

Research Article

Contending Trends and Impact of the Lake Nyos Cataclysm on the Wum Area Development Authority (WADA) 1986-1996.

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Abstract: The Lake Nyos limnic gas eruption that occurred in Menchum Division, North West Region of Cameroon on August 21st 1986 was considered as one of the deadliest in the World. This led to perish of several thousand persons and other sources of livelihood. It was a rare misadventure that necessitated rapid responsiveness. In spite of the tremendous worldwide financial, material and logistics succour, the well-timed intrusion of the Wum Area Development Authority (WADA) was crucial in dealing with the crunch. WADA intervened in the rescue and resettlement of survivors over different locations in Menchum Division. It did also in conjunction with other backers; coordinate delivery and provision of basic needs to the affected. All these, combined with other factors led to its liquidation in 1989, with heightening ramifications in 1996. This paper sustains therefore that, the contributions of WADA in the management of the disaster were colossal, even though with distressing repercussions on the authority and division in general. It is constructed on data, assembled from some secondary and primary sources, construed qualitatively and presented thematically.

Keywords: Contending Trends, Lake Nyos, Cataclysm, Impact, WADA.

INTRODUCTION

The myth that lakes were scared and often secret places in many African traditions remained tenuous until Lake Nyos exploded on August 21st 1986,¹ eliminating families in Nyos, Kam, Cha and Subum rural communities, including other vital sources of livelihood (cattle, fowls, rabbits, goats, sheep and others).² This was nonetheless, second of its kind in Cameroon, after that of Monoun in the West Region of the country that occurred on August 14th 1984, killing 37 people.³ The Lake Nyos explosion did not only instill fear and insecurity, but elicited a number of human and material damages in its vicinity. The most urgent need after this was that of disposing the putrefying bodies and animals; evacuating the several thousand survivors to temporary resettlement sites and meeting their immediate needs.⁴ It is worthy of note that Cameroonian authorities got informed about the disaster two days after it occurred and on receiving the news, President Paul Biya reacted thereof, appealing for worldwide assistance.⁵

¹ E. Shanklin (2007). "Exploding Lakes in Myth and Reality: an African Case Study", *Geological Society*, London, Special Publications, p.166.

² D. Tande (n.d). "The Lake Nyos Disaster 20 Years after (I): Revisiting Israeli Connection," Retrieved on the 28 November 2013, http://www.dibussi.com/files/lake_nyos_and_the_israeli_connection.pdf, p.1.

³ BBC News, "1986: Hundreds Gassed in Cameroon Lake Disaster." Retrieved on 06th October 2014, http://news.bbc.co.uk/onthisday/hi/dates/stories/august/21/newsid_3380000/3380803.stm

⁴ M. Amin & J. A. Manga (2010) "Report on the Security and Socio-Economic Reintegration of the Lake Nyos Area: Cameroon Lake Nyos Project, 20th November to 20th December 2010", *UNDP*, p.1, accessed 13 July 2014, www.google.com?q=martin+amin+johnson+a+manga%2C+on+the+security+and+socio-economic+integration+of+lake+nyos+area+december+2010.

⁵ M. L. Kpuhge (July 2012). "The Presbyterian Church in Cameroon (PCC) and the Management of the Lake Nyos Gas Disaster of 1986", *Global South e-magazine* vol. 8 No.3, p.7. Also see N. Cooper (September 1986). "Cameroon's Valley of Death", *News Week*, No. 66, p.19.

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The United States reacted with a pledge of 25,000 US Dollars in immediate aid, while France, Britain and other countries, including international organisations gave both material and logistical support.⁶ The Wum Area Development Authority (WADA) which operated in Menchum Division at the time as the foremost socio-economic development stimulus assumed the immediate responsibility of evacuating several hundred survivors from the disaster zone even before the intervention of the state and international community.⁷ WADA was seriously affected by the cataclysm, not only because it was operating various socio-economic activities in the Lake Nyos area at the time, but also because the disaster set in at a difficult period of the country's economy (economic crisis), thereby hastening its demise in 1989. The liquidation of WADA introduced far reaching ramifications on the socio-economic landscape of Menchum Division. It is from this backdrop that the paper focuses on the input of WADA and impact in the management of the Lake Nyos Gas Disaster. It is structured with a background stage on which the disaster was laid; determinants and manifestations of the disaster; contending issues and impact.

Contextual Framework

The Lake Nyos is in Nyos, a village located some 40 kilometers to the west of Wum, the administrative headquarters of Menchum Division in the North West Region of Cameroon. It is positioned on latitudes 6°26' North of the equator and 10° 18' east of the Greenwich Meridian.⁸ The villages found around the lake area include Cha, Nyos, Munji, Djingbe, and Subum.⁹ This lake is 50 kilometres from the Nigerian border to the north and northwest and Katsina-Ala River, which is part of the Benue River basin.¹⁰ The Lake itself occupies a crater, said to have been formed from a hydro volcanic eruption some 400 years ago.¹¹ It covers an area of some 1.5 kilometers square and is over 200 meters deep. In the rainy season, the excess lake water escapes over a low spillway, cut into the northern rim of the crater and down a valley through the Nyos village.¹² The Nyos disaster made the lake to be branded "Deadliest," with a wing span spread of about 23 kilometres. Its explosion led to noxious effects on survivors like: heartburn, eye lesions, and neurological problems such as monoplegia.¹³ The later effect is a condition that affects one muscle or group of muscles, one limb or one part of the body, and paraplegia leading to the paralysis of the lower part of the body and limbs.

The Lake Nyos is one of only three in the world known to be saturated with carbon dioxide including Lakes Monoun and Kivu in Rwanda, East Africa.¹⁴ The main rivers that drained Menchum Division before the limnic eruption were the Menchum and Kimbi rivers, whose head streams took rise from the Kom, Oku and Babungo hills.¹⁵ These rivers were very fast running, especially during the rainy season thereby lowering the tempo of socio-economic activities in the area as movement was strained due to no bridges across them. This issue was further compounded by the topography of the Lake area which posed serious obstacles to the development of communication and agricultural mechanization, thereby demanding much human labour with low output.¹⁶ Evidence of volcanic action was indicated by granite hills and the many crater lakes, prominent of which were Lakes Wum, Illum and Nyos itself.¹⁷ The Hydrology of the area influenced agricultural output to be below the subsistence level because communication was made difficult due to many rivers. This meant that many bridges and culverts had to be constructed, making them very expensive. The overhead obstacles required an improvement in agricultural techniques and techniques of roads construction and maintenance. It was in response to the foregoing and others, that WADA was created by the government of Cameroon.

In terms of human background, Menchum Division was divided into four main clan areas before 1986, each encompassing many ethnic groups. These clan areas were: Aghem, Beba-Befang, Esimbi, and Fungom. The principal ethnic groups of the division were: Esu, Weh, Aghem, Befang, Esimbi, Okoromanja and Bubaji.¹⁸ Added to these was

⁶ BBC News, "1986: Hundreds Gassed in Cameroon Lake Disaster."

⁷ Interview with J.N. Gabuin, 78 Years, Director of Defunct WADA, Bamenda, 28th August 2010.

⁸ F. L. M. Fomine (2011). "The Strange Lake Nyos CO₂ Gas Disaster: Impacts and the Displacement and Return of Affected Communities", *the Australasian Journal of Disaster and Trauma Studies*, Volume 1, p.1.

⁹ "The Lake Nyos", Accessed on 13 July 2016, http://en.wikipedia.org/wiki/Lake_Nyos.

¹⁰ Fomine, "The Strange Lake Nyos CO₂ Gas Disaster", p.1.

¹¹ Ibid.

¹² J.P. Lockwood (1986). "How Volcanoes Work: Lake Nyos", http://www.geology.sdsu.edu/how_volcanoes_work/Nyos.html, Accessed on 08 October 2014

¹³ Amin and Manga, "Report on the Security and Socio-economic Reintegration of the Lake Nyos Area," p.1.

¹⁴ Ibid., p.3.

¹⁵ G. F. Kum (2014). "Wum Area Development Authority (WADA) 1965-1994: Implantation, Economic and Social Conversions in Menchum Division," Ph.D. Thesis in History, University of Yaoundé I, p. 42.

¹⁶ M. L. Ndum (1996). "Aghem Women in Rural Development: A Historical Study, 1965-1991" DEPE II, ENS Yaoundé, p. 6.

¹⁷ T. Eyongetah & R. Brain (1978). *A History of the Cameroons*, London: Longman, p. 14.

¹⁸ Divisional Archives Wum (DAW) (1969). File: No.DMW 754/31/01/69, "Facts and Figures about Menchum Division", p. 3.

the Fulani, a principal cattle grazing group in the area. The Aghem claimed the Munchi origin in Nigeria although other schools claim the Tikari descent.¹⁹ Esimbi and Beba-Befang were grouped under the village of Widikum on the Manyu border which they considered their place of origin.²⁰ The Fungom clan area people that include: Esu, Weh, Nyos, Menkaf, Zhoa, Kung and Bafmen, claim the Tikar region as their place of origin.²¹ Only the history of Fang in Fungom is connected to that of Befang in Menchum Valley Sub-Division.²² The Fru-Awa area was made up of four ethnic groups, namely the Koutepts and Jukons who migrated from Nigeria, the Tikari villages of AKum, Nser, Nkang, Mbulum and Lebo which originated from the Lake Chad basin region as their Tikar neighbours in the Fungom clan area.²³ Another group that arrived in the area before the advent of WADA was the Fulani (Aku) early in 1957.²⁴ These groups had frequent socio-economic and cultural dissents among them.

The copious socio-economic problems in Menchum Division resulted to low living standards and general underdevelopment. It was in this light that WADA was created by the government of Cameroon through Presidential decree no. 73/2 of 3rd January 1973 to assist and accelerate the socio-economic development of the division. WADA had its origins from a protocol agreement concluded on the 20th October 1965 by the governments of Cameroon and West Germany, launching work on an Agricultural Training Centre (ATC) in Wum West Cameroon.²⁵ Based on the little or no prospects of the ATC, an intensive evaluation of the project was done at the end of 1971. It was established that until then the project had not achieved the desired success and as such, should be transformed to an organisation of economic and industrial character (WADA). When WADA was created, its activities were centred on the central part of Menchum Division, between the towns of Weh and Wum. But as time went by, these were gradually extended to other parts of the division such as Modele, Nyos, Esimbi, Yemnge, Su-Bum, Esu and Fru-Awa, to meet its central agenda of assisting and accelerating the socio-economic advancement of the area. The place of WADA and impact in the management of the Lake Nyos gas disaster could best be understood through its social and developmental activities in Menchum Division.

The activities of WADA could be noticed in the domain of agricultural extension, made up of: a Block Extension Farming Programme (BEFP), Oxen Training and Farming Programme (OTFP), Group Farming Programme (GFP) and Cooperative Development Programme (CODEP). There was also a technical department that harboured programmes like the rural infrastructural development service (in charge of constructing farm to market roads, constructing and harnessing water points, health centres and others), Carpentry and Mechanical services, notwithstanding a service for the provision of social amenities. All these were engulfed in its permanent and developmental structures, albeit agriculture was top on the list, to uphold government's commitment at the time (Green Revolution), to ensure food sufficiency in the country. The creation of WADA marked a turning point in the socio-economic history of Menchum Division in that the socio-economic development of the people was enhanced. There were improvements on farming methods, consumption patterns, market economy, average incomes of farmers, road network infrastructure, agricultural output and a shift in their land occupancy system. In the social domain, there was an increase in population, a cultural explosion, lifestyle conversion, improved inter-village land and farmer-grazier relationships. These developments were nevertheless interrupted among others, by the Lake Nyos gas disaster of August 21st 1986. The subsequent section gives an insight into the causes and course of the disaster.

Determinants and Indicators of the Disaster

When the Lake Nyos, boiled at a very high temperature, it overflowed its banks, emitted poisonous gases, with a disastrous toll on human, animal, and plant lives. After the disaster, the President of Cameroon, Paul Biya, summoned an international conference of scientists from different academic backgrounds to unravel the causes of the unprecedented calamity. One hundred scientists and other experts from different countries sat in the conference hall in Yaoundé from the 16th to 20th March 1987 in an acrimonious debate to reveal the results of their findings.²⁶ On the same note, George Kling, an ecologist at the University of Michigan recalls that the Lake Nyos disaster was one of the most baffling

¹⁹ Kum (2007). "The Cameroon-German Technical Cooperation for Menchum Division 1965-1995" DEA Dissertation in History, University of Yaoundé I, p.36.

²⁰ National Archives Buea (NAB) (1932). File No. 772/22, 1923-1933, "Wum Assessment Report [and later Reports]," Bamenda Division, p. 7.

²¹ DAW (n.d). File: No. E28/25/S, "The Sub-Prefecture Wum", p. 58.

²² Interview with Elias K.Vumbong, 68 Years, Ex-Stores Accountant Wum District Hospital, Wum, 19th November 2006.

²³ N.V. Kum (2006). *Esu and Her Neighbors: A Geopolitical History of the Esu People*, Yaoundé, Book House, pp. 60-62.

²⁴ Kum (2005). "The Socio-Economic Impact of the Liquidation of the Wum Area Development Authority (WADA) on Wum Central Sub-Division 1989-2004", Maîtrise Dissertation in History, University of Yaoundé I, p. 14.

²⁵ Kum, "Wum Area Development Authority (WADA) 1965-1994", p. 121.

²⁶ Fomine, "The Strange Lake Nyos CO2 Gas Disaster," p. 4.

scientists have ever investigated.²⁷ The deadly gases emitted by the lake, included carbon dioxide, carbon monoxide, and hydrogen sulphide, or cyanide gas.²⁸ These decimated over eighteen hundred people and almost all the animals in the villages around the lake area. Crops were also destroyed. The prominent illnesses suffered by survivors included severe headache, asphyxiation, burns, pulmonary infections, nervous problems and post-traumatic stress.²⁹

What actually caused the incident is still largely a matter of conjecture. Although with some scientific justifications, it is hard to come out with an acceptable assertion that explains why the Lake Nyos erupted. There exist several schools of thought not only among the people of the lake area, but also among scientists and conspiracy theorists. While scientists look at it as a natural disaster, conspiracy theorists think it was a man-made disaster and the people of Nyos think it was the wrath of one of their late chiefs that led to the outburst of the lake. The inhabitants of Nyos Village ascribed this disaster to the anger of one of their late chiefs popularly known as the "Lake Chief", who died earlier in 1983.³⁰ According to them, the will of the late chief was never respected. Before his death, he willed that the biggest cow among his flock be offered to the *Kwifon*, the most important secret society in the land for ritual purposes.³¹ But at his death, this cow was substituted with a slim one. One week later, all the late chief's cattle were seen moving in a queue into the lake.³² When the fatal disaster occurred, late in 1986, the residents of Nyos believed it was due to the wrath of the departed chief. Away from this are scientific views.

According to some scientists, a chemical gas in the depths of the lake had gradually accumulated over a long period of time, until it finally reached a saturation point and caused the explosion.³³ Their tests revealed a high concentration of sodium bicarbonate in the water. For them, this carbonic gas of magma was released by the interaction of a yet unspecified trigger event as there was no direct volcanic explosion. Smith³⁴ holds that it did not involve fresh magma, but superheated water flashing to steam thereby occurring on the bed of the lake. He further suggests that cool rainwater falling on one side of the lake might have triggered the overturn of the CO₂ layer. Although the incident was officially attributed to the natural eruption of toxic gases from the lake, certain sources hold that this might have been connected with night time covert military testing of unconventional weapons.³⁵ Although this is not confirmed, the United Nations sought to discourage such acts and urged nations to refrain from them. Kevin Krajick³⁶ intimates that such an event was quickly endorsed in Cameroon for political intrigues, since after the explosion scientists were unable to pinpoint its actual cause. The public quickly concluded that it was a man-made disaster. All these concur with some alleged suspicious happenings in Nyos during the months preceding the explosion as Tanda explains:

...the most conspicuous incident prior to the explosion was the fact that the traditional ruler of Nyos and royal family moved out of the village a few days before the explosion... Did the Traditional ruler of Nyos know of a timed explosion, too? Other reports, even from the Cameroon radio stations, said many months earlier "a strange white man" or 'geologist' had visited the Lake and warned that people should evacuate the village before a certain date.³⁷

The preceding theory settles on the fact that the gas emission was due to the detonation of a neutron bomb in a secret military test. This theory that originated both from national and international news reports, constantly compared the effects of the gas emission to that of a neutron bomb. Reporters in the area described it as looking like the aftermath

²⁷ Tanda, "The Lake Nyos Disaster 20 Years after (I): Revisiting Israeli Connection," p.1.

²⁸ Ibid.

²⁹ BMJ (May 1989) "Lake Nyos Disaster, Cameroon, 1986: the Medical Effects of Large Scale Emission of Carbon dioxide?" *BMJ*, Volume 298, p.2.

³⁰ M.N. Ngangwa,(1986). "National and International Communities in the Management of the Lake Nyos Gas Disaster" M.A. Dissertation in History, University of Yaoundé 1, p. 16.

³¹ Ben Dom, Interviewed on 8 August 2010. Aged 55 years, Teacher, Buabua Settlement Camp.

³² Ngangwa, "National and International Communities in the Management of the Lake Nyos Gas Disaster", p. 18.

³³ T. Musa (1998) Environment: Lake Nyos Survivors Stuck in Resettlement Camps, *IPS Correspondents*, Yaoundé,(Aug 27 1998), Retrieved on 10 October 2014 from, <http://www.ipsnews.net/1998/08/environment-lake-nyos-survivors-stuck-in-resettlement-camps/>

³⁴ E. Smith (2007) "Cameroon: Remembering Lake Nyos gas Disaster". *Personal Communication*, Cited in Forka Leypey Mathew Fomine, "The Strange Lake Nyos CO₂ Gas Disaster", p.3.

³⁵ I. O. Babatunde (March 2014), "Globalization and Nigerianization of Marine Pollution and the Attendant Effort to Combat it Through Law", *International Journal of Humanities and Social Science Invention*, vol.3 Issue 3, p. 64, Accessed 10 October 2014, from [www.ijhssi.org/v3\(3\)/version-2/J0332059070.pdf](http://www.ijhssi.org/v3(3)/version-2/J0332059070.pdf).

³⁶ Tande, "The Lake Nyos Disaster 20 Years after (I): Revisiting Israeli Connection," p.2.

³⁷ Ibid.

of this bomb, with damage only on living things and no visible effects on village huts and other buildings.³⁸ These people nevertheless lost their houses, property as they had to flee. Soon after the disaster occurred, the Lake Nyos Aid Management Committee was set up by the president of the Republic of Cameroon to manage the relief aid coming from various governments and organisations (national and international) for the resettled populations.³⁹ Albeit millions worth of material and financial assistance was given to help in solving problems emerging from the event, WADA remained one of the structures that got resolutely affected by the disaster as can be seen in the contending issues that follow.

WADA's Input and Issues

The eruption of Lake Nyos interrupted WADA rural development projects in the Bum and Yemnge sectors where Nyos and Cha communities were located and seriously affected. During the time of eruption, the following structures were under construction in Nyos: the sector's office and store, chief of sector's house, rest house, a Production Trails Demonstration Centre (PTDC) and the supervisor's house.⁴⁰ More still, roads, bridges and culverts that were under construction were abandoned due to the disaster where a lot of money had been invested. Some social infrastructures had been realised in the area, such as schools, health centres, youth centres, water supply and handicraft development and a cooperative building complex, consisting of conference halls, offices, produce stores, drying slabs, farmers service centres, huller rooms, chemical stores, and toilet facilities among others.⁴¹ All these were dissipated after the explosion. Being the principal development partner of the people and lone reliable capable government structure concerned with socio-economic development in Menchum Division at the time, WADA was faced with the urgent task of saving and resettling survivors from the lake area.

Apart from having extended many of its development activities to the lake area, WADA incurred enormous human and material losses as the Bum and Yemnge sectors were seriously affected by the disaster. The instantaneous problem which WADA got involved with, was assisting in resettlement of the over 4000 survivors, the government of Cameroon embarked on building camps for, out of the disaster zone.⁴² Before government intervention, all evacuations were done through WADA's financial and human efforts and this was too heavy for it to bear.⁴³ Those displaced were temporary settled at Kimbi (750), Kumfutu (289), WADA premises precisely at the Oxen Village (245), Bafmen (907) Esu (200) and at the Catholic Mission Wum (215) with assistance from WADA.⁴⁴ Resettling them in camps was just one problem solved. Other victims found refuge with relatives within and beyond Menchum Division in areas like Nkambe (259), Mesaje (750) Mungong (72), Fonfuka (202) and Mbuh (125) still through the authority's succour.⁴⁵ WADA did further ensure that they regain their mental balance, from the grief of loss of relatives, insecurity due to displacement from their normal habitats, frustration and starvation caused by the abandonment of farms and property.

WADA also grappled with the problem of overcrowding, not only in resettlement camps, but also in schools, especially in Kimbi and Fonfuka areas.⁴⁶ In government primary school Kimbi, before the disaster, there were only 186 pupils, but the number increased to 516, with more survived kids from the disaster. In Fonfuka, the number rose from 779 to 850 pupils.⁴⁷ While the disaster prompted such increases, the school equipment including teachers remained same. It was in this light that in trying to see into curbing one of the problems, WADA embarked on furnishing some school benches at her own cost in areas that were in need. Apart from this, WADA personnel was deployed on the field to help meet certain tasks: three senior staff among the local disaster commission, one senior staff managed the camp of over 200 victims settled on the Oxen Village premises, eleven drivers and operators occupied running its vehicles and distribution of aid items. A total amount of 334,520 (Three Hundred and Thirty Four Thousand Five Hundred and Twenty francs CFA) was spent on fuel and lubricants on vehicles and equipment from 23/08/86 to 25/09/1986. There was equally the free repair of outside vehicles involved in the rescue mission, including military vehicles, government and private individuals by the WADA mechanical workshop service estimated at 786,440 (Seven Hundred and Eighty Six Thousand Four Hundred and Forty francs CFA).

³⁸Ibid., Also see, "The Killer Lakes of Cameroon : Using Science to solve Problems", Accessed on the 04th October 2014, www.globalchange.umich.edu/430x279 Search by image.

³⁹ Interview with J.N. Gabuin

⁴⁰Ibid.

Interview with Peter Fru, Head of Technical Section of Defunct WADA, 83 Years, Bamenda, 10th August 2010.

⁴² DAW (1987), File No. None, "Impact of Lake Nyos on WADA", p. 1.

⁴³ Interview with J.N. Gabuin.

⁴⁴ Ibid.

⁴⁵ Ibid., also see Fomine, "The Strange Lake Nyos CO2 Gas Disaster", p.6.

⁴⁶ Interview with Peter Fru

⁴⁷ Ibid.

All storage facilities for perishable and non-perishable items used for the resettlement of displaced persons came from WADA.⁴⁸ During the period of the disaster, an estimated amount of 2,144,980 (Two Million One Hundred and Forty-Four Thousand Nine Hundred and Eighty francs CFA) was calculated as money used for the running of two Yasey Ferguson Tractors for 3 months, 1 Caterpillar bulldozer for twelve days to clear the road and make it passable, 8 four wheel drive vehicles including a 7 Tons Lorry for a total of 49 days.⁴⁹ All the foregoing was incurred during the periods of the immediate and post-resettlement of survivors in the division. Most of the investments made by WADA in the disaster area were either lost or abandoned as the zone was temporary declared “Disaster Region” and put out of bounds, pending the findings of scientists and conclusions of the colloquium organised by the government of Cameroon in 1987.⁵⁰ Major losses included the death of 506 beneficiaries of the 1006 participants in the BEFP, GFP and OTFP. It is worthy of note that these were the main actors in the WADA extension programme especially in areas like Su, Tsongkang, Mbonge and Babwa. Some of them owed loans to WADA, given that they were trained and equipped with funds from it, estimated at 600,000 francs CFA per Farmer.⁵¹ Even beneficiaries who survived, but indebted to WADA, never made up for their debts.

Other losses included the death of 10 out of the 101 draught cattle given out by WADA to extension farmers in the area.⁵² Valuable agriculture and office equipment as well as farm inputs were also lost and in some cases, abandoned. The chief of sector’s house and office amounting to some 18,000,000 (Eighteen Million francs CFA), 14 kilometres of roads with already constructed bridges and culverts estimated at 48,800,000 (Forty Eight Million Eight Hundred Thousand francs CFA), the cooperative building complex estimated at 25,000,000 (Twenty Five Million francs CFA), a rice huller and Corn Mill, estimated at 4,500,000 (Four Million Five Hundred Thousand francs CFA) were all abandoned as a result of the disaster.⁵³ There was also the abandonment of 8 hectares of land with trials of maize and soya beans, 1.5 hectares of demonstration plots of various crops, a meteorological station at the PTDC and 2 tons of seeds (soya beans, rice, and maize).⁵⁴ The Lake Nyos disaster partly explained the drop in the tonnage output for most crops in the division during the 1986/87 season to 99,10 tons from 170,70 beginning from the year 1984/85. Besides, most of the crops stored in the Batinga multi-purpose pre-cooperative society had not been collected before the disaster and were therefore abandoned.⁵⁵ The many victims temporarily resettled at the WADA Oxen village in Wum town greatly interrupted the OTFP as many participants who were settled there were sent back to their villages of origin to make room for disaster victims.

Added to the forgoing expenses, WADA had to ensure the permanent settlement of the victims on their premises and improve on their living conditions, alongside those of other rural inhabitants with similar problems. These problems included land availability, farm-to-market roads construction, agricultural credit and inputs, marketing of agricultural produce and installation of social infrastructure. In all, the deployment of WADA resources as a result of the Lake Nyos disaster affected the budget of the authority as it was the lone organisation that the administration and population depended on, in handling problems resulting from the disaster. The Menchum Integrated Rural Development Project (MIRUDEP) that was created in 1984 to be managed by WADA was suspended in 1986, due to insufficient Funds for the running its projects the OTFP, GFP, YFSS, PTDCs, Farm Service Centres, Crop Protection, Farm-to-Market Road Construction, Coffee Regeneration and Social Infrastructure.⁵⁶ In this backdrop, an additional amount of 500 million francs CFA was needed to augment the budget of the Authority to enable it execute its programmes and continue to assist in solving the problems so created.⁵⁷ This was never the case as WADA was finally closed down in 1989.

Impact of Disaster

Even though WADA had other problems emanating from the end of technical cooperation between Cameroon and West Germany and economic crisis that brought limited financial assistance, its situation got highly compounded by the Lake Nyos disaster.⁵⁸ The Lake Nyos disaster was one of the major determinants to the demise of WADA on 13th January 1989 by presidential Decree No. 89/037. This is because after yielding to the call of the President of the Republic

⁴⁸ Ibid., also see Fomine, “The Strange Lake Nyos CO2 Gas Disaster” p.6.

⁴⁹ DAW, “Impact of Lake Nyos on WADA”, p.1.

⁵⁰ An Address Presented by his Excellency the Governor Walson Mboe Ntuba, Chairman of WADA Board of Directors, at the 24th Board Session held in Wum, 28 November 1986, p.3.

⁵¹ Interview with Aloysius Ngwoh, Ex-Tractor Driver WADA, 63 Years, Wum, 16th September 2004.

⁵² DAW, “Impact of Lake Nyos on WADA”, p.4.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Interview with J.N Gabuin.

⁵⁶ WCA, File No. 200, “WADA”, p. 835.

⁵⁷ Ibid., p.7.

⁵⁸ Interview with Alfred Asafor and Mathias Mbang, Ex Technicians with WADA, and then with MIRUDEP, 51 and 55 Years Respectively, Wum, 13th May 2004.

for all Cameroonians and state owned institutions to deal with the economic crisis accordingly in 1987, WADA did reduce a few of its permanent workers, returned some civil servants that were on secondment to their ministries of origin and suspended some of its activities. But with increased financial stress from the Nyos incident, 71 more workers were relieved of their functions in 1988 and this posed a certain number of practical problems in the running of the Authority.⁵⁹ Concerning the reduction of salaries, the Authority's budget for payment was reduced from 35 million francs CFA in 1985/86 to 20 million francs CFA in the 1986/87 budgetary year; from 20 million francs CFA to 13, 5 million francs CFA in 1987/88 and to 6 million francs CFA in 1988/89.⁶⁰ In spite of these efforts WADA was still identified as unproductive and thus to be liquidated.⁶¹ Kain holds that WADA could still survive even with a very small budget if the Lake Nyos Disaster did not set in as it had ample viable land, cheap labour, and the necessary infrastructures to enable it productive.⁶²

The internal budget of WADA stood at 80 million francs CFA after its involvement in the disaster. According to J.N. Gabuin, in an effort to improve the authority's standing at the time, he appealed to government, to increase this budget to 150 million francs CFA, so as to make it self-sustaining and cover the expenses and losses incurred during the Nyos incident, no attention was paid him.⁶³ Due to the preceding trends, WADA was rather misguidedly identified as unproductive and to be closed down by the inter-ministerial commission that was charged with identifying state owned corporations to be maintained, privatised or liquidated. The liquidation of WADA had far reaching consequences on the rural masses of Menchum Division in general and Lake Nyos area in particular. This was given that the main economic activity in the division before WADA was farming and it devoted three quarters of its budget to promoting this through agricultural development programmes such as the BEFP, OTFP, GFP, and YFSS among others, to encourage food crop production. This was enhanced, but the authority was closed down shortly afterwards. The most affected areas were some of the very fertile ones in the division harbouring these extension services. Fonjong⁶⁴ intimates that one of the first outcomes of liquidation was the slowdown of agricultural activities in its area of jurisdiction since most of the farms which WADA helped to open were abandoned due to the Lake Nyos disaster and its liquidation.

Before WADA, Women did the cultivation and men were less interested in farming. With WADA, Draught Cattle and Tractors were introduced and farming methods greatly improved thereby leading to increased cash and food production, encouraging commercial farming. WADA provided technical, moral, financial and commercial assistance to the people and this was very effective.⁶⁵ After the Lake Nyos Disaster, these activities slowed down. This situation was due to the fact that there were inadequate finances for loans, farm inputs, moral and technical support. The limited financial resources of WADA, also led to an increase in tractor hiring hours to plough the fields of farmers. Before 1986, 12,000 francs CFA was paid to plough 2.5 hectares of land.⁶⁶ After the incident, the price rose to 34,000 francs CFA to plough this same area of land.⁶⁷ WADA used to provide fast growing and high yielding species of seeds to farmers during its heydays. After the disaster and its eventual liquidation, the slow growing and low yielding types of crops that were common in the area during pre-WADA days resurfaced and did enormously discourage agriculture. Group farming that was encouraged by WADA also dwindled. As such, most of the fruits, vegetables and basic foodstuffs produced in the area became insufficient.⁶⁸ The Wum central market, the main supplier of farm produce to towns like Bamenda in particular, began to import from Bamenda and other areas to meet local consumption needs. Areas like Wum, Bu, Agully, Yemnge Valley and others, principal rice producing areas suffered enormously after the disaster due to insufficient inputs.⁶⁹

One of WADA's objectives was the opening up of farm-to-market roads in Menchum Division.⁷⁰ Before its establishment, there were hardly any farm-to-market roads in the area. By the time of the disaster, many parts of the division, especially Wum town, had roads linking it to remote areas. The gas disaster led to most of the farm-to-market

⁵⁹ Interview with J.N. Gabuin

⁶⁰ Interview with Alfred Asafor and Mathias Mbang

⁶¹ Présidence de la République (1987). *Crise économique : La réponse du Cameroun*, Direction de Publication, Cabinet Civile, Yaounde, p.17.

⁶² Interview with Marius Kain, Clerk with Defunct WADA, 70 Years, Wum, 26th November 2006.

⁶³ Interview with J.N. Gabuin

⁶⁴ L.N. Fonjon (2004). Changing Fortunes of Government Policies and its Implications on the Application of Agricultural Innovations in Cameroon", *Nordic Journal of African Studies*, p. 21.

⁶⁵ Kum,"The Socio-Economic Impact of the Liquidation of the Wum Area Development Authority", p.66.

⁶⁶ WCA, File No. 200, "WADA", p.658.

⁶⁷ Interview with Andrew Anang Block Extension Farmer with Defunct WADA, Wum, 7th December 2008.

⁶⁸ Interview with Ebenezer Fung, Ex-President Bu-Mbengkas Cooperative Society, 73 Years, Bu, 8th January 2011.

⁶⁹ Management (1984). "Memorandum on Wum Area Development Authority", p.12.

⁷⁰ DAW (1984), File No. E28/622 Vol VI, "WADA", p. 642.

roads becoming almost impassable due to little or no means to construct new and or maintain existing ones. This made the transportation of agricultural produce, most especially the transportation and commercialisation of rice to become a cause for concern. They could not even sell what they produced, because there was no road to take it to the market.⁷¹ This aspect was further compounded by their lack of easy access to the good health care facilities which WADA helped establish in Su-Bum during its heydays. According to John Ngong Njang, who lives at the Ipalim camp, when they grow crops, these are destroyed by the livestock kept by others in the camp.⁷² This was not the case when WADA was there. Although there were farmer-grazier conflicts before WADA caused by the bitter relations between the cattle graziers and agricultural population of the division, she engaged permanently in reducing them through several methods, especially by trying to institute a modern farming system (permanent farming) against the traditional system in place.

WADA sought a progressive reform to meet the forgoing objective, thereby preventing the populations from spontaneous brutal opposition, which could encourage strikes from one or the other group.⁷³ For instance, the idea of promoting education, providing information and training campaigns through seminars and urging administrators to remain impartial in settling this conflict only as the law permitted. But all these were altered with the Lake Nyos incident and the eventual liquidation of WADA. In spite of the initiatives of the Ozone Friendly People Project (OFPP) to encourage pasture improvement in the area after liquidation, farmer-grazier conflicts remained unabated.⁷⁴ According to Djibril, one of the Lake Nyos survivors in the Upkwa resettlement Camp, they had enough land on which to farm and graze back in Nyos, during the days of WADA, with no cows destroying their crops and they could always feed themselves appropriately.⁷⁵ They filed a number of complaints with the District Officer in Wum, but nothing was done to remedy the situation. He recalled that the closure of WADA was a big knock-back at them. Before WADA, land was considered as the secret property of ancestors and temporally allocated to individuals for farming except for building purposes under the custody of the chief. With WADA, this practice was altered as farmers were permanently settled on pieces of land after training, in consultation with local chiefs.⁷⁶

WADA negotiated ample land for farmers operating under its agricultural programmes, but after the Lake Nyos disaster, the resettled victims found it difficult to acquire enough land for farming. This explained the drastic drop in revenues got from the extension programmes during the 1986/87 farming season. According to Ben Dom, they cultivated a lot of rice under the supervision of WADA.⁷⁷ He intimated that many of those who were displaced from the disaster area had a lot of interest in WADA activities. In the Fonfuka for instance, of the 10 nursery workers, 6 were Lake Nyos survivors who were WADA beneficiaries.⁷⁸ Dom adds that although the displaced persons were provided with good shelter in the camps that was all they received, despite promises of education, health and other social services, thereby being abandoned to themselves since 1989.⁷⁹ They also complained about not being able to farm on small pieces of land. The people felt so abandoned that the last resort for them was that of returning to their villages near Lake Nyos. But this seemed out of the question since geology experts, visiting the area at the time said the Lake Nyos was still dangerous. Pa Jeremiah Ful lamented the forgoing in the following words in Tansa:

... we have been in hell ever since they abandoned us here, there is no good thing, no feeding, no clothing, no health care. We are dying without help... People came here several times to ask what we wanted. They made promises and disappeared. The nearest health post is 20 kilometres away, and it takes about five hours to trek there. For a sick person, it takes a whole day. This is why some patients have died on the way before having the opportunity to have medical attention.⁸⁰

At the time of WADA, the people were with enough assistance to better their lives. In its absence, government failed to provide Lake Nyos survivors with skills for the future, while away from their original villages and homes. For J.N. Gabuin, these people needed to be supported in training geared towards encouraging income generating initiatives, have their livestock restocked and a programmed 10 to 15 years follow-up period, to see them well settled.⁸¹ Reverend

⁷¹ Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps".

⁷² Interview with John Ngong Njang, Farmer and Lake Nyos Survivor, Ipalim (Wum Central), 82 Years, 8th Septembre, 2010. Also see Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps." SCET-Cameroon (1983), *projet de développement rural intégré du département de la menchum*, vol.2, Directions des Etudes et Projets, MINAGRI, Yaounde, p. 57.

⁷⁴ Wum Rural Council (2003), "Monographic Study", p. 8.

⁷⁵ Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps."

⁷⁶ Ibid.

⁷⁷ Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps."

⁷⁸ Interview with J.N Gabuin.

⁷⁹ Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps."

⁸⁰ Ibid.

⁸¹ Interview with J.N.Gabuin.

Father John Musi, head of St. Martin's Parish in Wum on his part simply concluded that Lake Nyos survivors were merely evacuated; they were not resettled, but merely taken out of the danger zone and dumped in camps and therefore victims who still needed help.⁸²

CONCLUSION

The paper examined that WADA had invested on a series of developmental projects in the Lake Nyos Zone, before the gas disaster. This disaster killed many hundred inhabitants and displaced others from their original settlements. It pointed out that other sources of livelihood were also destroyed. Tremendous assistance was employed in managing the disaster, during and after its outbreak. Aside the state, national and international stakeholders, WADA got significantly involved in the disaster, especially because it was the lone structure at the time charged with enhancing socio-economic developments in Menchum Division. The authority engaged unequivocally in rescuing disaster survivors and resettling them over various locations within and beyond the division. It did partake in coordinating delivery and providing basic needs to the affected. The paper has maintained that the halt in WADA's operations in the Nyos area and its involvement in the disaster greatly hastened its demise in January 1989. The Lake Nyos Gas Disaster was thus one of the most prominent pushes to the bankruptcy of WADA, with devastating consequences on Menchum Division. For a better perceptive of the foregoing, the paper focused on analysing the contextual framework of the disaster, contributions and challenges faced by WADA and impact.

REFERENCES

1. Amin, M., & Manga J. A. (2010). "Report on the security and Socio-economic Reintegration of the Lake Nyos Area", Cameroon Lake Nyos Project, 20th November to 20th December 2010, *UNDP*, Accessed 13 July 2015, www.google.com?q=martin+amin+johnson+a+manga%2C+on+the+security+and+socio-economic+integration+of+lake+nyos+area+december+2010
2. An Address Presented by his Excellency the Governor Walson Mboe Ntuba, (28 November 1986). Chairman of WADA Board of Directors, at the 24th Board Session held in Wum.
3. Anang Andrew, Interview. (2008 December 7th). Block Extension Farmer with Defunct WADA, Wum.
4. Asafor Alfred, Interview. (2004 May 13th). Mechanic with Defunct WADA, 51 Years, Wum.
5. Babatunde O. I. (March 2014). "Globalization and Nigerianization of Marine Pollution and the Attendant Effort to Combat it Through Law." *International Journal of Humanities and Social Science Invention*, vol.3 Issue 3, pp.59-70. Accessed 10 October 2014, from [www.ijhssi.org/v3\(3\)/version-2/J0332059070.pdf](http://www.ijhssi.org/v3(3)/version-2/J0332059070.pdf).
6. BBC News (1986) "1986: Hundreds Gassed in Cameroon Lake Disaster," *BBC News*. Retrieved on 06 October 2014, http://news.bbc.co.uk/onthisday/hi/dates/stories/august/21/newsid_3380000/3380803.stm.
7. BMJ. (May 1989). "Lake Nyos Disaster, Cameroon, 1986: The Medical Effects of Large Scale Emission of Carbon Dioxide"? *BMJ*, Volume 298, 1-12.
8. Cooper, N. (September 1986). "Cameroon's Valley of Death", *News Week*, 66, 19.
9. Divisional Archives Wum (DAW) (1969). File: No. DMW 754/31/01/69. "Facts and Figures about Menchum Division".
10. DAW (1984). File No. E28/622 Vol VI, "Wum Area Development Authority".
11. DAW (1987). File No. None, "Impact of Lake Nyos on WADA".
12. DAW (n.d). File: No. E28/25/S, "The Sub-Prefecture Wum".
13. Dom, Ben, 55 years, Teacher, Buabua Settlement Camp, 8th August 2010.
14. Eyongetah, T. & Brain R. (1978). *A History of the Cameroons*. London, Longman.
15. Fomine, F. L. M. (2011). "The Strange Lake Nyos CO₂ Gas Disaster: Impact and The Displacement and Return of Affected Communities", *The Australasian Journal of Disaster and Trauma Studies*, -16.
16. Fonjon, L.N. (2004). "Changing Fortunes of Government Policies and its Implications on the Application of Agricultural Innovations in Cameroon", *Nordic Journal of African Studies*, pp.13-29.
17. Fru, P. (2010 August 10th). Head of Technical Section of Defunct WADA, 83 Years, Bamenda, 10th August 2010.
18. Fung, E. (2011 January 8th). Ex-President Bu-Mbengkas Cooperative Society with Defunct WADA, 73 Years, Bu.
19. Gabuin J.N. (2010 Aug. 28th). 78 Years, Director of Defunct WADA, Bamenda.
20. Kain, M. (2006, Nov. 26th). Clerk with Defunct WADA, 70 Years, Wum.
21. Kpughe L. M. (July 2012). "The Presbyterian Church in Cameroon (PCC) and the Management of the Lake Nyos Gas Disaster of 1986." *the Global south e-magazine*, Vol. 8 No.3, pp.6-14.
22. Kum G. F. (2007). "The Cameroon German Technical Cooperation Agreement for Menchum Division", DEA Dissertation in History, University of Yaoundé I.
23. (2005). "The Socio-Economic Impact of the Liquidation of the Wum Area
24. Development Authority (WADA) on Wum Central Sub-Division", Maîtrise Dissertation in History, University of Yaoundé I.
25. (2014). "Wum Area Development Authority (WADA) 1965-1994: Implantation,

⁸² Tansa Musa, "Environment: Lake Nyos Survivors Stuck in Resettlement Camps."

26. Economic and Social Conversions in Menchum Division.” Ph.D Thesis in History, University of Yaoundé I, 2014.
27. Kum, N.V. (2006). *Esu and Her Neighbors: A Geopolitical History of the Esu People*, Book House, Yaounde, 2006.
28. Lockwood. J.P. (1986). “How Volcanoes Work: Lake Nyos”, Assessed on 08 October 2014 from http://www.geology.sdsu.edu/how_volcanoes_work/Nyos.html.
29. Management .(1984). “Memorandum on Wum Area Development Authority”.
30. Mbang Mathias, Interview, Mechanic with Defunct WADA, 55 Years, Wum, 13th May 2004.
31. Musa, T. (1998), “Environment: Lake Nyos Survivors Stuck in Resettlement Camps”, *IPS Correspondents*, Yaoundé, retrieved on 10 October 2014 from, <http://www.ipsnews.net/1998/08/environment-lake-nyos-survivors-stuck-in-resettlement-camps/>.
32. National Archives Buea (NAB) (1932). File No. 772/22, 1923-1933, “Wum Assessment Report [and later Reports],” Bamenda Division.
33. Ndum, M. L. (1996). “Aghem Women in Rural Development: A Historical Study, 1965-1991”, DEPES II, ENS Yaoundé.
34. Ngangwa, M.N. (2006). “National and International Communities in the Management of the Lake Nyos Gas Disaster”, M.A. Dissertation in History, University of Yaoundé 1.
35. Ngwoh Aloysious, (16th September 2004.). Interview, Ex-Tractor Driver WADA, 63 Years, Wum,
36. Njang John Ngong. (Septembre, 2007). Interview, Farmer and Lake Nyos Survivor, Ipalim (Wum Central), 82 Years, 08
37. Présidence de la République (1987). *Crise économique :La réponse du Cameroun*, Yaoundé : Direction de Publication, Cabinet Civile.
38. SCET-Cameroon (1983). *Projet de Développement Rural du Département de la Menchum*, 2, Directions des Etudes et Projets, MINAGRI, Yaounde.
39. Shanklin, E. (2007). “Exploding Lakes in Myth and Reality: an African Case Study, *Geological Society*, London, Special Publications,165-176.
40. Smith, E. (2007). “Cameroon: Remembering Lake Nyos gas Disaster”, *Personal Communication*.
41. Tanda, D. (n.d). “The Lake Nyos Disaster 20 Years after (I): Revisiting Israeli Connection,” Retrieved on the 28 November 2013, http://www.dibussi.com/files/lake_nyos_and_the_israeli_connection.pdf.
42. “The Killer Lakes of Cameroon: (October 2014). Using Science to Solve Problems”, accessed on the 04th October 2014 , [www.globalchange.umich.edu/430 × 279Search by image](http://www.globalchange.umich.edu/430%20x%20279Search%20by%20image)
43. “The Lake Nyos”, Accessed on (13 July 2011). http://en.wikipedia.org/wiki/Lake_Nyos.
44. Vumbong K. Elias. (19th November 2006). Interview, 68 Years, Ex-Stores Accountant Wum District Hospital, Wum..
45. WCA (n.d). File No. 200, “Wum Area Development Authority”.
46. Wum Rural Council (2003). “Monographic Study”.