

Resettlement Challenges and the Plight of Lake Nyos Disaster Survivors in Cameroon Since 1986

Aloysius Nyuymengka Ngalim¹, Vitalis Song Yamsa²

PhD (Associate Professor)¹, (PhD Candidate)²

Department of History and African Civilisations

Faculty of Arts, University of Buea, Cameroon

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Abstract: This study investigates the resettlement initiatives for survivors of the Lake Nyos disaster in Menchum Division, Northwest Cameroon, following the catastrophic gas eruption of 1986. It posits that while multiple local, national, and international efforts were mobilized to aid the displaced population, these resettlement interventions were predominantly insufficient and poorly executed. The analysis further argues that the resettled communities' aspirations and needs remain unmet, primarily due to government actions that lacked responsiveness to local realities and the inefficacy of overarching resettlement strategies. Employing a qualitative methodology that incorporates interviews, archival documents, and secondary sources, the study critically examines the resettlement challenges encountered by Lake Nyos disaster survivors. The findings underscore key deficiencies in the resettlement efforts, including excessive bureaucratic centralization, corruption, and the systematic exclusion of local perspectives, which have exacerbated the socio-economic vulnerabilities of the displaced population. This paper also identifies a significant gap in the literature, as scholars have largely neglected the long-term socio-economic impacts of resettlement policies and the failure to integrate displaced communities into sustainable post-disaster recovery frameworks.

Keywords: Lake Nyos Disaster, Survivors, Displacement, Resettlement, Socio-economic Vulnerability.

1. INTRODUCTION

Human history is intricately linked to interactions with the environment, which provides resources for sustenance and growth. However, this relationship is often disrupted by natural and man-made disasters, which bring widespread destruction, loss of life, and social dislocation. Among the many natural disasters recorded globally, catastrophic events such as volcanic eruptions, earthquakes, and floods have reshaped communities and livelihoods.¹ In Cameroon, natural disasters are relatively frequent, with major events such as the 1984 Lake Monoun gas disaster and the 1986 Lake Nyos Disaster (LND) underscoring their devastating effects.² The Lake Nyos Disaster, a catastrophic limnic eruption in Menchum Division, unleashed toxic gases that claimed over 1,700 lives, decimated thousands of livestock, and uprooted entire communities from their ancestral lands. In the aftermath, the government of Cameroon, alongside various organizations, launched resettlement programs aimed at restoring livelihoods and supporting affected populations. These efforts encompassed the establishment of resettlement camps and the implementation of socio-economic recovery initiatives. However, despite these interventions, survivors continue to grapple with profound challenges, including inadequate housing, restricted access to essential resources, and persistent socio-economic instability.

Despite extensive research on disaster management, the resettlement of survivors remains a complex and often inadequately addressed challenge. The Lake Nyos disaster serves as a pivotal case study, highlighting the persistent difficulties in post-

¹ David F. Kriston Hagon, World Disaster Report: No One (International Federation of Red Cross Societies, 2018), 5–34.

² Mesmin Tchindjang, "Mapping of Natural Hazards in Cameroon" (University of Yaoundé, 2012), 1–11.

disaster resettlement. While various measures were undertaken to support affected communities, their effectiveness has been undermined by systemic issues such as excessive centralization, corruption, and the marginalization of local perspectives. Existing scholarship has largely overlooked the long-term socio-economic consequences of these shortcomings and the critical role of context-sensitive strategies in ensuring sustainable recovery. This article examines the resettlement measures implemented in the aftermath of the Lake Nyos disaster, evaluates their adequacy, and identifies key deficiencies. It argues that weak implementation and the absence of locally informed approaches have left survivors in prolonged socio-economic precarity. By shedding light on these challenges, this study contributes to broader scholarly discussions on disaster management and resettlement policies, offering insights that can inform more effective and inclusive strategies.

2. THEORETICAL FRAMEWORK

Understanding the resettlement challenges faced by the survivors of the Lake Nyos disaster requires a robust theoretical foundation that accounts for both the socio-economic disruptions and the psychological stresses of displacement. While numerous studies have explored post-disaster resettlement, existing frameworks often fail to capture the long-term struggles of displaced populations, particularly in contexts where government interventions are marked by inefficiencies, centralization, and a lack of community participation. To critically analyze the experiences of Lake Nyos survivors, this study adopts two key theoretical perspectives: the Scudder-Colson Theory of Resettlement and the Impoverishment Risk and Re-establishment (IRR) Theory. These frameworks provide valuable insights into the phases of resettlement, the vulnerabilities associated with displacement, and the strategies necessary for sustainable recovery. By integrating these theories, the study offers a comprehensive lens through which to assess the effectiveness of resettlement efforts and identify the structural deficiencies that have hindered long-term socio-economic stability for the affected communities.

Scudder-Colson Theory

Developed by Thayer Scudder and Elizabeth Colson, the Scudder-Colson Theory underscores the inherent stresses associated with both voluntary and involuntary resettlement. According to this theory, displaced individuals experience a predictable progression of stress responses, particularly in the early stages of resettlement.³ This phase, encompassing the lead-up to relocation, the relocation process itself, and the initial years of adaptation, is marked by heightened emotional strain and limited coping mechanisms. As individuals adjust to their new environments, they typically become more flexible and open to novel approaches, shifting towards greater individualism compared to non-resettled communities. Importantly, Scudder and Colson suggest that successful resettlement occurs when the relocated community achieves economic and administrative independence, fully integrating into its broader regional context without reliance on external support.⁴

The Scudder-Colson Theory is particularly relevant to this study, as it highlights essential conditions for effective resettlement, such as socio-economic stability and community autonomy. The framework aids in understanding the early stressors that Lake Nyos survivors faced and emphasizes the need for policies that foster community resilience and independence, areas where post-disaster resettlement efforts in Menchum Division encountered significant limitations. While the Scudder-Colson Theory underscores the broader socio-economic and community-based conditions necessary for successful resettlement, the Impoverishment Risk and Re-establishment Theory provides a more granular perspective, identifying specific risks.

Impoverishment Risk and Re-establishment Theory

The Impoverishment Risk and Re-establishment (IRR) Theory, formulated by Michael Cernea, focuses on the risks of impoverishment that accompany displacement and the necessary steps for mitigating these risks through targeted reconstruction efforts. Cernea argues that displaced individuals often lose vital forms of capital—natural, man-made, and social—during relocation, which increases their vulnerability to poverty.⁵ The theory posits three core concepts: risk, poverty, and reconstruction, which emphasize how displacement disrupts the existing social structure, disperses community networks, fractures kinship ties, and dismantles local economies. To counteract these risks, Cernea recommends specific

³ T. Scudder and E. Colson, *From Welfare to Development: Conceptual Framework for Analysis of Dislocated People* (Westview Press, 1982), 22.

⁴ Ibid.

⁵ Michael M. Cernea, *Involuntary Resettlement in Development Projects: Policy Guidelines in World Bank-Financed Projects* (Washington, DC, 1990), 65.

actions aimed at restoring lost capital and livelihoods. These include land-based resettlement to address landlessness, re-employment to alleviate joblessness, housing initiatives to combat homelessness, and social inclusion to counter marginalization, among other interventions.⁶

This theory is highly applicable to the study of Lake Nyos survivors, as it provides a framework for evaluating post-disaster interventions in Menchum Division. Cernea's emphasis on rebuilding socio-economic foundations aligns with the goals of the resettlement efforts in Cameroon, making his recommendations a useful lens for assessing the gaps between policy intentions and actual outcomes. By applying the IRR theory, this study underscores the need for comprehensive, context-sensitive strategies that address the multi-layered challenges of resettlement and support long-term socio-economic recovery for the affected communities.

These theories contribute critical insights into understanding the Lake Nyos resettlement's challenges and shortcomings. The Scudder-Colson Theory highlights the psychological and social stress of displacement, while the IRR Theory underscores the practical steps needed to restore livelihoods and address poverty risks, forming a robust framework for analyzing the experiences of disaster survivors in Menchum Division.

3. RESETTLEMENT INITIATIVES

The aftermath of the Lake Nyos Gas Disaster was catastrophic, leaving profound environmental destruction and displacing entire communities. The scale of devastation prompted a range of responses from local, national, and international actors, all aiming to provide relief and support for affected populations. While some interventions focused on immediate emergency relief, others sought to facilitate the long-term resettlement and socio-economic recovery of survivors.

4. IMMEDIATE LOCAL AND NATIONAL RESPONSE

In the wake of the disaster, both local and national stakeholders mobilized swiftly to address urgent humanitarian needs. Rescue operations prioritized evacuation, emergency medical care, and the distribution of essential relief materials. Despite the overwhelming challenges, local authorities and community members played a crucial role in providing first-line assistance. Nationally, the government worked in coordination with humanitarian agencies to deliver aid, establish temporary shelters, and stabilize the affected population. However, while these measures offered short-term relief, they also revealed significant gaps in addressing the long-term socio-economic rehabilitation of displaced communities. Notably, indigenous-led initiatives emerged as a testament to local resilience, underscoring the critical role of community-driven efforts in disaster response and recovery.

i. Indigenous Initiatives

In the immediate aftermath of the Lake Nyos Disaster, indigenous communities mobilized swiftly, drawing on traditional support systems and local knowledge to provide emergency assistance and foster communal resilience amidst the unfolding crisis. The first distress signal of the gas emission was reported by some indigenes of Nyos, Chah, and Subum. One of the people who saw and raised a warning alert was Emmanuel Ngu Mbi. Emmanuel Ngu Mbi was a worker of the Wum Area Development Authority (WADA) who happened to have slept in Wum on the eve of the disaster.⁷ On his way back to Nyos at dawn on Friday, 22nd August 1986, he perceived a strange smell that made him dizzy and unconscious.⁸ The following quotation paints a clear picture of what Emmanuel Ngu Mbi witnessed and how the first alarm was raised, accordingly:

He later regained his consciousness and continued to embark on his journey. A few kilometers from Chah, he met a dead antelope and thought it was a blessing to his long journey. He moved further and came across two dead rats and a dog. This man became more confused because his mind was full of many rhetorical questions. He then decided to enter a compound in Nyos to ask if people were aware of the death of these animals. Surprisingly, he saw everyone in the compound lying dead. In deep panic and confusion about what might have happened, he ran back to Wum and reported that something strange had happened in Nyos.⁹

⁶ Ibid, 66.

⁷ Mathew, Forka L. "The Strange Lake Nyos CO₂ Gas Disaster: Impacts and the Displacement and Return of Affected Communities." *Australian Journal of Disaster and Trauma Studies* 1 (2011): 3.

⁸ Ibid., 3.

⁹ Ibid

Emmanuel Ngu Mbi's miraculous survival and assertiveness were certainly the first milestones to salvage the situation in Nyos and its neighboring villages. Without his discovery of littered animal corpses on the streets, the casualties would have risen exponentially. Having thus discovered that something terrible had occurred in the land, he braved the odds to announce to the public what he had noticed. By announcing the unfortunate circumstance to the people, it created greater public awareness, and the attention of the government, local administrative authorities, churches, and other civil authorities was brought on board.

The first relief initiative or community intervention rescue campaign came from the Nyos inhabitants. It was very timid because of the imminent danger posed by the toxic gas. Once the indigenes were assured the area was safe, they began burying the carcasses *en masse*, evacuating the injured, and transporting the seriously wounded to hospitals. Critically injured victims were taken to nearby facilities in Nkambe, Wum, and Fundong for medical care. This community-driven self-help effort gained admiration and sympathy from neighboring villages, including their leaders and local development associations. As news of the disaster spread, religious institutions, particularly the Catholic Church, mobilized resources and personnel to deliver immediate relief to the affected communities.

ii. Church Authorities

Expanding on the community's initial efforts, church authorities, particularly the Catholic Church, took a leading role in organizing relief initiatives to support the affected communities in the aftermath of the Lake Nyos disaster. Mobilizing resources and personnel, the Church provided immediate assistance and long-term support to the affected communities. According to an interview with Emmanuel Puh, the Catholic Church authorities in Wum promptly responded upon learning of the incident, launching a rescue mission to the disaster site.¹⁰ The Catholic Church organized mass burials, rescuing and transporting survivors to nearby hospitals, providing critical care to gas-affected victims, and mobilizing resources for relief efforts. Clergy members assessed the situation, documented the devastation, and coordinated ongoing support for the affected populations.¹¹ This intervention underscores the vital role of faith-based organizations in disaster relief, particularly their capacity to mobilize resources and provide comprehensive care during crises. Father James Nielen was crucial in transporting many sick and injured individuals to hospitals for treatment. Additionally, he directed the surviving local populations to conduct mass burials for the deceased.¹² The efforts of the Catholic priests significantly facilitated the implementation of resettlement initiatives for the surviving victims. On August 22, 1986, the Presbyterian Church of Cameroon (PCC) further bolstered these efforts by dispatching a rescue mission to the affected area, led by Daniel Gruh Muaikéi. According to Muaikéi's report, the PCC team buried over 176 bodies in the villages of Chah, Nyos, and Subum. He recounted: "... I was accompanied by two security officers... casualties were lying here and there, both human beings and animals were already decomposing, and some were in lock-up houses. We buried 98 dead bodies and witnessed the burial of 18 corpses"¹³

Building on the initiatives by local communities and religious organizations, the government launched an emergency relief mission to address the escalating crisis. The Senior Divisional Officer (SDO) for Menchum, Fai Yengo Francis, visited Nyos village on August 22, 1986. Although unable to reach the disaster site due to contamination concerns, he recognized the catastrophe's magnitude and issued a Prefectoral Order mandating the immediate evacuation of all residents in surrounding areas.¹⁴ The SDO took charge of overseeing the evacuation, rescue, and temporary resettlement efforts, while also coordinating the distribution of relief materials to victims. Radio announcements in Wum restricted access to the risk zones, warning the public of toxic gas contamination. These measures were aimed at ensuring the safety of both humans and animals. The SDO's assessment of the disaster zone provided critical updates, enabling the swift mobilization of essential supplies such as food, blankets, and buckets, which were distributed to temporary resettlement camps with logistical support from military personnel and Brasseries du Cameroun trucks, all coordinated by the Governor's Office in

¹⁰ Interview with Emmanuel Puh, 52 Years, Farmer, Buea, 26/09/2019

¹¹ Reverend Father Fred Tenhorn, a Catholic priest, led the initial mission into the risk zone with remarkable courage. Driving through the deserted village of Chah, where no survivors were found, he proceeded to Subum and encountered some survivors. There, he organized a mass burial for the deceased, transported survivors to Wum for further care, and rescued victims who had inhaled toxic gas and were unconscious, providing them with critical assistance. On August 22, 1986, Father James Nielen, the Parish Priest of Bafmeng, arrived in Nyos to assess the situation. He submitted a detailed report to the Archbishop of the Bamenda Archdiocese, describing the devastation and emphasizing the Church's ongoing commitment to supporting the affected populations.

¹² Ibid, p.2.

¹³ J. Smolwe, "The Lake of Death," Newsweek, no. 66, September 8, 1986, 6.

¹⁴ Clement Tjomp, "Nation Counts its Dead: Wum Tragedy," *Cameroon Tribune*, no. 668, August 29, 1986, 2.

Bamenda. Although the Governor of the North West Province planned to visit the disaster site, the area's inaccessibility limited the visit to Wum. This coordinated effort was further supplemented by national and international relief initiatives to meet the broader needs of the survivors.¹⁵ This coordinated effort was complemented by additional national and international relief measures to address the broader needs of the survivors.

iii. Other National and International Relief Measures

Following the Governor's office's communication with the Prime Ministry and the Presidency of the Republic, swift action was taken at the highest levels of government. President Paul Biya's visit to the North West Province on August 24, 1986, marked a significant turning point in the disaster response.¹⁶ His evaluation of the affected areas led to the announcement of both short-term relief measures and long-term plans to mitigate future risks.¹⁷ Subsequently, mixed teams comprising administrative, military, and medical personnel were deployed to oversee evacuations, ensure public safety, and establish temporary resettlement camps in safer zones. The President's appeal for international assistance highlighted the gravity of the situation, prompting immediate support from the Israeli government. Within three days of the disaster, a team of 17 medical experts arrived to provide specialized aid.¹⁸ While the involvement of international partners brought vital expertise and resources, it also sparked controversies and conspiracy theories about the origins of the gas emission, highlighting both the importance of global solidarity and the need for strong, coordinated local systems to ensure effective disaster response and security.

iv. National Defense and Security Forces

The defense and security forces, alongside civilian collaborators, played a crucial role in managing the immediate aftermath of the Lake Nyos disaster, ensuring the safety of survivors, and facilitating the essential delivery of humanitarian aid. Their involvement included coordinating the relocation of affected populations, assisting in the burial of abandoned corpses, and establishing temporary shelters, such as tents, to house the displaced. Despite their efforts, there were notable tensions and challenges, particularly concerning the behavior of some uniformed officers. The survivors, many of whom were subjected to intimidation and harassment by the security forces, experienced further trauma. This situation was exacerbated by language barriers, as most of the security personnel were Francophone, unable to communicate effectively with the English-speaking victims, further straining relations and hindering cooperation.

In parallel to the defense and security forces, medical personnel, including doctors and nurses from various regions such as Yaoundé, Bafoussam, Bamenda, and Douala, were swiftly deployed to provide emergency medical assistance.¹⁹ Equipped with necessary medical supplies, the healthcare teams focused on immediate care for victims exhibiting symptoms such as unconsciousness, respiratory issues, and skin lesions. As part of their precautionary measures, the medical experts advised individuals entering the contaminated zones to wear oxygen masks and protective clothing to mitigate exposure to the hazardous gases. Moreover, they underscored the importance of burying the deceased promptly to prevent the outbreak of epidemics, including cholera.²⁰ The concerted efforts of the medical teams were vital in treating critical cases and saving lives, underscoring the importance of coordinated intervention in disaster response. This multifaceted national initiative, while instrumental in providing urgent relief, also highlights the challenges inherent in coordinating a large-scale disaster response. The tensions between military personnel and local communities, compounded by language barriers, reveal the complexities of disaster management, where even well-intentioned efforts can be undermined by interpersonal and cultural dynamics. Furthermore, the contributions of medical personnel not only addressed immediate health concerns but also reinforced the importance of preventive measures in managing disaster-induced health crises.

As previously discussed, the national response to the Lake Nyos disaster took a significant step forward with the signing of Decree No. 86/1069 by President Paul Biya on August 24, 1986, establishing the National Committee for the Relief and Management of Relief Aid (NCRMA). This decree designated Bamenda and Douala as the operational headquarters for the committee, with the Douala agency receiving international aid from foreign governments, while the Bamenda agency

¹⁵ Tjomp, "Nation Counts its Dead," 2.

¹⁶ Tjomp, "Nation Counts its Dead," 2.

¹⁷ Cameroon Tribune, "Welcome Back Israel," August 27, 1986.

¹⁸ Interview with Julius Tamfru, Nurse, 52 years, Buabua, May 5, 2019.

¹⁹ Cameroon Tribune, "Welcome Back Israel," 1986, 2.

²⁰ Sylvester Gwellem, "Mr. Biya Sympathizes with Nyos Peoples," *Cameroon Tribune*, no. 668, August 29, 1986.

managed local contributions within the province.²¹ The formation of this committee marked a pivotal moment in the relief efforts, fostering greater coordination and facilitating the mobilization of resources, which encouraged increased international solidarity from nations worldwide.

The Israeli government's intervention was notably prompt, occurring due to the timing of the disaster during a diplomatic visit by the Israeli Prime Minister to Cameroon. The incident's high media coverage further heightened Israel's responsiveness, making their assistance one of the earliest to arrive.²² While some view this as a mere coincidence, others argue that the rapid international response, particularly from Israel, suggests that these partners may have had prior knowledge of the impending disaster. This perspective is often cited by critics as evidence for the conspiracy theories surrounding the event, adding complexity to the narrative of international involvement.

Considering the confusion and conflicting reports surrounding the disaster's cause, there was an urgent call for international collaboration to identify the origins of the incident and prevent similar occurrences in the future. This need for a comprehensive understanding culminated in the organization of an international conference in Yaoundé in 1987. The conference aimed to address rescue strategies, examine various interpretations of the event, and propose solutions to mitigate the risk of further disasters. The conference served as a vital platform for global stakeholders, facilitating a cooperative approach to disaster management and heightening awareness of the ongoing crisis.

The Yaoundé conference resulted in several key recommendations, emphasizing the importance of coordinated efforts between national and international stakeholders to assist the Cameroonian government and aid victims in reconstructing the devastation caused by the disaster. Central to these recommendations was the establishment of temporary resettlement camps for survivors, a measure swiftly implemented by local and humanitarian organizations. The Ministry of Public Health, the Red Cross, the Northwest Provincial Committee for Reception and Management of Aid, and other agencies responded by providing critical services such as healthcare, shelter, water, and security at the resettlement sites.²³ These actions were integral in stabilizing the situation for the survivors, while the global community's engagement underscored the collective responsibility in addressing both the immediate and long-term needs of the affected populations.

V. The Creation of Temporary Resettlement Camps

There was an urgent need to resettle the population of the affected villages, given their deplorable health and social conditions. The temporary resettlement sites were created almost immediately to host the displaced people. The temporary resettlement camps were one of the first initiatives taken by the local administrative authorities in the Division. The creation of the sites was to ease the distribution of emergency aid and to ensure the safety of the victims.

The location of the resettlement sites for the victims also took into cognizance factors like the village of origin and the ethnic background of the survivors. This was because the displaced population cut across Menchum and Fungom areas.²⁴ This seems to suggest the reason why the Kimbi and Kumfutu resettlement camps were principally made up of survivors from Subum and some Fulani communities. Those from Nyos and Chah were taken to the Catholic Mission Center in Wum and Bafmeng.²⁵ Table 1 shows the distribution of the population of resettled survivors at the various temporary resettlement camps.

Table 1: Temporary Resettlement Camps for Survivors in the First Two Weeks of the LND

Resettlement Camps	Number Survivors
Catholic Hospital Wum	215
Wum Hospital	400
WADA	245
Kumfutu	289
Bafmeng	907
Mungong	72

²¹ Tjomp, "Nation Counts its Dead," 2.

²² Tjomp, "Nation Counts its Dead," 2.

²³ Gumundur Sigvaldason, "International Conference on the Lake Nyos Disaster, Yaoundé Cameroon, 16th-17th March: Conclusions and Recommendations," *Journal of Volcanology and Geothermal Research*, University of Iceland, 1987, 98-108.

²⁴ Interview with George Tetang, Farmer, 50 years, Leader of the Buabua Resettlement Camp, May 5, 2019.

²⁵ Ibid.

Fonfuka	202
Mbuh	125
Kimbi	470
Esu	200
Nkambe	259
Mesaje	750
Total	4133

Source: Adapted from Forka, L. Mathew. "The Strange Lake Nyos CO₂ gas Disaster: Impacts and the Displacement and Return of Affected Communities" *Australian Journal of Disaster and Trauma Studies*, vol. 1, (Yaoundé, Cameroon, 2011).

Table 1 provides a snapshot of temporary resettlement camps established to accommodate survivors during the first two weeks following the Lake Nyos Disaster (LND). It records the distribution of 4,133 displaced individuals across various camps, showing that Bafmeng hosted the largest group of survivors (907), while Mungong had the fewest (72). The concentration in Bafmeng may reflect the fact that many Nyos and Chah residents were originally from Bafmeng, having migrated to these areas for farming. This familiarity likely encouraged their relocation to a community they already knew, simplifying the resettlement process. Other high-occupancy camps included Mesaje and Kimbi, which hosted 750 and 470 survivors, respectively, likely due to the availability of better infrastructure and resources. In contrast, Mungong, Fonfuka, Esu, and Mbuh had relatively fewer survivors, ranging from 72 to 202. This distribution suggests that these locations had limited capacity, fewer resources, or were less accessible compared to the higher-occupancy sites. By late 1987, many of these temporary camps saw a considerable increase in population, as survivors were unable to return home immediately. For instance, Kimbi's population doubled from 470 to 940, while the Catholic Mission Wum and Mesaje grew from 250 to 544 and from 750 to 1,178, respectively. This trend of rising numbers indicates that the camps initially intended as temporary shelters were adapting to meet longer-term housing needs.²⁶

In addition to establishing temporary resettlement camps, essential food supplies were provided to support the survival of displaced individuals. Items such as sugar, rice, and groundnut oil were distributed across the various camps. A significant portion of these provisions came from international donors, as detailed in Table 2. The distribution of these relief materials was overseen by a dedicated commission established to manage aid for the Lake Nyos victims.²⁷

Table 2: Types of Food Items and Quantity Donated by Foreign Countries to LNDS in 1986

Food Item	Quantity (tons)
Rice	546
Dried vegetables	3
Vegetable oil	23
Powder milk	11
Tin milk	286
Biscuits	3
Fish	7
Meat	3
Tomatoes	2
Groundnut Oil	2
Mineral water	15
Sugar	300kg
Total	1201

Source: M. N. Ngangwa, "National and International Communities in the Management of the Lake Nyos Gas Disaster" (M.A. Dissertation, University of Yaoundé, 2006).

²⁶ Forka L. Mathew, "Lake Nyos," 2-5.

²⁷ M. N. Ngangwa, "National and International Communities in the Management of the Lake Nyos Gas Disaster" (M.A. Dissertation, University of Yaoundé, 2006).

Table 2 details the types and quantities of food items donated by foreign countries to the victims of the Lake Nyos Disaster in 1986, amounting to a total of 1,201 tons of food assistance. Among the donated items, rice was the most significant contribution, with 546 tons provided, indicating its vital role as a staple food for the displaced populations. Other substantial contributions included milk (286 tons), sugar (300 kg), and vegetable oil (23 tons), which likely contributed to the nutritional needs of the survivors in the resettlement camps. The distribution of dried vegetables, powdered milk, biscuits, fish, meat, tomatoes, and groundnut oil was minimal in comparison to rice and tin milk. This disparity reflects logistical challenges in procuring and transporting these items or a prioritization of staple foods that could sustain a larger number of people for a longer duration. The relatively small quantities of items like dried vegetables (3 tons) and tomatoes (2 tons) suggest that while these items were provided, they were not sufficient to meet the diverse dietary needs of the survivors. Furthermore, the table notes that the distribution of food items was overseen by a commission specifically established to manage relief efforts for the Lake Nyos victims. This structured approach implies an organized response to the disaster, facilitated by international donors. However, the text also mentions that the distribution faced challenges, which could include logistical issues such as transportation difficulties, communication breakdowns, or the need to ensure equitable distribution among the various resettlement camps. These challenges hindered the effectiveness of the relief efforts, resulting in some camps receiving more or less than needed. Overall, Table 2 underscores the crucial role of international aid in disaster response, highlighting both the generosity of foreign donors and the complexities involved in delivering aid effectively. The data illustrate the need for a balanced approach to food distribution, where both staple and supplementary food items are provided to address the nutritional diversity required by the affected populations. The challenges mentioned also call attention to the importance of planning and coordination in disaster relief efforts to ensure that all affected individuals receive adequate support promptly.

Interviews with displaced individuals revealed significant challenges in the resettlement camps, particularly regarding food availability. Meals were irregular, and many victims were compelled to consume unfamiliar or undesirable foods, while traditional staples such as fufu-corn were scarce. This scarcity heightened feelings of nostalgia and loss, with visible signs of stress and trauma manifesting among the displaced populations, reflecting the inadequacy of their living conditions. These issues were especially pronounced at the overcrowded Kimbi temporary resettlement camp. Furthermore, the relocation to resettlement areas with infertile soils exacerbated the difficulties for internally displaced persons (IDPs), most of whom relied on farming as their primary livelihood. The poor soil quality undermined their ability to sustain themselves, compounding their economic and social vulnerabilities. In 1988, these challenges necessitated the transition to permanent resettlement camps, which aimed to provide more stable living conditions. The relocation disrupted the socio-economic fabric of the farming communities. The scarcity of familiar foods and reliance on external aid eroded the self-reliance of displaced individuals, contributing to psychological stress and a loss of cultural identity tied to traditional dietary practices. Overcrowding and poor soil fertility in the temporary camps further hindered the ability of farmers to re-establish their livelihoods, leading to economic stagnation and increased dependence on external support.²⁸ These conditions underscore the critical need for well-planned, culturally sensitive, and economically viable permanent resettlement strategies to restore the dignity, well-being, and productivity of affected communities.²⁹ While temporary resettlement camps provided immediate relief, the growing challenges of overcrowding, food shortages, and socio-economic instability underscored the urgent need for sustainable, long-term solutions to rehabilitate displaced communities.

5. LONG-TERM INITIATIVES

Recognizing the inherent limitations of transient relief measures and the imperative for systemic resilience, a strategic framework of long-term initiatives was deployed to facilitate sustainable recovery and socio-economic reintegration. These initiatives were structured to address fundamental infrastructural and developmental needs, encompassing permanent resettlement housing, general housing provisions, the establishment of healthcare and educational facilities, provision of potable water infrastructure, equitable land distribution, strategic grant and donation programs (including contributions from organizations such as Heifer Project International), and the implementation of proactive disaster prevention protocols. The overarching objective was to foster enduring community stability and facilitate the self-sustaining revitalization of affected populations. The following long-term initiatives were undertaken, aimed at ensuring sustained recovery and community resilience.

²⁸ Aloysius N. Ngalim, "Post-conflict Experiences of Resettled Bakassi Peninsula, 2006-2016," *Asian Journal of Peace Building* 7 (2019), 105-123.

²⁹ Interview with Alhaji Yosufa, 49 Years, Grazer, Ipalim, 22nd May 2019.

i. Construction of Permanent Resettlement Accommodation Facilities

In direct response, following the implementation of temporary resettlement measures, the establishment of permanent resettlement sites marked the third major phase of post-disaster resettlement and rehabilitation. Initiated between late 1987 and early 1988, this phase responded to persistent complaints from the victims regarding their living conditions at the temporary sites. Notably, the proceedings of the Lake Nyos Disaster Conference held in Yaoundé from March 18–20, 1987, emphasized the urgent need to create permanent resettlement sites to address the long-term needs of the affected populations.³⁰

To implement the decision to create permanent resettlement sites, experts from the following concerned ministries of Fisheries, Animal Husbandry, and Agriculture were charged in their respective areas of competence to study and identify favorable sites where permanent structures could be built. Seven resettlement sites were identified: Ipalim, Kimbi, Upkwa, Waindo in Wum, Kumfutu, Buabua, Yemnge, and Esu.³¹ Attempts were also made by the government to provide social and economic amenities like pipe-borne water, clinics or health centers, and housing facilities for the collective benefit of the resettled persons. The internally displaced persons were allowed to settle in any camp of their choice and enjoy all facilities put in place by the government and its partners. The provisions are discussed in the subsequent sections.

ii. Housing

Housing was the first remarkable social incentive put in place by the government. Houses were constructed and distributed to registered victims. Everyone was given two sleeping rooms, a parlor, and a kitchen. In 1990, the Cameroon government-built houses in the Buabua resettlement camp. Some of these houses in the camp were built without kitchens. Consequently, those who inhabited these buildings were obliged to erect a wooden kitchen close to the living space. The fast-growing population made life relatively difficult and unfavorable for the occupants. A situation in which some informants testified was responsible for the outbreak of common infectious diseases.³²

iii. Creation of Health Care Facilities

Another social measure that was put in place in the resettlement camps was health care units. Although no permanent healthcare facilities were planted at Nyos and its environs after the disaster, hospitals or health centers were constructed in some camps to address the health needs of the people. For example, treated mosquito nets and medications were distributed free of charge to the population to prevent malaria infections and cholera.³³ In Buabua, the resettlement camp, for example, a health center was created in 2004 to cater to the health of the victims. The health center was constructed with funds from Cameroon's Ministry of Public Health. As noted already, this was one of the recommendations of the Yaoundé Lake Nyos Conference. Though faced with an acute shortage of trained personnel, the Buabua camp was better than the others. In the resettlement camp at Bafmeng, no single health district was constructed. The resettled persons here trekked for a reasonable distance to New Town (Kassa) for medical care.³⁴ In an interview with Williams Achi, he blamed their deplorable health situation on the lack of healthcare facilities.

iv. Educational Facilities

The need to create educational establishments for the post-Lake Nyos disaster victims was another crucial necessity that needed the government's attention. In an interview with Mbang Solomon, both primary and secondary schools were created in some of the villages that hosted the victims by the government in 1987. For example, the WADA rehabilitation center alone had 250 internally displaced persons. Out of these, there were 170 children at the center. Specifically, 81 were in primary and secondary schools.³⁵ In an interview with Williams Achi, he further explained that 36 pupils were registered at the nursery and primary levels and 45 at the secondary level.³⁶ The creation of schools at the resettled sites cajoled the people to take an interest in the education of their children. For example, at the Buabua resettlement camp, a primary and secondary school was created. At the Ipalim camp, no secondary school was created. The lone primary school in the camp

³⁰ Tjomp, "Nation Counts its Dead," 2.

³¹ Interview with John Mbah, 46 years, hunter, 7th May 2019.

³² Interview with Julius Tamfuru, 52 years, nurse, Buabua, 5th May 2019.

³³ Interview with Ignatius Chah Ngum, 52 years, hunter, Buabua, 6th May 2019.

³⁴ Interview with Williams Achi, 57 years, teacher, Bafmeng, 24th May 2019.

³⁵ Interview with Solomon Mbang, 54 years, farmer, 22nd May 2019.

was founded by a Roman Catholic Priest, Rev. James Nielen, to reduce the level of illiteracy among the children in the camp.³⁷ This school was later taken over by the government.

In an interview with Ching Daniel, he stated that educational institutions were unevenly distributed. The Kimbi resettlement camp had many pupils with inadequate school infrastructure.³⁸ Other challenges were therefore acute shortage of teachers and didactic materials. However, the Kimbi Government Technical School was constructed by the Buabua and Kimbi Lake Nyos Cultural and Development Association (BUKILSDA) to cater to secondary technical education needs. The government and Non-governmental Organizations also donated material assistance to pupils and students of the disaster risk sites resettlement camps. The material assistance was in items like books, pens, and uniforms. In addition, the government made education free of charge to all the children in the camps.³⁹ Another resettlement initiative was from the First Lady of Cameroon, Madam Jeanne Irene Biya. She visited Nyos in December 1986. She donated 250 didactic materials to over 170 Fulani pupils and students.⁴⁰ To further improve the social amenities of the Lake Nyos victims, portable water, as shown in Table 3, was needed.

v. Provision of Portable Water

The introduction of pipe-borne water was another laudable initiative introduced to improve the conditions of the Lake Nyos disaster victims. Table 3 shows the provision of pipe-borne water in the Ipalim, Kimbi, and Buabua resettlement camps sourced from an interview with Tamtang Augustine.⁴¹

Table 3: Number of Estimated Stand Taps in Buabua, Kimbi, and Ipalim Resettlement Camps from 1986 to 2018

S/N	Year Camp	1986-1996	1996-2006	2006-2012	2012+	Estimated Number of Stand Taps in Resettlement Camps
1	Kimbi	NA	NA	NA	02	02
2	Buabua	NA	NA	05	05	10
3	Ipalim	NA	NA	NA	NA	00
Total		00	00	05	04	11

Source: Interview with Tamtang Augustin, 59 Years, Farmer, Buabua, 6th May 2019

A: Available

NA: Not Available

Table 3 provides an overview of the estimated number of stand taps for potable water in the Buabua, Kimbi, and Ipalim resettlement camps from 1986 to 2018. The table indicates a concerning lack of infrastructure for safe drinking water in these areas, with data segmented into four time periods: 1986-1996, 1996-2006, 2006-2012, and 2012 onwards. From the data, it is evident that between 1986 and 1996, as well as from 1996 to 2006, there were no recorded taps in any of the camps, reflecting a complete absence of accessible pipe-borne water during those years. During the period 2006 to 2012, Buabua saw the installation of 10 stand taps, while Kimbi had only two. In stark contrast, Ipalim reported zero taps throughout the entire period. The figures highlight the inadequacy and inconsistency in the provision of potable water across the different camps, with Buabua benefiting disproportionately due to its accessibility compared to the other camps. The absence of stand taps in the earlier years indicates a significant gap in humanitarian response, which likely affected the health and hygiene conditions of the displaced populations. The reliance on small springs and streams for water in Ipalim further underscores the precarious situation, as these sources were shared with cattle, posing risks of contamination and waterborne diseases. This situation raises concerns about the overall welfare of the internally displaced persons (IDPs) in these camps, emphasizing the critical need for improved infrastructure and health resources.

³⁷ Interview with Daniel Ching, 55 years, farmer, Ipalim, 24th May 2019.

³⁹ Ibid

⁴⁰ Sylvester Gwellem, "Cameroon Tribune: Biya Sympathizes with Nyos Peoples" No. 668, Friday, December 19th, 1986, p.2.

⁴¹ He oversaw the Buabua resettlement camps. He was also one of the heads at the Kimbi resettlement camp during temporary resettlement. He was a quarter head at Subum before the Lake Nyos disaster of 1986. He was designated by the government to head the five sub-sections of the Buabua resettlement Camp.

Moreover, Table 3 illustrates that from 2006 onwards, there was minimal progress in expanding access to potable water, with only 4 taps established in the following years. The cumulative total of 11 taps by 2018 remains alarmingly low, particularly when considering the number of individuals who may have been reliant on these facilities for their water supply. The stagnation in improving water access since the initial relief efforts highlights the abandonment of the resettled victims after the initial crisis response, suggesting a neglect of their ongoing socio-economic needs. Furthermore, the analysis points to the broader implications of insufficient water supply for the livelihoods of the victims. The issue of land distribution was another critical factor in the long-term recovery of disaster-affected populations.

vi. Land Distribution

Land distribution has long been a contentious issue, particularly in post-disaster contexts, where it plays a pivotal role in the ability of displaced populations to rebuild their livelihoods and establish self-sufficiency. Historically, land and its resources have been central to societal conflicts, especially in contexts of population resettlement, migration, and natural disasters. Land distribution for internally displaced persons (IDPs) following the Lake Nyos disaster was intended to provide them with the means to cultivate crops and graze livestock for subsistence. Each family was allotted approximately 300 square meters of land. However, oral accounts suggest that many resettled individuals were dissatisfied with the land allocated to them. While the plots were located near their homes, they were insufficient to meet the household's growing needs. Crops such as corn, beans, cassava, and groundnuts were cultivated, but by the late 1980s, the population of the camps had outgrown the available land due to a rising birth rate. This demographic growth exacerbated material demands, creating a pressing need for additional land and resources. Many respondents reported that their requests for more land were not met. As a result, the scarcity of land led to encroachments on areas reserved for grazing, sparking protracted farmer-grazer conflicts. Notably, in 2012, 2013, and 2016, conflicts erupted between Fulani cattle herders and farmers in the Buabua and Ipalim resettlement camps. These disputes over land use highlight the critical need for effective land distribution policies to address the long-term challenges faced by displaced populations.⁴²

The competition for land, particularly for farming and grazing, not only strained relationships between farmers and Fulani cattle herders but also contributed to an environment of ongoing tension and conflict. Despite these challenges, the displaced populations sought to make the most of the limited natural resources available to them. In addition to their efforts, external support in the form of grants and donations played a crucial role in alleviating some of their hardships.

vii. Grants and Donations

Grants and donations from both governmental and non-governmental organizations were integral in supporting the resettled communities, providing financial relief and resources essential for their survival and recovery. Respondents indicated that donations and grants from various organizations significantly improved the living conditions of the affected populations in multiple ways. These grants were provided by a range of state and non-state actors, including political parties, as well as foreign governments such as those of the United Kingdom, Germany, Switzerland, and Israel.⁴³ Although most of the assistance was in material items, the financial package received is indicated in Table 4.

Table 4: Various National Grants and Cash Donations to LNDS, 1986 to 1988

S/N	Stakeholder	Donation (CFAF)
1	WCPDM Sub Section Fontem	120, 000
2	Milk Way company	308,250
3	CAMSUCO	500, 000
4	Guinness Cameroon	1000, 000
5	Canon Yaoundé	1000, 000
6	National Relief Commission	50 000, 000
7	SCAC Transport International	1000, 000
8	Fougerille Company	250, 000

⁴² Interview with Ibrahim Muhamadu, 54 years, grazer, Ipalim, 22nd May 2019.

⁴³ Clement Tjomp, "Nation Counts its Dead: Wum Tragedy" *Cameroon Tribune*, No.666. (Friday 29th August 1986).

9	SNEA Reglement Secours	250, 000
10	Ebobo and C.I.E Company	2, 000, 000
11	CIE Commercial Company	500, 000
12	SOCACOP	200, 000
13	Societe Anonyme	3, 000, 000
14	Sangmelima Council	910, 000
15	Bamenda Family Meeting	1000, 000
16	Cameroon Brazilian Community	15000, 000
17	AMACAM	2000, 000
18	Islamic Cultural Association	3000, 000
19	Brasseries du Cameroun	1,500, 000
20	Mr. Oliver Cacoub	500, 000
21	SOSUCAM	2,00, 000
22	Commerce Service Transit	5000, 000
23	Thomson CST DR/RTC	250, 000
24	ECAM Placages	109, 000
25	Lom Djerem CPDM Section	52000
26	UNALOR	30, 000, 000
27	Razel Cameroun	3000, 000
28	Professional Women's Club	15, 000,000
39	Paribas Cameroon Bank	5000, 000
30	Aluminum Pehiney	3,639,626
31	YCPDM NKONDONDO IV	364, 500
32	Federation of Evangelical Churches	116,910
33	Eglise Presbyterian	300, 000
34	Ndongolo Parish	3,280,000
35	Niger [Nigeria] Community in Cameroon	515,850
36	IBM Fiance Company	10, 000,000
	Total	160, 866, 136

Source: Adapted from Clement Tjomp, "Nation Counts its Dead: Wum Tragedy," Cameroon Tribune, No. 666, Friday, 29th August 1986. See also Henry N. Bang, "Natural Disaster Risk, Vulnerability and Resettlement: Relocation Decisions following the Lake Nyos and Monoun Gas Disasters in Cameroon" (Ph.D. thesis, University of East Anglia, 2009).

Table 4 provides a comprehensive overview of the various national grants and cash donations received for the Lake Nyos disaster survivors from 1986 to 1988. The data presents a total sum of 160,866,136 CFA francs contributed by diverse stakeholders, including local political parties, businesses, non-governmental organizations, and international entities. A significant feature of the table is the diversity of donors, showcasing the collective effort from different sectors to assist the affected populations. Notably, the largest contributions came from the National Relief Commission, which allocated a substantial 50,000,000 CFA francs, emphasizing the critical role of state-supported initiatives in disaster relief. Additionally, donations from corporate entities like Guinness Cameroon and Canon Yaoundé, each contributing 1,000,000 CFA francs, further underline the engagement of private businesses in humanitarian efforts.

The distribution of donations reflects a range of funding levels, with several contributions under 1,000,000 CFA francs and a few exceeding that amount. For instance, the Cameroon Brazilian Community stands out with a generous donation of 15,000,000 CFA francs, demonstrating the potential for diasporic communities to impact disaster relief efforts significantly. Conversely, smaller contributions, such as the 30,000 CFA francs from UNALOR, suggest that even minimal assistance can collectively contribute to substantial relief efforts. Furthermore, the table indicates a reliance on both national and international actors for the provision of aid. Contributions from international bodies or foreign entities, while not explicitly detailed in the table, include indirect support that bolsters the overall response. The varied nature of the donations—from cash to material goods—highlights the multifaceted approach necessary for effective disaster relief, addressing immediate needs such as shelter, food, and healthcare. The cumulative total of the donations reflects a robust response to the crisis, but

it also opens discussions about the adequacy of the funds relative to the needs of the displaced population. The significant funding from organizations like IBM Finance Company (10,000,000 CFA francs) and Aluminum Pechiney (3,639,626 CFA francs) indicates a willingness among corporations to support community resilience, yet the persistent socio-economic challenges faced by survivors' post-disaster raise questions about the distribution and utilization of these funds. In summary, Table 4 not only enumerates the financial support provided to the Lake Nyos disaster survivors but also serves as a lens through which to evaluate the effectiveness of community mobilization and resource allocation in the wake of a significant humanitarian crisis. The varied levels of contributions from different stakeholders underscore the importance of a collaborative response in addressing the complexities of disaster recovery, while also highlighting the ongoing challenges that need to be addressed to improve the living conditions of the affected communities.

The grants and donations were administered by the Committee for the Management of Relief Aid to the Lake Nyos Disaster in Bamenda. The Divisional Relief Commission in Bamenda contributed 100 lamps and 300 pots. In addition to national contributions, foreign governments also assisted the displaced and resettled victims of the Lake Nyos disaster, as detailed in Table 5.

Table 5: Cash Donations from Some Foreign Countries, 1986 to 1987

S/N	Foreign Stakeholder	Donation (FCFA)
1	Gabon	100, 000,000
2	USA	5,000,000
3	Canada	50,000,000
4	Netherlands	37, 750,000
5	China	10,000,000
6	Japan	100,000,000

Source: Adopted and adapted from Clement Tjomp, "The Nation Counts its Dead, Wum Tragedy," Cameroon Tribune, No. 66, Friday, August 29th, 1986. Henry N. Bang, "Natural Disaster Risk, Vulnerability and Resettlement: Relocation Decisions following the Lake Nyos and Monoun Gas Disasters in Cameroon" (Ph.D. thesis, University of East Anglia, 2009).

Table 5 presents a comprehensive overview of cash donations received from various foreign countries to support the victims of the Lake Nyos disaster between 1986 and 1987. The donations listed reflect the international response to this crisis and highlight the varying levels of financial commitment from different nations. Gabon stands out as the largest contributor with a donation of 100,000,000 FCFA, demonstrating significant commitment from a neighboring country and underscoring regional solidarity during times of crisis. Canada also made a substantial donation of 50,000,000 FCFA, which indicates its engagement in humanitarian efforts globally. Japan matches Gabon's contribution with another donation of 100,000,000 FCFA, showcasing its proactive approach to international disaster relief. The Netherlands contributed 37,750,000 FCFA, further exemplifying a commitment to humanitarian assistance, while the USA and China provided more modest donations of 5,000,000 FCFA and 10,000,000 FCFA, respectively.

The disparities in contributions highlighted in Table 5 illustrate the variability in foreign aid, which can stem from a country's economic capacity, political interests, or perceived obligations to humanitarian causes. The significant donations from Gabon and Japan might suggest a stronger regional or bilateral relationship with Cameroon, prioritizing assistance in disaster recovery. Additionally, the table emphasizes the importance of material aid alongside cash donations, with countries like Germany providing camp beds, blankets, and medical personnel from the Soviet Union and Israel. This diversified support is essential for addressing the multifaceted needs of the victims beyond mere financial assistance.

However, the management of these donations raises critical concerns. The text indicates that the Committee for the Management of Relief Aid was responsible for overseeing national donations, while a separate committee in Douala handled foreign contributions. Unfortunately, systemic issues such as poor management, embezzlement, and inconsistencies in aid delivery ultimately undermined the effectiveness and sustainability of the support provided. This situation highlights the need for accountability in disaster response and emphasizes the importance of transparent management systems to ensure that aid reaches those in need. Despite the significant contributions detailed in Table 5, the narrative stresses that this assistance was primarily limited to the immediate aftermath of the disaster. The criticism of the response as being restricted to the "immediate post-disaster period" underscores the necessity for ongoing support beyond initial relief efforts. The lack

of sustained intervention from the early 1990s into the 2000s points to a common challenge in humanitarian aid: the tendency for international attention and resources to wane once the immediate crisis subsides. This lack of long-term support highlights the critical importance of a comprehensive recovery strategy that includes both immediate relief and sustained development assistance.

viii. The Contribution of the Heifer Project International⁴⁴

Following the Lake Nyos disaster in 1986, the organization played a pivotal role in aiding the affected communities. With its regional headquarters located in Bamenda, Heifer responded promptly to the urgent needs of survivors, implementing programs designed to foster reliable income-generating activities.⁴⁵ The assistance provided by Heifer included the distribution of livestock such as goats, rabbits, sheep, pigs, and cattle, along with training in modern agricultural techniques, including crossbreeding for increased productivity. Notably, exceptional individuals from the communities were sponsored to receive advanced training in livestock breeding in the United States. Among them were Peter Fukah, Adamu Karimu, and Saidu Alimu, who returned with valuable knowledge to share with their communities.⁴⁶ Additionally, survivors residing in the resettlement camps were educated in skills such as poultry and pig farming, as well as modern organic feed production for livestock. Significantly, Fulani cattle herders who lost their livestock due to the eruption were provided with cattle to help rebuild their herds. For instance, at the Buabua resettlement camp, each survivor received two sheep, a cow, and a bull, with the expectation that the first female offspring would be shared with others, fostering a cycle of generosity known as “passing over the gift.”⁴⁷

While the project had a positive impact on the livelihoods of resettled individuals and communities, leading to a noticeable increase in livestock numbers between 1990 and 2000, it was not without challenges.⁴⁸ The lack of accompanying animal feed, compounded by the logistical difficulties of acquiring feed from distant locations, led to chronic malnutrition among the animals.⁴⁹ The adverse effects were exacerbated by outbreaks of diseases such as bird flu and cattle influenza, which took a heavy toll on the beneficiaries.⁵⁰ Despite these setbacks, Heifer Project International’s initiatives highlighted the importance of community-driven approaches in disaster recovery. This experience served as a reminder that effective disaster response should not only address immediate needs but also lay the groundwork for long-term sustainability and resilience among affected populations. Apart from national and international relief efforts examined above, a couple of other measures were implemented to mitigate the plight of the affected communities and to prevent the recurrence of the disaster. For example, degasification and the rehabilitation initiative by the Cameroon government were very important and worth examining.

6. DISASTER PREVENTION MEASURES

Disaster prevention is crucial for protecting communities from future calamities. In the case of the Lake Nyos disaster, prevention efforts extend beyond physical interventions to include community education, infrastructure development, and ecological restoration. Recognizing this, the Cameroonian government and international stakeholders prioritized early warning systems, disaster preparedness training, and stronger local governance. Involving local communities in these initiatives enhances their effectiveness and cultural relevance, ultimately reducing vulnerability and strengthening resilience.

i. The Degasification Scheme

The degasification scheme was a critical disaster prevention measure implemented after the Lake Nyos disaster to mitigate the risk of future limnic eruptions. This initiative involved installing pipes and pumps to vent excess carbon dioxide from

⁴⁴ Heifer Project International was an American Non-Governmental Organization (NGO) and non-profit organization aimed at eradicating poverty and hunger through sustainable initiatives based on a holistic community development approach. This organization was created in 1944 to initiate and promote agricultural development in developing countries, to distribute animals and agricultural inputs, and to provide value-based training to families in need around the world as a means of making them self-sufficient. See Magaret, L. Derek. Heifer Project: International Directory.

⁴⁵ Interview with Julius Tamfru, 52 years, nurse, Buabua, May 5, 2019.

⁴⁶ Interview with Ismaila Saidu, 51 years, grazer, Ipalim, May 22, 2019.

⁴⁷ Ibid.

⁴⁸ Interview with Ibrahim Hassan, 50 years, grazer, Subum, May 13, 2019.

⁴⁹ Ibid.

⁵⁰ Ibid.

the lake's depths, reducing pressure buildup that could trigger another catastrophe.⁵¹ The project, part of the broader Lake Nyos and Monoun Degassingification Project (NMDP), had three key objectives: continuous environmental monitoring, the establishment of CO₂ detection stations for early warning, and the implementation of permanent degassing infrastructure.

Scientific studies conducted in the 1980s revealed alarmingly high CO₂ recharge rates of up to 80 mol/m² per year, with gas saturation in the lake reaching 97%. Based on these findings, experts recommended installing degassing pipes in 2001. The initiative successfully reduced gas content by 40%, with each pipe achieving a 12–14% reduction in gas levels.⁵²

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7. SURVIVAL STRATEGIES AND CHALLENGES

The aftermath of the Lake Nyos disaster highlights a multitude of challenges that significantly hampered the effectiveness of reconstruction efforts. Key issues such as over-centralization of power, mismanagement of resources, neglect of local authorities, ethnic tensions, and the influence of political actors emerged as formidable obstacles. These intertwined factors created a complex landscape that impeded the successful resettlement and rehabilitation of the affected populations, revealing critical shortcomings in disaster management practices.

i. Over Centralization

At the forefront of the challenges faced by the Lake Nyos resettlement initiatives was the over-centralization of authority. Key decisions regarding the management of disaster victims were primarily directed from the political capital of Yaoundé, located 500 km away from the disaster site.⁵⁷ At the forefront of the challenges faced by the Lake Nyos resettlement initiatives was the over-centralization of authority. Key decisions regarding the management of disaster victims were primarily directed from the political capital of Yaoundé, located 500 km away from the disaster site. The National Relief Commission, responsible for managing the victims, had its headquarters in this distant capital, with additional distribution centers in Bamenda and Douala. This geographical separation resulted in unnecessary bureaucracy, causing delays in the delivery of essential aid to the disaster-affected areas. As noted by Mamuda Adamu, many institutions responsible for disaster management were centralized in Yaoundé, leading to significant inefficiencies in response efforts. Moreover, the absence of an independent disaster management structure in Cameroon meant that centralized ministries handled all

⁵¹ Henry N. Bang, *30 Years after the LND: What Prospects for Rehabilitation and Reintegration in the Region* (Book Venture Published LLC: USA, 2016), 19-90.

⁵² Ibid

⁵³ H. Michel. et al., "Degassing the 'Killer Lakes' Nyos and Monoun, Cameroon," *EOS, Transactions, American Geographical Union*, vol. 85 (2004): 1-4.

⁵⁴ Ibid.

⁵⁵ F.T. Aka, "Depth of Melt Segregation below the Nyos Maar-Diatreme Volcano: Major Trace Element Evidence and Their Bearing on the Origin of CO₂ in the Lake Nyos Volcanic Lake," *Springer* (2015): 467-488.

⁵⁶ Henry N. Bang, *30 Years after the LND: What Prospects for Rehabilitation and Reintegration in the Region* (Book Venture Published LLC: USA, 2016), 19–90.

⁵⁷ Interview with Mamadu Adamu, Grazer, 52 Years, Ipalim, 22nd May 2019; See also Henry N. Bang, *30 Years after the LND: What Prospects for Rehabilitation and Reintegration in the Region* (Book Venture Published LLC: USA, 2016), pp. 19-90

disaster-related matters, further complicating timely relief efforts. Ndille emphasizes that the lack of a coherent disaster management framework before the Lake Nyos disaster severely limited the government's ability to address life-threatening risks effectively.⁵⁸ Over-centralization resulted in the neglect or non-consultation of the local authorities in the resettlement planning process.

ii. Neglect of Local Authorities

Transitioning from the issue of over-centralization, it is essential to consider the neglect of local authorities and the local population in the resettlement planning process. Local authorities, who possess critical insights into the needs and dynamics of their communities, were largely overlooked in the decision-making process.⁵⁹ In interviews, survivors expressed frustration at their exclusion, revealing that many had not been consulted about their resettlement or the management of their needs. This neglect fostered resentment and conflict among families in resettlement camps, particularly concerning land disputes. The failure to engage local perspectives in the reconstruction process ultimately led to social tensions that could have been mitigated had local voices been integrated into the planning stages. Cameroon's economic situation in 1986 also affected the quality of the Lake Nyos disaster resettlement scheme.

iii. Impact of Cameroon's Economic Situation

Adding another layer of complexity to the challenges faced by the Lake Nyos disaster resettlement initiatives was the precarious economic situation in Cameroon during the 1980s. The country was undergoing a Structural Adjustment Program (SAP) aimed at revitalizing its struggling economy, which entailed significant cuts to government spending. This policy shift adversely affected public services, including essential emergency responses in the wake of the Lake Nyos disaster. President Paul Biya's advocacy for austerity measures during the presentation of the 1987/1988 budget to the National Assembly resulted in cuts to public spending on essential infrastructure, such as housing, healthcare, roads, schools, pipe-borne water, and education, which were critical for the rehabilitation of Lake Nyos survivors.⁶⁰ This led to wage cuts and forced retirements. The dire economic climate meant that many of the funds and resources intended for disaster management were diverted to cover broader economic shortfalls, leaving the victims of the Nyos disaster with inadequate support in their time of need.

iv. Corruption and Embezzlement

Compounding the effects of economic challenges, corruption and embezzlement further hindered the success of the resettlement initiatives. A substantial portion of the funds allocated to the Lake Nyos Disaster Scheme (LNDS) was misappropriated by avaricious state actors, while aid materials often failed to reach the intended beneficiaries. Interviews with victims revealed that authorities responsible for distribution stole relief items such as blankets, clothing, and foodstuffs.⁶¹ The Presbyterian Church in Cameroon (PCC) faced similar setbacks in Buabua, where greed and mismanagement marred rehabilitation efforts. A financial report by Rev. Tande to the Synod office indicated that only 8,123,940 CFAF out of an allocated 12,000,000 CFAF was used for rehabilitation work in the Buabua camp.⁶² Additionally, the centralization of relief distribution largely excluded NGOs and foreign donors, creating an environment conducive to corruption and mismanagement.

The persistence of corrupt practices was exacerbated by the absence of monitoring and evaluation committees to oversee the allocation of funds and resources. Bang reports that international agencies donated approximately 15 billion CFAF, in addition to internal contributions from the Cameroonian government, yet interviews with victims say that much of these funds were embezzled. Politicians leading relief missions on behalf of the government and donor agencies were implicated in these corrupt practices, diverting materials and selling them to businessmen.⁶³ Camps in remote areas were often

⁵⁸ Roland Ndille and Johannes A. Belle, "Managing the Limbe Floods: Considerations for Disaster Risk Reduction in Cameroon," *International Journal of Risk Sciences* (2004), p. 2.

⁵⁹ Interview with Anthony Jam, 68 Years, Bafmeng, 12th May 2019.

⁶⁰ Cameroon Tribune, "President Biya Presents 1987/88 Budget," No. 713, Tuesday, June 22, 1987. See also Henry N. Bang, 30 Years after the LND: What Prospects for Rehabilitation and Reintegration in the Region (Book Venture Published LLC: USA, 2016), 19–90.

⁶¹ Henry N. Bang, and Kapila, "Social Risk and Challenges in Post Disaster Resettlement: The Case of the Lake Nyos, Cameroon" *Journal of Risk Research* (1989), p. 9-15.

⁶² Michael Lang, "Presbyterian Church in Cameroon (PCC) and the Management of the Lake Nyos Gas Disaster of 1986," South-South Enlarge Programme for Research on the History of Development (2012): 3, quoting Presbyterian Church Archives Buea (PCAB), File No. 3435, Letter by Rev. Elias Cheng, 1987.

⁶³ Interview with Robbenson Wake, 69 Years, Farmer, Ipalim, 21st May 2019.

neglected, with relief supplies intended for them being redirected elsewhere. Beyond corruption and embezzlement, dishonesty and unfulfilled promises from management stakeholders further undermined the Lake Nyos resettlement initiative, leaving many victims without the assistance they desperately needed.

v. Dishonesty and failed Promises

Lake Nyos disaster victims endured unfulfilled political promises and deceptive commitments from both politicians and some donors.⁶⁴ In the aftermath of the disaster, high-ranking officials, including the then Senior Divisional Officers (SDOs) of Menchum and Bui, along with President Paul Biya, made grand pledges to construct roads to Nyos, build schools, and establish health centers. However, as of 2018, none of these promises had been concretely fulfilled.⁶⁵ Like many other communities in the North-West Region of Cameroon, Nyos remains underdeveloped and fragmented in terms of infrastructure. Beyond mere inaction, some survivors were outrightly scammed, receiving blank or invalid cheques. For instance, the Mezam Divisional Union issued an S.C.B. cheque worth 210,000 FRS, yet the recipient faced humiliation at the bank upon discovering its invalidity.⁶⁶

The mismanagement of the Lake Nyos disaster stemmed largely from poor coordination, excessive centralization, and the inaccessibility of key areas within the risk zone. According to Witucki, these factors significantly delayed relief efforts and hampered the penetration of aid into affected villages.⁶⁷ While environmental challenges undoubtedly played a role in the difficulties of aid distribution, the greater obstacle was political interference and corruption. Dishonest officials manipulated relief channels for personal gain, further compounding the victims' frustration. The combination of physical barriers and political exploitation rendered the resettlement process ineffective, leaving the victims to grapple with both natural and man-made hardships.

8. CONCLUSION

The 1986 Lake Nyos disaster remains a stark reminder of nature's unpredictability and the far-reaching consequences of inadequate disaster management. While local, national, and international actors mobilized efforts to support survivors, the resettlement process has been marred by bureaucratic inefficiencies, corruption, and a failure to prioritize community needs. Despite initial relief efforts providing food, medical aid, and temporary shelter, long-term rehabilitation has been insufficient, leaving survivors vulnerable to socio-economic hardship, land disputes, and limited access to essential services. The shortcomings of these interventions highlight a disconnect between policy intentions and the lived realities of displaced populations, reinforcing the need for more sustainable and inclusive disaster recovery strategies.

The case of Lake Nyos underscores the dangers of governance plagued by political indifference, nepotism, and mismanagement, emphasizing the importance of participatory approaches in disaster response. The application of theories such as the Impoverishment Risk and Re-establishment (IRR) model and the Scudder-Colson framework illustrates that successful resettlement must go beyond physical relocation to ensure economic stability, social integration, and psychological well-being. Moving forward, a renewed commitment to infrastructure development, community engagement, and early warning systems is essential to preventing similar tragedies. By learning from past mistakes and prioritizing human dignity, stakeholders can build a more resilient framework for disaster management, ensuring that affected communities receive the support necessary to rebuild their lives.

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