality.
- Very high water temperatures around or in excess of 30°C in summer with no thermal stratification of the water column.
- High irradiation (>2,000 kWh m^{-2} a^{-1}), which together with high nutrient concentrations (Al-Imarah et al., 2006), leads to very high primary production, high dissolved oxygen concentrations throughout the water column and high overall ecosystem productivity. Primary production occurs mainly by reed, submerged and floating macrophytes.
- Exceptionally high evapotranspiration and an associated trend towards salinization (Al-Saad et al., 2010), which is further aggravated by anthropogenic factors (Al-Maroofi et al. 2012).
- Unusually strong dependence of the surroundings, including the human population, on the regulating (e.g. microclimate regulation, dust storm reduction, water purification), provisioning (e.g. water, reed, pasture, fish and meat) and cultural ecosystem services provided by the Ahwar of southern Iraq .

The Ahwar have been witnessto long term ecological succession dating back to the ice ages, as well as seasonal cyclical succession. Both successions are driven by non-biological processes (mainly hydrological and geomorphological) which create the foundation of an ecological paradise. The Ahwar have acquired the unique capability of sustaining their ecosystems throughout the ages despite successive natural and manmade pressures.

The unique hydrological system of the Ahwar is in itself an outstanding natural phenomenon, representing a wetland that fluctuates in size in a seasonal manner. Each of the four natural components of the property has its own particular hydrological system which stands independent of the others; thus creating a grand mosaic extending from freshwater dominated marshes in the case of the Huwaizah, through the extensive habitats of the Central Marshes, then descending to the brackish low-salt marshes in the East and West Hammar, and finally reaching the highest salt content in proximity to the sea.

Endemic and restricted range species/subspecies and ongoing speciation

The active ecological processes in the Ahwar create a spectrum of ecological habitats for flora and fauna which has specifically led to the adaptation and evolution of a significant number of animal taxa of an endemic and restricted range nature. These include four mammals including the endemic Bunn's Short-tailed Bandicot Rat and a subspecies of the Smooth-Coated Otter, in addition to the restricted range species of Mesopotamian Gerbil and Euphrates Jerboa. Further, the Ahwar harbors five taxa of birds including the endemic species of Basra Reed Warbler and Iraq Babbler, in addition to the three restricted range subspecies of the Little Grebe, the Black Francolin and the Hooded Crow.

Further, the water bodies of the property are a primary habitat for six restricted-range fish species: *Luciobarbus esocinus, L. xanthopterus, L. subquincunciatus, Cyprinion kais, Silurus triostegus* and *Mesopotamechthys sharpeyi.*

In addition, the Ahwar harbor three bird populations that exist here thousands of kilometers away from their core global populations in Africa, including the African Darter, the Sacred Ibis, and the Goliath Heron. These are likely to be relict populations from past periods of much larger range extensions. This testifies to the extraordinary refuge function of the Ahwar in the face of historical range contractions, and hence to their paramount importance for biodiversity conservation. It has also lead to geographically clearly separated populations in place of formerly continuous species ranges. Hence, a first stage of ongoing speciation is represented, complementing later stages such as those represented by species and subspecies that are almost or fully restricted to the Ahwar. In combination, restricted range species, subspecies and isolated populations of various vertebrate taxa can be considered as evidence of active ongoing adaptation and speciation processes in the Ahwar. Finally, the Ahwar also represent a safe refuge for many other endangered species of animals and birds in particular.

Migration, particularly Waterbirds, Fish and Crustaceans

The bird migration and the migration of fish and shrimp species which occur within the property's habitats reflect an adaptation process by these animals to long-term seasonal fluctuations in water levels and other ecological variables. At least 20 of the 44 fish species of the Ahwar are diadromous species from the Arabian Gulf (Coad, 2010). Most of them frequent the West and particularly East Hammar Marshes, which had already resumed an important role as spawning, nursery and foraging grounds for eleven of them in 2009 (Mohamed et al., 2009). Among them are species of paramount economic importance such as the Hilsa Shad (*Tenulosa ilisha)*, which uses the Ahwar as a spawning and nursery area but occurs and is exploited throughout the Arabian Gulf and beyond, where it contributes significantly to overall catches (Al-Dubakel, 2011). A parallel example among the invertebrates is the commercially important Penaeid Shrimp (*Metapenaeus affinis)*, which uses the East Hammar as a nursery area (Salman et al., 1990). These examples show that the Ahwar of southern Iraq not only are an outstanding ecosystem by themselves but also play a leading role to support lifecycles of fauna, ecosystem functioning and provisioning ecosystem services in the downstream Arabian Gulf.

The fact that the Ahwar are the only suitable large-scale wetland system within thousands of kilometers along two primary bird migration routes leads to their recognition as one of the largest West Eurasian-Caspian-Nile staging points and also wintering grounds for ducks. They are also important as a major stopover point for shorebird species flying along the West Asian-East African flyway. As a result, the Ahwar are considered to be a primary and critically located component of cross-continental flyways, particularly for West-Asian migratory water birds from western Eurasia. Historical abundance of migratory waterbirds in the Ahwar numbered into the millions, and currently, increasing numbers of migratory birds are already being recorded on the property as a result of its restoration since 2003.

Ecosystem resilience

The Ahwar have developed an amazing ecological resilience - i.e. an ability to maintain and restore ecological process integrity and ecosystem function in spite of external disturbance. It has always been the case that the Ahwar would come back to life after destructive events. This remarkable adaptive capacity against fluctuations and environmental change, in addition to the velocity of recovery processes, has been a characteristic of the Ahwar for thousands of years. While high ecological resilience is considered a general feature of many wetlands, the Ahwar of southern Iraq are set apart by the fact that the last dramatic recovery process took place very recently, right after the drastic destruction of the Ahwar during the second half of the last century and the re-flooding of the Ahwar at the beginning of the new millennium.

Criterion (x)

Biodiversity: The proposed site contains highly important and significant habitats for in-situ conservation of biological diversity, including those containing threatened species of high conservation and scientific importance.

The Ahwar of southern Iraq are one of the world's most important freshwater ecosystems situated within an extremely arid environment with some of the highest evaporation and transpiration levels, and some of the lowest levels of rainfall. They can be considered a "wetland island in a vast ocean of desert". The Ahwar embrace a mosaic of habitats critical for a significant number of taxa, including globally threatened and range-restricted species and isolated populations, thus creating a site of global caliber in terms of species of conservation priority.

Overall species richness

Recent records from the Ahwar include a wide variety of species from different taxa encompassing 264 bird species and 44 species of fish (24 freshwater and 20 marine). There are also 38 mammal species if historical records from the 20th Century are included. In addition, 18 reptile species, 3 species of amphibians, 25 Odonata species and 371 plant species are known from the area.

Species of global conservation importance

The Ahwar host 12 globally threatened bird species, such as the vulnerable Marbled Teal. More than 40% of their global population spends the winter on the property. Another vulnerable species, the Basra Reed-Warbler, which is a restricted-range species, has more than 70% of its breeding population in the Marshes.

The Ahwar also include critical natural habitats for three threatened mammal species, including the Smooth-coated Otter and the Bunn's Bandicot Rat, with no recent records of the latter subsequent to the drainage that occurred before 2000.

As for reptiles, the Euphrates Soft-shell Turtle is an endangered species that is only known from a few localities in Iraq and Iran, whereas Murray's Comb-fingered Gecko has a restricted range limited to the Ahwar, Shatt Al Arab and the Iranian western shores on the Arabian Gulf. It was recently evaluated as data deficient on the regional level of the Ahwar, which leaves open the possibility that it is also a threatened species globally.

Lastly, a recent regional assessment of 30 taxa (2 plants, 3 fish, 2 mammals, 1 reptile, and 22 birds) revealed the occurrence of 5 critically endangered species, 12 endangered species, and 13 vulnerable species all on the regional level of the Ahwar.

Irreplaceability of the Ahwar for threatened species

The number of threatened species occurring at a site is not the only aspect of its potential OUV with regard to World Heritage criterion (x). Its irreplaceability is another key attribute. 19 endemic taxa (including species and subspecies) occur in the Ahwar, of which 2 species and 3 subspecies are birds, 3 species and 1 subspecies are mammals, 2 species are reptiles, 6 species are fish, and 1 species are from the order Odonata. In addition, the Ahwar harbor globally significant numbers (more than one percent of global population) of 68 waterbirds species. This further underlines the function of this property as a crucial knot in the fabric of bird migration routes, and also its importance for vertebrates in general.

Contact Information

The document was prepared by the National Committee for the Environmental and Cultural Management of the Ahwarand their World Heritage Nomination.

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