

# Sirombu in West Nias during the 2004 and 2005 earthquakes and tsunamis: a preliminary study

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**Abstract.** Sirombu, a coastal settlement and trading hub on the western coast of Nias Island in Indonesia, was severely impacted by the devastating earthquakes and tsunamis that struck Aceh and the western offshore islands of Sumatra on December 26, 2004, and again on March 27, 2005. This paper examines the immediate aftermath of these catastrophic events in Sirombu. Employing a historical methodology and drawing upon diverse data sources, the study reveals the rapid transformation of life in Sirombu from normalcy to chaos and fear as the disasters unfolded. The earthquakes and tsunamis resulted in significant loss of life and injuries, widespread destruction of homes, markets, the seaport, and other infrastructure, and the displacement of the local population.

## 1 Introduction

The devastating Indian Ocean earthquake and tsunami of December 26, 2004, with a magnitude of 9.3, left deep scars and tragedy, particularly for the regions directly impacted, such as Aceh and the islands off the western coast of Sumatra. Sirombu, on Nias Island, was among the areas most severely affected, due to its location directly facing the waves of the Indian Ocean. The situation worsened when another earthquake struck Nias on March 28, 2005, with a magnitude of 8.7, also triggering a tsunami. This second disaster further exacerbated the conditions in Nias, especially in Sirombu.

In Nias island, thousands were injured or killed, and many coastal residents lost their livelihoods as homes, businesses, and public facilities were devastated by the earthquakes and tsunamis. In the aftermath, residents sought refuge in safer areas [1].

According to collected data, the Sirombu subdistrict was the hardest hit by the earthquakes and tsunamis, suffering the highest number of casualties [2]. In both disasters, Sirombu, facing west, bore the brunt of the tremors and the surging tsunami waves from the Indian Ocean. This impact was felt not only by those residing in Sirombu on the main island of Nias but also by inhabitants of the smaller Hinako Islands, which fall under Sirombu's administrative jurisdiction [3].

This paper presents a preliminary study of the 2004 and 2005 earthquakes and tsunamis in Nias, focusing on Sirombu, and their immediate aftermath. Employing a historical perspective, this study aims to illuminate the profound impact of these natural disasters on the people of Sirombu. The post-earthquake atmosphere was harrowing, a stark contrast to the pre-disaster tranquility.

## 2 Methodology

This manuscript examines the events of the devastating earthquake and tsunami that struck several regions in the Indian Ocean, including Sirombu in the Nias Islands, two decades ago in 2004 and 2005. Given the historical nature of these events, this study employs a historical research methodology.

The research employs a historical research methodology. Data sources consist of both primary and secondary written documents [4]. All data collected in the heuristic phase underwent rigorous critical analysis, including external and internal critiques. Following the critical analysis, the data were interpreted using both quantitative and qualitative approaches to establish historical facts. The final stage involved the synthesis and presentation of these findings through historiography.

## 3 Results and discussion

### 3.1 Region and geographic location

Sirombu is a subdistrict and the only seaport commercial town located on the west coast of Nias Island. No other commercial towns are found along the west coast of Nias Island. Other commercial towns do still exist, but they are located not on the west but on the north, east and south coasts of Nias Island. On the north coast of Nias there is the Lahewa seaport commercial town and in the south, there is Teluk Dalam. While in the east there is Gunugsitoli. In addition to the commercial town, since the Dutch colonial period in the 19<sup>th</sup> century, Gunungsitoli

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has also served as the capital of the Nias Regency. These conditions make Sirombu a commercial town, seaport as well as a small foremost and outermost outpost located in the western part of the Indonesian archipelago.

The Sirombu region is a landmass projecting into the sea (a cape), situated on the western coast of Nias Island and facing directly towards the Indian Ocean. Initially, Sirombu was referred to as "Cape of Good Hope" by traders who frequented the area [5]. This term bears resemblance to the name given to the Cape of Good Hope in South Africa by Portuguese explorers in the 15<sup>th</sup> century. It is possible that the meaning is similar. Sirombu, located at the western tip of Nias Island, offered new hope as a place to settle and engage in various livelihoods such as trade, agriculture, and livestock, particularly for those who came from outside Nias Island.

At the time of the two earthquakes and tsunamis in 2004 and 2005, Sirombu was administratively classified as a subdistrict under the jurisdiction of Nias Regency. At that time, Nias Island had only two regencies: Nias Regency with its capital in Gunungsitoli and South Nias Regency with its capital in Teluk Dalam. Sirombu is situated on the western coast of Nias Island, while Gunungsitoli is located on the eastern coast. The two are separated by a considerable distance of 76 km.



**Fig. 1.** Location of Sirombu in Nias Island (source: maps.google.com)

Sirombu subdistrict encompasses two distinct areas: the mainland area connected to Nias Island and the Hinako Islands, located to the west of Sirombu. Several small islands are included in the Hinako Islands, namely Hinako Island, Imana Island, Bawa Island, Asu Island, Bogi Island, etc. The Hinako Islands are the outermost group of islands in the westernmost part of Indonesia.

Broadly speaking, the topography of Sirombu, including the small islands of the Hinako archipelago, can

be divided into two categories: lowlands and highlands, with a relatively balanced distribution. The elevation ranges from 0 to 800 meters above sea level. The coastal lowlands, interspersed with undulating terrain, comprise nearly 50% of the total area. The remaining portion consists of hilly regions [6]. Figure 1 is the location of Sirombu on the Nias Island.

### 3.2 Population and livelihoods

Similar to other coastal towns and trading ports, Sirombu boasts a heterogeneous population in terms of ethnicity and religion. Its urban character stems from its historical role as the sole seaport on the western coast of Nias Island, attracting numerous traders, primarily from other parts of Nias and the island of Sumatra.

The majority of Sirombu's inhabitants, both on the main island and the Hinako Islands, are indigenous Nias people. They represent the coastal and island-dwelling communities, distinct from the Nias people who reside in the island's interior highlands.

In addition to the native Nias population, Sirombu is home to several ethnic groups originating from outside Nias, including Acehnese, Minangkabau, Sulawesi, and Chinese communities. Many of these groups have resided in Nias for centuries, with significant assimilation occurring through intermarriage with the indigenous population [7].

The Acehnese, arriving by sea from northern Sumatra, have exerted a considerable influence on Nias, particularly in the northern, eastern and western regions. This was observed by Italian anthropologist Elio Modigliani during his 1886 visit to Nias. Modigliani noted that in some areas, the physical characteristics of the inhabitants deviated from the typical Nias appearance, which William Marsden, in his 1811 work "History of Sumatra," described as having lighter skin tones compared to the Malays [8]. Modigliani attributed these variations to Acehnese influence [9].

Unlike the Acehnese who migrated from the north, the Minangkabau people arrived in Sirombu from the southeast, reflecting the location of their primary homeland in central and western Sumatra. Some Minangkabau inhabitants of Sirombu originated from Pariaman on the west coast of Sumatra, bearing the title *Mara* [10].

Another ethnic group present in Sirombu hails from the island of Sulawesi. Concentrated in the Hinako Islands near Sirombu, they belong to the Maros tribe of Sulawesi and are locally referred to as the *Maruwi*. To preserve their ancestral ties, these Nias residents of Maros origin adopted *Maru* as their surname. Nias individuals with surnames like *Maruhawa*, *Maruao* and *Marunduri*, etc are considered descendants of the Maros people. Meanwhile, the Chinese presence in Sirombu, as in other parts of the Indonesian archipelago, is primarily driven by economic factors, with many serving as entrepreneurs and merchants.

Sirombu is also home to a significant fishing community. The fish caught in Sirombu not only meet the nutritional needs of the local population but also those of

neighboring villages located in the highlands or mountains, such as Mandrehe and Moi in West Nias and Lölöwa'u in South Nias.

Sirombu has long been recognized as a trading centre in the Nias archipelago and the western coast of Sumatra. As a commercial hub, it attracts people from various regions for trade. Trade in Sirombu occurs both locally, such as with the Hinako Islands, and internationally. Chinese merchants have historically played a prominent role in Sirombu's trade, purchasing items like swiftlet nests pigs [10], and even engaging in the slave trade. By the late 19<sup>th</sup> century, the Hinako Islands had developed a thriving coconut cultivation and trade industry.

For centuries, the port of Sirombu has facilitated the transportation of goods and people from various regions, particularly those located in the Indian Ocean region and the western islands of Sumatra. These include the Hinako Islands, Batu Islands, and even areas on the western coast of Sumatra, such as Sibolga, Air Bangis, Pariaman, and Padang. Before the 2004 earthquake, the main port on Nias Island, Gunungsitoli, located on the east coast, had an average of two sailings per week. Sirombu also served as a port of call for ships from *Emmahaven* (Teluk Bayur), Teluk Dalam, Hinako, Lahewa, and even Sibolga.

The population of Sirombu subdistrict, including those residing in the Hinako Islands, engages in various professions, including fishing and farming. Agricultural activities include the cultivation of coconuts, cloves, and other crops. In the 19<sup>th</sup> century, trade with Sirombu involved goods such as tobacco, colorful fabrics, trinkets, and brass wire. The brass wire was used to decorate spears, and small pigs served as a form of currency [10].

Sirombu also has a livestock-based economy. The indigenous Nias people in Sirombu primarily raise pigs, which are used for both consumption and customary rituals. During the Dutch colonial period, pigs from Nias Island were even exported to Sumatra and Singapore. Meanwhile, according to a report by Henry Lyman, who arrived in Nias in late May 1834, the Malay community on the island raised buffalo and goats, and there were also some horses [11]. Agricultural products from Nias included rice and coffee, which were shipped to Padang.

### 3.3 The earthquake, tsunami, and their impact

The tsunami that struck Sirombu, West Nias, on December 26, 2004, consisted of multiple waves separated by intervals. The first wave arrived around 10:00 a.m., shortly after the earthquake, causing a minor rise in sea level of 10 to 25 cm. However, the third wave was far more destructive, reaching an estimated height around 5 meters. This surge of seawater inundated the land for approximately four hours before receding.

The earthquake and tsunami that followed three months later, on March 28, 2005, also impacted the coastal areas of Sirombu, including the seaport. The initial earthquake and tsunami on December 26, 2004, caught the population completely off guard.

Throughout history, for at least the past two centuries, Nias Island has frequently been struck by earthquakes and tsunamis. Nias regularly experiences large-scale

earthquakes that trigger tsunamis reaching the land. Records indicate devastating earthquakes and tsunamis occurred in 1843, 1861, and 1901. However, due to the significant time lapse, these events had faded from the collective memory of the Nias community by the early 2000s. Consequently, the current generation had no living memory of such a disaster.

When the earthquake struck Sirombu, followed by the tsunami on December 26, 2004, the residents were gripped by confusion, anxiety, and fear. The term "tsunami" was largely unknown to them. In their local understanding, seawater inundating the land was referred to as *molö*. Unlike tsunamis, *molö* typically involved minor flooding, reaching only a few centimeters or up to one or two meters. *Molö* was associated with heavy rainfall rather than earthquakes, occurring when rivers overflowed and flooded low-lying areas along riverbanks and estuaries (*luaha*).

People fled in panic to save themselves. Shops and houses in Sirombu's market were destroyed. Homes in both the mainland and Hinako Islands areas of Sirombu were also devastated. Four villages within the Sirombu subdistrict were severely affected: Pasar Sirombu, Pulau Himana, Pulau Bawa, and Pulau Hinako. Figure 2 below shows the state of Sirombu after the earthquakes and tsunamis disaster



**Fig. 2.** Sirombu after earthquake and tsunami (source: presbyterian disaster assistance) [12]

In addition to houses, shops and markets, the earthquakes and tsunamis in Nias also damaged a number of houses of worship. There are dozens of houses of worship in Sirombu with 3 variants according to the religious communities that exist there, namely churches for residents who are Christians, both Protestant and Catholic, mosques and mushalla for residents who adhere to Islam and Vihara for residents who adhere to Buddhism. This diversity is in accordance with Sirombu's condition as an urban town. At the time of the earthquake and tsunami in 2004 Sirombu subdistrict had 52 houses of worship, consisting of 39 churches, 7 mosques, 5 mushalla and 1 monastery [13]. However, during the earthquake and tsunami, some of these houses of worship, such as the Orahua Niha Keriso Protestan (ONKP) Church and Baiturrahman Mosque, were damaged due to the strong shaking of the earthquake and were washed away by the tsunami [14, 15].



**Fig. 3.** Houses destroyed at Sirombu (source: getty images, 51903152, december 29, 2004)

The once vibrant coastal town of Sirombu, situated along the picturesque western coast of Nias, was left desolate. Hundreds of houses and shops that had formed the economic heart of Nias were abandoned by their residents in the aftermath of the March earthquake. Figure 3 above shows destroyed houses at Sirombu.

The 2004 and 2005 earthquakes and tsunamis had a profound impact on the local economy. Sirombu, once a bustling hub along Nias's picturesque western coastline, was left deserted in the aftermath of the disaster. Hundreds of kiosks and shops, which formed the backbone of the region's economy, were abandoned by their owners. The following map is the epicentres of the devastating earthquakes on the off west coast of Northern Sumatra on December 26, 2004 and March 28, 2005 (Fig. 4).



**Fig. 4.** Epicentres of the 2004 and 2005 earthquakes – Northern Sumatra (source: h. boschitz, participation in post-disaster situations: the case of reconstruction in Nias, Indonesia, *master thesis*, universität wien, 2013) [16]

### 3.4 Displacement

The devastating earthquakes and tsunamis that struck twice in succession within a mere three months triggered significant geographical mobility among the residents of Sirombu. This displacement was driven by two primary factors. First, the psychological trauma instilled a deep-seated fear and anxiety among the community, prompting them to seek refuge from potential future disasters. Second, the consecutive natural disasters resulted in the loss of homes and livelihoods for a substantial portion of the population residing near the coast. This was particularly evident among the merchants in Sirombu's market, as the buildings collapsed due to the earthquakes and were partially swept away by the tsunamis. Furthermore, fishermen who relied on the Sirombu waters for their livelihood were unable to resume their activities due to the lingering fear of venturing back into the sea. Similarly, farmers, especially coconut cultivators inhabiting the coastal regions of both mainland Sirombu and the Hinako Islands, faced significant disruptions to their livelihoods [17, 18].

Three distinct patterns of displacement emerged in the aftermath of the earthquakes and tsunamis. The first pattern involved residents living along the coast relocating to higher ground. The second pattern saw inhabitants of the Hinako Islands migrating to mainland Nias. Additionally, a third pattern emerged, with residents from Sirombu subdistrict, both on mainland Nias and the Hinako Islands, migrating out of Nias Island altogether.

In the first pattern, the people who fled were those who originally lived on near by Sirombu beach. The number is quite large because this is the centre of economic activity for the Sirombu community that has been going on for centuries. Not only the local community, Sirombu is also the economic centre of the inland community of Nias Island, especially those who live in the central and western parts of Nias Island such as from the Mandrehe, Lölöwa'u, and surrounding areas.

There are various public facilities such as markets, schools, houses of worship, seaport docks, etc in Sirombu. Of the three patterns of displacement caused by the disasters of 2004 and 2005 as mentioned above, it was this group that experienced and was directly affected by the devastating earthquakes and tsunamis. This was partly because their homes and businesses were located very close to the coastline and were at risk from the Indian Ocean tsunami waves.

Tanjung Sirombu in West Nias is a coastal residential area that at the time was only a dozen meters away from the shoreline, and was among the worst affected areas by the tsunami. The number of victims of missing and dead villagers was recorded at 8 people and hundreds of others were permanently evacuated.

When the initial earthquake struck on December 26<sup>th</sup>, many residents of Pasar Sirombu village sought refuge in Tetesua, an elevated area located 3 km east of Sirombu. Tetesua subsequently housed hundreds of new residents living in tents or temporary shelters along the roadside. Others established residences further away from Sirombu. It was only a week later that they returned to Sirombu to assess and salvage belongings from the wreckage of their

houses and shops. However, they soon returned to the shelters (Fig. 5).



**Fig. 5.** A man, girl and dog cross deep water at Sirombu village (source: getty images, 51903159, december 29, 2004)

Meanwhile, the second pattern is a category of population that originally settled in villages located on several small islands. There are 10 islands located off the west coast of Sirombu, namely Hinako Island, Asu Island, Heruanga Island, Imana Island, Bögi Island, Langu Island, Hamutala Island, Lawanda Island, Bawa Island, and Si'ite Island. The size of each island varies. The smallest island is Lawanda with an area of 25 hectares while the largest island is Hinako Island with an area of 94 hectares. Not all of these islands are inhabited. Until the year leading up to the devastating earthquake on December 26, 2004 with a magnitude of 9.3, only five islands were inhabited. The other 5 islands were not inhabited at all. The 5 inhabited islands combined, there are 11 villages, 6 villages each on Hinako Island, 2 villages on Imana Island, 1 village on Bögi Island, and 3 villages on Bawa Island [19].

The evacuees from these small islands were not only limited to the villagers of these islands who lived by the beach, but also included families whose homes were some distance from the beach. In addition to these evacuated families, the elderly population was also included.

Many Sirombu residents who fled their homes sought refuge on the island of Sumatra. In this emergency, their primary destination was the homes of relatives and acquaintances who had previously relocated to Sumatra. This provided not only temporary accommodation but also a sense of security and comfort. Several provinces in Sumatra, including Aceh, North Sumatra, and West Sumatra, have hosted significant Nias communities since the Dutch colonial era. Furthermore, the expansion of oil palm plantations in provinces like Riau, Jambi, and Bengkulu has attracted Nias migrants seeking employment opportunities.

In the early 2000s, Sirombu's population averaged around 16,000. This figure increased to 17,394 in December 2004, just before the first earthquake and tsunami. However, by 2005, the population had decreased to 16,620. By 2006, the population had sharply declined to approximately 8,790 individuals. This figure remained relatively stable until 2010, as illustrated in Table 1:

**Table 1.** Population of Sirombu Subdistrict (2003-2010) (Source: BPS Kabupaten Nias, 2010 [6])

Year	Population
2003	16.989
2004	17.394
2005	16.620
2006	8.790
2007	8.802
2008	8.820
2009	8.840
2010	9.478

The table above reveals a significant and dynamic shift in the population composition of Sirombu in the years leading up to, during, and after the earthquake and tsunami disasters. In 2003, a year prior to the earthquake, the population stood at 16,989 individuals. This figure saw a slight increase in 2004, reaching 17,394 individuals, representing a 0.98% growth. As the earthquake and tsunami struck in late December 2004, their impact was not yet reflected in the statistical population count for that year. However, by 2005, a decline became evident, with the population decreasing to 16,620 individuals, a 0.96% reduction.



**Fig. 6.** Residents of Sirombu are evacuating (source: getty images/bay ismoyo, 52512369, march 31, 2005)

The second natural disaster, the earthquake and tsunami of March 2005, had a profound impact on Sirombu's population. By 2006, one year after the two disasters, the population had dwindled to 8,750 individuals. This represented a staggering decrease of 7,870 individuals, or 47%, compared to 2005. In essence, Sirombu lost nearly half its population in the wake of the two natural disasters of 2004 and 2005. This population composition persisted for the following four years. The population figures for 2007, 2008, and 2009 remained in the 8,000s. It wasn't until 2010 that a slight increase was observed, with the population reaching the 9,000s. Figure 6 shows residents of Sirombu evacuating after the March 28, 2005 earthquake.

## 4 Conclusion

For centuries, Sirombu was renowned as a peaceful urban centre, a hub of commerce and tourism, harmoniously inhabited by diverse ethnicities and religions. However, the devastating natural disasters abruptly transformed this

idyllic town. This article explores how the consecutive catastrophes reshaped Sirombu from a welcoming haven into a place filled with horror. The profound impact on the local community led to significant social changes in a relatively short period, encompassing shifts in settlement patterns and migration. In the aftermath of the earthquake and tsunami, a pervasive sense of fear gripped the community. Approximately half of Sirombu's population migrated out of the region, primarily seeking refuge on the island of Sumatra.

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