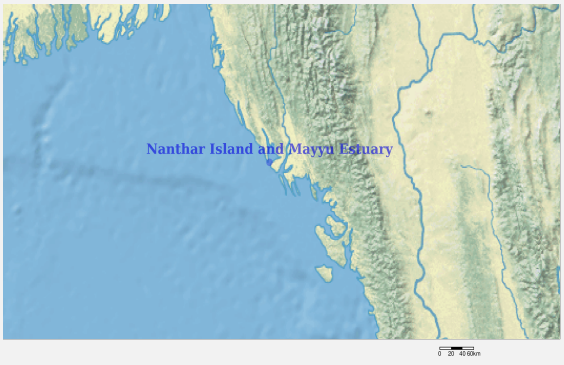
Ramsar Information Sheet

Published on 21 May 2020

Myanmar

Nanthar Island and Mayyu Estuary



Designation date	22 May 2020
Site number	2421
Coordinates	20°15'23"N 92°45'24"E
Area	3 608,00 ha

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

The main habitat types on Nanthar Island are coastal intertidal mudflats, sandy beaches (on sand banks and spits) and mangrove forests (small remnants), as well as small areas of man-made fish ponds. Collectively, these coastal environments support a rich intertidal assemblage of fish and marine invertebrates, and significant numbers of waterbirds. A total of 67 water bird species has been recorded at the site based on regular field surveys between 2008-2019. The intertidal mudflats around Nanthar Island provide important habitats for migratory shorebirds; of greatest significance about 5% of the global population of the Critically Endangered spoon-billed sandpiper (18-35 individuals), the Endangered spotted greenshank (4-5 individuals) and great knot (ca. 150 individuals), the Vulnerable Indian skimmer, and a number of Near Threatened waterbird species, such as black-headed ibis, painted stork, Eurasian curlew, black-tailed godwit, bar-tailed godwit, red knot, red-necked stint and curlew sandpiper. Nanthar Island also hosts a considerable number of nesting marine turtles of three species such as loggerhead turtle (Vulnerable), green turtle (Endangered) and olive ridley (Vulnerable). Each year, more than 120 nests of three turtle species are recorded on the island. Due to upwelling from the Bay of Bengal, the coastal water immediately around Nanthar Island is very nutrient-rich, which helps nurture local fisheries and benefits large congregations of shorebirds and other migratory waterbirds. Local communities harvest these rich coastal fisheries using traditional aquacultural techniques.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Dr. Naing Zaw Htun
Institution/agency	Nature and Wildlife Conservation Division
Postal address	Office No. 39, Forest Department, Ministry of Natural Resources and Environmental Conservation Nay Pyi Taw, Republic of the Union of Myanmar
E-mail	nwcdfdmof@gmail.com
Phone	+95-673-405002
Fax	+95-673-405397

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

From year	2008
To year	2019

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Nanthar Island and Mayyu Estuary
Unofficial name (optional)	Nanthar Island and Mayyu Myit Wa

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps	0

Boundaries description

The boundary is the same as the proposed Nanthar Island Marine National Park by the Ministry of Natural Resources and Environmental Conservation, according to the issue of the Ministry's notification as proposed to designate Nanthar Island as a Marine National Park on 1st October, 2019. The Nanthar Island is located at N 20.242923 E 92.74923 and sits in the outlet of a small estuary. It is situated between Sittwe and Rathedaung Townships of Rakhine State and isolated from the Bay of Bengal, which is at the South and West of the island (as shown in the digital map). The wide and low-lying deltaic region on the Sittwe plain is formed by the tributaries and distributaries of the Mayyu, Kalandan (Kispanadi) and Lemyo (Lemro) rivers. Amongst them, Kalandan River is the largest one. The whole coastline is indented by many inlets and lagoons. Nanthar Island contains extensive mudflats, sandy beaches and small pockets of mangrove forest. More mangrove forest and adjacent salt marshes are still found along mainland coast opposite to the Island. These are determined in distribution and extent by the tidal influence and the dynamics of the estuaries.

2.2.2 - General location

a) In which large administrative region does the site lie?	Rakhine State
b) What is the nearest town or population centre?	Nanthar Island is located 20 kilometers the north-west of Sittwe City.

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):	3608
Area, in hectares (ha) as calculated from GIS boundaries	3597.721

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	108. Northern Bay of Bengal

Other biogeographic regionalisation scheme

Spalding, M D et al. (2007) Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas. BioScience 57(7): 573-583.

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	Nanthar is a unique island with a combination of sandy dunes and mudflats in a highly dynamic coastal environment. This type of coastal environment is not found anywhere else in Myanmar nor within the Indo-Malay biogeographical region and possibly finds its most similar equivalent with Sonadia Island neighbouring in Bangladesh 120km far North. Nanthar Island's dynamic environment trap sediment, leading to the formation of shifting channels. Sediment accumulation has led to the constant formation of shifting channels and new sand banks, which plays a role in stabilizing of the coastline.
Other ecosystem services provided	Due to upwelling from the Bay of Bengal, the waters off Nanthar Island support rich feeding grounds for marine life and the waterbirds that depend on it. The rich marine resources support artisanal fisheries, which is a common form of livelihood for the local communities living in and around Nanthar. Given its bird assemblages that include globally threatened species and the rich coastal ecosystems, Nanthar also has good potential for nature-based tourism

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

☑ Criterion 6 : >1% waterbird population

☑ Criterion 8 : Fish spawning grounds, etc.

Justification	The site is of high importance as a food source, breeding and nursery area for fish and crustacean populations in the Bay of Bengal coast near Sittwe observing. As it predominantly consists of mudflat, mangroves and near-coast estuarine waters of rich nutrient that act as the fish nursery and breeding area, fish from the sea migrates to mangroves so that their eggs can attain the adult stage. A total of 26 fish species are found in and around Nanthar Island; significantly hilsa shad (Tenualosa ilisha) - status LC. The other abundant species are toli shad (Tenualosa toli), gold stripe sardinella (Sardinella gibbous), goldspotted grenadier anchovy (Coilia dussumieri) and areolate grouper (Epinephelus areolatus).

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 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/ AVES	*Anser indicus*	Bar-headed Goose	☐	☐	☑	☐	☐	☐	☐	☐	900	2009-2018	1.6	LC	☐	☐		Winter Visitor

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ AVES	*Calidris tenuirostris*	Great Knot	☑	☑	☐	☐	☐	☐	☐	☐	40	2008-2013	0.01	EN	☐	☑		S & SE Asia (non-breed)
CHORDATA/ AVES	*Eurynorhynchus pygmeus*	Spoon-billed Sandpiper	☑	☑	☑	☐	☐	☐	☐	☐	34	2008-2013	11	CR	☐	☑		Eurynorhynchus pygmeus is a synonym often used in the place of Calidris pygmaea (Linnaeus, 1758). Recorded annually on Nanthar Island since 2008. 450-500 birds are believed to be remaining in the wild, with a breeding cohort of 120 pairs (Zöckler et al. 2016). Nathan Island is a wintering area for this species.
CHORDATA/ AVES	*Limosa limosa*	Black-tailed Godwit	☐	☑	☐	☐	☐	☐	☐	☐	1200	2008-2019	0.8	NT	☐	☐		South Asia (non-breed)
CHORDATA/ AVES	*Rynchops albicollis*	Indian Skimmer	☑	☐	☐	☐	☐	☐	☐	☐	27	2008-2019	0.36	VU	☐	☐		S & SE Asia (non-breed)
CHORDATA/ AVES	*Tringa guttifer*	Nordmann's Greenshank	☑	☑	☑	☐	☐	☐	☐	☐	5	2008-2019	1	EN	☑	☑		Nanthar Island supports for the habitat of the Nordmann's greenshank or spotted greenshank in winter. It is non-breeding range.
Fish, Mollusc and Crustacea																		
CHORDATA/ ACTINOPTERYGII	*Coilia dussumieri*	Anchovy; Gold spotted gernadier anchovy; Gold spotted grenadier anchovy; Golden anchovy; Goldspotted grenadier anchovy; Gold-spotted grenadier anchovy; Grenadier anchovy	☐	☑	☐	☐	☐	☐	☑	☐				LC	☐	☐		Nanthar Island provides its breeding and nursery area.
CHORDATA/ ACTINOPTERYGII	*Epinephelus areolatus*	Areolate grouper; Areolate rock cod; Areolate rockcod; Areolated grouper; Areolated rockcod; Brownspotted grouper; Flat-tail cod; Green-spotted rock cod; Grouper; Reef cod; Rock cod; Seabass; Spotted grouper; Squaretail grouper; Squaretail rock cod; Squaretail rockcod; S	☐	☑	☐	☐	☐	☐	☑	☐				LC	☐	☐		Nanthar Island provides its habitat.

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ ACTINOPTERYGII	*Sardinella gibbosa*	Fringed-scaled sardine; Fringescale sardinella; Fringe-scaled pilchard; Gold stripe sardine; Gold stripe sardinella; Goldstipe sardinella; Goldstripe sardine; Goldstripe sardinella; Goldstripe sardinelle; Goldstripe sardines; Indian sprat; Sardine; Slender sardine	☐	☑	☐	☐	☐	☐	☑	☐				LC	☐	☐		Nanthar Island provides its habitat.
CHORDATA/ ACTINOPTERYGII	*Tenualosa ilisha*	Hilsa; Hilsa herring; Hilsa shad; Indian shad; River shad	☐	☑	☐	☐	☐	☐	☑	☐				LC	☐	☐		S & SE Asia (non-breed), very popular and sought-after protein in the Indian subcontinent.
CHORDATA/ ACTINOPTERYGII	*Tenualosa toli*	Big-mouthed tenualosa; Chinese herring; Chinese-herring; Giant herring; Herring; Hilsa herring; Toli shad	☑	☑	☐	☐	☐	☐	☑	☐				VU	☐	☐		S & SE Asia (non-breed) but supports its habitat.
Others																		
CHORDATA/ REPTILIA	*Chelonia mydas*	Green Turtle	☑	☑	☐	☐	☐	☐	☐	☐				EN	☑	☑		Nesting site
CHORDATA/ REPTILIA	*Dermochelys coriacea*	Leatherback Sea Turtle	☑	☑	☐	☐	☐	☐	☐	☐				VU	☑	☑		Nesting site
CHORDATA/ REPTILIA	*Lepidochelys olivacea*	Olive Ridley Sea Turtle; Pacific Ridley	☑	☑	☐	☐	☐	☐	☐	☐				VU	☑	☑		Nesting site
CHORDATA/ MAMMALIA	*Orcaella brevirostris*	Irrawaddy Dolphin; Irrawady Dolphin	☑	☑	☐	☐	☐	☐	☐	☐	10	2008-2019		EN	☑	☑		Often seen in estuaries

1) Percentage of the total biogeographic population at the site

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

The main habitat types on Nanthar Island are coastal intertidal mudflats, sandy beaches (on sand banks and spits) and mangrove forests (small remnants), as well as man-made fish ponds. Collectively, these coastal environments support a rich intertidal assemblage of fish and marine invertebrates, and significant numbers of waterbirds. Due to upwelling from the Bay of Bengal, the coastal waters immediately around Nanthar Island is very nutrient-rich, which helps local fisheries nurture to protect the areas for the ecology of local fishery so that a sustainable source of local livelihood is ensured. Local communities harvest these rich coastal fisheries by using traditional means. Large congregations of migratory waterbirds such as waders also benefit from these rich feeding grounds.

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

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
A: Permanent shallow marine waters		3		
D: Rocky marine shores		4		
F: Estuarine waters		1		Representative
I: Intertidal forested wetlands		4		Rare

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
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		3		

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds		4		Representative

4.3 - Biological components

4.3.1 - Plant species

<no data available>

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/AVES	*Actitis hypoleucos*	Common Sandpiper				Common
CHORDATA/AVES	*Anas acuta*	Northern Pintail	3000	2008-2019		Common
CHORDATA/AVES	*Anas clypeata*	Northern Shoveler				Uncommon
CHORDATA/AVES	*Anas penelope*	Eurasian Wigeon	1200	2008-2019		Uncommon
CHORDATA/AVES	*Anas querquedula*	Garganey				Uncommon
CHORDATA/AVES	*Anastomus oscitans*	Asian Openbill				Common
CHORDATA/AVES	*Ardea alba*	Great Egret	153	2008-2019		Common
CHORDATA/AVES	*Ardea cinerea*	Grey Heron;Gray Heron	7	2008-2019		Common
CHORDATA/AVES	*Ardeola bacchus*	Chinese Pond-Heron;Chinese Pond Heron				Common
CHORDATA/AVES	*Ardeola grayii*	Indian Pond Heron				Common
CHORDATA/AVES	*Arenaria interpres*	Ruddy Turnstone	37	2008-2019		Uncommon
CHORDATA/AVES	*Aythya fuligula*	Tufted Duck				Common
CHORDATA/AVES	*Bubulcus coromandus*	Eastern Cattle Egret				Common
CHORDATA/AVES	*Calidris alba*	Sanderling	215	2008-2019		Rare
CHORDATA/AVES	*Calidris canutus*	Red Knot	35	2008-2019		Rare
CHORDATA/AVES	*Calidris ferruginea*	Curlew Sandpiper	150	2008-2019		Uncommon

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	*Calidris minuta*	Little Stint				
CHORDATA/AVES	*Calidris ruficollis*	Red-necked Stint	280	2008-2019		Uncommon
CHORDATA/AVES	*Charadrius alexandrinus*	Snowy Plover;Kentish Plover	550	2008-2019		Common
CHORDATA/AVES	*Charadrius dubius*	Little Ringed Plover				Common
CHORDATA/AVES	*Charadrius hiaticula*	Common Ringed Plover				Common
CHORDATA/AVES	*Charadrius leschenaultii*	Greater Sand-Plover;Greater Sand Plover	440	2008-2019		Common
CHORDATA/AVES	*Charadrius mongolus*	Lesser Sand-Plover;Lesser Sand Plover	1000	2008-2019		Common
CHORDATA/AVES	*Chlidonias hybrida*	Whiskered Tern	200	2008-2019		Common or uncommon
CHORDATA/AVES	*Chlidonias leucopterus*	White-winged Tern				Common or uncommon
CHORDATA/AVES	*Chroicocephalus brunnicephalus*	Brown-headed Gull	340	2008-2019		Common
CHORDATA/AVES	*Dendrocygna javanica*	Lesser Whistling Duck				Common
CHORDATA/AVES	*Egretta garzetta*	Little Egret	1230	2008-2019		Uncommon
CHORDATA/AVES	*Gallinago gallinago*	Common Snipe				Uncommon
CHORDATA/AVES	*Gallinago stenura*	Pin-tailed Snipe				Uncommon
CHORDATA/AVES	*Gelochelidon nilotica*	Gull-billed Tern				
CHORDATA/AVES	*Glareola lactea*	Small Pratincole				
CHORDATA/AVES	*Hydroprogne caspia*	Caspian Tern				
CHORDATA/AVES	*Limicola falcinellus*	Broad-billed Sandpiper	330	2008-2019		
CHORDATA/AVES	*Limosa lapponica*	Bar-tailed Godwit	5	2008-2019		
CHORDATA/AVES	*Microcarbo niger*	Little Cormorant				Common
CHORDATA/AVES	*Mycteria leucocephala*	Painted Stork				
CHORDATA/AVES	*Numenius arquata*	Eurasian Curlew	69	2008-2019		Common
CHORDATA/AVES	*Numenius phaeopus*	Whimbrel	65	2008-2019		Common
CHORDATA/AVES	*Nycticorax nycticorax*	Black-crowned Night-Heron;Black-crowned Night Heron				Common
CHORDATA/AVES	*Philomachus pugnax*	Ruff				Rare
CHORDATA/AVES	*Pluvialis fulva*	Pacific Golden-Plover;Pacific Golden Plover				Common
CHORDATA/AVES	*Sterna hirundo*	Common Tern				Uncommon
CHORDATA/AVES	*Sternula albifrons*	Little Tern				Uncommon
CHORDATA/AVES	*Thalasseus bengalensis*	Lesser Crested Tern				Uncommon
CHORDATA/AVES	*Thalasseus bergii*	Great Crested Tern;Greater Crested Tern				Uncommon
CHORDATA/AVES	*Threskiornis melanocephalus*	Black-headed Ibis	59	2008-2019		Uncommon
CHORDATA/AVES	*Tringa erythropus*	Spotted Redshank				Uncommon
CHORDATA/AVES	*Tringa glareola*	Wood Sandpiper				Uncommon
CHORDATA/AVES	*Tringa nebularia*	Common Greenshank				Common
CHORDATA/AVES	*Tringa stagnatilis*	Marsh Sandpiper				Uncommon
CHORDATA/AVES	*Tringa totanus*	Common Redshank	335	2008-2019		Common
CHORDATA/AVES	*Vanellus indicus*	Red-wattled Lapwing				Common

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	*Xenus cinereus*	Terek Sandpiper	85	2008-2019		Common

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Af: Tropical wet (No dry season)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 0

a) Maximum elevation above sea level (in metres): 10

- Entire river basin ☐
- Upper part of river basin ☐
- Middle part of river basin ☐
- Lower part of river basin ☐
- More than one river basin ☐
- Not in river basin ☑
- Coastal ☑

4.4.3 - Soil

- Mineral ☑
- Organic ☑
- No available information ☐

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

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Marine water	☑	No change

Water destination

Presence?	
Marine	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site ☐
- Significant accretion or deposition of sediments occurs on the site ☑
- Significant transportation of sediments occurs on or through the site ☑
- Sediment regime is highly variable, either seasonally or inter-annually ☐
- Sediment regime unknown ☐

4.4.6 - Water pH

- Acid (pH<5.5) ☐
- Circumneutral (pH: 5.5-7.4) ☐
- Alkaline (pH>7.4) ☐
- Unknown ☑

4.4.7 - Water salinity

- Fresh (<0.5 g/l) ☐
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☑

Euhaline/Eusaline (30-40 g/l) ☑
Hyperhaline/Hypersaline (>40 g/l) ☐
Unknown ☐

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐
Mesotrophic ☐
Oligotrophic ☐
Dystrophic ☐
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 greater urbanisation or development ☐
Surrounding area has higher human population density ☐
Surrounding area has more intensive agricultural use ☑
Surrounding area has significantly different land cover or habitat types ☑

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)	High
Wetland non-food products	Fuel wood/fibre	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Scientific and educational	Long-term monitoring site	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	Medium

Within the site: 10 s
Outside the site: 1,000 s-10,000 s

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

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☑

Description if applicable

The Nanthar Island predominantly consists of mudflat, mangroves and near-coast estuarine waters. As the communities from seven villages living close to Nanthar Island and Mayyu Estuary have limited economic opportunities of income and highly depend on fishery at subsistence level. Fishing is controlled by licensing system. Because of good fertility of soil, small-scale agriculture is practiced by applying traditional cultivation methods during the rainy season mainly for rice, water melon, chili and peppers.

An official Government-led protected area establishment committee has already been comprised of for sustainable management of this area. Nowadays, Nanthar Island is underway to establish as a protected area under legal protection of the Government of Myanmar. As it was internationally recognized by East Asian Australasian Flyway Partnership as a Flyway Network Site, the community awareness and participation in conserving shorebirds and sea turtles and cooperation with related INGOs and government departments such as Department of Agriculture and Department of Fishery have been enhanced by CEPA actions through EAAFP small grant and other available financial sources.

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☑

Description if applicable

Previously, the local communities from the surrounding villages made the temporary camps mainly for fishing and small scale agriculture on the Nanthar island. Nowadays, human settlement cannot be found. However, those communities of nearly 1000 households inhabiting around the island highly depend upon subsistence fishing for their main livelihood option. Such activities of fishing and collection of shellfish and crabs are practised in a traditional way by using gillnets, drift-nets, longlines, hook and trap and not regarded as having adverse impacts on fish populations. People from three villages from the surrounding region of the Mayyu river, which is at the north of the island, have one tradition to believe and celebrate for the Goddess of Mayyu River for its sustained fish yield and it usually takes place in their own villages during winter. The site is therefore providing not only nutrient-rich food but also the aesthetic and spiritual values for the communities.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☑

Description if applicable

The dominant socio-economic activities within and around the Nanthar Island are fishing, aquaculture and small-scale agriculture. Crops such as paddy, corn, water melon, chili and metal nuts are commonly planted.

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☑

Description if applicable

There is at least one monastery in every village of the northside of Nanthar Island and like any other Buddhist areas, local villagers traditionally respect and follow the sermons and advice of the monks.

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	☑	☑

Provide further information on the land tenure / ownership regime (optional):

The Government of Myanmar owns all land and also owns all the marine area.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Forest Department, Rakhine State: It manages Nanthar Island and Mayyu Estuary, specifically related to mangroves and biodiversity conservation. The coastal management will be developed after designation. The Department of Fisheries is fully responsible for fishery sector of the nearby Nanthar Island & Mayyu Estuary, which is part of the jurisdiction of the Department of Fisheries under the Ministry of Agriculture, Livestock and Irrigation. Township General Administrative Department usually connects with different and relevant stakeholders. Myanmar Police Force is also responsible to reduce the threat for this area and to involve in patrolling.
Provide the name and title of the person or people with responsibility for the wetland:	Director, Mr. Soe Tint, Forest Department, Rakhine State
Postal address:	Thatta Htarna Street, Ye New Su Ward, Sittwe Township, Rakhine State, Myanmar
E-mail address:	rakhaingdiroffice@forest.gov.mm

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
Housing and urban areas	Low impact	Medium impact	☐	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Marine and freshwater aquaculture	Low impact	Medium impact	☑	☑
Livestock farming and ranching	Low impact	Medium impact	☐	☑

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Mining and quarrying	unknown impact	unknown impact	☐	☑

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Shipping lanes	Low 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	Low impact	Medium impact	☑	☑
Fishing and harvesting aquatic resources	Low impact	Medium impact	☑	☐

Human intrusions and disturbance

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

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Industrial and military effluents		Low impact	☑	☐
Agricultural and forestry effluents	Low impact	Medium impact	☐	☑

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	unknown impact	Low impact	☑	☐
Temperature extremes	Low impact	Low impact	☑	☐

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	EAAFP Flyway Network Site	https://www.eaaflyway.net/myanma r/	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Proposed Marine National Park	Nanthar Marine National Park		whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

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

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Proposed

Human Activities

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

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

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 ◉

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Aung, P.P,Tin Aung Tun, Aung Myin Tun, Aung Naing Oo, Min Thein Htet, Ren Naung Soe, Saw Thein Maung & Kyaw Thein Aung: (2016) Monitoring Programme for Critically Endangered Spoon-billed Sandpiper on its Globally Most Important Wintering Grounds in Myanmar https://www.banca-env.org/wp-content/uploads/2018/07/spoon-billed-sandpiper-monitoring-in-myanmar-fi nal.pdf

Aung, P.P, Ren Naung Soe, Saw Thein Maung, Kyaw Thein Aung, Shwe Thein & Win Min Tun (2016) Communication Education Participation Awareness (CEPA) Programme in Nanthar Island, Rakhine State.

Aung, P.P, Ren Naung Soe, Saw Thein Maung & Kyaw Thein Aung (2017) Monitoring Migratory Shore Birds Survey in Nanthar Island https://www.banca-env.org/wp-content/uploads/2018/07/monitoring-of-migratory-nanthar-island.pdf

Aung, P.P, Saw Moses, Nigel Clark, Guy Q.A. Anderson, Geoff M Hilton, Graeme M Buchanan, Christoph Zöckler and Rhys Green (2018). Recent changes in the number of spoon-billed sandpipers Calidris pygmaea wintering on the Upper Gulf of Mottama in Myanmar. Oryx

Clark, N.A., Anderson, G.Q.A., Li, J., Syroechkovskiy, E.E., Tomkovich, P.S., Zöckler, C., Lee, R. & Green, R.E. (2018) First formal estimate of the world population of the Critically Endangered spoon-billed sandpiper Calidris pygmaea. Oryx, 52, 137-146.

Mark D. Spalding, Helen E. Fox, Gerald R. Allen, Nick Davidson, Zach A. Ferdaña, Max Finlayson, Benjamin S. Halpern, Miguel A. Jorge, Al Lombana, Sara A. Lourie, Kirsten D. Martin, Edmund Mcmanus, Jennifer Molnar, Cheri A. Recchia, and James Robertson (2007) Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas. BioScience 57(7): 573-583.

Spoon-billed Sandpiper Task Force (various). News bulletins - accessible at http://www.eaaflyway.net/spoon-billed-sandpiper.php

Zöckler, C, Htin Hla, T, Clark, N, Syroechkovskiy, E, Yakushev, N, Daengphayon, S and Robinson, R (2010). Hunting in Myanmar is probably the main cause of the decline of the Spoon-billed Sandpiper Calidris pygmeus. Wader Study Group Bulletin 117(1): 1–8

Zöckler, C. T. Htin Hla, A. Bräunlich (2012). Status of Bar-headed Geese (Anser indicus) wintering in Western Myanmar. Kasarka 15(1):63-65.

Zöckler, C., T. Zaw Naing, S. Moses, R. Nou Soe & T. Htin Hla (2014): The importance of the Myanmar Coast for Water Birds. Stilt 66: 37-51.
Zöckler, C., Beresford, A. E., Bunting, G., Chowdhury, S. U., Clark, N. A., Fu, V. W. K.. Htin Hla, T. Morozov, V.V., Syroechkovskiy, E.E, Kashiwagi, M., Lappo, E. G, Tong, M., LeLong, T.,Yat-Tung Y., F. Huettmann, F., Akasofu, H. K., Tomida, H. and G. M. Buchanan (2016) The winter distribution of the spoon-billed sandpiper Calidris pygmaeus. Bird Conserv. Internat. 26: 476–489.

Zöckler, C. (2018) Status and trends of wintering Bar-headed Geese Anser indicus in Myanmar. Goose Bull. 23:15-23.
Zöckler, C., Aung, P.P., Grindley, M., Aung, C. & Momberg. (2019) Coastal Wetlands in Myanmar: a Directory of importance sites.

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
<2 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:


Flock of Crab at Nanthar Island (*Mr. Ren Naung Soe (BANCA), 21-01-2019*)


Habitat Type of Waterbirds, Nanthar Island (*Mr. Ren Naung Soe (BANCA), 21-01-2019*)


Birds in northern part of Nanthar Island (*Forest Department, Myanmar, 22-01-2019*)


Spoon-billed sandpiper found on the Nanthar Island (*Mr. Ren Naung Soe (BANCA), 17-02-2019*)


Birds and mangroves of Nanthar Island (*Mr. Ren Naung Soe (BANCA), 21-01-2019*)


Habitat Type of Nanthar Island and Mayyu Estuary (*Mr. Min Thiha Zaw (BANCA), 08-02-2020*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation	2020-05-22