Ramsar Information Sheet

Published on 26 May 2015

Viet Nam

U Minh Thuong National Park

Designation date:	30 April 2015
Ramsar ID:	2228
Coordinates:	9°35'38"N 105°5'42"E
Official area (ha):	8 038,00
Number of zones:	5464

https://rsis.ramsar.org/ris/2228
Created by RSIS V.1.3 on Thursday 12 November 2015

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary *(This field is limited to 2500 characters)*

U Minh Thuong National Park (UMTNP) has an area of 8,038 ha and supports one of the last significant areas of peatswamp forest remaining in Vietnam. It is recognised as one of the three highest priority sites for wetland conservation in the Mekong Delta.

UMTNP also has approximately 3,000 ha of open swamp and flooded grassland, the largest and most significant of any located in the U Minh region. This is reflected in the distinctive flora and fauna found there. To date, 32 mammal species, 187 bird species, 34 herptile species, 37 fish species, 203 insect species and a number of aquatic species have been recorded living in different water bodies inside the park. Many of the species the site supports are globally threatened. Moreover, the peatswamp forests play a key role in preventing soil acidifaction, support water filtering and storage, and provide important spawning habitats for freshwater fishes.

The peatswamp forests and seasonally inundated grasslands in U Minh Thuong are home to abundant avifauna in the Mekong Delta. Buckton et al (1999), in a survey of 10 key wetland sites in the Mekong Delta in 1999, found that U Minh Thuong supported the highest bird species richness and was, possibly, the largest waterbird breeding colony of all sites visited. In addition to its importance for waterbirds, UMT has a number of other biodiversity values, including being one of only three sites in the world known to support a population of Hairy-nosed otter (Lutra sumatrana).

A wide range of natural and semi-natural ecosystems maintained throughout UMTNP provide important breeding and spawning grounds for many important fishes. Most of the 37 fish species observed in U Minh Thuong are native species and include 8 species whose range of distribution is restricted to the lower Mekong Basin.

U Minh Thuong supports large areas of peat layers and a complex system of canals that can store a large volume of water. It functions as a sponge that maintains the groundwater level and releases surface water to the surrounding areas, and supports production and daily activities of the local communities surrounding the park. In addition, the site holds a number of values including spiritual, historical, archaeological, educational and scientific values.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Name: Tran Ngoc Cuong

Institution/agency: Biodiversity Conservation Agency, Vietnam's Environment Protection Administration, Ministry of Natural Resources and Environment

Postal address *(This field is limited to 254 characters)*

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2.1.2 - Period of collection of data and information used to compile the RIS

From year: 1998

To year: 2014

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): U Minh Thuong National Park

Unofficial name (optional): Vuon Quoc Gia U Minh Thuong

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Boundaries description (optional) *(This field is limited to 2500 characters)*

The boundary of the site is the boundary of U Minh Thuong National Park as shown on the map. In the east, it shares borders with Minh Thuan commune; in the north and west, it borders with An Minh Bac commune (both in U Minh Thuong district); and in the south, it shares borders with Thoi Binh district, Ca Mau province.

2.2.2 - General location

a) In which large administrative region does the site lie?	U Minh Thuong district, Kien Giang province
b) What is the nearest town or population centre?	An Minh Bac and Minh Thuan communes of U Minh Thuong district

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?	Yes ○ No ◉
b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?	Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha):	8038
Area, in hectares (ha) as calculated from GIS boundaries	8198.17

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	IM1402 (Indochina Mangroves)

Other biogeographic regionalisation scheme *(This field is limited to 2500 characters)*

The area falls within IM1402 (Indochina Mangroves) Ecoregion within Tropical & Subtropical Moist Broadleaf Forests of Indo-Malayan Region.

Olson et al. (2001), Terrestrial Ecoregions of the World: A New Map of Life on Earth.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided *(This field is limited to 3000 characters)*

U Minh Thuong supports large areas of peat layers and a complex system of canals that can store a large volume of water. It functions as a sponge that maintains the groundwater level and releases surface water to the surrounding areas, and supports production and daily activities of the local communities surrounding the park. The Melaleuca forest in the core zone of U Minh Thuong National Park plays an important role in maintaining the soil and water quality in the buffer zone by preventing the acidification of topsoil and surface water, filtering ground water, and storing freshwater during the dry season.

Other reasons *(This field is limited to 3000 characters)*

U Minh Thuong is one of the last remnants of climax peatswamp forest in the specified biogeographic region, with the domination of mixed forests and Melaleuca forests on peat that covers c. 3,000 ha of the park. They are some of the rarest typical samples of this type of ecosystem in Southeast Asia. The site is recognized as one of the three highest priority sites for wetland conservation in the Mekong Delta (Buckton et al. 1999).

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	23402 in 2004, 14396 in 2009, 17594 in 2011, 20109 in 2013 during the breeding season (April to Oct every year)
Start year	2004
Source of data:	Nguyen Phuc Bao Hoa 2005; UMT NP 2013

☑ Criterion 6 : >1% waterbird population

☑ Criterion 7 : Significant and representative fish

Justification *(This field is limited to 3000 characters)*

A survey in 2000 recorded 37 fish species for U Minh Thuong. Most of them are native species, including 8 species whose range of distribution is restricted to the lower Mekong Basin (Sage (eds.) 2004). The species endemic to the lower Mekong Basin are: Chitala ornata, Amblypharyngodon chulabornae, Esomus metallicus, Hampala dispar, Rasbora borapetensis, Macrognathus siamensis, Trichogaster microlepis, and Trichogaster pectoralis. In general, UMTNP is dominated by

stagnant water with seasonal flooding in some areas. Stagnant water has very low oxygen levels. Some families of fish (including Channidae: 3 species, Clariidae: 2 species, Balontiidae: 6 species) are well adapted with such conditions and are dominant in the park (Sage (eds.) 2004).

☑ Criterion 8 : Fish spawning grounds, etc.

Justification *(This field is limited to 3000 characters)*

U Minh Thuong maintains a wide range of natural and semi-natural ecosystems, including Melaleuca forests, mixed forests and inundated grasslands, which are important breeding and spawning grounds for many important fish species (ITB 2002). The abundance of fish is particularly high for economically significant fish species that are common to the Mekong Delta. Preliminary results of a 12-month fish stock assessment conducted by the Institute of Marine Aquaculture at Can Tho University in 2000 indicate 9 important commercial fish species occurring at UMTNP, including: Bronze Featherback (Notopterus notopterus), Broadhead Catfish (Clarias macrocephalus), Walking Catfish (Clarias batrachus), Climbing Perch (Anabas testudineus), Snakeskin Gourami (Trichogaster pectoralis), Threespot Gourami (Trichogaster trichopterus), Chevron Snakehead (Channa straita), Blotched Snakehead (Channa lucius), and Swamp Eel (Monopterus albus). While the fishing activities outside the park are intensive, all these nine species use UMTNP as their most important breeding and spawning grounds.The site is acting as a “reserve” for the local fish stock and therefore important for local economy. During the dry season, as water within the flooded forest diminishes, vast volumes of fish move into the confines of the core zone canals. Intensive and lucrative fishing activities sanctioned by the UMT NP occur during this time (Sage (eds.) 2004).

3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / ACTINOPTERYGII	*Amblypharyn chulabhornae*		☐	☐	☐	☐	☐	☐	☑	☐					☐	☐		
CHORDATA / ACTINOPTERYGII	*Anabas testudineus*	Climbing perch	☐	☐	☐	☐	☐	☐	☐	☑					☐	☐		
CHORDATA / AVES	*Anastomus oscitans*	Asian Openbill	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Anhinga melanogaste*	Oriental Darter	☐	☐	☐	☐	☐	☑	☐	☐				NT	☐	☐		
CHORDATA / MAMMALIA	*Aonyx cinereus*	Asian small-clawed Otter	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Vulnerable on Viet Nam Red Data Book; CITES-Appendix II	
CHORDATA / AVES	*Aquila clanga*	Greater Spotted Eagle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☑	Endangered on Viet Nam Red Data Book	
CHORDATA / AVES	*Ardea alba*	Great Egret	☐	☐	☐	☐	☐	☑	☐	☐					☐	☐		
CHORDATA / AVES	*Ardea cinerea*	Grey Heron	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Ardea purpurea*	Purple Heron	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES																		

Ardeola bacchus

Chinese Pond Heron	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Ardeola speciosa*	Javan Pond Heron	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Bubulcus ibis*	Cattle Egret	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / ACTINOPTERYGII	*Channa lucius*		☐	☐	☐	☐	☐	☐	☐	☑					☐	☐		
CHORDATA / ACTINOPTERYGII	*Chitala ornata*		☐	☐	☐	☐	☐	☐	☑	☐				LC	☐	☐		
CHORDATA / ACTINOPTERYGII	*Clarias batrachus*	Walking catfish	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		
CHORDATA / ACTINOPTERYGII	*Clarias macrocephal*	Broadhead catfish	☐	☐	☐	☐	☐	☐	☐	☑				NT	☐	☐	High Vulnerability by FishBase	
CHORDATA / REPTILIA	*Cuora amboinensis*	Southeast Asian Box Turtle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Vulnerable on Viet Nam Red Data Book; CITES - Appendix II	
CHORDATA / AVES	*Dupetor flavicollis*	Black Bittern	☐	☐	☐	☐	☐	☑	☐	☐					☐	☐		
CHORDATA / AVES	*Egretta garzetta*	Little Egret	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Egretta intermedia*	Intermediate Egret	☐	☐	☐	☐	☐	☑	☐	☐					☐	☐		
CHORDATA / AVES	*Emberiza aureola*	Yellow-breasted Bunting	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☑		
CHORDATA / ACTINOPTERYGII	*Esomus metallicus*	Striped flying barb	☐	☐	☐	☐	☐	☐	☑	☐				LC	☐	☐		
CHORDATA / ACTINOPTERYGII	*Hampala dispar*	Spotted hampala barb	☐	☐	☐	☐	☐	☐	☑	☐				LC	☐	☐	High Vulnerability by FishBase	

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / REPTILIA	*Heosemys annandalii*	Yellow-headed Temple Turtle	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Vulnerable on Viet Nam Red Data Book; CITES - Appendix II	
CHORDATA / AVES	*Leptoptilos javanicus*	Lesser Adjutant	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Vulnerable on Viet Nam Red Data Book	
CHORDATA / MAMMALIA	*Lutra sumatrana*	Hairy-nosed Otter	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Endangered on Viet Nam Red Data Book; CITES - Appendix II	
CHORDATA / ACTINOPTERYGII	*Macrognathus siamensis*		☐	☐	☐	☐	☐	☐	☑	☐				LC	☐	☐		
CHORDATA / REPTILIA	*Malayemys subtrijuga*	(Malayan) Snail-eating Turtle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Vulnerable on Viet Nam Red Data Book; CITES - Appendix II	
CHORDATA / MAMMALIA	*Manis javanica*	Sunda Pangolin	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Endangered on Viet Nam Red Data Book; CITES - Appendix II	
CHORDATA / AVES	*Microcarbo niger*	Little Cormorant	☐	☐	☑	☐	☐	☑	☐	☐	2896	1999-2013	2.9	LC	☐	☐		SE Asia - 1% threshold is 1,000 as of 2012. 1999 - 1,348 2000 - 1,767 2004 - 4,062 2009 - 1,342 2011 - 2,051 2013 - 6,811
CHORDATA / ACTINOPTERYGII	*Monopterus albus*	Swamp eel	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		
CHORDATA / AVES	*Mycteria leucocephala*	Painted Stork	☐	☐	☐	☐	☐	☑	☐	☐				NT	☐	☐		
CHORDATA / ACTINOPTERYGII	*Notopterus notopterus*	Bronze featherback	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		
CHORDATA / AVES	*Nycticorax nycticorax*	Black-crowned Night Heron	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		
CHORDATA / AVES	*Phalacrocora fuscicollis*	Indian Cormorant	☐	☐	☐	☐	☐	☑	☐	☐				LC	☐	☐		

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Plegadis falcinellus*	Glossy Ibis	☐	☐	☑	☐	☐	☑	☐	☐	2896	1999-2013	1.7	LC	☐	☐		S, SEA - 1% threshold is 250 (non-bre) as of 2012. 1999 - 1,391 2004 - 472 2009 - 436 2011 - 259 2013 - 436
CHORDATA / MAMMALIA	*Prionailurus viverrinus*	Fishing Cat	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Endangered on Viet Nam Red Data Book	
CHORDATA / MAMMALIA	*Pteropus lylei*	Lyle's flying fox	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	CITES - Appendix II	
CHORDATA / ACTINOPTERYGII	*Rasbora rubrodorsalis*		☐	☐	☐	☐	☐	☐	☑	☐				LC	☐	☐		
CHORDATA / AVES	*Threskiornis melanocepha*	Black-headed Ibis	☐	☐	☐	☐	☐	☑	☐	☐				NT	☐	☐		
CHORDATA / ACTINOPTERYGII	*Trichogaster microlepis*		☐	☐	☐	☐	☐	☐	☑	☐					☐	☐		
CHORDATA / MAMMALIA	*Viverra megaspila*	Large-spotted Civet	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Vulnerable on Viet Nam Red Data Book	

(This field is limited to 2500 characters)

Snakeskin Gourami (Trichogaster pectoralis) qualifies for Criterion 7 and 8

Threespot Gourami (Trichogaster trichopterus) qualifies for Criterion 8

Chevron Snakehead (Channa straita) qualifies for Criterion 8

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

(This field is limited to 2500 characters)

U Minh Thuong National Park supports one of the last significant areas of peatswamp forest remaining in Vietnam, and is recognised as one of the three highest priority sites for wetland conservation in the Mekong Delta (Buckton et al. 1999).

Tran Triet (2000) has classified the vegetation of the core zone into four types: forest dominated by Melaleuca cajuputi on both peat and mineral soils; seasonally inundated grasslands dominated by Phragmites vallatoria and Eleocharis dulcis; open swamps dominated by Nymphaea nouchali, Pistia stratiotes, Salvinia cucullata and Typha domingensis; and natural streams and canals. The vegetation of the buffer zone consists of seasonally inundated grassland, open swamps, Melaleuca plantations, agricultural land, fishponds and canals. U Minh Thuong harbours a diversity of flora, including many rare and endemic species. Tran Triet (2000) has recorded 226 species of non-cultivated vascular plants. Among these is the duckweed, Lemna tenera, which is rare throughout its range in South-East Asia but common at U Minh Thuong (BirdLife International and MARD 2004).

The conservation importance of U Minh Thuong National Park is further highlighted by the high bird diversity. During a survey of wetland sites in the Mekong Delta by BirdLife International and the Institute of Ecology and Biological Resources (IEBR), U Minh Thuong had the highest bird species richness of any of the sites visited (Buckton et al. 1999). To date, 187 bird species have been recorded at U Minh Thuong, including nine globally threatened or near-threatened species (Safford et al. 1998, Buckton et al. 1999, Sage (eds.) 2004).

There are 32 mammal, 187 bird, 34 herptile, 37 fish and more than 200 insect species recorded within UMTNP to date (Sage (eds.) 2004 and Anon. 2012).

Aside from globally threatened species listed in Criterion 2, there are a number of species with the site that are ranked by IUCN (2011) as globally near-threatened (NT) or data deficient (DD). Please refer to the list of Noteworthy animal species.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3		Representative
Xf: Freshwater, tree-dominated wetlands		2		Rare
Xp: Permanent Forested peatlands		1		Rare

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Lemna tenera	Duckweed	Rare in SEA

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/ACTINOPTERYGII	Anabas testudineus	Climbing perch				DD on IUCN Red List 2011
CHORDATA/ACTINOPTERYGII	Boraras urophthalmoides	Least rasbora				NT on IUCN Red List 2011
CHORDATA/ACTINOPTERYGII	Channa micropeltes	Indonesian snakehead				Very High Vulnerability by FishBase
CHORDATA/ACTINOPTERYGII	Chitala ornata	Crown featherback				High Vulnerability by FishBase
CHORDATA/REPTILIA	Enhydris innominata	Tay Minh Water Snake				DD on IUCN Red List 2011
CHORDATA/REPTILIA	Enhydris jagorii	Jagor’s Water Snake				DD on IUCN Red List 2011
CHORDATA/ACTINOPTERYGII	Gobiopterus chuno	Glass goby				DD on IUCN Red List 2011
CHORDATA/AVES						

Ichthyaetus ichthyaetus

Grey-headed fish eagle

NT on IUCN Red List 2011

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	Limosa limosa	Black-tailed Godwit				NT on IUCN Red List 2011
CHORDATA/ACTINOPTERYGII	Monopterus albus	Asian swamp eel				High Vulnerability by FishBase
CHORDATA/ACTINOPTERYGII	Notopterus notopterus	Bronze featherback				High Vulnerability by FishBase
CHORDATA/ACTINOPTERYGII	Ompok bimaculatus	Butter catfish				High Vulnerability by FishBase
CHORDATA/ACTINOPTERYGII	Ompok bimaculatus	Butter catfish				NT on IUCN Red List 2011
CHORDATA/ACTINOPTERYGII	Oxyeleotris marmorata	Marble goby				High Vulnerability by FishBase
CHORDATA/AVES	Pelecanus philippensis	Spot-billed Pelican				NT on IUCN Red List 2011
CHORDATA/AVES	Ploceus hypoxanthus	Asian Golden Weaver				NT on IUCN Red List 2011
CHORDATA/MAMMALIA	Pteropus vampyrus	Large Flying Fox; large flying fox				
CHORDATA/REPTILIA	Python bivittatus	Asiatic Rock Python				NT on IUCN Red List 2011
CHORDATA/MAMMALIA	Viverra zibetha	Large Indian Civet				NT on IUCN Red List 2011

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Am: Tropical monsoonal (Short dry season; heavy monsoonal rains in other months)

(This field is limited to 1000 characters)

UMTNP is situated in the sub-equatorial tropical monsoon climate zone with the total rainfall relatively higher than in other areas in the Mekong Delta.

Rainy season is from May to November with August and September being the most rainy months. Dry season is from December to April. The highest number of sunny days is observed from January to April.

Average annual rainfall is 2,400 mm, and it has been relatively stable in many years. Average number of rainy days is 163 - 171 days, which means that in every two days, there is one rainy day.

Average annual humidity ranges from 82.2% to 87.5%.The most humid months are September and October (86.0-89.0%), and the driest months are February and March (75.6-83.2%). Average annual evapotranspiration is more than 1,000 mm.

Average annual temperature is 27.0°C, varying from 26.5 to 27.3°C.

UMTNP is typically dominated by two winds flows: the northeast wind from November to April; and the southwest wind from June to September.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 1

a) Maximum elevation above sea level (in metres): 2

Lower part of river basin ☑

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.
(This field is limited to 1000 characters)

UMTNP is situated in the Ca Mau Peninsular in the Mekong Delta in the south of Vietnam. The peninsular covers 1.6 million hectares. It has complicated hydrological, hydraulic and pedological regimes, and is influenced by two tidal regimes.

The Ca Mau Peninsular can be divided into six sub-zones, namely West Bassac, U Minh Thuong (Upper), U Minh Ha (Lower), South Ca Mau and Bac Lieu-Vinh Chau Coast. Water from the peninsular drains into the sea via the rivers, Cai Lon, Cai Be, Ong Doc, Ganh Hao, and My Thanh. These rivers are important for reducing floods in the region. Water supply of the region comes from rains and water from Bassac River via an extensive canal and channel network. UMTNP is situated in the South Ca Mau subzone, which supports some highest biodiversity and has high potential for fishery and aquaculture.

4.4.3 - Soil

Mineral ☑

Organic ☑

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ◉ No ○

Please provide further information on the soil (optional) *(This field is limited to 1000 characters)*

The Ca Mau Peninsular was mostly formed in the Holocene transgressions. Most of the peninsular is dominated by saline, sulphate, peat and alluvial soils. In the sediments of the peninsular, there are three major minerals found including hydromica, kaolinite and smectit (Le Xuan Thuyen, 1996). However, traversing landward from the sea, the content of smectit is strongly reduced from the new sediments of the coastal mangroves to the older sediments of inland areas (Nguyen Ngoc Hoa (ed.), 1990).

In peatswamps, the depth of peat layers varied from 40 to 120 cm depending on topographical elevations. Under the peat layers, grey clays were found, and where the peat layer does not exist, there are thick layers of brown clays (Nguyen Van De 2002). Under the peat and clays, there are sulfidic horizons found in different depths. Where deeper, the sulfidic horizon contents proto-thionic fluvisols, and where swallower, it contents orthi thionic fluvisols.

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	☑
Marine water	☑

Water destination

Presence?
Feeds groundwater
To downstream catchment

Stability of water regime

Presence?
Water levels fluctuating (including tidal)

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology: *(This field is limited to 1000 characters)*

Hydrology of U Minh Thuong is influenced by bi-daily tides from the Gulf of Thailand that come to the park by different

directions: most important are from the Cai Lon River (north) and from Ong Doc River (south) - those two major tidal flows meet in the border between Kien Giang and Ca Mau provinces. Water levels in U Minh Thuong are influenced by both tidal regimes and inland rainfalls, both factors are varied following monsoon conditions. Water level is high from July to February, and low from March to June every year.

Flood conditions depend on the rainfalls and tides. By end of July and for up to 3 months, most of paddy fields in the area are flooded.

4.4.5 - Sediment regime

Sediment regime unknown ☑

4.4.6 - Water pH

Unknown ☑

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

4.4.8 - Dissolved or suspended nutrients in water

Unknown ☑

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

Surrounding area has more intensive agricultural use ☑

Please describe other ways in which the surrounding area is different: *(This field is limited to 1000 characters)*

The entire land area outside the park is used for agricultural-forestry-fishery purposes.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Fresh water	Drinking water for humans and/or livestock	Medium
Fresh water	Water for irrigated agriculture	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	Medium
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Spiritual and religious values	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Long-term monitoring site	Medium

Other ecosystem service(s) not included above: *(This field is limited to 1000 characters)*

For more information on ecosystem services please refer to the attachment VN_lit1504.docx under Additional reports and documents.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ○ Unknown ◉

4.5.2 - Social and cultural values

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	☑	☐

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☐	☑

Provide further information on the land tenure / ownership regime (optional): *(This field is limited to 1000 characters)*

Land tenure/ownership:
a) within the Ramsar site:
100% of the park area is owned by the state. The government assigned U Minh Thuong National Management Board to manage the area for conservation purposes.

b) in the surrounding area:
Land tenure in the surrounding area is titled to individual farmers. In the core zone's contiguous area (365 ha from the park boundary to Canal 120) park authority signed contracts with 76 local households for forest protection.

Current land (including water) use:
a) within the Ramsar site:
The whole of the Ramsar Site is a National Park. It is a protected area that serves for biodiversity conservation and ecotourism.

b) in the surroundings/catchment:
The entire land area outside the park is used for agricultural-forestry-fishery purposes.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: *(This field is limited to 1000 characters)*

Kien Giang Provincial People's Committee takes the overall jurisdiction over U Minh Thuong National Park.

U Minh Thuong National Park Management Board manages the park.

Other provincial state agencies share mandate in management of park including Department of Natural Resources and Environment, Department of Agriculture and Rural Development, Department of Investment and Planning, and Department of Finance etc.

Provide the name and title of the person or people with responsibility for the wetland: Mr. Le Hoang Huong, Director

Postal address: *(This field is limited to 254 characters)*

Postal Address: U Minh Thuong National Park, An Minh Bac commune, U Minh Thuong district,
Kien Giang province, Vietnam

Tel.: +84 773883037, Fax: +84 773883023

E-mail address: vuonquocgiauminhthuong@gmail.com

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas		High impact	☑	☐

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water releases	High impact	Medium impact	☑	☐

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals	High impact	Medium impact	☑	☐

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Unspecified/others	Medium impact		☐	☑

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	High impact	High impact	☑	☐

Please describe any other threats (optional): *(This field is limited to 2500 characters)*

For more information on threats on both within the Ramsar Site and in the surrounding area please refer to the attachment VN_lit15041.docx under Additional documents and reports.

5.2.2 - Legal conservation status

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	KienGiangBiosphereReserve		partly

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	AnASEANHeritagePark		whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	UMinhThuong		whole

5.2.3 - IUCN protected areas categories (2008)

II National Park: protected area managed mainly for ecosystem protection and recreation ☑

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Soil management	Proposed
Re-vegetation	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Proposed
Reintroductions	Proposed

Human Activities

Measures	Status
Communication, education, and participation and awareness activities	Implemented
Research	Proposed

Other: *(This field is limited to 2500 characters)*

U Minh Thuong was designated as a national park, the highest category in the national protected areas system of Vietnam. The site was first designated as a nature reserve by a decree of the government of Vietnam in 1993 (Buckton et al. 1999). In the same year, a nature reserve investment plan was approved by the former Ministry of Forestry. In the following year, U Minh Thuong Nature Reserve and Historical Site Management Committee was established to oversee the administration of the site and manage government funding through the national 327 Programme (BirdLife International and MARD 2004; Sage (eds.) 2004).

On 14 January 2002, the management category of U Minh Thuong was revised from nature reserve to national park, following Decision No. 11/TTg of the Prime Minister. According to the Prime Minister's decision, the total area of the national park is 8,053 ha, comprising a strict protection area of 7,838 ha, a forest rehabilitation area of 200 ha and an administration and services area of 15 ha. In addition, there is a buffer zone of 13,069 ha, outside of the national park. According to the Prime Minister's Decision, the national park is under the management of Kien Giang Provincial People's Committee.

Following the revision of the management category, the U Minh Thuong Nature Reserve and Historical Site Management

Committee was restructured as a national park management board, following Decision No. 49/QD-UB, dated 8 July 2002. The management board currently has 59 members of staff, based at eight guard stations. A revised investment plan for the national park was prepared in 2003. For more information on the investment plan please refer to the text box under Key conservation measures.

In addition, U Minh Thuong was designated as one of core zones of Kien Giang Biosphere Reserve by UNESCO in 2006 and in 2013, the site was recognised as a ASEAN Heritage Park.

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site: *(This field is limited to 1000 characters)*

In Vietnam, the most important plan for protected areas is the investment plan approved by MARD that consists of work plan and required budget for a given period. In UMTNP, the Investment Plan for the period of 2003-2017 is being implemented.

The park authority is now preparing a plan that will allow local communities to harvest resources (non-timber forest products and invertebrates) on a limited basis under the supervision and control of the park rangers. The plan is expected to be ready for the approval of Kieng Giang PPC by end of 2015.

A water resource management plan that is aimed at mitigating the risk of peatland drying and forest fire was prepared and submitted to the local government for approval.

The park Management Board has just established a visitor center. For more information please refer to the attachment VN_lit1504.docx under Additional reports and documents.

The park also has a conservation awareness program for local communities and schools.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water quality	Proposed
Birds	Implemented
Plant community	Implemented

(This field is limited to 2500 characters)

From 1998 to 2003, CARE International in Vietnam implemented a Danida-funded U Minh Thuong National Park Conservation and Community Development project. For more information on this project please refer to the attachment VT_lit1504 under Additional reports and documents.

In 2003, Kien Giang Provincial People's Committee decided to fund the Investment Plan for Protection and Development of UMTNP for the period of 2003-2017 with a total amount of VND 119 billion (c. USD 6 million).

Following the plan, the national park was divided into three functional zones: Strictly Protection Zone, Ecological Zone and Administration and Service Zone with the specified management procedures are applied for each zone. The plan includes specific programmes such as:
- Conservation and restoration of the typical samples of the inundated Melaleuca forests, and other unique ecosystems of U Minh area;
- Protection of animal species of conservation concerns (including fishes);
- Scientific Research and Ecotourism;
- Capacity building for the park management board;
- Socio-economic development by creating new jobs for buffer zone residents and
- Improve participation of the local communities in park management and wise-use of wetland resources.

Conservation measures proposed but not yet implemented:

There are a few proposals put forward by the park managers but not yet funded by the investment plan:
- Establishment of a botanical garden and forest animal collections that will serve for scientific research, education, and recreation purposes;
- Restoration and reintroduction of selective vegetations;
- Restoration of wild animal population (mammal, bird, and herptile species);
- Animal rescue centre;
- Monitoring of water quality and aquatic species; and
- Research on the development of soil environment.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

(This field is limited to 2500 characters)

The list of bibliographical references is attached as a separate document in the Section: Additional reports and documents - Other published literature.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<3 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Little Egret (*Dr. Tran Ngoc Cuong, SEPA Focal point for Viet Nam, 27-11-2008*)

Bird Station at U Minh Thuong Nature Reserve (*Dr. Tran Ngoc Cuong, SEPA Focal point for Viet Nam, 03-10-2009*)

Locals collecting Nymphaea Nouchali (*Dr. Tran Ngoc Cuong, SEPA Focal point for Viet Nam, 13-12-2009*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2015-04-30