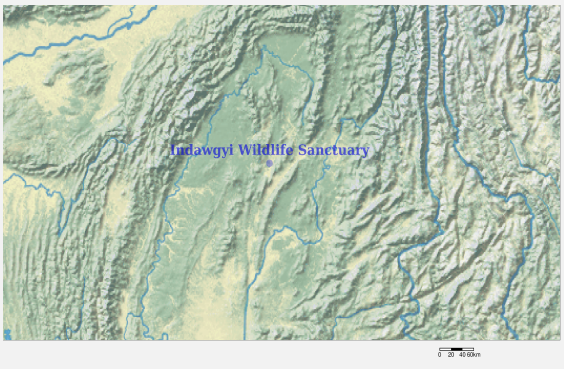
Ramsar Information Sheet

Published on 1 February 2016

Myanmar

Indawgyi Wildlife Sanctuary



Designation date	2 February 2016
Site number	2256
Coordinates	25°09'34"N 96°21'43"E
Area	47 884,38 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 (This field is limited to 2500 characters)

Indawgyi Lake is the largest natural freshwater lake in Myanmar that is approximately 24 km long, and up to 8 km wide. The lake basin has extensive shallow areas but reaches up to 22 m depth. The immediate edges of the lake are gently sloping and have mostly been converted to wet rice agriculture, which is also included within the Site boundary. Beyond the Site boundary are the surrounding ridges. The ridges are uniform running along the eastern side of the lake, rising to 1,175 m asl. The hills to the west and south are more extensive and irregular and rise to 1,180 m asl and 1,500 m asl, respectively. The lake is fed by three main streams and at least five secondary streams that flow in from the surrounding ridges. These ridges form the catchment component of the larger Indawgyi Lake Wildlife Sanctuary, and together with the Naung Khun In in the north-west of the lake were proposed for inclusion within the Ramsar Site at a later time, though is not part of the sanctuary currently.

The main outflow is the Indaw River to the north, which eventually drains into the Ayeyarwaddy River. The Indaw River flows through seasonally inundated herbaceous marsh and agricultural land, primarily wet rice paddy. Approximately 30,000 people live in 16 villages situated in the lake basin, and depend on a mixture of rice farming between the lake and the surrounding hills, and fishing. Rice field in the lake basin appears to be maintaining habitat for sarus crane and several other key species. Tourism is limited at Indawgyi till today, but a steady stream of visitors comes to enjoy the scenic beauty. The annual festival at the Shwe Myint Zu Pagoda, which is situated on the west side of the lake and is connected by a semi-submerged causeway, attracts several tens of thousands of mostly Burmese Buddhist pilgrims.

The whole Site supports at least 20,000 migratory and resident waterbirds on a regular basis including coot, purple swamphen, tufted and ferruginous ducks, lesser whistling ducks, and black-headed gulls as well as many other ducks, waders and gulls. The Site is also home to five species of globally threatened turtles that are Asian brown tortoise (Manouria emys), Burmese peacock softshell turtle (Nilssonia formosa), yellow tortoise (Indotestudo elongata), Asian softshell turtle. Indawgyi, with 93 fish species recorded at it, has a very high diversity of fish species with 7 species recently discovered to be new to science and endemic to the Indawgyi wetlands.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Name: Mr. Win Naing Thaw

Institution/agency: Nature and Wildlife Conservation Division, Forest Department, Ministry of Environmental Conservation and Forestry

Postal address (This field is limited to 254 characters)

Office No. 39, Forest Department, Ministry of Environmental Conservation and Forestry, Nay Pyi Taw, The Republic of the Union of Myanmar

E-mail: nwcdfdmof@gmail.com

Phone: +95 67 405002

Fax: +95 67 405397

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

From year: 1997

To year: 2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Indawgyi Wildlife Sanctuary

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)

This Site is in two sections and corresponds to Indawgyi Lake (= Indawgyi Kan) and the surrounding lowlands. These correspond to the entire area within the lake drainage basin below approximately 200 m elevation. The Site incorporates the wetland component of Indawgyi Lake Wildlife Sanctuary, i.e., Indawgyi Lake up to its high-water level of approximately 175 masl, plus about the first 8 km of the only outflow, the Indawgyi River (= Indawchaung or Indawgyi chaung).

2.2.2 - General location

a) In which large administrative region does the site lie? Kachin State

b) What is the nearest town or population centre? Hopin Town in Mohnyin Township

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): 47884.38

Area, in hectares (ha) as calculated from GIS boundaries 47839.08

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Burmese Monsoon Zone

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

The Site lies near the southern boundary of the Biounit of North Irrawaddy, comprising the Kachin and Upper Chindwin

divisions, which is a sub-unit of 09 the Burmese Monsoon Zone. The biogeographical unit used here is taken from the regional analysis of the Indo-Malayan Realm in MacKinnon (1997). This is the system adopted by the Myanmar government (Forest Department 2012).

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)

During wet season, the lake probably expands appreciably to flood the low-lying areas surrounding the lake basin. It probably provides groundwater recharge and flood control functions. Sediment entering the lake from the areas of artisanal gold mining to the southwest of the Site is a threat as it leads to the rapid sedimentation of the lake.

Other ecosystem services provided (This field is limited to 3000 characters)

The areas surrounding the Indawgyi Lake stops mercury rich materials generated by artisanal gold mining from spreading across the lake bed. Moreover, most of the resident population practices wet rice agriculture and due to the rich alluvial deposits in the lower Indawgyi basin the area is a net rice exporter.

Other reasons (This field is limited to 3000 characters)

The Burmese Monsoon Zone Biounit (Unit 09) consists of the Irrawaddy catchment between the Chin Hills to the west, extends north through the evergreen forests of Mizoram, Manipur and Nagaland and to the Shan plateau to the east. The Biounit includes the dry central zone of Myanmar, the Chindwin and the Kachin regions and the northern hills leading up into the Himalayan Mountains, and has a total area of just over 400,000 sq km (MacKinnon 1997). Many of the wetlands and grasslands in the Biounit have been converted to wet rice agriculture, while many tributaries are affected by hydropower dams and gold mining. Indawgyi Lake is the third largest lake on the mainland of Southeast Asia and by far the largest intact wetland in the Burmese Monsoon Zone Biounit, while the associated wetland margins represent relatively intact natural wetland habitat of a type that is becoming increasingly rare in the Biounit. The Site is thus both unique within the Biounit yet representative of once widespread habitat. For these reasons it is also considered suitable for World Heritage nomination under environmental criteria (Davies et al., 2004).

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	20000
Start year	1997
Source of data:	Wetlands International 2013, Davies et al 2004, MBNS 2008, MCDP 2012, IWC (Feb 2013), IWC (Feb 2014), IWC (Feb 2015)

☑ Criterion 6 : >1% waterbird population

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

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Dalbergia oliveri	Burma Rosewood	☑	☐	☐	EN	☐		
Dipterocarpus dyeri		☑	☐	☐	CR	☐		

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 / REPTILIA	Amyda cartilaginea	Asian Softshell Turtle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / AVES	Anhinga melanogaster	Oriental Darter	☐	☐	☑	☐	☐	☐	☐	☐	159	2012	1.59	NT	☐	☐		
CHORDATA / MAMMALIA	Axis porcinus	hog deer	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / AVES	Aythya fuligula	Tufted Duck	☐	☐	☐	☐	☐	☑	☐	☐	3000	2004		LC	☐	☐		
CHORDATA / AVES	Aythya nyroca	Ferruginous Duck	☐	☐	☐	☐	☐	☑	☐	☐	3000	2004		NT	☐	☑		
CHORDATA / AVES	Chroicocephalus ridibundus	Black-headed Gull	☐	☐	☐	☐	☐	☑	☐	☐	1200	2004			☐	☐		
CHORDATA / AVES	Ciconia nigra	Black Stork	☐	☐	☑	☐	☐	☐	☐	☐	1	2012	1	LC	☐	☐		
CHORDATA / REPTILIA	Cuora amboinensis	Myanmar Box Turtle	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / AVES	Dendrocygna javanica	Lesser Whistling Duck	☐	☐	☐	☐	☐	☑	☐	☐	2000	2004		LC	☐	☐		
CHORDATA / AVES	Gallinago nemoricola	Wood Snipe	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		Occasional records of individuals

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	Grus antigone	Sarus Crane	☐	☐	☑	☐	☐	☐	☐	☐	26	2015	4.3	VU	☐	☐		
CHORDATA / AVES	Grus grus	Common Crane	☐	☐	☑	☐	☐	☐	☐	☐	120	2012	12	LC	☐	☐		
CHORDATA / MAMMALIA	Hoolock leuconedys	Eastern Hoolock Gibbon	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / REPTILIA	Indotestudo elongata	Yellow Tortoise	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / AVES	Leptoptilos javanicus	Lesser Adjutant	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		
CHORDATA / REPTILIA	Manouria emys	Asian Browne Tortoise	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / REPTILIA	Nilssonia formosa	Burmese Peacock Softshell	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / AVES	Porphyrio porphyrio	Purple Swamphen	☐	☐	☐	☐	☐	☑	☐	☐	5000	2004		LC	☐	☐		
CHORDATA / MAMMALIA	Trachypithec shortridgei	Shortridge's Langur	☑	☐	☐	☐	☐	☐	☐	☐				EN	☑	☐		

(This field is limited to 2500 characters)

More info about criterion 5: We have compiled 15 of the available count datasets, covering 13 years between 1997 and 2015 (Table 2). These data indicate combined waterbird populations of over 20,000 on 8 occasions (all on separate years and consistently over the last 4 years). The average count is only 16,741, but we suspect that the average is below the threshold of 20,000 because some counts have not been able to cover the whole Site. Indeed, to our knowledge, no full census of the Site has yet been achieved, as it would require at least three count teams travelling in separate boats, and preferably five independent teams doing synchronized counting. We also realized that species such as the numerous purple swamp hen is most likely underestimated. A total count of this species during a survey in December 2014 amounted to at least 5,000 individuals (Zöckler 2015).

Table2. Waterbird count data for the Site

1997* Lake only** 23,113*** WI (2013)****
2000 Lake only 19,081 WI (2013)
2001 Lake only 14,926 WI (2013)
2002 Lake only 31,485 WI (2013)

2003 Lake only 12,922 WI (2013)
2003 Lake only 13,550 Davies et al 2004
2004 Lake & river 20,916 WI (2013)
2005 Lake only 18,184 WI (2013)
2006 Lake & river 21,059(3) WI (2013)
2007 Lake only 13,595 WI (2013)
2007 Lake only 13,034 MBNS (2008)
2012 Lake & river 24,336 MCDP 2012
2013 Lake only 25,925 IWC (Feb 2013
2014 Lake only 23,342 IWC (Feb 2014)
2015 Lake only 27,070 IWC (Jan 2015)

* Year
**Notes
***Ramsar Site single winter counts (Lake and river)
****Source of data

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)

Lake habitats include: Open water, herbaceous marsh, floating mats, limited emergent beds and extensive areas of submerged macrophytes.

Due to the relatively high transparency of the water (c.3.5m), there are extensive beds of submerged and floating leaved macrophytes that are dominated by the genus Vallisneria, with Ceratophyllum demersum most commonly occuring.. In addition, there are extensive areas of herbaceous marsh grading into floating mats in certain parts, especially at the north end between Nyaungbin and the Indawgyi Chaung outflow, at the southern end and around the major Nanyinkha Chaung inflow. The floating mats are dominated by the genus Salvinia, Eichhornia, Polygonum and grasses. Beds of emergents are relatively few. Around the drying margins of the lake, a species of Barringtonia is common, which presumably gets inundated in the wet season.

The seasonally inundated and water logged plains surrounding the lake were probably covered by herbaceous marsh and scrub swamp and swamp forest/woodland but have been mostly converted to rice fields except for the herbaceous marsh which undergoes more prolonged inundation closer to the open water of the lake, and in the region of Naung Khun In Lake. The surrounding ridges are still mostly forested. The native vegetation in these forests is moist broadleaf forest with many teak individuals (Tectona grandis). These forests are very important to sustain the wetland ecosystem.

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
M: Permanent rivers/ streams/ creeks	Indaw stream	4	480	Representative
O: Permanent freshwater lakes	Indawgyi Lake	2	11900	Unique
Tp: Permanent freshwater marshes/ pools		3	51	Representative
Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	Indawgyi	3	1000	Representative

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
3: Irrigated land		1	15684	Representative
4: Seasonally flooded agricultural land	Indaw Chaung	2	4050	Representative

4.3 - Biological components

4.3.1 - Plant species

Invasive alien plant species

Scientific name	Common name	Impacts
Imperata cylindrica	bladygrass,cogongrass,kunaigrass,Japar	Actually (minor impacts)

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	Anas strepera	Gadwall	468	2004		
CHORDATA/AVES	Anser anser	Greylag Goose	406	2004		
CHORDATA/AVES	Anser indicus	Bar-headed Goose	164	2004		
CHORDATA/AVES	Ardea purpurea	Purple Heron	78	2004		
CHORDATA/AVES	Aythya ferina	Common Pochard	720	2004		
CHORDATA/AVES	Chroicocephalus brunnicephalus	Brown-headed Gull	647	2004		
CHORDATA/ACTINOPTERYGII	Gudusia variegata			2004		Endemism
CHORDATA/AVES	Microcarbo niger	Little Cormorant	609	2004		

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts
CHORDATA/ACTINOPTERYGII	Cyprinus carpio	Greensnakeheadedfish	Actually (minor impacts)

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)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 180

a) Maximum elevation above sea level (in metres): 200

Entire 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)

Indawgyi Lake

4.4.3 - Soil

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

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	☑

Water destination

Presence?
To downstream catchment

Stability of water regime

Presence?
Water levels largely stable

4.4.5 - Sediment regime

Sediment regime unknown ☑

4.4.6 - Water pH

Alkaline (pH>7.4) ☑

4.4.7 - Water salinity

Unknown ☑

(ECD) Dissolved gases in water (This field is limited to 1000 characters)

Water quality is generally good, with a mean transparency of 3.45 m (n=13) and dissolved oxygen concentration at 1 m depth of4.71mg/l (n=15; both from January 2003, Davies et al., 2004).

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 significantly different land cover or habitat types ☑

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

The surrounding area is mainly human settlement with low population density and agricultural land.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	High
Fresh water	Water for irrigated agriculture	High
Wetland non-food products	Fuel wood/fibre	Medium
Wetland non-food products	Livestock fodder	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or 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
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium

Within the site: 30,000

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

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

Description if applicable (This field is limited to 2500 characters)

Human occupation and use of the Site bring significant cultural values linked to its conservation and ecological functioning:

• Low-impact agriculture and free grazing of cattle help maintain a mixed mosaic habitat containing wallows and waterholes that provide food to cranes, storks and ibises;
• Domestic livestock provide important food source for the critically endangered slender-billed vulture (Gyps tenuirostris) and white-rumped vulture (Gyps bangalensis) which are regularly recorded, at the Site as well as the Himalayan griffon (Gyps himalayensis);
• Cattle may be helping maintain water bird-friendly lake margins in some areas;
• The lake area around Shwe Myint Zu Pagoda is a protected zone by local Buddhist believers, where no fishing is permitted.

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	☑	☐
Other public ownership	☐	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	☐	☑
Religious body/organization	☑	☐

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)

Park Warden Office,
Indawgyi Wildlife Sanctuary,
Mohnyin Township, Kachin State,
The Republic of the Union of Myanmar

Provide the name and title of the person or people with responsibility for the wetland: Mr. Htay Win, Staff Officer

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

Park Warden Office,
Indawgyi Wildlife Sanctuary,
Mohnyin Township, Kachin State,
The Republic of the Union of Myanmar

E-mail address: nwcdfdmof@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	Low impact	Medium impact	☑	☐

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	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	High impact	High impact	☑	☑

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Logging and wood harvesting	Medium impact	Medium impact	☐	☑
Fishing and harvesting aquatic resources	High impact	High impact	☑	☐

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☐

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Vegetation clearance/ land conversion	Medium impact	Medium impact	☑	☐

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact	Medium impact	☑	☐

Pollution

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

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

More information about the threats with high impacts:

Within the Site:

- Hydraulic gold mining along streams in the southwest of the sanctuary (outside of the site) has been an ongoing threat to the lake over the past ten years, primarily through increased sedimentation and use of mercury. The scale of the impact on the biological and human values of the site has not yet been fully evaluated.

- Overfishing is potentially a threat; anecdotal evidence points to a decline in catches of commercial species, though this has not yet been documented across all fishing communities. A local NGO, Friends of Wildlife, has some fish catch monitoring data from 2011 and 2012.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
ASEAN Heritage Park	IndawgyiWildlifeSanctuary		whole

5.2.3 - IUCN protected areas categories (2008)

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 ☑

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	Implemented

Human Activities

Measures	Status
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Partially implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

Other: (This field is limited to 2500 characters)

- A cessation of gold mining is planned but for political reasons is proving difficult to enact. There is, however, now very high level interest in seeing the mining stop. Plans for the peaceful relocation of gold mining households will need to be drawn up.
- Community forestry is being undertaken in eight community Forest User Groups that are in the process of applying to certify a total of <200 hectares.
- Community fisheries are being undertaken in Indawgyi Lake by eight local communities in collaboration with the wildlife sanctuary and department of fisheries. No-fishing zones and a range of regulations have been established and marked, and some enforcement is taking place. Support is provided by the local NGO, Friends of Wildlife.
- Further expansion of community forestry and community fisheries is planned under projects held by FFI and FOW and funded until at least 2015.

Indawgyi Lake Wildlife Sanctuary has 14 staff (four of whom are temporary or contract staff) and operates basic management functions from five sub-stations at the sanctuary. The headquarters is in Mohnyin, the township capital about three hours drive from the lake. Main activities include:
o Ad hoc patrols, in response to reports of crimes

o Monthly patrols in logging hotspots, under a donor funded project at the site (see below)
o Awareness raising at the annual Shwe Myint Zu pagoda festival and other events as instructed by the ministry, or where additional funding is available
o Surveys of encroachments or as directed by the ministry

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 ◉

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)

• A visitor centre building was completed in 2012 at the main entrance to the Indawgyi basin at Nam Mon village, although it has yet to be furnished with any interpretation panels and to be opened to the public.
• Inn Chit Thu Community Ecotourism Group was formed in late 2013 with support from FFI, and provides biological and cultural information to visitors staying in Lonton village (currently the only place foreigners can stay without special permission).
• The wildlife sanctuary and local groups, including NGOs and projects, conduct awareness raising at the annual Shwe Myint Zu pagoda festival awareness, which can receive over 100,000 visitors.
• To date, awareness and extension activities have been conducted by local and international NGOs, particularly on gibbons, fish, waterbirds and forestry issues.

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
Animal species (please specify)	Implemented
Birds	Implemented

(This field is limited to 2500 characters)

Indawgyi Lake Wildlife Sanctuary's staff also conduct:
- Regular waterbird census conducted
- Annual Asian Waterbird Census conducted with the support of a number of outside agencies, most recently Fauna and Flora International (in 2012/2 and 2013/4 seasons).

Scientific research and facilities include:
• Fish surveys have been completed (June 2015) with the support of FFI. The taxonomic description of new species to science is still ongoing.
• Ongoing fish catch (landing site) monitoring undertaken by community fisheries groups with support from FOW.
• Community patrolling on the lake and in forest areas is generating data on resource use patterns. These patrols are conducted with support from FOW (lake) and FFI (forests).
• Monitoring of Eastern Hoolock Gibbon (Hoolock leucondys). Population density estimates were made in five locations in 2010 and will be resurveyed every five years.
• Monitoring of Hog Deer. FFI and NWCD have undertaken a hog deer occupancy surveys using grid-based camera trapping.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

(This field is limited to 2500 characters)

Davies, J., Sebastian, A.C. and Chan, S. (Eds) (2004). A Wetland Inventory for Myanmar. Ministry of Environment, Japan.

Forest Department (2011). National Biodiversity Strategy and Action Plan. Ministry of Environmental Conservation and Forestry, Nay Pyi Taw.

Geissmann, T., Ngwe Lwin, Soe Soe Aung, Grindley, M., Momberg, F. (2010). Hoolock Gibbon and Biodiversity Survey in the Indawgyi Lake Area. Fauna & Flora International (FFI), Myanmar Program. Yangon.

Government of the Union of Myanmar (2004). Notification for the establishment of Inle Lake Wildlife Sanctuary (Amet kyawnha sa) No.39/2004, Ministry of Forestry, Nay Pyi Taw.

IUCN (2012). IUCN Red List of Threatened Species.Version 2012.1
<www.iucnredlist.org>. Downloaded March 2012.

Indawgyi Wildlife Sanctuary (2015): Waterbird Census February 2015.

Kottelat, M. (2015). Fish species observed in Lake Indawgyi and its basin; December 2014 update. Fauna & Flora International Myanmar Program, Yangon.

MacKinnon, J., WCMC (Ed) (1997). Protected Areas Systems Review of the Indo-Malayan Realm. Prepared by the Asian Bureau for Conservation (ABC) in collaboration with The World Conservation Monitoring Centre (WCMC). World Bank, Washington.
MBNS [Myanmar Bird and Nature Society] (2008). Field Feathers 2008. MBNS, Yangon.

Thiri Daewe Aung, Saw Moses, Momberg, F., Ngwe Lwin, Aung Moe, Htay Win and Grindley M.E. (2012). Report on Waterbird Census: Indawgyi Lake, Kachin State (6 – 10 February 2012). Report No.19 of the Myanmar Conservation and Development Program. A joint project of the Biodiversity and Nature Conservation Association (BANCA), Fauna and Flora International (FFI), and the People Resources and Conservation Foundation (PRCF), BANCA, Yangon.

U Myint Shwe and Grindley, M.E. (2012). Preliminary Turtle Conservation Status, Indawgyi Lake, Kachin State, 21 to 30 March 2012. Report No. 18 of the Myanmar Conservation and Development Program. A joint project of the Biodiversity and Nature Conservation Association (BANCA), Fauna and Flora International (FFI), and the People Resources and Conservation Foundation (PRCF). BANCA, Yangon.

U Thein Aung and U Thet Htun (2001). Migratory Waterbirds and Wetland Habitats in Myanmar. Nature and Wildlife Conservation Division, Forest Department, Myanmar.

WI [Wetlands International] (2013). Waterbird Census Data for selected sites in Myanmar. Unpublished count data in Microsoft Excel format. Wetlands International, Wageningen.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<1 file(s) uploaded>
ii. a detailed Ecological Character Description (ECD) (in a national format)
<1 file(s) uploaded>
iii. a description of the site in a national or regional wetland inventory
<1 file(s) uploaded>
iv. relevant Article 3.2 reports
<no file available>
v. site management plan
<no file available>
vi. other published literature
<5 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Sarus Crane (Forest Department, FFI, 09-12-2013)

Shwe Mit Zu Pagoda (Forest Department, Fauna and Flora International (FFI), 09-12-2013)

Stork-billed Kingfisher (Forest Department, FFI, 08-12-2013)

Tufted Duck (Forest Department, FFI, 09-12-2013)

Little Green Bee-eater (Forest Department, FFI, 09-12-2013)

Glossy Ibis (Forest Department, FFI, 08-12-2013)

Bronze-winged Jacana (Forest Department, FFI, 09-12-2013)

Asian Openbill (Forest Department, FFI, 08-12-2013)

Purple Heron (Forest Department, FFI, 09-12-2013)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2014-11-04