

# Ramsar Information Sheet

Published on 14 August 2015

Update version, previously published on 1 January 1998

# Ghana

## Densu Delta Ramsar Site



Designation date: 14 August 1992

Ramsar ID: 564

Coordinates: 5°33'N 0°18'E

Official area (ha): 5 892,99

Number of zones:

https://rsis.ramsar.org/ris/564 Created by RSIS V.1.3 on Thursday 12 November 2015

## Color codes

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

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

## 1 - Summary

Summary (This field is limited to 2500 characters)

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 km2. 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 Mendskrom. 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



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



### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish) Densu Delta Ramsar Site

## 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 O No

(Update) B. Changes to Site area No change to area

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

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

#### 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

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

The 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.

#### 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 other cou	or more Yes O No
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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): 5892.99

## 2.2.5 - Biogeography

#### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Afro-tropical
Marine Ecoregions of the World (MEOW)	
Marine Ecoregions of the World (MEOW)	Afro-tropical

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

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.

# 3 - Why is the Site important?

- 3.1 Ramsar Criteria and their justification
- ☑ 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	<b>IUCN Red List</b>	CITES Appendix I	Other status	Justification
Cyperus articulatus	jointed flatsedge							
Paspalum vaginatum	seashore paspalum							
Sesuvium portulacastrum	shoreline purslane							

(This field is limited to 2500 characters)

The area supports over 57 species of seashore birds, with an estimated population of about 35,000, and 15 species of fish with Tilapia zillii and Sarotherodon melanotheron as the prevailing species.

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

Dhadaaa	0-1	Common name	Species	qualifie	s under o	criterion	Species	contribut	es under	criterion	D 0'	Period of pop. Est. % occurrenc		OTEO Assessed in I	0140 A div. I	Other Status	Justification
Phylum			2	4	6	9	3	5	7	8	Pop. Size	Period of pop. Est. % occurrenc	e IUCN Red LIS	t CITES Appendix I	CWS Appendix I	Otner Status	Justification
CHORDATA / AVES	Calidris alba	Sanderling			✓						230	0.23	LC ORE				
CHORDATA / AVES	Calidris ferruginea	Curlew Sandpiper			<b>✓</b>						4730	1.05	LC offs				
CHORDATA / AVES	Calidris minuta	Little Stint			<b>✓</b>						2610	1.24	LC offs				
CHORDATA / AVES	Charadrius hiaticula	Common Ringed Plover			<b>✓</b>						1560	0.78	LC offs				
CHORDATA / AVES	Charadrius pecuarius	Kittlitz's Plover			<b>✓</b>						30	0.08	LC offer				
CHORDATA / AVES	Chlidonias niger	Black Tern			<b>✓</b>						2250	1.12	LC offer				
CHORDATA / AVES	Egretta garzetta COL	Little Egret			<b>✓</b>						1630	0.46	LC orsp				
CHORDATA / AVES	Glareola cinerea COL	Grey Pratincole			<b>✓</b>						330	1.32	LC offsp				
CHORDATA / AVES	Himantopus himantopus	Black-winged Stilt			<b>✓</b>						310	0.77	LC offsp				

Dhadaaa	0-1	0	Species	qualifie	s under o	criterion	Species	contribut	es under	criterion	D 0'	Desired of some Est	0/	ILION De da l'es	OITEO Assessables I	0110 4	Other Status	Justification
Phylum	Scientific name	Common name	2	4	6	9	3	5	7	8	Pop. Size	Period of pop. Est	% occurrence	IUCN Red List	CITES Appendix I	CWS Appendix I	Other Status	Justification
CHORDATA / AVES	Pluvialis squatarola	Grey Plover			<b>✓</b>						340		0.22	LC offer				
CHORDATA / AVES	Recurvirostra avosetta	Pied Avocet			<b>✓</b>						100		0.14	LC offer				
CHORDATA / AVES	Thalasseus maximus COL	Royal Tern			<b>✓</b>						2590		5.18	LC off				
CHORDATA / AVES	Thalasseus sandvicensis	Sandwich Tern			<b>✓</b>						1970		1.31	LC ong				
CHORDATA / AVES	Tringa erythropus	Spotted Redshank			<b>✓</b>						550		0.45	LC offer				
CHORDATA / AVES	Tringa nebularia COL	Common Greenshank			<b>✓</b>						390		0.12	LC offer				
CHORDATA / AVES	Tringa stagnatilis	Marsh Sandpiper			<b>✓</b>						30		0.81	LC o les				



(This field is limited to 2500 characters)

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? 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.

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

<no data available>

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Species		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		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	

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

## 4.1 - Ecological character

(This field is limited to 2500 characters)

The Densu Delta comprises an open lagoon, saltpans, 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 saltpans. 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.

## 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		
F: Estuarine waters		1		
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
M: Permanent rivers/ streams/ creeks				
Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools				

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
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

Scientific name	Common name	Position in range / endemism / other
Cyperus articulatus		
Imperata cylindrica		
Paspalum dissectum		
Sesuvium portulacastrum		
Sporobolus virginicus		

## 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/REPTILIA	Chelonia mydas	Marine turtle				
CHORDATA/REPTILIA	Dermochelys coriacea					
CHORDATA/AVES	Egretta gularis	Western Reef Heron;Western Reef-Heron				
CHORDATA/REPTILIA	Lepidochelys olivacea					
CHORDATA/AVES	Sterna hirundo	Common Tern				

# 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) 0
- a) Maximum elevation above sea level (in metres) 152

Lower part of river basin <a>Image: Image of the control of the co

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)?

## 4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water		No change
Marine water		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 <a>Image: Image: I

Significant transportation of sediments occurs on or through the site 🗸

(ECD) Water temperature 25-30°C

## 4.4.6 - Water pH

Unknown 🕢

## 4.4.7 - Water salinity

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

Euhaline/Eusaline (30-40 g/l) 🗹

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 i) broadly similar  $\bigcirc$  ii) significantly different  $\bigcirc$  Site differ from the site itself:

Surrounding area has greater urbanisation or development <a>Image: Image of the control of the c

Surrounding area has higher human population density <a> Image: Image of the control of the cont

Surrounding area has significantly different land cover or habitat types <a>Image: Image of the cover of the

## 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	Educational activities and opportunities	
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	

#### **Supporting Services**

<b>Ecosystem service</b>	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	High
Nutrient cycling	Carbon storage/sequestration	Medium

Within the site: 485,700

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

#### 4.5.2 - Social and cultural values

<no data available>

# 4.6 - Ecological processes

<no data available>

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

## 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

#### Public ownership

Category	Within the Ramsar Site	In the surrounding area
Local authority, municipality, (sub)district, etc.		✓
Other public ownership		✓

#### Private ownership

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

#### Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights		✓

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

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: (This field is limited to 1000 characters)

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

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

Charles Amankwah

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

PO Box M.239 Accra, Ghana

Estuarine or salt pan complex

E-mail address: ccamankwah@yahoo.com										
5.2 - Ecological character threats and responses (Management)										
5.2.1 - Factors (actual or likely Human settlements (non agricultural)	5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character  Human settlements (non agricultural)									
Factors adversely affecting site Actual the Housing and urban areas		Poten	ential threat Within the s		the site Ch	Changes In the		e surrounding area Chan		ges
Biological resource use										
Factors adversely affecting site	Actual t	threat	Potential thr	eat		site C	hanges	In the surroundin	g area	Chang
Logging and wood harvesting					✓					
Fishing and harvesting aquatic resource	es				✓					
Natural system modifications										
Factors adversely affecting site	Actual thre	eat Po	otential threa	t W	ithin the site	Chai	nges l	n the surrounding a	rea C	hanges
Dams and water management/use					✓					
Vegetation clearance/ land conversion					✓					
Pollution										
Factors adversely affecting site	Actual thr	reat P	otential threa	t W	lithin the sit	e Cha	nges	n the surrounding	area (	Changes
Household sewage, urban waste wate	r							✓		
Unspecified								✓		
Please describe any other threats (option	onal): (This fie	eld is lim	ited to 2500 chan	acters	s)					

## 5.2.2 - Legal conservation status

#### Non-statutory designations

Designation type	Designation type Name of area		Overlap with Ramsar Site		
Important Bird Area	DensuDelta		whole		

## 5.2.3 - IUCN protected areas categories (2008)

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

## 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 O 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)

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

(This field is limited to 2500 characters)

Ghana Coastal Wetlands Management Project. Ghana Wildlife Department, Accra-Ghana.

Biney, C. A. 1995. Limnology: Environmental Baseline Studies – Limnology: Sakumo, Densu Deltaand 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.

Ntiamoa-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)

<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>

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

#### v. site management plan

<2 file(s) uploaded>

#### vi. other published literature

<no file available>

## 6.1.3 - Photograph(s) of the Site

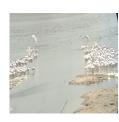
Please provide at least one photograph of the site:



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



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)

## 6.1.4 - Designation letter and related data

#### **Designation letter**

<no file available>

Date of Designation | 1992-08-14