

THE IMPORTANCE OF HYDROGRAPHIC SURVEYING IN THE DEVELOPMENT OF A WATER/LAKE TRANSPORTATION SYSTEM IN GHANA

By

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Contents

- Background
- The State Of Hydrographic Surveying In Ghana
- The Importance Of Hydrographic Surveying And Its Benefits.
- Challenges in the Hydrographic Affairs of Ghana
- Conclusion



■ Background



- Ghana lies on the Western Coast of Tropical Africa.
- Half of the country lies less than 152 meters (500 ft.) above sea level

Extent:

N→S 672 km, b/n latitudes 4.5°N and 11°N.
E →W 536 km b/n longitudes 3°W and 1°E.

Borders:

West (668 km) by Cote d'Ivoire,
East (877 km) by Togo,
North (548 km) by Burkina Faso, and
South (539 km) by the Gulf of Guinea and
the Atlantic Ocean (Coastline).

Total area: 238,540 km²;

land: 230,020 km², Water area: 8,520 km²

**Hydrographic/Ocean observation study
very important .**



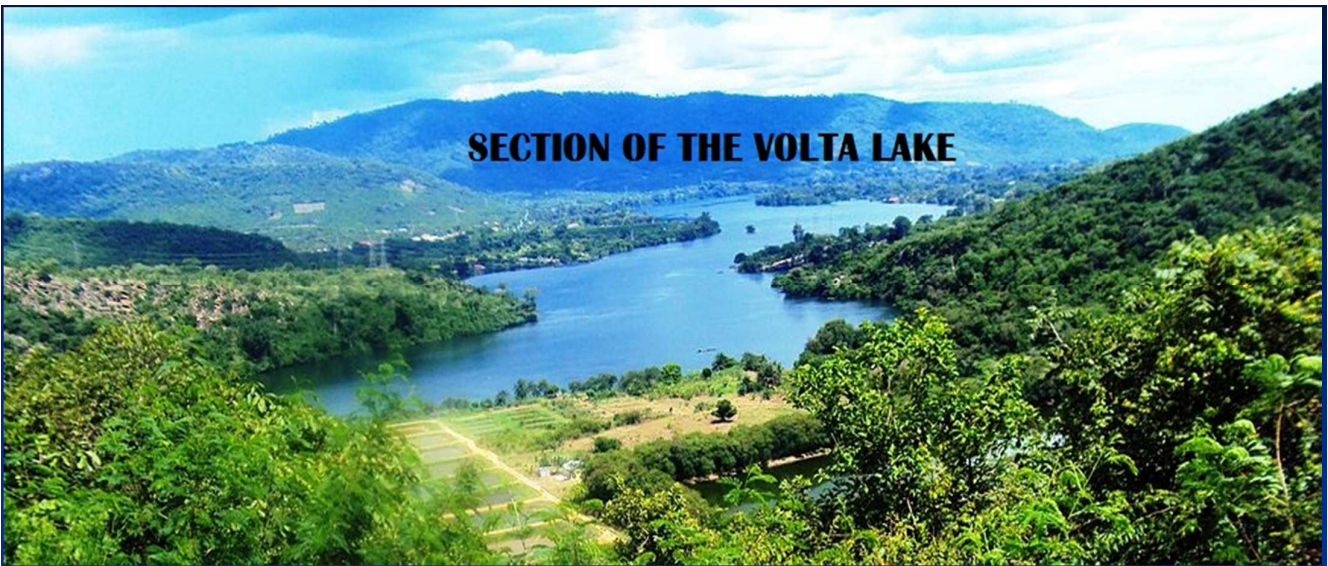
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- The Volta River is the main fresh water source for Ghana. It drains into the Gulf of Guinea and Atlantic Ocean; and has three main tributaries—the Black Volta, White Volta and the Red Volta. Its total length including the Black Volta is about 1,500 km (930 miles).
- The River Volta was dammed that created the Volta Lake and meant to store up water primarily to generate hydro-electricity. Additionally it was envisaged that it would serve other purposes and improve inland water transport.



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SECTION OF THE VOLTA LAKE

- Along this river/lake and the coast are towns, communities, villages that depend on the use of these water bodies for their livelihood and business activities.
- The use of fishing canoes and small boats have been the available mechanism for transporting people and goods which has endangered lives over the past periods due to unavailability of safety measures.



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The State Of Transportation In Ghana

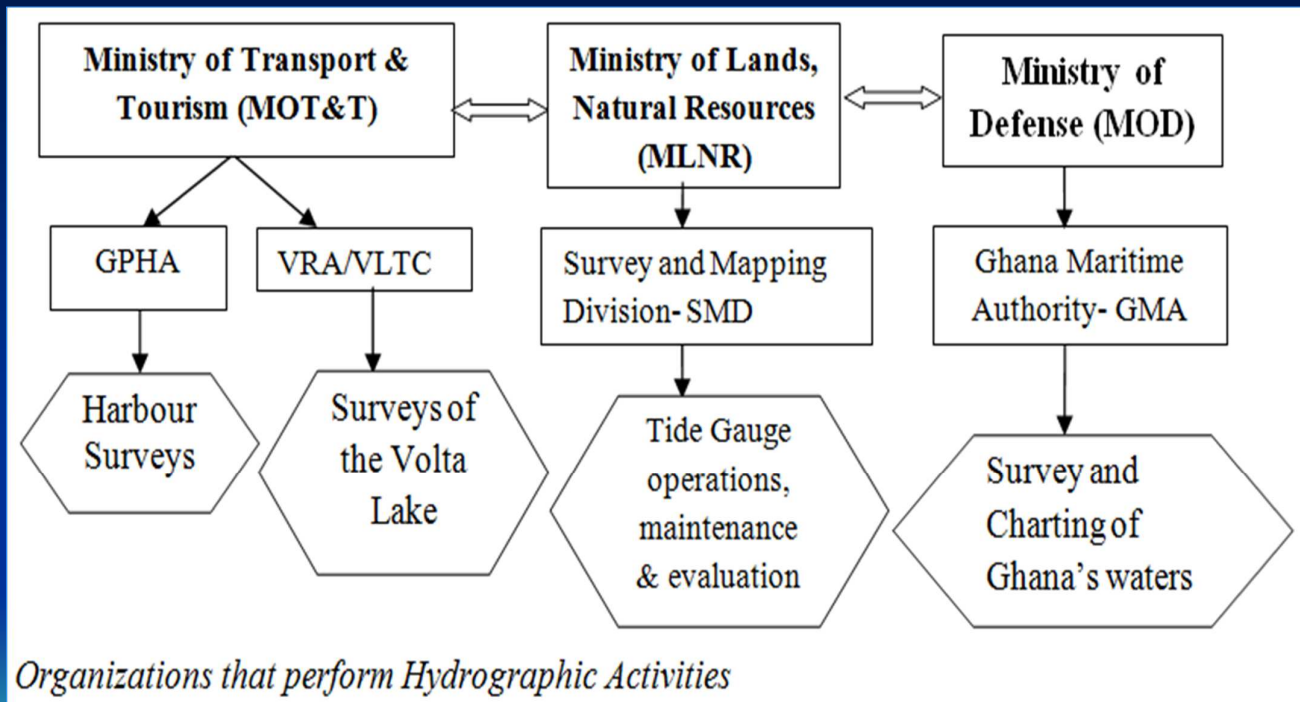


Largely dependent on the use of our road system and to a small extent the water system, rail system and by air.



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■ The State Of Hydrographic Surveying In Ghana



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■ The Importance of Hydrographic Surveying And Its Benefits

Hydrographic Surveying- It is conducted to measure the depth and bottom configuration of water bodies to produce the nation's nautical charts to ensure Safe Navigation on the water bodies.

Importance:

1. The Volta River/Lake is termed to be a killer because since the gorge was flooded in 1966, thousands of hardwood trees were left standing. They snag the nest of fishermen and danger their boats.
2. The presence of these tree stumps and rocks under the surface of water bodies have caused various categories of river/lake disasters which have led to the loss of lives and valuable items.

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Hard wood trees and tree stumps left standing in the Volta River



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Examples of Disasters

1. June 1999- 76 people drowned in the lake in a boat accident. (capsized after striking a **tree stump**)
2. June 2000- 13 Died in boat disaster (The accident occurred when the boat ran over a **tree stump** and developed a crack resulting in leakage)
3. April 2002- 50 down in Volta Lake boat accident (90 passengers instead of the authorized 76)
4. March 2007- 13 people perished including 4 children
5. September 2011- 35 Lives Lost in Boat disaster. (The boat was said to have run into a **tree stump** and started leaking seriously at the base before sinking)
6. August 2013- 8 Killed In Boat Disaster. (hit a **tree stump** in the river causing the boat to capsize.)



7. 14-16 June, 2014 - 18 bodies retrieved after Volta Lake boat wreck. (safety rules was not observed and the boat was said to have run into a **tree stump**)
8. 17th June, 2014 - Boat Disaster Claims 9 Lives On Volta Lake. (capsized after striking a **tree stump**)

(NB: 7 & 8 ARE THE MOST RESENT INCIDENTS)



Benefits:

1. Help adopt the most efficient and effective preventive and remedial measures to ensure clean water bodies.
2. Its results will be used to produce the nation's nautical charts to ensure Safe Navigation on the water bodies.
3. Again, its results will assist to identify floor materials that impede the smooth movements of water body users.
4. It will help to determine a clear transportation path for boats and water body users to make it more navigable and safe.
5. etc.



▪ **Challenges in the Hydrographic Affairs**

- Non-existence of a Ghana National Hydrographic Service.
- Lack of Hydrographic surveying and Ocean Observation equipments, i.e. Research Vessels to conduct the surveys.
- Non-membership of International Hydrographic Organization (IHO)
- Unavailable capacity to process the measured Tidal data
- Non-existence body to control the activities of the various institutions
- Absence of Human Resource development training



■ Conclusion

- The development of Water Transportation can be determined by the conduct of Hydrographic Surveying as this activity will be of high significance to National Development of a country.
- Need to create the awareness in the importance of hydrographic surveying to determine the safety in the use of the water body for transportation.
- Water Transportation System can be one of the cost effective and safest modes of transportation in Ghana and its development can be made possible by the conduction of a hydrographic survey to determine the topography of the water body.



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