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

FIG WORKING WEEK 2015
17-21 MAY SOFIA BULGARIA

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**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



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▪ 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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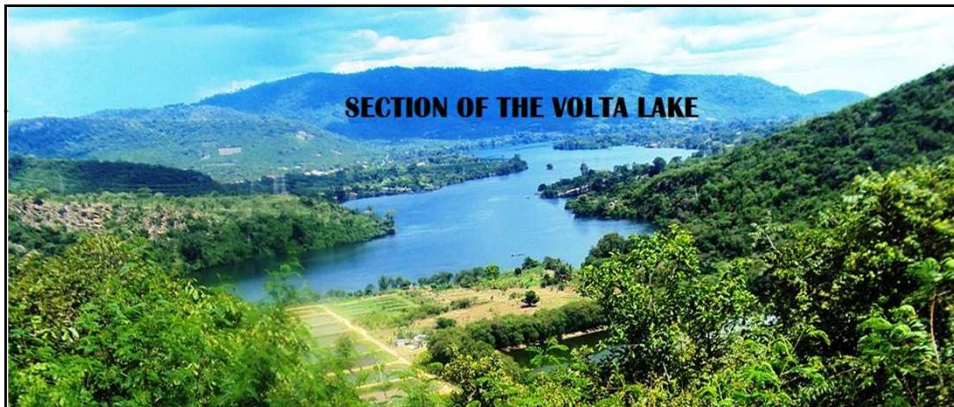




- The Volta River is the main fresh water source for Ghana. It drains into the Gulf of Guinea and Atlantic Ocean; and has three main tributaries—the Black Volta, White Volta and the Red Volta. Its total length including the Black Volta is about 1,500 km (930 miles).
- The River Volta was dammed that 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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- 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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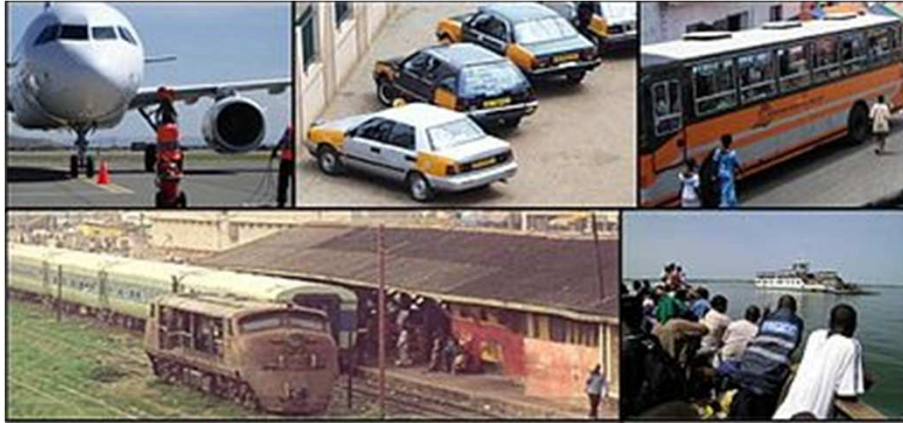




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▪ **The State Of Transportation In Ghana**



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



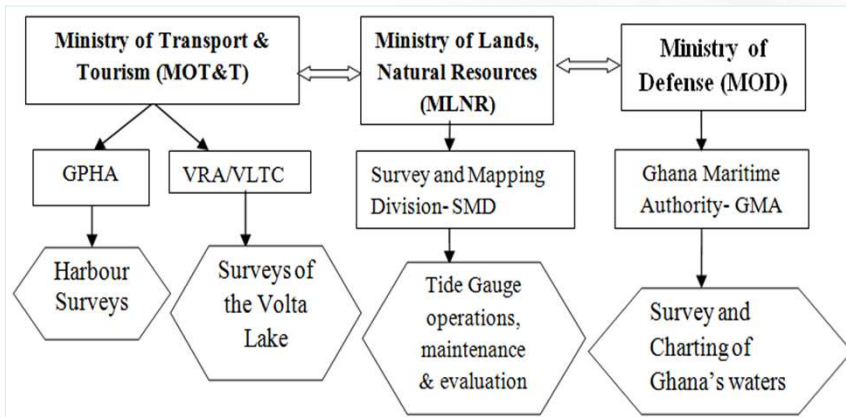
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▪ **The State Of Hydrographic Surveying In Ghana**



Organizations that perform Hydrographic Activities



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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.

It's 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. Portion of the Volta Lake, what once was a forest and now is the Volta Lake





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▪ **Examples of Disasters caused by Tree Stumps**



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▪ **Examples of Disasters caused by Tree Stumps**



1. June 1999- 76 people drowned in the lake in a boat accident. (capsized after striking a **tree stump**)



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▪ **Examples of Disasters caused by Tree Stumps**



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)



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▪ **Examples of Disasters and their Causes**



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 drown in Volta Lake boat accident (90 passengers instead of the authorized 76)



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4. March 2007- 13 people perished including 4 children with reasons unknown.



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4. March 2007- 13 people perished including 4 children with reasons unknown.
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)



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6. August 2013- 8 Killed In Boat Disaster. (hit a **tree stump** in the river causing the boat to capsize.)



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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**)



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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**)



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▪ **Benefits**

1. Help adopt the most efficient and effective preventive and remedial measures to ensure clean water bodies.
2. Results obtained from the survey 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 safe and navigable.
5. etc.



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▪ **Challenges in the Hydrographic Affairs in Ghana**

- 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



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▪ **Conclusion**

- The conduct of Hydrographic Surveying can determine the safety in the use of the water bodies in the development of Water Transportation which is of high significance to the National Development of a country.
- There is the need to create the awareness of 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 most cost effective and safest modes of transportation in Ghana and its development can be made possible by the conduct of hydrographic surveying of water bodies.



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