

3.6 GHANA

Introduction

Ghana covers 238 305 km², and with a population of 12 827 000 has a mean population density of 53.8 persons/km². The sandy coast extends for 580 km along the Gulf of Guinea, backed by a broad coastal plain. This is 170 km deep in the west, narrowing to 25 km near Accra (5°33'N/0°13'W), but broadening again in the east above the lagoons and delta of the Volta River, to 70 km. A triangular mountainous wedge intrudes into the country from the west, with its southern boundary backing the coastal plain along the parallel 6°N, with numerous peaks between 600-760 m asl. Mountains of the Chaîne du Togo form the lower eastern boundary, while much of the eastern interior region is occupied by the valley of the Volta, entirely below the 200 m contour and now partly flooded by the largest artificial lake in Africa. The highest points in Ghana are all in the Chaîne du Togo, with a maximum of 876 m asl at Mt. Djebobo (8°20'N/0°37'E). Higher plateau land, 200-400 m asl, lies along the northern border, but is broken at the northwestern and northeastern corners by the valleys of two rivers, both tributaries of the Volta. In the northeast, the Oti River flows in from Togo, with which country it forms the border for 100 km, while in the northwest the Black Volta enters from Burkina Faso and forms the border with that country, and then with Cote d'Ivoire for a total distance of 250 km.

Drainage is dominated by the Volta system. The Black and White Volta Rivers rise to the north in Burkina Faso and unite in Lake Volta. In the southwest, the Bia and Tano Rivers rise in the southern highland wedge and flow into Aby Lagoon in Cote d'Ivoire, while the Ankobra and Pra Rivers, and several minor streams flow directly to the sea.

Climate

Ghana is situated in the dry sector of the Guinea Coast centred on the meridian, and rainfall patterns over the country are quite complex. The highest rainfall is received over the coastal plain in the southwest, west of Cape Three Points (4°45'N/2°06'W). Here mean annual precipitation reaches 2125 mm, but decreases inland up the eastern border to 1625 mm at 5°30'N, at which level it remains as far as 6°30'N. Rainfall is 1625 mm at Cape Three Points from where it decreases progressively towards Accra (769 mm /yr) and then rises marginally to about 800 mm at Cape St. Paul (5°49'N/0°57'E) and then to 1000 mm at the eastern border. The mountain peaks of the southern central sector and the southeastern border receive falls of 1700-1750 mm/yr, but rainfall over the interior diminishes from about 1350 mm at the parallel 7°N to 1200 mm at 8°30'N, while the entire north of the country receives less than 1100 mm and the extreme northeast less than 1000 mm. The western coastal region has but one wet and one dry season, despite numerous reports to the contrary. At Axim (4°53'N/2°14'W) rain falls all the year and only August is dry. A bi-modal rainfall pattern sets in to the east of Cape Three Points, and at Takoradi (4°59'N/1°43'W) the major wet season lasts for 5 months from March to

July, followed by a two month dry season in August-September, after which the rains return in October-November. A second dry season lasts from December-February inclusive. At Accra the rainy season lasts only 4 months, from March-June inclusive, while July-September is dry. The rains return briefly in October. Inland the short dry season disappears, and at Kumasi (6°41'N/1°35'W) in the southern highlands it rains all year except for January and February. In the mid-north, at Tamale (9°25'N/0°50'W), the dry season lasts for 5 months from November-March inclusive.

Hot dusty Harmattan winds blow intermittently in the north during the long dry season. They may persist for several weeks, then cease for a period before blowing again. Occasionally they reach as far south as Accra. The mean temperature of the coolest month is 24°C at Accra and that of the warmest month is 27°C, with an identical regime at Takoradi. At Kumasi equivalent figures are 24 and 26°C, while at Tamale they are 26 and 30°C. Potential evaporation increases along the coast from west to east, and from the coast towards the north. It is estimated as 1630 mm/yr at Axim and 2058 mm/yr at Accra, and over 2200 mm/yr throughout the north. Sunshine receipts range from 1600 hrs/yr at Axim to 2400 hours/yr at Accra.

Wetlands

Small mangrove stands occur at river mouths along the coast and on some of the lagoons, being best developed on the western coast, between Cote d'Ivoire and Cape Three Points. Swamp forest and permanent herb swamps occur on rivers and streams and around Lake Amonsuri, in the wet, western coastal district. Tidal saltmarshes and grasslands occur on many small lagoons in the central and eastern sectors, and grassy floodplains, with some inundated gallery and levee forest occur on many streams on the coastal plain. Other areas of seasonally inundated grassland, away from permanent watercourses, occur in the vicinity of Accra.

Other floodplains occur in the dry northern zones on the Black Volta and Oti Rivers and their tributaries. The huge water surfaces of Lake Volta and the Kpong Dam dominate the interior, and other impoundments are planned, e.g. the Bui Dam on the Black Volta. Lake Bosumtwi, a crater lake in the southern highlands, is the largest natural lake in the country.

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1. Coastal Wetlands

General: The wetlands are described from west to east along the coast. Most of the systems are small and only brief details are provided, since most conform to the pattern of typical open or closed lagoons at river mouths, described in the regional introduction. Biney (1982) gives a detailed account of the water chemistry and physical characteristics of 15 major lagoons on the Ghana Coast, while Mensah (1979) has reviewed work on the Ghana Lagoons to that date.

(a) The Western Border

Country: Ghana

General: In the extreme west, Unvaiye Lagoon ($5^{\circ}07'N/2^{\circ}55'W$) of 200 ha area, and which is entirely situated in Ghana, opens into Ehy Lagoon in Cote d'Ivoire, itself part of the Aby Lagoon complex. Close to it, and opening to the sea at $2^{\circ}47'W$, is the small Domini Lagoon, which with its peripheral zones of inundation covers some 400 ha. A few kilometres inland, the Ghana/Cote d'Ivoire border is delineated by the channel of the Tano River, which discharges into Ehy Lagoon, but above the lagoon permanent forested swamps cover 7500 ha in Ghana.

(b) The Amansuri Wetlands

Country: Ghana

General: In moving east along the coast, a block of 8 000 ha of semi-permanent swamp land surrounds Lake Amansuri which lies 2.5 km inland behind a sandy/rocky coast which obstructs drainage seawards at $2^{\circ}34'W$. The lake measures 2.5km x 1 km and is rectangular, with an open water surface of 2600 ha, while the surrounding wetland measures 24 km across and 11 km deep. Amansuri Lake receives water from several small streams, notably the Adenimumio, Evini, Bosoke, Eivla and Myejini, which have a combined catchment of close to 1010 km², mostly below the 50 m contour. The system is very flat, but is backed to landward by low hills about 10 km from the coast.

The lake has a mean depth of 2.8 m with a maximum depth of 5 m. The swamp lands are

inundated to a depth of 1 m during the rainy season, but tend to dry completely by the end of the dry season. The lake level falls by 1-2 m in the dry season and the inflows cease so that the residual lake water becomes stagnant. The system drains via the Amansuri River to Amansuri Lagoon on the coast farther east at 2°23'W. The constricted mouth of this lagoon is mostly open, and the swamps and zone of temporary inundation which enclose the lagoon, extend inland for 12.5 km, attaining a maximum width of 8 km and an area approaching 9 000 ha. Secchi depths in the lake reach 1.1 m, and pH varies from 7.0 in the peripheral sedge zone to 5.9 in the open water. The concentrations of the principal ions are sodium 17 mg/l; potassium 2 mg/l; calcium 1.6 mg/l; sulphate 22 mg/l and chloride 20 mg/l.

The dominant macrophytes in the peripheral vegetation of the lake are *Fuirena umbellata* and *Rhynchospora wallichiana* in the fringing sedge zone, *Nymphaea lotus* and *N. maculata* in a zone of rooted, floating leaved plants, and in deeper water *Nymphoides indica* and *Cyrtosperma senegalense* with some *Raphia hookeri* and *R. vinifera* in water up to 3 m deep, with *Vossia cuspidata* between the stem bases. *Chrysichthys vellifer*, *Hemichromis fasciatus* and *Tilapia aurea* are the commonest fish. There are several villages in the area, with a total population approaching 5000. The lake is fished quite intensively from a fishing village built out into the lake on piles, coconuts are grown on the periphery of the swamps. *Raphia* palms are tapped for their sap, and hunting occurs in the swamps.

(c) Ankwoa River

Country: Ghana

General: A 9000 ha floodplain which includes patches of permanent swamp land extends 15 km upstream from the mouth of the Ankwoa River (2°15'W), reaching widths of up to 6 km.

(d) Cape Three Points to Takoradi

Country: Ghana

General: To the east of Cape Three Points, semi-permanent swamps occupy some 1200 ha on the Suni River (2°00'W) along the boundary of the Cape Three Points Forest Reserve. In continuing east, a zone of inundation occupying 950 ha occurs on an ephemeral stream which reaches the sea at longitude 1°54'W, and again there are small tidal floodplains on the little inlets at Mpatano (1°52'W) and Apowa (1°50'W). Immediately behind the mouth of the Hwini River (1°47'W) there is floodplain of 850 ha, and another small wetland exists immediately east of Takoradi (1°45'W).

(e) Krobu River – Cape Coast District

Country: Ghana

General: A floodplain with some patches of permanent swamp, the lower parts of which experience some tidal influence, covers a total of 6000 ha behind the Krobu River mouth (1°37'W). It extends 7.5 km along the coast and 7.5 km inland. Farther east there are 8

isolated pockets which are subject to inundation during the rains. These include small areas of permanent swamp and total 4000 ha in extent. They are situated inland of Komenda (1°30'W), and a further 6 patches are situated inland of the town of Cape Coast (1°15'W). *Raphia* spp. occur in all these swamps. The small lagoon at Apa (1°10'W) has an open water area of a few hundred hectares.

(f) Amisa River & Lagoon

Country: Ghana

General: There is a substantial lagoon at the mouth of the Amisa River (1°00'W). The lagoon is 3 km long and 1 km wide, while the peripheral floodplain covers 7500 ha and extends inland for 15 km, with widths of up to 8 km. The lagoon mouth is perennial.

(g) Nawka River & Lagoon

Country: Ghana

General: Here (0°55'W) the lagoon has a maximum width of 1.7 km and is 5 km long, oriented E-W parallel with the coast, while a swampy floodplain extends up the Nakwa River for 30 km. There are patches of semi-permanent swamp a few kilometres distant from the river in depressions. The total on this system probably amounts to a little over 7200 ha, including the open water surface of the lagoon. *Raphia* spp. occur in this system.

(a) Sumina & Apabaka Lagoons

Country: Ghana

General: Still farther east are the little Sumina Lagoon (0°48'W), and Apabaka Lagoon (0°44'W), which with its peripheral tidal inundation zone occupies 1000 ha.

(g) The Winneba Wetlands

Country: Ghana

General: Areas of tidal and seasonal inundation occur around Muni Lagoon to the west of Winneba (0°37'W), while a floodplain and a lower tidal inundation zone occur on the Ayensu River which discharges to Ouiba Lagoon to the east of the town. The combined wetland extends along the coast behind the coastal dunes, for 12.5 km, and reaches 4 km inland. Other patches, totalling 2000 ha, subject to seasonal inundation occur inland on the Pon Pon, Ngana and Okruda Rivers, centred on a longitude of 0°26'W.

(h) Wetlands of the Accra District

Country: Ghana

General: West of Accra some seasonally inundated grasslands are found upstream on the Densu River and its tributaries extending 27.5 km inland from the sea, at a point 0°20'W, totalling some 6700 ha in extent. Tidal influence extends at least 10 km upstream and the lower pocket is partly tidal. Other areas of seasonally inundated grassland occur to the east of the city, amounting to another 3000 ha, situated between 20-38 km inland, at

longitude 0°05'W. The vegetation of such coastal grasslands is dealt with in the regional introduction. Between the Accra wetlands and the Volta Delta there are 5 small lagoons, each with small peripheral inundation zones. Sakumona Lagoon (0°02'W) is the most westerly and Jange (0°10'E) and Moyo (0°12'E) the most easterly.

(i) The Volta Delta

Country: Ghana

General: Towards the eastern border with Togo, the delta of the Volta River extends for 82 km along the coast and associated wetlands extend upstream for 75 km. The wetlands fall into two blocks. The westward block comprises 25 500 ha, which includes Songaw Lagoon (0°30'E), some 16 km long from east to west and 7 km wide. The whole western block is 10 km deep along the river and tapers down to 4 km at the western end, over a distance of 36 km. The eastern block is much larger and includes Keta (0°50'E) and Avu Lagoons, and numerous small lakes and lakelets. It covers a total of 167 000 ha. Keta Lagoon has an open water surface of 27 000 ha and measures 27 km in length and 15 km in maximum width. Avu Lagoon is 11 km long with a maximum width of 5 km. The mouth of the Volta is 750 m wide, but immediately inside the mouth the river contains several islands and the channel expands to a width of 5 km. The total area of 182 000 ha, save for that of the lagoons, is flooded seasonally, but permanent swampland exists in a number of localities throughout the delta. These are concentrated on the east bank of the main channel and on the margins of some of the islands.

Songaw Lagoon has a mean depth of 1.75 m and a maximum depth of 4 m, while the corresponding figures for Keta Lagoon are 80 cm and 2 m. The mean pH values for these lagoons are 7.2 and 8.1 respectively, and mean salinity is 2.3 and 18.7 ‰. Mean Secchi depths are 85 cm and 35 cm. Water temperatures average 29.5°C in Songaw and 31.2°C in Keta Lagoon. Sodium and chloride are the principal ions in Songaw Lagoon, each having concentrations close to 35 meq/l, while potassium, calcium, magnesium and other anions are very low, all about 1 meq/l. In Keta Lagoon sodium and chloride both reach mean annual concentrations close to 280 meq/l, while the figures for potassium, calcium and magnesium are 9, 19 and 12 meq/l respectively, and those for bicarbonate and sulphate are 2 and 22 meq/l respectively. Songaw Lagoon is very rich in nitrates.

Flora & Fauna: As described in the regional introduction.

Human Impact & Utilisation: The construction of the dams on the Volta at Akosombo and Kpong has affected the ecology of Avu and Keta Lagoons, leading to lower water levels and increased salinities as seasonal floods in the delta have virtually ceased. The only discharges nowadays are those associated with the generation of electricity. Songaw Lagoon has however, been little affected. Some rice is grown on the coastal floodplains, and the estuaries and lagoons are fished intensively. Over 57 000 people were engaged in the fishing industry in 1960, and recent reports suggest that this figure has not altered significantly, due to the well developed fishery on Lake Volta. However, canoes have largely given way to motor boats as fishing vessels, and catches have increased. Sea fishing is now carried out almost exclusively by motor boats and large trawlers, but

lagoon and lake fishing still involves traditional canoes. The mean national annual catch was close to 40 000 tonnes from inland waters and 184 000 tonnes from coastal waters in 1984 (FAO statistics). The bulk of the inland fish catch comes from Lake Volta. Prior to the construction of the dam at Akosombo, Keta Lagoon was the most principal source of non-marine fish and, although diminished in importance, it still supplies a substantial proportion of the inland catch. Oysters are farmed in the lower Volta below the Kpong Dam. Rice is grown on some of the coastal floodplains and the acreage converted to rice paddy is increasing.

Conservation Status: No coastal wetland is legally protected.

2. Floodplains of the North

(a) The North East

Country: Ghana

General: The Oti River, known as the Pendjari in Togo, enters Ghana in the far northeast and meanders south to the head of the eastern arm of Lake Volta. It has a seasonal floodplain 55 km long, averaging 7 km in width, at first, but at a point 10°35'N enters a stretch of permanent swamps with reeds and trees. This swamp extends downstream for 35 km, and also for 20 km up the Silebonga, a left bank tributary, and terminates at a point 10°23'N. Below this point floodplains are poorly developed, and extend away from the river for any distance only where tributaries enter. However, other floodplains occur on the western tributaries, e.g. the Gambara, Kountonè, Nagla, Wakpe, Bupiala and Kulaw Rivers. Altogether there are about 93 000 ha of wetland on the Oti and its tributaries.

The Red and White Volta Rivers both enter Ghana from Burkina Faso in the northeast of the country, coming to a confluence 160 m asl near the town of Gambaga (10°32'N/0°27'W). Above the confluence there is a floodplain on the White Volta (10°56'N/0°23'W), covering 3600 ha, and below the confluence, where the White Volta flows due west for a distance of 60 km, there is an intermittent floodplain to a longitude of 1°02'W, with a total area of close to 5500 ha. At this longitude the river turns abruptly south, and flows for a further 200 km to enter the head of the western arm of Lake Volta. En route there are intermittent floodplains, which include some oxbow lakes, for the first 60 km, and thereafter a continuous floodplain for the remaining 140 km. This latter floodplain has an average width of 4 km and also includes numerous little oxbow lakes. It has a total area of 60 000 ha. Other floodplains occur on several tributaries, notably the Nasia, Nyagpuni, Bumli, Kulabong and Paw Rivers. Here there are a further 55 500 ha of wetland, including some 15 000 ha of permanent herb swamp in on the Paw, Bumli and Nyagpuni Rivers.

Yet another 21 000 ha of permanent swamp land is situated along the Kalurakuni River and its tributary, the Mawli River, over a distance of 75 km above the western arm of Lake Volta, into which the Kalurakuni River discharges. Thus, at a conservative estimate, there are 238 600 ha of swamp and floodplain in northeastern Ghana on affluents of Lake Volta.

Hydrology: The floodplains on the tributaries of the Oti and Volta Rivers respond rapidly

to rains over the local catchments which reach their peak from July-September, and the rivers thus flood from August-October. Water depths exceed 3.5 m on some of the eastern floodplains. The floods on the Volta River, which has its sources farther north, peak later and tend to extend flooding on the tributaries.

Flora & Fauna: As described in the regional introduction for herb swamps and floodplains of the Soudanian savanna region.

Human Impact & Utilisation: Cattle are grazed on the floodplains as the floods recede, and the rivers, lakes and floodplains are fished extensively. In recent years rice cultivation has begun in the area.

Conservation Status: Unprotected.

(b) The North West

Country: Ghana

General: The Black Volta River enters Ghana at its northwestern extremity and flows south along the Ghana/Burkina Faso border, and then along the Ghana/Cote d'Ivoire border for a total of 250 km. Over this stretch it receives tributaries principally from the higher lands to the west, while the streams entering the left bank, from Ghana, are not perennial. A discontinuous floodplain occurs along the Black Volta, and a narrow floodplain occurs on the Kohodio River which crosses the border from Cote d'Ivoire and now joins the Black Volta above Bui. From here the Black Volta flows east to enter the western extremity of Lake Volta, in this stretch receiving a major tributary, the Tain River shortly below Bui. The Tain rises in the southern highland wedge and flows due north to the Black Volta, and both it and its several affluents have narrow floodplains and headwater swamps. The total area of wetland on the Black Volta system has not been assessed accurately.

Hydrology: Floods peak in September-October.

Flora & Fauna: Essentially as described in the regional introduction for the Soudanian savanna zone; however large mammals are scarce. The intermittent affluents entering the Black Volta from Ghana carry gallery forest, some of which is flooded, and most of which is dominated by *Cola laurifolia*, *Diospyros mespilifonnis* and *Syzygium guineense* in the wetter parts, and by *Borassus aethiopum*, *Cola laurifolia*, *Isoberlinia grandiflora* and *Kigelia africana* in drier parts. Two crocodiles, *Crocodylus cataphractus* and *C. niloticus* and two monitors, *Varanus exanthematicus* and *V. niloticus*, occur here. Among the large mammals recorded are *Cephalophus rufilatus*, *Hippopotamus amphibius*, *Kobus ellipsiprymnus*, *K kob*, *Redunca arundinum*, *Sylvicapra grimmia*, *Syncerus caffer* and *Tragelaphus scriptus*. Locally, *Colobus polykomos* is common in the gallery forest trees.

Human Impact & Utilisation: Some rice is grown on the floodplain of the Kohodio River, and also farther north on the Black Volta. The river is fished, and some hunting occurs along the river.

Conservation Status: Unprotected, apart from the lower Kohodio River and the banks of the river which are protected in Bui National Park.

3. Lake Bosumtwi

Country: Ghana

Coordinates: 6°30'N/1°24'W

Area: 3850 ha

Altitude: c. 130 m asl

Nearest Town: Accra (165 km SE)

General: Bosumtwi is a crater lake, almost circular in outline, with steep shores and a diameter of 7 km. A low hill rises to 145 m on its northern rim, and the land slopes up from its southern bank to a peak of 215 m asl some 10 km distant. There is a small fishery.

4. Artificial Impoundments

(a) Lake Volta

Country: Ghana

Coordinates: 6°16'-9°13'N/1°03'W-0°20'E

Area: 848 225 ha (open water surface - low water)

Altitude: 91 m asl (high water)

Nearest Town: Accra (90 km SSW)

General: The dam at Akosombo, just 100 km from the sea on the Volta River, was closed in 1964 to create the largest artificial water body in Africa. Lake Volta stretches 320 km from N-S, but the long axis of the lake measures 390 km. In the lower basin the lake has a mean width of more than 20 km, and the maximum depth of 75 m is found in the lower southern basin near the dam. The lake occupies a much branched river valley and has a shoreline of 4827 km (Welcomme, 1972). The annual draw-down arises only from evaporation and from the constant discharge necessary to generate hydroelectric power. The lake has seldom been full to capacity and large expanses of flat land are exposed around the lake margin. Three to four year's floods are required to fill the lake to capacity. The northern part of the lake is subject to a Soudanian climate with one wet and one dry season. The weather is rainy and windy from July-October and calm, warm and dry for the rest of the year. In the south, in the so-called forest zone (now very largely deforested), the climate is bi-modal as at Accra. A useful introductory account of the lake is given by Beadle (1981). In 1981 a second dam was completed at Kpong, 18 km downstream from the Akosombo Dam. Both dams are used to generate hydroelectric power.

Hydrology & Water Quality: The Volta Lake is fed principally by three rivers, the Oti and the Black and White Volta, and is drained by the Volta, the mean discharge rate of which, at the mouth, is 1176 m³/sec. Direct precipitation makes a substantial contribution to the annual water receipt of the lake. The lake contains some 1640 billion m³ of water at capacity (Petr pers. comm.), although far larger volumes have been cited in diverse publications. The water is well mixed and well oxygenated during the rainy and flood seasons, but it usually stratifies during the dry season when the bottom layer may become de-oxygenated.

Flora & Fauna: The peripheral aquatic vegetation is dominated by *Pistia stratiotes* and *Ceratophyllum demersum*, with some waterlilies in the shallow bays, backed by a reed-sedge flora. Floodplain grasses, including *Echinochloa pyramidalis* and *Oryza barthii* occur in areas subject to strong seasonal fluctuations in water level, and *Vossia cuspidata* occurs in the reed-sedge swamps around the margins. Gallery forest

occurs along the northern rivers entering the lake, while some southern streams support high forest of the Guineo-Soudanian transition zone. Preliminary discussions of the fish fauna, together with numerous references to research papers, are given by Lowe-McConnell (1975) and Beadle (1981). Several papers by Petr (1968a,b,c; 1969; 1970a,b; 1971; 1972) relate to the faunal changes during the filling period. Mammals recorded in the rivers and riparian forests at the heads of the arms of the lake include *Cephalophus rufilatus*, *Cercopithecus aethiops*, *C. mona*, *C. nictitans*, *Colobus polykomos*, *Hippopotamus amphibius*, *Kobus ellipsiprymnus*, *Potamochoerus porcus*, *Sylvicapra grinzmia* and *Tragelaphus scriptus*, but all are now scarce, except in the National Park. Crocodiles and terrapins are also present, including, reputedly, *Osteolaemus tetraspis*.

Human Impact & Utilisation: The creation of the lake flooded a large area of seasonal wetland, and displaced the resident large mammal fauna, and has had an adverse effect upon fisheries in the delta. However, a new and more productive fishery has been established on the lake, with an estimated maximum sustainable yield of 39 000 tonnes/yr. Early catches, shortly after filling, were in the vicinity of 60 000 tonnes/yr, while the 1984 figure was 40 000 tonnes. Productivity in the young lake was higher than in the mature lake, as is usual with impoundments, thus accounting for some of the very high early catches. The mean annual catch now fluctuates about the estimated maximum sustainable yield. The lake has become an important site for aquatic birds, and there is an expanding reptilian fauna associated with it. The creation of the reservoir reduced the incidence of human sleeping sickness by destroying the breeding sites of tsetse flies along the river, but also by displacing the human population. A vector of bilharzia, *Bulinus truncatus*, has however become established in the lake and many fishermen are affected.

Conservation Status: The lake is unprotected, except for an area on the west central shore in the Digya National Park which borders two major arms of the lake and encompasses a third. The park extends from the south shore of the Sene Ann of the lake (7°32'N) to the north shore of the Obosum Arm of the lake (7°03'N) and includes the Djuwa Arm; the arms being named after the river valleys that have partially been flooded. The park extends east to the longitude 0°45'W.

(b) Lake Bui (projected)

Country: Ghana

Coordinates: projected, 8°19' -8°44' N/2°11' -2°26' W

Area: projected, c. 47 000 ha

Altitude: projected, c. 210 m asl

Nearest Towns: Sekondi-Takoradi (385 km S); Accra (380 km SE)

General: Although it has been marked on many maps and atlases since the 1960s, Lake Bui still does not exist. It is discussed here simply because excluding it might appear as a major omission. A 1985 report for the Volta River Authority by Acres International Ltd., of 5259 Dorchester Road, Niagara Falls, Ontario L2E 6W1, Canada, lists a dam at Bui among several alternative possible future developments. If built, the reservoir behind the dam at Bui on the Black Volta will provide an open water surface some 50.5 km long and up to 20 km wide. The lake so formed would be set in savanna country in the Bui

National Park, and some gallery forests on the Black Volta and Kohodio Rivers would be destroyed.

Flora & Fauna: Not Applicable.

Conservation Status: If the dam is built the lake will be encompassed by the Bui National Park, established in 1983, and all its shores will be protected.

(c) Other Impoundments

General: Other impoundments exist at Voa, Tono, Weija, Dawhenge and Barekese.