

# Marine Accidents in Northern Nigeria: Causes, Prevention and Management

# **Lawal Bello Dogarawa**

Nigerian Maritime Administration and Safety Agency, No. 4 Burma Road, Apapa – Lagos, Nigeria Email: lbdogarawa@yahoo.com

# **Abstract**

Boat mishaps tend to be increasing in Nigeria in spite of all regulatory measures which have been taken to prevent and control marine accidents. Boat mishaps could occur anywhere water transportation takes place. However, there is a general impression that water transportation takes place only in the riverine areas located in Southern Nigeria but, this paper reports about marine accident cases in Northern Nigeria. It evaluates the safety measures put in place by operators and other institutional bodies in the areas and assesses the level of infrastructure in terms of quantity, quality and accessibility to boat operators, boat users and institutional staff. Questionnaires were administered through individual and group interviews with boat owners, boat drivers, boat users, boat builders, boat engine mechanics, local government officials, maritime workers union, the marine police, traditional regulators and staff of the federal government agencies for maritime affairs.

The paper found that marine transportation is neglected in Northern Nigeria with dilapidated jetties, ill-equipped marine police, non-functional ferries and boast meant to be used by federal officials and wrecks in water channels without removal. Maritime safety is therefore compromised with cases of overloading carrying people, animals, grains and petroleum products in one boat without fire extinguisher and no lifejackets. The paper concludes that there are considerable water transportation activities in Northern Nigeria without a corresponding government attention. It is therefore recommend that government should intervene by providing lifejackets, fire extinguishers, training of surveyors, refurbishing ferries for enforcement as well as creating safety awareness in the region.

**Keywords:** Boat mishap, Northern Nigeria, Casualties, Overloads, Lifejackets, intervention measures

# 1. Introduction

It is very absurd to read on a regular basis, reports about boats mishaps resulting into loss of lives and properties instead of breakthrough made by marine engineers and naval architects on shipbuilding, efficient wreck removal and ship recycling. It is equally disturbing when the causes of ship capsizing in the country are repeatedly common requiring little government intervention to avert them but without necessary official concerted efforts to reverse the ugly trend of loss of enormous resources. Although government has provided enough policy



frameworks on how to ensure safety in the Nigerian waters, there is lack of enforcement on the part of executing agencies.

Section 428 subsection 1a - 1c of the Nigerian Merchant Shipping Act (MSA), 2007 states that there is a marine casualty when any ship is lost, abandoned, materially damaged or causes lost or material damage to another ship or there is any loss of life by reason of any casualty occurring to or on board any ship on or near the coast of Nigeria. On the other hand, Sections 189 – 192 of the Act provides measures to be taken to prevent marine accidents and for the protection of seamen and other maritime employees. It also requires investigations to be conducted into causes, general trend and hazards for marine accidents by empowering the Minister to make regulations dealing with structure, machinery, safety, cargo types, loading and unloading as well as firefighting, ballast and kitting for crew members. Also, Section 258 subsections 1 and 2 empowers the Minister to make rules for the safety of non-conventional vessels including prescribing the requirements for hull, equipment and machinery, lifesaving appliances, manning level, ship class, inspection and licensing as well as prevention of overloading and overcrowding. Again, Section 275 of the Act makes it mandatory for masters of all Nigerian ships, near coastal and inland waters ships to transmit reports regarding any accidents resulting into loss of life or injury, unseaworthiness of the ship, inefficiency of the hull or machinery, failure of which without any reasonable cause, on conviction shall be liable to a fine of not less than one hundred thousand Naira.

## 1.1 The Problem

Wrecks are vessels sunk, stranded or abandoned in harbour, dock, pier, tidal water or port approaches under the control of a harbour authority. Wrecks include jetsam, flotsam, lagan and all derelicts (including logs) floating or submerged in the tidal waters or the operational shores of a nation. Wrecks are viewed seriously because they constitute danger to navigation and to lifeboats engaged in rescue operations and other services.

In Nigeria, there is a general impression that wrecks can only be found in the coastal states where there are seaports. In fact, there is hardly any mention of such instance when government officials and maritime professional are discussing about water transportation in Nigeria apart from those that occurred in places which they commonly referred to as the "riverine areas". However, for several years now, newspapers have been reporting about boat mishaps along different water channels in the hinterland.

What are the causes of boats mishaps in the interior? What role has government played to prevent boats accidents in those places? What intervention other measures can be put in place to avert boats casualties?

# 1.2 Objectives

This Paper attempts to find out about the types, causes and frequencies of boats mishaps in selected Northern states of Nigeria and to document suggestions from operators and the communities on how to prevent or minimise the occurrence to the lowest possible level. The



Paper also intends to evaluate the safety measures put in place by operators and other institutional bodies in the areas and assesses the level of infrastructure in terms of quantity, quality and accessibility to boat operators, boat users and institutional staff. The Paper examines the educational background and training needs of operators and institutional staff as well as the number and quality of training institutions in the areas in order to recommend various intervention policies to government.

# 1.3 Methodology

This Paper administers questionnaires through individual and group interviews covering boat owners, boat drivers, boat users, boat builders, boat engine mechanics, local government officials, maritime workers union, the marine police, traditional regulators and staff of the federal government agencies for maritime affairs. The interview was blended by personal observations on marine infrastructure and on-the-spot assessment of the quantum of maritime activities. The study covers Baga fish dam and Doron Baga in Borno State, Numan and Jimeta in Adamawa State, Lau, Ibi and Donga in Taraba State, Lokoja in Kogi State, Toto in Nasarawa State, Katsina Ala, Dura, Amafa, Gwer, Konshiha and Logo in Benue State, Komaduga, Karege, Kasir, Dogona and Gogaram in Yobe State as well as Sada, Raha and Dole Kaina in Kebbi State.

## 2. Literature review

Egbuh (2006), discovers that there were 102 wrecks located at 62 wreck sites within the Lagos ports area and another seven wrecks at the Lagos bar estimated to cost about US\$40 to be removed. Obviously, such large number of wrecks constitutes enormous danger for navigation by ocean-going ships visiting Lagos area. On the other hand, Bob-Manuel (2002) observes that human error was a predominant factor in capsizing of vessels. He asserts that vessels may capsize when they hit high and steep breaking waves from the side which will subject them to severe rolling or pitching, gale and loss of stability. He contends that some of these factors can be controlled by the provision of internal buoyancy compartments in order to secure the stability of the boat when fully laden. Egbuh (2006), also states that capsize hazards can also be minimized by reducing the period of exposure i.e. the number of trips of the boat per day, by the acquisition of wave data, detailed study of the wave pattern and developing ways to encounter dangerous waves. He concludes that avoidance of overloading to maintain enough freeboard and prudent observance of the national maritime rules and regulations are very critical in averting boat accidents.

The Nigerian Association of Master Mariners (NAMM) in 2009 identifies poor pilotage services, lack of adequate lighting system at the ports, absence of a system to administer, monitor and investigate these mishaps, failure to sound signals, inappropriate speed of the ship, light or shapes off and inappropriate directions or supervision on work and collision among other causes of marine accidents. The leading cause of collisions is improper lookout which is classified into three types: i) No lookout; ii) Failure to recognize the other vessel until just before collision despite standing lookout; and iii) Insufficient observation of the movement of the other vessel after once recognizing it. Other causes of accidents includes: inappropriate



reporting or taking-over, inappropriate maneuverings, poor selection and maintenance of course, insufficient attention to weather or sea-surface conditions, inappropriate anchoring or mooring, insufficient maintenance, inspection or handling of lubricating oil/fuel oil as well as insufficient study of the waterways. The assertion by NAMM is part of what the study attempted to verify in the areas covered during the research.

On the other hand, the United States Coast Guard (USCG, 2005) contends that the number one cause of fatalities in boating accidents is capsizing which is caused by improper loading or overloading but it can also be caused by other things such as foul weather. Another reason pointed out for capsizing is anchoring to the stern. That every year boats capsize, and people are injured or killed, because of the vessel being anchored by the stern. However, another great cause of fatal accidents is someone falling overboard, which occur while the boat is moored, or at anchor. It is most often caused by unstable footing or unsafe acts, like sitting on the sideboards or gunwales. Standing or moving about without holding on to something can also be a cause.

USCG statistics shows that 61% of the accidents were caused by improper vessel operation, 21% caused by alcohol usage with bad weather, turbulent waters accounted for 14% and improper vessel loading accounted for 12% of the total. It noted that the stability of a vessel is affected by the weight and position of that weight on the vessel. When a boat starts everyone is in a stable position, then someone moves, shifting the weight that can upset the stability especially for boats under 16 feet when in fact, the load is to be distributed evenly and not over loaded. Similarly, the average death rate in 2005 for boating accidents for the U.S. was 5.4 per 100,000 registered boats. The highest was Florida with 8 deaths per 100,000 registered boats, and the lowest three states were North Dakota, Rhode Island and Vermont all of the with zero fatalities. However, among states with boating fatalities, New Hampshire and Indiana – the only two states that require PFD be worn at all times by everyone while boating had the lowest fatalities with 1 death per 100,000 boats registered, and 1.9 per 100,000, respectively. This remarkable success was achieved because the USCG had insisted that boaters were in "Command" and consequently responsible for whatever might happen to them and those on their boats by ensuring that everyone wears a PFD.

Whereas Wines (2005), reports that 102 people died as a result of ship capsize along Jalingo River in Taraba state, Mei (2009), reports that 40 people lost their lives after their boat capsized mid-river in the State. While the two reports did not indicate at what hour the accidents occurred, 20 people died along River Benue when the boat moving at night was overturned by harsh current in 2007. This incident was similar to 38 people that died in Bagwai Lake in 2008 after the boat driver missed his route at night and hit wreck on his way overcrowded with people accompanying bride to her husband's house.

Naku (2007), also reports about the death of 50 children in a wooden passenger and cargo boat which was overloaded with people and freight that developed mechanical fault on the Nun River of Bayelsa State. In 2008, there was another mishap involving Navy patrol boat and a passenger speedboat which claimed nine lives on the Nun River in the night (Sapa-dpa). Earlier



in 2006, a census official was drowned in a boat mishap in Kano while 80 people died in 2007 along Dole-Kaina River following collision between a cargo ship and a ferry overcrowded with market women returning home. This was after another boat had sank while crossing the River Niger carrying 100 passengers overloaded with goods out of which 80 people were lost in 2003. Addeh (2009), again reports about 55 people who died when a boat attempted to rescue another boat that had first layer leakage also developed engine fault at the middle of River Nano carrying primary school children at the Nigeria-Benin border. A passenger ship of 200 people capacity carrying 500 passengers also had an accident along Nembe River in Port Harcourt in 2000 resulting into the death of dozens while three people lost their lives in Bangi, Niger State following boat mishap in 2008 (Super Admin).

Apparently, both human and technological factors are involved in boat mishaps. Complexity adds to the probability of system failure generally through unforeseen interactions between subsystems. But it has also been observed that most accidents occur at the end of the day when environment and drinking can induce bad judgment by boat drivers. Accidents are most frequent in the rainy season when rivers swell up and ferrying becomes a hazard. Ironically, these incidences keep on occurring despite the fact that Section 40 of the Nigerian Maritime Administration and Safety Agency (NIMASA) Act 2007 empowers the Agency to detain any ship that is considered to be unfit to proceed to sea due to defect in the ship, its machinery or equipment or any part; or because of under-manning, overloading, unsafe or improper loading. Section 41 of the NIMASA Act 2007 also stipulates a fine of up to the sum of one million Naira on conviction, against persons who uses, causes or permits navigation of any defective lighter, barge or like vessel which endanger human life. These provisions of the law should have reduced cases of boat mishaps in the country if they are being fully enforced. And where the accidents occur, Section 1 subsection 2b requires NIMASA to make enquiries as to the shipwrecks or other casualties affecting ships or as to charges of incompetence or misconduct on the part of seafarers in relation to such casualties. However, it appears that Marine Board Investigations are limited to ocean-going and sizeable coastal ships thereby neglecting small ships and boats which provide essential services to common people and are the ones that are largely involved in marine accidents. In fact, big marine accidents are often not investigated properly according to the IMO resolutions and EU law. The reason is political and politicians see an opportunity for change - not improvements and this affects future safety at sea, along the coast and the inland waterways. And if there are no safeguards against the manipulations of accident investigations, marine safety will actually be made worse. Unfortunately, large independent organisations involved with safety matters like classification societies, universities, model test tanks, trade unions, etc. are not likely to criticise this situation as they are too closely associated with the various administrations and often financially dependent on them (e.g. for research grants). Incidentally, the small, truly independent company or individual working to improve safety at sea has no chance in this game. Serious analysis and improvements are easy to destroy with the normal means of the public servants and politicians in charge.



# 3. Findings

This study discovers that except in the months of August through November, marine activities in the areas are generally very low. This was attributed to shallow waters in Lake Chad, River Gongola, River Benue and River Niger. Consequently, the period from December to July is bad times for boat operators. Whereas rainfall in most parts of Northern Nigeria starts in May and becomes regular by July, respondents assume that the four months of full capacity activities were made possible when Central African Republic, Chad and Cameroon opened their locks to discharge excess water from rainfall in order to avoid forceful break of their earth dams. In Baga fish dam for example where marine activities takes place within a 12 km canal constructed by the Federal Government in the early 1980s, only 10 boats were operating out of the over 200 boats and ships that usually operate during busy period. Marine activities have also become history in Doron Baga, a place in years past that was covered by over-flowed water from Lake Chad. The place is now a settlement for hundreds of fishing families mostly from Kebbi State. However, relative activities are still going on in other places like Daban Masara, Madayi, Duguri, Kangalan, Barkime, Meri, Kakuri, Dogon Chuku and Shuwaran which are villages along the canal.

Marine operations in this Northeast axis of Nigeria involve carrying cargoes and passengers to and from Sudan, Chad, Cameroon and Niger Republic. Conversely, activities in *Numan* covers up to *Jen* in *Karim Lamido*, and *Barrong* ferrying passengers and farm produce. During low activities, only about 26 percent or 13 boats out of the 50 boats were in business. Operations in *Jimeta* seems to be the lowest among all the other areas even during peak periods contrary to *Lau* where activities were relatively higher than what it is in the lower period of other areas except in *Lokoja*. The marine operations in *Lau* usually cover *Jen*, *Kabawa*, *Guruwa*, *Usmanu*, *etc*. Boat operators in *Ibi* are relatively busy throughout the year. They have the advantage of crossing passengers and cargoes largely from Eastern Nigeria to Jos in Plateau State because it is shorter than going by road.

Donga had 10 boats crossing people from and to *Akati*. There were between 2 to 3 boats carrying farm produce and passengers in the neighbouring *Sukundi, Tunari, Kanon Kabawa, Inyalani, Matan Sarki, Gundu Ogabi* and *Guruza* villages. Water level in Donga was higher than in *Baga, Numan, Jimeta, Lau and Ibi*. During rainy season, river *Sada* and river *Raha* which are tributaries to Rima River over-floods their banks and wash away farmlands. The water level reduces drastically in dry season but fishing and few transportation activities still takes place. However, boat mishaps rarely occur in these places. From *Nguru* through *Komaduga* and *Geidam* up to *Gogaram* along Yobe River boat operators provide uninterrupted services throughout the year until the last few years when migrant birds brought a foreign weed that grows very tall and multiply fast which now affects both fishing and navigation. Local communities are worried that solution is yet to be found on how to control or even eradicate the weed from their waters. Maritime communities in *Konshisha, Gwer, Amafa, Dura* and *Logo* are generally personal service rather than commercial.



# 3.1 Maritime infrastructure

Marine activities suffer a great deal of setback in the hinterland due to serious neglect of water transportation despite its importance in the movements of people and cargoes especially farm produce. There are few dilapidated jetties which are being submerged during rainy season. Although there are offices of the National Inland Waterways Authority (NIWA) and the Marine Police in these places, their work is hindered by inadequate equipment. Whereas the patrol boat belonging to the marine police in *Numan* was not functioning, the boat in *Jimeta* was used occasionally due to low activities. Conversely, both NIWA and the marine police did not have patrol boats in *Lau*, *Ibi* and *Donga*.

In the past, ferry services were provided by NIWA in virtually all these places. Presently, there were only six ships left five of which had been at anchor in the dockyard for several years without being used.

Boats were being constructed with woods by local builders at the river side and operators use small Yamaha engines to propel them. Buoys were abandoned in NIWA dockyard in *Lokoja* and the rivers were not marked to aid navigation.

Boat owners, operators and mechanics differed in their levels of formal education. In general, boat builders and mechanics had passed out from technical colleges and few of them had diploma. On the other hand, boat owners and operators were secondary school leavers. Most of them had minimum credits for entry into post-secondary institutions but lack of finance has prevented them from furthering their education.

However in most places, operators have union with spelt out rules and regulations governing membership and the rights of members. The marine community in *Baga* and neighbouring villages are organized under the umbrella of the Maritime Workers Union of Nigeria (MWUN). There is also a well-structured Union of about 130 members in *Numan* who, during low business activities, the Union organizes them into two groups with each group operating in-turn for one week. The Union makes such arrangement to ensure that members not only remain in marine business but also stay close to the river bank. However, operators in *Jimeta* were not well organized because of rift between union officials. Members alleged that the Chairman of the Union was imposed on them by *Sarkin rafin Yola*.

Lau operators were equally unionized and they claimed to be busy throughout the year. Union membership is up to 50 operating about 17 boats during most active season. At Ibi, the union had 110 members with over 21 boats. They are equally relatively busy throughout the year. They have the advantage of crossing passengers and cargoes as a shorter route for Ibos going to Jos in Plateau State. Operators were unionized in *Lokoja* as well with about 93 members owning some 17 small boats, 15 medium size boats and 9 big boats. Other areas of *Lokoja* had only small and medium size boats.



The jetty constructed by the United African Company (UAC) during the colonial era is still in use at Buruku, Benue State. Although the roads across the two sides of the river are dual carriage, there is no bridge that links them together. Consequently, barges are being used to get goods and people across the river. The barges are constructed by local boat builders with wood.

In times of low business operations, except in *Numan*, operators stay away from the river bank to take up motorcycle transport service popularly known as *Achaba*, *Okada* or *Going*. Although they sometimes make more money in that business than from the water transport operation, they claimed that it was not their most cherished means of livelihood. In 2005, the union in *Baga* and *Numan* received undisclosed amount and N10000 assistance respectively from NIWA. The *Baga* union used the financial assistance to mobilise members to remove water hyacinths in their routes. Each boat owner in *Baga* also paid N6000 to NIWA to renew licence annually. On the other hand, boat owners paid N600 and N100 respectively to NIWA and their union in other areas. Where union exists, members may be granted loans to acquire or repair boats or engines. They may also be assisted on other matters especially to solve health problems.

There was a general impression that Government was neglecting marine communities in these areas. They did not seem to know about the existence of both former NMA and JOMALIC.

# 3.2 Maritime safety

There is no doubt that inadequate infrastructure is one of the biggest challenges to marine safety in those places. Despite the provisions of the law and, of course, the presence of government officials, boats are generally overloaded and overcrowded. Except in *Lau* and *Donga* where there were attempts to introduce lifejackets on rent by private initiatives, passengers were carried for short and long distances without lifejackets. Ironically, in *Lokoja* and other places, boats were stopped in the middle of the rivers to check cases of overload and overcrowding instead of doing it before the boat commences its voyage. Often, boats develop engine faults due to poor maintenance, water penetrate inside it because of overweight and eventually sink thereby drowning the passengers. There is no boat with load line in all those places.

The marine police lack the motivation and capacity to move swiftly when accidents occur. Apart from those who passed out from technical colleges, boat building is being carried out largely by artisans who inherit the skills from their parents. While there is only one mechanic in major areas, spare parts were either of low quality or not readily available at the time of need.

Search and rescue operations were still undertaken through communal efforts. In virtually all the places, there are families popularly known as *Gidan Sakin rafi* that are in-charge of rivers and provides search and rescue operations. These families are reputed for their ability to rescue people and recover properties as well as dead bodies. Consequently, search and rescue skill is transferred from generation to generation in *Gidan Sarkin rafi*. However, there were times when search and rescue operations were carried out by volunteers such as in *Jimeta*.



# 3.3 Marine accidents

There are more marine accidents occurring in August than in any other months of the year. This is so because of strong water waves outflow from Chad, Cameroon and other countries which uproots trees by the river banks and submerged other types of wrecks into the navigable ways. The locations of these wrecks deposited were hardly known or visible to boat drivers. Marine accidents also occur during harmattan season as a result of strong wind. As already noted, marine accidents occur as a result of overloading and overcrowding when people are combined with animals, manufactured goods and farm produce full to the brim without regard to their total weight.

Every year, boat mishaps occur about four times in *Doron Baga*, twice in *Numan*, three times in *Jimeta* and *Lau*, five times in *Ibi*, three times in *Donga* and four times in *Lokoja* with loss of lives in at least one accident per annum. However, there was hardly any boat mishap without loss of properties. Over 15 people died in one major accident in *Lokoja* in 2006 as result of overload. Similar accident occurred in 2005 by the bridge along *Numan — Biu* road on *River Gongola* because of strong wind that resulted in collision of two boats. Six boats sank in *Jimeta* all at once in 2006 where neither the goods nor the boats were recovered but there was no loss of life.

Boat mishap involving modern ships started as far back as 1977/78 in *Donga*. The wreck is still at the spot. Another ship also sank in *Donga* in 1983. Community efforts to remove the wrecks was however not successful. In July 2011, a boat carrying 20 people capsized at *Makurdi* while crossing passengers to *Nassarawa* during which five people died.

## 4. Conclusion

There are some common factors which cause marine accidents in the sea, on the coast and along the inland waterways. These common elements are both human and technological. Whereas crewmen may be careless about safety by allowing overloading and overcrowding or abuse in alcohol consumption, poor maintenance of the ship, engine and equipment malfunction and harsh weather affects sea-going, coastal and inland water ships.

Boat mishaps in Northern Nigeria are generally caused by overloading, overcrowding, wrecks along the water channels, night sailing without adequate light, absence of river marks and lack of enforcement of safety regulations by Government agencies. Notwithstanding the fact that agencies like the marine police and NIWA do not even have functioning patrol boats, instead of monitoring and enforcing compliance to boats capacity limit before allowing them to sail, they increase the risk of capsizing by checking overloading and overcrowding at the middle of the rivers.



The marine communities in Northern Nigeria also have strong attachment to water transportation like their counterparts in the South. However, they are largely ignored by Government in providing assistance and awareness campaigns.

There is a general belief by boat drivers and users that they can rescue themselves any time there is trouble because they know how to swim. As a result, they tend to underrate the importance of wearing lifejackets on board. While most boat drivers survive mishaps, they are occasionally among the casualties. It therefore becomes imperative for serious sensitisation and continuous enforcement of safety rules in Nigeria.

It is observed that there is no presence of NIMASA in any of the areas covered by this study except in *Lokoja*. Apart from being the Government agency responsible for maritime safety and administration in the country, it is also responsible for the implementation of the provisions of Cabotage Act 2003. Enforcement of Cabotage Act should not be limited to the activities on the coastal waters.

It is noted that the number of ships being inspected for the purpose of Flag State and Port State controls are very small because of inadequate number of ship surveyors in the country. This suggests that Government attention may not be on non-conventional ships and boats for a long time. Incidentally, they are the crafts that are mostly involved in marine accidents.

## 5. Recommendations

In view of the findings and conclusion of the study, the following recommendations may help to prevent marine accidents in Nigeria and ensure sustained safety of navigation.

- When a boat capsizes the occupants should be encouraged to remain inside the boat instead of dispersing into the water and make search and rescue operations difficult to coordinate.
- 2. There is the need to register all non-conventional ships and to conduct regular inspections in order to ensure their continued safety.
- 3. It is also critical to examine all vessels sailing on the nation's waterways and to review existing rules and regulations governing domestic shipping trade with a view to reclassify the ships and to redesign licence and other permits as a way of enforcing capacity limits.
- 4. Government should quickly address the problem of inadequate ships surveyors by training fresh engineering graduates and converting other engineers working in transport agencies in order to bridge the gap.
- Government through its parastatals should provide 250 lifejackets and 20 medium-sized fire extinguishers to each of the areas in order to reduce loss of lives and property from mishaps.
- 6. Government should encourage all marine communities to be organised in a union in order to ease enforcement of safety rules and regulations as well as standards for boats building.



- 7. Government should promote the idea of establishing Search and Rescue Volunteer Groups in all marine communities and also direct NIMASA to carry out regular awareness campaign about modern safety measures.
- 8. Government should introduce intervention policies aimed at improving the education and training of the marine communities in different aspects of maritime.
- 9. There should be regular studies on how to minimise boat mishaps. The studies should include comparison on the solutions to marine accidents in other countries. The findings from the studies should be disseminated to stakeholders through leaflets, bulletins, circulars, public lectures and media discussions.

# References

Abu Dhabi News.Net 2007 "People missing after Nigerian boat accident"; <a href="http://www.abudhabinews.net/story/288280">http://www.abudhabinews.net/story/288280</a>

Anders Björkman 2002 "Not Learning from Marine Accidents – Some Lessons Which Have Not Been Learnt"; <a href="http://members.tripod.com/heiwaco/rinapaper.htm">http://members.tripod.com/heiwaco/rinapaper.htm</a>

Bob Couttie 2009 "Maritime Accident Casebook"; <a href="www.maritimeaccident.org/tags/cargo/">www.maritimeaccident.org/tags/cargo/</a>

"Causes of Boating Fatalities"

http://www.boattest.com/Resources/view\_news.aspx?NewsID=76

Comet 2000 "Dozens Feared Dead after Boat Accident in Nigeria"; <a href="https://www.articles.orlandosentinel.com/2000-0">www.articles.orlandosentinel.com/2000-0</a>

Dawn 2003 "80 missing as boat sinks"; <a href="http://www.dawn.com/2003/03/04/int12.htm">http://www.dawn.com/2003/03/04/int12.htm</a>

Dennis Naku 2007 "50 Kids Die in Bayelsa Boat Mishap"; http://allafrica.com/stories/200703020255.html

dpa news 2007 "33 killed, 48 missing in boat mishap on northern Nigerian river"; <a href="http://www.digitaljournal.com/article/killed">http://www.digitaljournal.com/article/killed</a> 48 missing in boat mishap on northern Nigerian river

Ernest Chinwo 2008 "Bakassi - 15 Citizens Die in Boat Mishap"; http://allafrica.com/stories/200806130498.html

Godwin Oritse, Vivian Nwokedi & Sarah Moshe 2010 "Nigerian hydrographic society partners UNILAG on training"; <a href="https://www.vanguardngr.com/2010/12/nigeria">www.vanguardngr.com/2010/12/nigeria</a>...

"31 people die in Nigeria boat collision" <a href="http://www.gmanews.tv/story/63332/">http://www.gmanews.tv/story/63332/</a>

"Ten die when Nigerian boat capsizes: police" <a href="http://www.haaba.com/news/2008/05/22/7-137331/ten-die-when-nigerian-boat-capsizes-police.htm">http://www.haaba.com/news/2008/05/22/7-137331/ten-die-when-nigerian-boat-capsizes-police.htm</a>

IRIN 2006 "NIGERIA: Deaths, delays and disruptions mar national census"; <a href="http://www.globalsecurity.org/military/library/news/2006/03/mil-060323-irin04.htm">http://www.globalsecurity.org/military/library/news/2006/03/mil-060323-irin04.htm</a>

Michael Wines 2005 "Nigeria: 102 Dead In Boat Accident"; www.query.nytimes.com/gst/fullpage.html

Naija4Life 2011 "Four die in Calabar boat accident"; <a href="www.nigeriaa2z.com/2011/04/28/four-">www.nigeriaa2z.com/2011/04/28/four-</a>
NIGERIA 2008 "Dozens of boat accidents in the north"; <a href="http://wow.gm/africa/gambia/article/2008/4/4/nigeria-dozens-of-boat-accidents-in-the-north">http://wow.gm/africa/gambia/article/2008/4/4/nigeria-dozens-of-boat-accidents-in-the-north</a>
Nigerian Association of Master Mariners 2009 "Nigeria: Safety of Country's Water Ways"; <a href="http://allafrica.com/stories/200904010115.html">http://allafrica.com/stories/200904010115.html</a>



Reporting marine accidents 2003 Causes of marine accidents judged; <a href="http://74.6.239.67/search/cache=major+causes+of+marine+accidents">http://74.6.239.67/search/cache=major+causes+of+marine+accidents</a>

SaferNigeria 2011 "13 drown in two boat accidents near Epe in Lagos State"; www.saferafricagroup.com/2011/04/05/13-.

Salisu Rabiu 2008 "26 Dead in Nigeria Boat Accident"; Associated Press Writer

SAPA 2007 "Nigeria boat accident claims 50"; www.voanews.com/english/news/a-13-2...

Sapa-DPA 2005 "Hundred feared drowned in boat accident in Nigeria"; <a href="https://www.mg.co.za/article/2005-08-16-hundred">www.mg.co.za/article/2005-08-16-hundred</a>.

USCG 2005 "Common Boating Accidents": <a href="http://www.rescuediver.org/rescuetech/boatops5.htm">http://www.rescuediver.org/rescuetech/boatops5.htm</a>

"Nigeria and Benin border river boat accident caused 40" www.dajj.men-blogs.net/The-first-blog-b...

"The Packed Wedding Party" www.safeboater.com/articles/worst-b.

Xinhua 2007 "Boat accident kills 20 in E. Nigeria"; www.chinadaily.com.cn/world/2007-07

Xinhua 2008 "Thirty-Eight Killed in Boat Mishap in Northern Nigeria";

http://english.cri.cn/2947/2008/04/02/1221@341194.htm

Xinhua 2009 "40 Killed in Boat Mishap in Nigeria"; http://english.cri.cn/6966/2009/07/07/2001s499576.htm

## **Interviews**

A. M. Abu-Abdissamad; Interviewed in Zaria

Ali Wukari; *Interviewed* in Jimeta Asen G; *Interviewed* in Lagos Ibrahim Illo; *Interviewed* in Lagos

Maritime Workers Union of Nigeria – Baga branch; Interviewed in Baga

Maritime Workers Union of Nigeria – Jimeta branch; *Interviewed* in Jimeta

Maritime Workers Union of Nigeria – Numan branch; *Interviewed* in Numan

Salisu Umar; *Interviewed* in Lagos

The Marine Police – Baga post; Interviewed in Baga

The Marine Police – Jimeta post; Interviewed in Jimeta

The Marine Police – NIWA dockyard post; *Interviewed* in Lokoja