



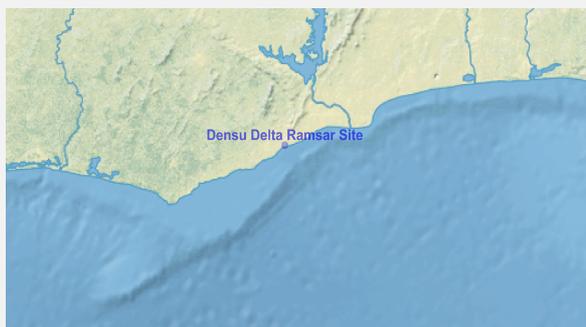
# Ramsar Information Sheet

Published on 8 May 2024

Update version, previously published on : 14 August 2015

## Ghana

### Densu Delta Ramsar Site



Designation date	14 August 1992
Site number	564
Coordinates	05°31'47"N 00°19'39"W
Area	5 892,99 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 Densu Delta Ramsar site comprises river delta with open brackish lagoon, sand dunes, salt ponds and salt pan complex, freshwater marsh, coastal savanna grassland, thickets of degraded mangrove and scrub. It lies west of Accra and is fed by the Densu river which is about 116 km long, and has an area of about 2,460 km<sup>2</sup>. The construction of the Weija dam in 1978, just 8 km inland from the Atlantic sea, reduced the effective catchment area of the Densu Delta Wetland to about 60.5 km south of the dam. The eastern and northern sides of the Wetland are heavily populated. e.g. Dansoman, Kwashieman, Mallam, and Mendeskrom. There are about 20 farming and fishing communities/settlements within the Ramsar site. On the average fishermen earned 524,400.00 per person in 1993. In 1994 the average daily fish catch was about 650 kg. The Densu Delta can sustain an annual fish yield of 270 tonnes, generating between 80 104 million cedis annually. This makes the lagoon an important source of livelihood for the people who depend on it. Also, it supports a salt industry which makes millions, of dollars in foreign exchange a year. The Weija dam which supplies water to half the population of Accra receives its water from the Densu.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

Institution/agency	Wildlife Division (Forestry Commission)
Postal address	Ministries Post Office P. O. Box MB 239 Accra, Ghana

##### National Ramsar Administrative Authority

Institution/agency	WildlifeDivision,ForestryCommission
Postal address	Ministries Post Office P. O. Box MB.239, Accra

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

From year	1990
To year	2023

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Densu Delta Ramsar Site
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#### 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes <input type="radio"/> No <input checked="" type="radio"/>
(Update) B. Changes to Site area	No change to area
(Update) For secretariat only: This update is an extension	<input type="checkbox"/>

#### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	Uncertain
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## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

b) Digital map/image  
<2 file(s) uploaded>

Former maps	0
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##### Boundaries description

The Densu Delta Ramsar site is located west of the capital Accra at Latitude 5°31'N and Longitude 0°20'W. The Site boundary was delineated, surveyed, pillared and map out as a new nature (wetland) conservation area in fulfillment of Ghana's commitment to the ratification of the Ramsar Convention on Wetlands. The southern boundary follows the shoreline of the sea (Gulf of Guinea). The rest of the boundary line follows a catchment boundary and limits defined by then planning scheme of the Planning authority. The northern boundary is bordered by the International N1 Highway linking to Togo. Being an urban wetland it is surrounded and filled with heavy urban development with majority of the core area within the limits if the Panbros Salt Industries.

### 2.2.2 - General location

a) In which large administrative region does the site lie?	Greater Accra Region
b) What is the nearest town or population centre?	Weija-McCarthy Hills

### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?	Yes <input type="radio"/> No <input checked="" type="radio"/>
b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?	Yes <input type="radio"/> No <input checked="" type="radio"/>

## 2.2.4 - Area of the Site

Official area, in hectares (ha):

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

## 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Afrotropical

### 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

The Densu Delta and Wetlands take their source from the Densu River which originates from the Atewa Mountains in the East Akim Abuakwa District of Eastern Region thus resulting in a very extensive catchment area. The river meanders through the Densu basin, bifurcating as it reaches the coastal area into a delta, wetlands and lagoon before emptying into the sea. Meanwhile upstream at Weija the river is dammed, thus trapping large amounts of sediments from upcountry behind the dam. The main lagoons and Delta are located south of the Accra-Winneba/Cape Coast trunk road and bounded on the south by the Atlantic Ocean coastline between Bortianor and Gbegbeyise. The Aplaku-Bortianor road and the Lofa stream define the western and eastern boundaries respectively. The hydrology of the Densu-Delta is influenced by the opening and closing of the sluice gates of the Weija dam and breaking of the sandbar near Tsokome. The reservoir behind the dam is a source of potable water to some parts of the Accra Metropolis and is used also for irrigation and fishing and also important for the recharge of the local aquifer.

Other ecosystem services provided

The wetland serves as a source of food (Fish, Bushmeat, Fruits, Crabs) and herbs for medicines. Also supports pollinators and provides a suitable environment for recreation, tourism and aesthetics. Serves as habitat to migratory birds and support stages of their life cycle, maintenance of genetic diversity, micro-climate regulation and carbon sequestration.

- Criterion 3 : Biological diversity

Justification

The site contains a collection of unique, rare, endangered, abundant or somehow, biogeographically important species of both plants and animals. The area supports over 57 species of seashore birds, with an estimated population of about 35,000 and 15 fin species of fish belonging to 14 genera and 9 families, with *Tilapia zillii* and *Sarotherodon melanotheron* as the prevailing species of fish. Oteng-Yeboah (1994) identified a total of 136 plant species (belonging to 50 flowering plant families) in the flood plains and elevated ground of the Densu Delta. Towards the sea shoreline, typical strands species are the following; *Ipomoea pescaprae*, *Sporobolus virginicus* and *Cyperus maritimus*. *Sesuvium portulacastrum* beds are found along the banks of the salt pans (Gordon, 1995) and the eastern tributary of the Densu close to the salt pans. *Paspalum vaginatum* is also common in these areas. Coconut trees (*Cocos nucifera*) fringe the dunes and the scrubs are mainly of two mangrove species *Avicennia africana* and *Rhizophora racemosa*.

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

Optional text box to provide further information

This site provides habitat support as nesting and breeding grounds for several birds including; different tern species, black-winged stilt and collared pratincole . Also serve as wintering grounds for several migratory waterbirds.

- Criterion 6 : >1% waterbird population

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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<b>Plantae</b>								
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Avicennia germinans</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ LILIOPSIDA	<i>Cyperus articulatus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ LILIOPSIDA	<i>Cyperus capitatus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Ipomoea pes-caprae</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ LILIOPSIDA	<i>Paspalum vaginatum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Rhizophora racemosa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Sesuvium portulacastrum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		

A total of 136 plant species (belonging to 50 flowering plant families) in the flood plains and elevated ground of the Densu Delta have been identified. These contribute to the Key Biodiversity Area (KBA) status of the site.

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

RIS for Site no. 564, Densu Delta Ramsar Site, Ghana

Phylum	Scientific 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								
<b>Birds</b>																	
CHORDATA/AVES	<i>Calidris alba</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	413	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Calidris ferruginea</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6812	2020-2023	1.7	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the Western Siberia/West Africa biogeographical population.
CHORDATA/AVES	<i>Calidris minuta</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1108	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Charadrius hiaticula</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4400	2020-2023	1.83	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the psammodromus, Canada, Greenland & Iceland/W & S Africa biogeographical population.
CHORDATA/AVES	<i>Chlidonias niger</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	809	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Dendrocygna viduata</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1814	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Egretta garzetta</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	943	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Glaucopis trichoptera</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	662	2020-2023	3.31	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the pratincola, Western Europe & NW Africa/West Africa biogeographical population and serves as nesting and breeding ground for species.
CHORDATA/AVES	<i>Himantopus himantopus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2947	2020-2023	2.45	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the himantopus, SW Europe & North-west Africa/West Africa biogeographical population and serves as nesting and breeding ground for species.
CHORDATA/AVES	<i>Microcarbo africanus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2319	2020-2023	2.32	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the africanus, W Africa/West Africa biogeographical population.
CHORDATA/AVES	<i>Numenius phaeopus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	296	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Pluvialis squatarola</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	184	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Sterna hirundo</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3700	2020-2023	2.05	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the hirundo, Southern & Western Europe (bre) biogeographical population and serves as nesting and breeding ground for species.
CHORDATA/AVES	<i>Thalasseus maximus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1500	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Thalasseus sandvicensis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2001	2020-2023	1.18	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the sandvicensis, Western Europe/West Africa biogeographical population and serves as nesting and breeding ground for species.
CHORDATA/AVES	<i>Tringa erythropus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	43	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/AVES	<i>Tringa nebularia</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2991	2020-2023	1.03	LC	<input type="checkbox"/>	<input type="checkbox"/>		Supports at least 1% of the Northern Europe/SW Europe, NW & West Africa biogeographical population.
CHORDATA/AVES	<i>Tringa stagnatilis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26	2020-2023		LC	<input type="checkbox"/>	<input type="checkbox"/>		

1) Percentage of the total biogeographic population at the site

This site is known as a migratory bird staging area with a high count of over 57 species of waterbirds. It holds on regular basis  $\geq 1\%$  of the biogeographic population of numerous species including the Spotted Redshank *Tringa erythropus*, Curlew Sandpiper *Calidris ferruginea*, Little Stint *Calidris minuta*, and Black-Winged Stilt.

Migrant birds begin to arrive on the site in late August, and their numbers peak in September-November. The birds start to leave the area at the onset of the dry season, when large sections of the lagoon dry up; by January, the bird population is drastically less than the autumn peak (Piersma & Ntiamao-Baidu, 1995). These population estimates of waterbirds are however from IWC bird counts done in January 2020, 2021, 2022 and 2023.

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

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Species	<input type="checkbox"/>	The area supports over 57 species of seashore birds, with an estimated population of about 35000 and 15 fish species including mammals, rodents and reptiles species.	
ecological features	<input type="checkbox"/>	The main ecological features includes the major habitats and vegetation types includes sand dunes, lagoons, salt pan marshes and scrub, coconut trees fringe, and scattered stands of mangrove with extensive areas of open water	
Mangroves	<input type="checkbox"/>	Several stands of red, white and black mangrove are scattered across sensitive areas of the site.	Mangrove vegetation provides an ecosystem of incredible biological diversity comprising hundreds of algae, mollusk, crustacean, fish, insect, reptile, bird, and mammal species.

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

### 4.1 - Ecological character

The Densu Delta comprises an open lagoon, salt pans, freshwater marsh and scrub and sand-dunes. The wetland is fed mainly by the Densu river, which is dammed upstream (Weija dam) to supply water to the city of Accra. The dam has had profound effects on the lagoon and general hydrology of the wetland, since freshwater inflow into the wetland is controlled by the management of Weija Water Works. There is no direct outlet channel to the sea, but the lagoon often overflows into the sea after heavy rains.

There is little vegetation on the dunes and in the salt pans. Some coconut-palms *Cocos nucifera* fringe the dunes, while the banks of some of the pans are colonized by *Sesuvium portulacastrum*. Scattered stands of mangrove are found in some areas around the lagoon, while the freshwater parts of the wetland support stands of mainly *Imperata*, *Typha* and *Cyperus*. Scrub vegetation grows on other parts of the wetland.

The site contains a collection of unique, rare, endangered, abundant or somehow, biogeographically important species of both plants and animals. A total of 136 plant species (belonging to 50 flowering plant families) in the flood plains and elevated ground of the Densu Delta are recorded. Towards the sea shoreline, typical strand species include the following; *Ipomoea pescaprae*, *Sporobolus virginicus* and *Cyperus maritimus*. *Sesuvium portulacastrum* beds are found along the banks of the salt pan and the eastern tributary of the Densu close to the salt pans. *Paspalum vaginatum* is also common in these areas. Coconut trees (*Cocos nucifera*) fringe the dunes and the scrubs are mainly of two mangrove species *Avicennia africana* and *Rhizophora racemosa*.

The area supports over 57 species of seashore birds, with an estimated population of about 35,000 and 15 fin species of fish belonging to 14 genera and 9 families, with *Tilapia zillii* and *Sarotherodon melanotheron* as the prevailing species of fish.

The reservoir behind the dam is a source of potable water to some parts of the Accra Metropolis and is used also for irrigation and fishing and also important for the recharge of the local aquifer. The wetland serves as a source of food (Fish, Bushmeat, Fruits, Crabs) and herbs for medicines. Also supports pollinators and provides a suitable environment for recreation, tourism and aesthetics. Serves as habitat to migratory birds and support stages of their life cycle, maintenance of genetic diversity, micro-climate regulation and carbon sequestration.

### 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		4		
E: Sand, shingle or pebble shores		3		Representative
F: Estuarine waters		1		Representative
G: Intertidal mud, sand or salt flats		1		
I: Intertidal forested wetlands		2		
J: Coastal brackish / saline lagoons		2		

#### 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		1		Unique
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		3		Representative

#### Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
5: Salt exploitation sites		2	

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Forested hills	

### 4.3 - Biological components

#### 4.3.1 - Plant species

##### Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTALILIOPSIDA	<i>Cyperus articulatus</i>	
TRACHEOPHYTALILIOPSIDA	<i>Imperata cylindrica</i>	
TRACHEOPHYTALILIOPSIDA	<i>Paspalum dissectum</i>	
TRACHEOPHYTAMAGNOLIOPSIDA	<i>Sesuvium portulacastrum</i>	
TRACHEOPHYTALILIOPSIDA	<i>Sporobolus virginicus</i>	

#### 4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/REPTILIA	<i>Chelonia mydas</i>				
CHORDATA/REPTILIA	<i>Dermochelys coriacea</i>				
CHORDATA/REPTILIA	<i>Lepidochelys olivacea</i>				
CHORDATA/AVES	<i>Egretta gularis</i>				

### 4.4 - Physical components

#### 4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Aw: Tropical savanna (Winter dry season)

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- 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

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?	Changes at RIS update
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Marine water	<input type="checkbox"/>	No change
Water inputs from surface water	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

#### 4.4.5 - Sediment regime

Significant accretion or deposition of sediments occurs on the site

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Significant transportation of sediments occurs on or through the site

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Sediment regime unknown

(ECD) Water temperature

#### 4.4.6 - Water pH

Unknown

#### 4.4.7 - Water salinity

Mixohaline (brackish)/Mixosaline (0.5-30 g/l)

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Euhaline/Eusaline (30-40 g/l)

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Unknown

#### 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 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)	Medium
Fresh water	Drinking water for humans and/or livestock	Medium
Wetland non-food products	Reeds and fibre	Low

##### 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	High
Erosion protection	Soil, sediment and nutrient retention	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	Low
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	

##### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	
Scientific and educational	Educational activities and opportunities	

##### Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Carbon storage/sequestration	Medium

Within the site:

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

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

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

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

<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
Local authority, municipality, (sub)district, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public ownership	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

About 1/8 of the Site is owned by a private firm (Panbros Salt Industries Limited) for commercial salt mining. The rest is owned by families and clans, who have leased out the land to individuals, commercial entities, etc. for development.

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Wildlife Division (Forestry Commission) Accra, Ghana / Panbros Salt Industries Limited Accra, Ghana / Ga South Municipal Assembly, Weija, Ghana

Provide the name and/or title of the person or people with responsibility for the wetland:

Thomas N.B Acquah - Site Manager

Postal address:

Wildlife Division,  
Forestry Commission  
Ministries Post Office  
P.O Box MB 239  
Accra

E-mail address:

tnbacquah@yahoo.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	Changes	In the surrounding area	Changes
Housing and urban areas			<input type="checkbox"/>		<input checked="" type="checkbox"/>	

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Logging and wood harvesting			<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Fishing and harvesting aquatic resources			<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dams and water management/use			<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Vegetation clearance/ land conversion			<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Household sewage, urban waste water			<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Unspecified			<input type="checkbox"/>		<input checked="" type="checkbox"/>	

Please describe any other threats (optional):

Estuarine or salt pan complex

### 5.2.2 - Legal conservation status

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Densu Delta		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	Implemented

Habitat

Measures	Status
Improvement of water quality	Proposed

Species

Measures	Status
Threatened/rare species management programmes	Proposed

Human Activities

Measures	Status
Regulation/management of wastes	Proposed

### 5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

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:

No educational facility available

### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water quality	Proposed

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Ghana Coastal Wetlands Management Project. Ghana Wildlife Department, Accra-Ghana.  
 Biney, C. A. 1995. Limnology: Environmental Baseline Studies – Limnology: Sakumo, Densu Delta and Muni-Pomadze Ramsar Site. Report for the Ghana Coastal Wetlands Management Project. 30pp. Ghana Wildlife Department, Accra, Ghana  
 Dadson, J. A. 1995. Environmental Baseline Studies Report: Socio-economic status of local communities Densu Delta Ramsar Site. 78pp. Ghana Coastal Wetlands Management Project for Ghana Wildlife Department, Accra-Ghana  
 Gordon, C. 1995. Environmental Baseline Studies Report: Aquatic Ecology Densu Delta Ramsar Site. 39pp. for the Ghana Coastal Wetlands Management Project. Ghana Wildlife Department, Accra-Ghana.  
 Koranteng, K. A. 1995. Environmental Baseline Studies Report Fisheries: Densu Delta Ramsar Site. 59pp. Ghana Coastal Wetlands Management Project Ghana Wildlife Department, Accra-Ghana.  
 Oteng-Yeboah, A. A. (1999). Densu Delta Ramsar Site. Management Plan, CWMP, Wildlife Department.  
 Oteng-Yeboah, A. A. 1994. Environmental Baseline Studies Report for Plant Ecology: Densu Delta Ramsar Site. Ghana Coastal Wetlands Management Project. Ghana Wildlife Department, Accra-Ghana.  
 Ntiamoah-Baidu, Y. & Gordon, C., (1991). Coastal Wetlands Management Plans: Ghana. Report to World Bank, Department of Zoology, University of Ghana, Legon, Accra., Ghana.  
 Tumbulto, J. W. and R. R. Bannerman 1995. Environmental Baseline Studies Hydrology: Densu Delta Ramsar Site. Ghana Coastal Wetlands Management Project. Ghana Wildlife Department, Accra-Ghana.  
 Wildlife Department, (1971). Wildlife Conservation Regulations. In: Consolidated Wildlife Laws of Ghana, 1998. Pp.36.  
 World Bank (1997) Towards an Integrated Coastal Management Strategy for Ghana. World Bank, Washington & Environmental Protection Agency, Accra. 137pp.

#### 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)

<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

<2 file(s) uploaded>

vi. other published literature

<no file available>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Picture of birds ( Wildlife Division (Forestry Commission), 15-12-2022 )



Densu delta picture ( Wildlife Division (Forestry Commission), 26-11-2014 )



Densu delta picture ( Wildlife Division (Forestry Commission), 11-02-2015 )



Densu delta picture ( Wildlife Division (Forestry Commission), 26-11-2014 )



Fish caught from Densu River by local fishermen ( Wildlife Division (Forestry Commission), 15-12-2022 )



Densu River with mangrove stands along river banks ( Wildlife Division (Forestry Commission), 15-12-2022 )



Drying up salt pans ( Wildlife Division (Forestry Commission), 15-12-2022 )



Flood plains ( Wildlife Division (Forestry Commission), 15-12-2022 )



Canoe for fishing on river banks ( Wildlife Division (Forestry Commission), 15-12-2022 )



Red Mangrove stand in river ( Wildlife Division (Forestry Commission), 15-12-2022 )



Black heron fishing for prey ( Wildlife Division (Forestry Commission), 15-12-2022 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 1992-08-14