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LESSON FROM THE PAST, KNOWLEDGE FOR THE FUTURE: ROLES OF HUMAN MEMORIES IN EARTHQUAKE AND TSUNAMI NARRATIVES IN MENTAWAI, INDONESIA¹

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ABSTRACT

Oral traditions are an important part of the culture of most Indonesian communities. Mentawai, an ethnic group residing in Mentawai Islands of Indonesia, has various genres of oral tradition. Traditional knowledge and local wisdom pertaining to natural disasters are also part of their oral tradition. Mentawai Islands are located along active tectonic plates, where earthquakes commonly occur at various magnitudes. Records show that great earthquakes and tsunamis hit Mentawai Islands several times in 1797, 1833, 2007, and 2010. Surprisingly, earthquakes occurring some hundred years ago do not seem to appear in Mentawai oral tradition. This is slightly different from communities in Simeulue, Solomon, and Andaman Islands whose natives still remember some devastating catastrophes that occurred in the past. People's collective memories play an important role in upholding significant messages from past natural disasters. Some of those messages contain important lessons on how to cope with natural disasters if they should occur again. As a result, the majority of inhabitants of those islands survived future catastrophes because they remembered the lessons contained in their oral tradition. This is totally different in Mentawai where more than 500 people died during the 2010 earthquake and tsunami. Because of this, the Mentawai case becomes an interesting topic of study. This paper aims, therefore, to find out the reasons behind this apparent lack of oral tradition pertaining to the earthquakes and tsunamis that occurred several hundred years ago.

KEYWORDS

Oral tradition; collective memory; earthquake and tsunami; disaster mitigation.

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ABSTRAK

Tradisi lisan merupakan bagian penting dari kebudayaan sebagian besar masyarakat Indonesia. Mentawai, sebuah kelompok etnis yang berada di Kepulauan Mentawai di Indonesia, memiliki beraneka ragam tradisi lisan. Pengetahuan tradisional dan kearifan lokal yang berkaitan dengan kebencanaan juga merupakan bagian dari tradisi lisan mereka. Kepulauan Mentawai terletak di lempeng tektonik aktif. Gempa bumi dengan kekuatan guncangan yang berbeda-beda sering terjadi di Mentawai. Gempa bumi besar dan tsunami melanda Kepulauan Mentawai beberapa kali pada 1797, 1833, 2007, dan 2010. Anehnya, gempa bumi yang terjadi beberapa ratus tahun yang lalu itu ternyata jarang atau tidak ditemukan dalam tradisi lisan Mentawai. Fenomena yang sedikit berbeda dapat ditemukan dalam masyarakat di Kepulauan Simeulue, Solomon, dan Andaman yang penduduknya masih mengingat beberapa bencana dahsyat yang terjadi pada masa lalu. Ingatan kolektif suatu masyarakat memainkan peran penting dalam mengingat pesan penting dari bencana alam yang terjadi pada masa lalu. Beberapa pesan itu mengandung pelajaran penting untuk menghadapi bencana alam yang mungkin terjadi pada masa depan. Alhasil, mayoritas penduduk Kepulauan Simeulue, Solomon, dan Andaman selamat dari bencana karena mereka ingat pesan dari tradisi lisan mereka. Sebaliknya, lebih dari 500 orang menjadi korban gempa bumi dan tsunami yang terjadi pada tahun 2010 di Mentawai. Karena perbedaan tradisi lisan itu, kasus Mentawai menjadi topik kajian yang menarik. Oleh karena itu, makalah ini bertujuan untuk mengetahui alasan di balik ketiadaan tradisi lisan yang terkait dengan gempa bumi dan tsunami yang terjadi beberapa ratus tahun silam di Mentawai.

KATA KUNCI

Tradisi lisan; ingatan kolektif; gempa bumi dan tsunami; mitigasi kebencanaan.

1. INTRODUCTION

A scene from *Repdeman*², a documentary film produced in 2018 by Watchdoc, a production house based in Jakarta, shows a conversation between two survivors saying that they did not have any terrible experience before the 2010 earthquake and tsunami in Mentawai Islands. The 2010 catastrophe has devastated their islands and killed more than 500 people. They also did not remember whether their ancestors ever experienced similar catastrophic events because they had not heard stories about any devastating natural disasters in their islands. Max Morris (1900), Edwin M. Loeb (1929), Bruno Spina (1980), and some other scholars have collected various Mentawai mythical narratives, including those about the origin of earthquakes. However, stories about disastrous events that killed many people are surprisingly absent in their narrative collection.

While studying historical records of earthquakes and tsunamis in Dutch libraries in Leiden, I came across historical records of earthquakes occurring near Mentawai Islands in 1797 and 1833. These earthquakes were recorded by J. du Puy who reported that, on 10 February 1797, at 10 o'clock in the evening, a large earthquake occurred and was followed by small ones the next day. Two casualties were incurred during the earthquake, while a lot of houses were damaged and devastated by a tsunami in Padang and adjacent villages like Air Manis (du Puy 1845, 114; see also Natawidjaja et al. 2006, 32). Information provided by J. du Puy was documented by Dr. Stumpff in *Tijdschrift voor Neêderland's Indië* in 1845, reporting that the city of Padang had experienced another large earthquake on 24 November 1833 at eight o'clock in the evening (Stumpff 1845, 156–157). The record also mentioned that a few moments after the earthquake, the seawater

2 https://www.youtube.com/watch?v=yO_N1ZIDJSQ.

rose and wiped out several settlements in West Sumatran mainland such as Padang, Painan, and some places in Bengkulu. Local people in Padang still remember a story about how some boats docking at Muara Padang river were drifted by a tsunami a few kilometres inland and stranded near the railways. At that time, Padang was sparsely populated. However, information on this event was absent in Mentawai, and it seems that this event has not made its way into Mentawai oral tradition.

With regard to the roles of oral tradition in maintaining information about disastrous events, an interesting lesson can be taken from the case of the 1907 great earthquake that occurred near Simeulue Island³, an island located 150 kilometres off the west coast of Sumatra. It caused a tsunami that devastated villages in Simeulue. This event is well remembered by the Simeulue islanders as a nightmare. They keep preserving the memory of this event by telling and singing it, and have been passing on messages about the event to the next generations. This event has indeed become part of their oral tradition called *smong*. Then, a major 9.1–9.3 magnitude (Richter scale) earthquake took place in the Indian Ocean near Aceh Province of Indonesia in 2004. The earthquake caused a huge tsunami that hit Aceh Province and the adjacent Simeulue Island and Nias Islands, as well as some neighbouring countries such as Sri Lanka, India, and Thailand. Mentawai Islands south of Nias, however, were less affected by the tsunami, which killed approximately 227,898 people in total⁴. The majority of Simeulue Island inhabitants living in its coastal areas surprisingly survived the 2004 Aceh tsunami because they remembered their own oral tradition that was derived from a previous earthquake and tsunami in 1907. This tradition has been practiced by Simeulue Islanders for many generations.

According to McAdoo et al. (2006), local people in Simeulue observed that the seawater receded a few minutes after a massive earthquake in 2004. These natural characteristics resembled those in the 1907 earthquake and tsunami. People in Simeulue realised that the receding seawater resembles the information contained in *smong*, their local oral tradition, which describes that seawater recedes after great quakes. This verbal account refers to the past earthquake and tsunami that occurred in 1907 in the region. The 1907 earthquake triggered a tsunami, devastated the settlements located in the coastal areas, and killed many people in Simeulue. Therefore, the people screamed “*smong*” to alarm each other, urging them to immediately evacuate themselves away from beaches and to run to higher areas after seeing the receding seawater (McAdoo et al. 2006).

Another similar example is the 2007 tsunami that affected Solomon Island as studied by Fritz and Kalligeris (2008). Many people there also survived because they were familiar with an ancestral wisdom of “run to higher ground after an earthquake.” They received this wisdom from the survivors of a smaller previous tsunami that occurred on 17 August 1959 (Fritz and Kalligeris 2008,1). Solomon Islanders ran to higher ground after earthquake in order to avoid being killed by an impending tsunami. Another example is the indigenous people of Andaman Islands in the Bay of Bengal who immediately ran uphill as soon as they noticed that seawater was receding in order to save their life from tsunami in 2004.⁵ The folklore which says about “huge shaking of ground followed by a high wall of water” has saved the Andaman people from tsunamis.⁶ Unfortunately, when a 7.7 magnitude earthquake struck Mentawai Islands on 25 October 2010 at 9 o’clock in the evening, the local communities were not prepared for the impending tsunami due to their lack of local wisdom.

3 Simeulue is administratively a regency that separated from West Aceh in 1999. <https://en.wikipedia.org/wiki/Simeulue> last accessed on 12 February 2019.

4 https://en.wikipedia.org/wiki/2004_Indian_Ocean_earthquake_and_tsunami, last accessed on 17 August 2019.

5 <https://www.survivalinternational.org/material/67>, last accessed on 5 July 2019.

6 https://en.wikipedia.org/wiki/2004_Indian_Ocean_earthquake_and_tsunami, last accessed on 7 January 2020.

During the research in 2017, 2018, and 2019 in Mentawai, I gathered various Mentawai stories, but the people could not recollect any stories about great earthquakes and tsunamis that devastated their homeland in the past although historical records clearly show that earthquakes and tsunamis did hit Mentawai in 1797 and 1833. The case of Mentawai earthquakes and tsunamis is an interesting topic of study for those who want investigate the correlation between the 1797 and 1833 earthquakes and tsunamis and the 2010 earthquake and tsunami in the context of oral tradition and human memories. This paper aims to answer two main research questions: (1) What caused the absence of oral tradition pertaining to past earthquakes and tsunamis, in spite of historical records of earthquake and tsunami in the past? and (2) How current oral narratives can contribute to solving the issue of “Mentawai megathrust” which predicts great earthquakes?

This paper is organized as follows. First, I describe the methodology and research site. Then, I present the theoretical discussion about memory and oral tradition and their correlation to natural catastrophes. After that, I present information about the Mentawai archipelago, its inhabitants, and their socio-cultural features, including their oral tradition regarding earthquakes and tsunamis. Before the conclusion, I discuss the data gathered from field, as well as the relevant literature and theoretical points.

2. METHODOLOGY AND RESEARCH SITES

Primary data and secondary information presented in this paper were gathered during irregular visits to Mentawai Islands for several weeks in 2004, 2006, and 2013–2019. Data were gathered through interviews, following suggestions by Bernard (1994) and Briggs (1986). Older individuals were interviewed and asked to tell any stories about earthquakes and tsunamis that they remember. They were also asked to sing some songs related to earthquake and tsunami. The stories and songs were then transcribed and analysed. Secondary data were gathered from the Internet and published reports. Academic papers, as well as relevant documents of governmental and non-governmental organisations, were studied and evaluated. Some relevant reviews of selected literature and published stories about earthquakes and tsunamis were also analysed and elaborated in this paper.

This research was conducted in a small archipelago consisting of four main islands: Siberut, Sipora, North Pagai, and South Pagai with tens of islets located about 100 miles off the west coast of West Sumatra (see Map 1). Mentawai is situated between Batu Islands in the north and Enggano Island in further South. The total landmass of this archipelago is 6,011.35 square kilometers. These islands are administratively under the government⁷ of Mentawai Islands Regency, established in 1999 after being separated from Padang Pariaman Regency in the mainland Sumatra.

Mentawai Islands Regency (*Kabupaten Kepulauan Mentawai*) consists of ten sub-districts, 43 villages, and about 202 hamlets and traditional settlements. In 2015, the Mentawai Archipelago was inhabited by 85,295 people (*Badan Pusat Statistik* [Statistics Indonesia] 2016, 55). For this research, I visited selected areas, which were Saibi Samukop in Central Siberut sub-district and Rereiket valley in South Siberut sub-district. In 2016, I also visited villages devastated by the 2010 tsunami in Sipora Island such as Beriulou, Taraet, Bosua, and some resettlement areas of tsunami survivors in North Pagai and South Pagai in order to get information about the occurrence of tsunami and the social conditions after the tsunami and to gather oral narratives related to earthquakes and tsunamis.

⁷ A regency (an administrative division below province and above sub-district) is called kabupaten in Indonesian.

Map 1. Mentawai Islands.⁸

3. ORAL TRADITIONS, COLLECTIVE MEMORIES, AND NATURAL DISASTERS

The notions of “oral tradition” and “memory” presented in this section are partially quoted from my unpublished Ph.D. thesis (Tulus 2012). As they are strongly relevant to this paper, I re-elaborate them here as part of the theoretical framework of this study. Most categories of oral narratives described in the scholarly literature have to do with stories that belong to a whole community. Jan Vansina (1973) is one of the leading scholars in the study of oral tradition. Along with the results of his research, Vansina states, “Oral traditions are historical sources of a special nature. Their special nature derives from the fact that they are ‘unwritten’ sources couched in a form suitable for oral transmission, and that their preservation depends on the powers of memory of successive generations of human beings” (Vansina 1973, 1). In this explanation, Vansina points out three essential elements of oral traditions. Oral traditions consist of historical information (Vansina 1985) which is verbally passed on from one generation to another by relying on human memory.

Ruth Finnegan (1992, 5–17; 142–157) mentions that oral traditions have several genres: mythical stories or mythical tales, poems, riddles, folktales, fairy tales, fables, legends, mantras, norms, and other kinds of verbal arts. These terms are commonly found in scholarly literature. Each of those genres has a different theoretical focus. At the local level, communities do not specifically categorize their oral traditions in genres. However, they might identify their oral traditions by using local terms in order to name or specify their specific themes. Telling stories and singing songs are ways of transmitting messages of oral tradition. The main roles of oral traditions are to bring families or communities together and to maintain the historical ties among members of their society.

⁸ The original map has been modified in order to illustrate research locations. The map was adapted from https://commons.wikimedia.org/wiki/File:Mentawai_Islands_Map.png, accessed on 16 May 2019.

3.1 Remembering

Oral historical narratives comprise traditional knowledge and cultural values. Communities tell stories of crucial occurrences and sing songs of past events to maintain them. By singing, storytellers attract people's attention to melodious messages and entertain them at the same time. Rhythm and lyrics can evoke listeners' emotion who may respond to the songs using particular gestures (Rappoport 2016; Sather 2017; Tulus 2018). Drawing figures on house walls or crafting specific objects related to important events can also be the way to sustain the memory of past events (Hoskins 1998; Schefold 2017). Referring to such objects, storytellers will recount details of the past events. Meanwhile, listeners need to remember the story, the object, and their correlations (Hoskins 1998). Summarizing this idea, I reformulated one of the propositions on a separate page of my Ph.D. thesis that states, "In oral tradition, memorizing past events that once affected a family, kin group, or community is a powerful tool for establishing a fundamental understanding of the connections between these past events and current circumstances" (Tulus 2012). This is a common practice in communities without written tradition. People's memory of past events can last for several generations.

In addition, it is important to know a place name where a past event occurred. Sometimes, people simply use such place names as the title of their story, such as *Mapaddegat*, a place in Sipora Island. The *Mapaddegat* story comprises a historical narrative on how the ancestors of the Mentawaians migrated from Siberut to Sipora. These ancestors arrived at a place where their canoe was capsized due to big waves and where their bow made out of palm called *paddegat* disappeared in the ocean. Because of this loss of bows, Mentawai ancestors named the place *Mapaddegat*, short for a longer word *Mabelepadddegat* that means "a place where bows and arrows were lost" (Tulus 2012, 48).

Members of a family or community can easily recognize themes of a story about particular events as the events have affected the family or community. Important themes of the story of an event are preserved and transmitted to the following generations. What members of a community should do, according to Paul Thompson (2000), is to keep remembering "keywords". Keywords can also be a place name, individual identity, name of an event, or objects related to an event. For example, "*smong*" in Simeulue is a keyword, which points to the 1907 tsunami. The word reminds islanders to prepare themselves whenever tsunami is going to strike their villages (Yogaswara and Yulianto 2005; Syafwina 2014; Suciani et al. 2018). Most of people in Simeulue Island survived in the 2004 tsunami after hearing their fellow inhabitants shouting the word *smong*. They noticed the receding seawater similar to what is being described in their *smong* or oral tradition.

The current generation memorizes what they have heard or learned from earlier generations. The nature of human memory plays a crucial role in the preservation of these historical materials. Based on this, I asked two things: (1) How do the memories of human beings preserve the past? and (2) How does people reflect on their memories of the past? These questions led me to look at research done by Mary Margaret Steedly (1993) in North Sumatra among Batak Karo communities, which states

Memory is never private property and experience is never a simple matter in this overinhabited terrain; voices are always multiple, fragmented, interrupted, possessed by the memories of other people's experience. The transfer and transcription of historical experience—in names, monuments, genealogies; in collective fantasy and in the regulated social intercourse of everyday life; in law, property, and desire; in stories inhaled with the common air of a shared place or time—is the moment through which subjectivity is produced (Steedly 1993, 22).

In short, the memories of human beings are collective and social, delimited by particular groups of people, spaces, places, and times. Memories are not purely objective in conveying past occurrences to the

present. Maurice Halbwachs calls this “the framework of collective memory” (Halbwachs 1992, 53), which confines and binds our most intimate remembrances to each other. Furthermore, he writes that “[t]he collective framework of memory is the result or sum or combination of individual recollections of many members of the same society” (Halbwachs 1992, 53). Thus, as Lewis A. Coser suggests, “[collective] memory needs continuous feeding from collective sources and is sustained by social and moral props” (Coser 1992, 34).

Collective memory manifests itself in traditions of families and different social groups. Older generations of a community typically encourage their younger generations to remember important past events by reminding them with phrases such as “do not forget this” or “always remember that”. However, some communities tend to show the opposite attitude. They seem to intentionally “forget” or simply do not transmit a past event due to particular reasons such as avoiding any disadvantageous consequences that can affect younger generations. Consequently, some important historical events remain unheard by the next generations.

3.2 Forgetting

“Forgetting” seems to be a simple process. In particular communities such as Mentawai, there is a custom precluding people from recalling the name of a dead person in order not to invoke the soul of the dead, which may possess living people and harm their souls. There are stories that can be told in public, but there are also stories that can only be told in front of a limited number of people and in particular circumstances because they are considered as secret. Mentawai people believe that they must not tell taboo stories in details in order not to invoke real natural disasters. Instead, they just tell the general overview of a story just enough to let their children know and remember that some natural disasters once occurred in the past, especially the ones that caused many casualties. As time passes, this custom tends to make people forget the important historical events. Instead, they begin to accustom themselves to new values and knowledge that are either self-invented or introduced by outsiders. Consequently, some cultural elements or values can be simply forgotten due to the fact that their functions and meanings have gradually diminished in a society.

In Mentawai, social, cultural, and political changes have strong impacts on Mentawai traditional culture. Mentawaians have given up some of their traditional rituals and sociocultural practices due to suppression by religious and governmental bodies. Such organizations have forbidden the Mentawaians to practice their traditional culture since 1954 (Sihombing 1979). There is no official retraction of this prohibition until now. Consequently, some traditional knowledge, such as the memories of earthquakes and tsunamis, including rituals related to them, are no longer practiced as often as before or have even ceased to exist altogether. Instead, they are practicing modern cultural values as well as newly embraced religions and rules introduced by the government. This indirectly contributes to diminishing Mentawai traditional knowledge and cultural values.

There is also another reason why people may completely forget their past events, namely because the events occurred many generations ago and the community do not have any written tradition. In other words, most of their cultural knowledge is maintained through oral tradition. Meanwhile, a past event may have taken place three to five generations ago, which suggests that it took place more than one century ago. From anthropological perspective, there is about 20- to 25-year difference between two successive generations in a society, assuming that the members get married at the age of 20 to 25 years old, sometimes even less in certain communities. In Mentawai, for instance, there is a 15- to 20- year difference between two successive generations. People can easily recollect many past events if they occurred only some generations ago. However, other past events could have taken place hundreds of years ago, even thousands of years ago. In this case, people can no longer recollect the events completely. In the course of time, people tend to

forget certain events in the distant past as many other past events might have occurred afterwards, such as assaults among families, family migration, and family separation. People only remember the most important and favourable events for them such as ancestral lands, ancestors, and particular features of their families. Many past events may also have been forgotten because they are too painful to remember. In the course of time, memories of such distant events can no longer be sustained and eventually cease to exist.

3.3 Human Memory and Cycle of Natural Disasters

In case of a catastrophe, human memory plays an important role in remembering and preserving information about past events. Some natural disasters such as earthquakes and tsunamis are cyclical: they have occurred and will reoccur in the future. The repetitions can happen in the same place or a few miles away from their initial places. Natural disasters can change topographical and social structures (Oliver-Smith & Hoffman 1999). Some earth scientists have been studying the paleo-geodetic vertical deformation by studying the growth pattern of microatoll corals from islands west of Sumatra in combination with data gathered from the research instrument of Global Positioning System (GPS) permanently installed in the mainland Sumatra and its western islands using a network called Sumatran GPS Array (SuGAR). Scientists have been monitoring earth plate movements in Sunda megathrust over the last two decades, which leads to the idea that earthquakes occur in every 50, 100, 200, 300, and even 400 years (Briggs et al. 2006; Sieh et al. 2008; Meltzner et al. 2010).

If a major earthquake occurs every 200 years, it takes approximately 10 to 13 generations before another major earthquake reoccur. Information about a previous earthquake 200 years ago might have been improperly transmitted. The transmission may also fail altogether if most of the community members fell victim to the disaster (Mikami et al. 2014, 867) and survivors decided to move to new places, leaving older settlements and their memory untold. Consequently, current members of the community cannot recollect the memories of past massive earthquakes and devastating tsunamis that occurred about 200 years ago. Nonetheless, disastrous events that occurred a hundred year ago might still be recollected because they have only passed three to four generations. Messages about these historical events can be well preserved by communities with strong oral tradition practices. This is exemplified by the case of Simeulue Island.

3.4 Oral Tradition of Earthquakes and Tsunamis: The Case of Smong in Simeulue

In 2004, great earthquakes occurred and generated a tsunami that devastated Aceh and other adjacent regions, including Simeulue. In 2005, other great earthquakes occurred, which also generated a tsunami and affected Simeulue. Most fishermen in Simeulue surprisingly survived those devastating events. In both events, Simeulue people who were on beaches promptly screamed the word *smong* in order to alert others to flee to higher ground. They realised that the seawater receded after an earthquake. This phenomenon resembles the one described in their oral tradition.

The concept of *Smong* originated from an earthquake-generating tsunami that occurred on 4 January 1907 and affected Simeulue Island. According to previous research, the term *smong* came from Devayan language that means "tidal waves" that come from the sea to the land (Yogaswara and Yulianto 2005, 21–24; Syafwina 2014; Suciani et al. 2018). Many casualties were incurred by the 1907 tsunami. After this devastating event, survivors transmitted this knowledge by singing *buai-buai* (traditional lullaby) and narrating a *nandong* (poem) to their family members. In the course of time, *smong* became part of Simeulue oral tradition. In order not to ruin the triggering effect of *smong*, local people are not supposed to shout the keyword if there is no tsunami. *Smong* is therefore associated with a plain message for disaster mitigation.

The smong text presented here is the result of comparison between several texts excerpted from published papers, a research report, and an online article produced by several scholars (Syafwina 2014; Suciani at al. 2018 and Gadeng at al. 2018; Yogaswara and Yulianto 2005; and Ayat S. Karokarodo 2014 in the online media⁹). When comparing one text to another, I noticed not only some similarities but also inconsistency and inaccurate translation from local language into both Indonesian and English. Therefore, I revised some parts of the Indonesian and English translations and enriched the local text by adding some texts taken from Syafwina (2014) in the last section in order to show its variants. The smong text is given in Table 1, as follows:

Devayan	Indonesian	English
1. <i>Enggel mon sao curito, inang maso semonan, manoknop sao fano, uwilah da sesewan.</i>	1. <i>Dengarlah satu cerita, pada zaman dahulu, tenggelam satu desa, begitulah mereka ceritakan.</i>	1. Please listen to a story, one day in the past, a village was sinking, that is how it was told.
2. <i>Unen ne alek linon, fesang bakat ne mali, manoknop sao hampong, tibo-tibo mawi.</i>	2. <i>Diawali oleh gempa, disusul oleh ombak yang besar sekali, menenggelamkan satu kampung, secara tiba-tiba.</i>	2. It started with an earthquake, followed by a giant wave that suddenly drowned a village
3. <i>Anga linon ne mali, uwek suruik sahuli, maheya mihawali, fano me singa aktaek (fano me singa tinggi).</i>	3. <i>Jika gempanya kuat, disusul oleh air laut yang surut, segeralah cari tempat kalian yang aman (segeralah cari tempat kalian yang lebih tinggi).</i>	3. If the earthquake is strong and followed by receding seawater, find yourself a higher (safer) place immediately.
4. <i>Ede smong kahanne, turiang da nenekta, miredem teher ere, pesan dan navi da.</i>	4. <i>"Smong" namanya, sejarah nenek moyang kita, ingatlah itu sungguh-sungguh, pesan dan nasihatnya.</i>	4. It is called "smong", our ancestors' history, always remember its messages and lessons.
5. <i>Smong dumek-dumek mo, linon uwak-uwak mo, kilek sulu-sulu mo (according to Syafwina, 2014: kilek lampu-lampumo), eklai kedang-kedang mo (according to Syafwina, 2014: elai keundang-keundangmo).</i>	5. <i>"Smong" adalah air mandimu, gempa bumi adalah ayunan tidurmu, (cahaya) kilat adalah lampu-lampumu, guntur adalah gendang-gendangmu.</i>	5. "Smong" is your bath water, earthquake is your cradle, lightning is your lamps, thunderstorm is your drums.

Table 1. *Smong* in Devayan, Indonesian, and English.

Simeulue people consistently practice their oral tradition even though the disaster itself took place about a hundred years ago. It is relatively close to the current generation. Therefore, *smong* is still uttered until now and have saved the lives of most Simeulue people during the 2004 and 2005 tsunamis. The Simeulue case is similar to those of some other islands, namey Solomon and Andaman. However, it is not the same as the Mentawai Islands case. The 2010 earthquake and tsunami devastated parts of Mentawai Islands. Tens of villages were destroyed and more than 500 casualties were incurred. In the following section,

⁹ <https://www.mongabay.co.id/2014/12/20/kearifan-lokal-selamatkan-warga-simeulue-dari-amukan-tsunami-bagian-1/>, last accessed 15 February 2019.

I describe sociocultural and oral traditions in Mentawai based on primary data gathered during my fieldwork and on secondary sources of information gathered from available and relevant literature.

5. MENTAWAI ISLANDS AND THEIR INHABITANTS

Mentawai Islands are located along active tectonic plates off the west coast of Sumatra. During the Tertiary period, the sub-duction force of the Indian-Australian plate under the Sunda Shelf pushed up this chain of islands from the ocean floor. Mentawai Islands appear to have been separated from Sumatra by the 1,500-meter-deep Mentawai basin between Sumatra and Mentawai for about 500,000 years at least since the Mid-Pleistocene, so their flora and fauna have evolved in isolation from the dynamic evolutionary events on the mainland Sumatra and the rest of the Sunda Shelf (WWF 1980, 3; Whittaker 2009, 73). Located along active tectonic plates, Mentawai Islands are frequently affected by earthquakes.

Mentawaians are the major native inhabitants of Mentawai islands. Based on his study of cultural characteristics, Reimar Schefold (1988; 1989) assumes that the ancestors of Mentawaians might arrive at the islands about two thousand years ago. However, there is no obvious information about the people who first arrived and where they embarked on. Stories of origins provide some ideas of the first ancestors and the locations of their first settlements (Tulius 2012; 2014). According to Schefold's research, some ancestors migrated directly from Sumatra, while others departed from Sumatra via neighboring islands of Nias and Batu before coming to Mentawai Islands (Schefold 1988; 1989).

A Portuguese chart dated 1606 shows Siberut named as Mintaon (Schefold 1991; Coronese 1986), which signifies that Europeans first sailed across Mentawai Islands in the 17th century. There is no historical account before that date. Historical accounts of natural disasters in this archipelago can only be found in Dutch archives starting from 1845 onward. The rest of historical information of traditional Mentawaians and their prehistorical life are captured in oral accounts as they do not have any written tradition. They narrate stories or verbally share cultural knowledge to each other (Tulius 2012).

5.1 Mentawaiian Traditional Coastal Dwellings and Maritime Culture

The majority of resettlement areas of the Mentawaians are currently located in the interior of Mentawai Islands. According to family stories, some groups of traditional Mentawaians once lived near the coastal areas of Siberut Island as their ancestors came from outside of the Mentawai archipelago. Those ancestors had expanded into different families and established more than 200 kin groups. They went netting (*mubattau*) sea turtles, catching fish, and collecting shells. They also planted coconut palms on islets near their home settlements. After Siberut Island was well occupied, Mentawaians started migrating to other islands in the archipelago, namely Sipora and Pagai Islands. These activities are described in their oral narratives.

According to 2018 and 2019 research¹⁰, Mentawaians sing of sea eagles, wind, sunshine, sunshower, and waves to illustrate their sea journey in shamanic songs. Those elements of nature have metaphoric meanings. Sea eagles represent the eyes of ancestors looking upon the sailing canoe, while wind that blows the sail and pushes the canoe forward represents the power of aerial spirits. Sunshine symbolizes the light of life, while sunshower represents the ancestral world. Sea symbolizes the medium of journey. Unpopulated older settlements located in the coastal areas can still be found, along with older gardens and planted fruit trees. This reveals the maritime culture of the Mentawaians in the past and the fact that they once lived near

¹⁰ This research was conducted together with Professor (Emerita) Linda Burman-Hill of the University of California, Santa Cruz.

the coastal areas of the archipelago. For some reasons, perhaps due to historical natural disaster such as tsunamis or because they merely wanted to search for new living places inland, some of those communities moved to the interior of Mentawai Islands.

5.2 Social Changes and Their Impacts on Oral Traditions in Mentawai Islands

By knowing the history of a society, we may know the process of changes in their traditions. We can also understand why some cultural practices disappeared while others can survive. In Mentawai society, world religions have strong influence on Mentawai traditional culture. Protestantism was first brought to Pagai Islands in 1901, and the traditional belief system was gradually affected by it. It took a few decades before Mentawaians were converted to Protestantism in Pagai. Later, this religion was brought to Sipora and Siberut. In 1950s, Islam and Catholicism came to Mentawai Islands as well. Pressure on traditional culture and belief system in Mentawai increased considerably in 1954 when the local government and churches forbade the Mentawaians to practice their traditional cultures. Traditional objects related to Mentawai rituals were confiscated and destroyed by the Police and church leaders, starting from 1954 (Sihombing 1979; Coronese 1986; Schefold 1988). Rapid changes also occurred in Pagai and Sipora. Most Mentawaians have relinquished their traditional cultures and been practicing Protestantism in order to obey government regulations.

With a vision to develop the lives of the Mentawaians within Indonesia as a modern state, the Indonesian government decided to resettle the Mentawaians, whose houses were traditionally scattered across different valleys away from each other, to organized villages located at the coastal areas in 1970s (Persoon 1994). The government opened these new resettlement areas near the coasts so that government officials can run different governmental programs to accelerate the integration of Mentawai into Indonesia. The government has set up healthcare, basic education, and other public facilities. Infrastructures and other modern facilities have been made available. Meanwhile, various forms of natural resources exploitation rights such as extensive and intensive logging concessions have been given to different logging companies in order that the government gained tax revenues to financially support the development programs (see Persoon and Schefold 1985). On Siberut, tourism has played an important role in maintaining some part of traditional culture since 1980s (Bakker 1999). Some traditional settlements were allowed to exist although the residents no longer practice much of their traditional culture. The government is gradually transforming traditional kampongs into new government villages, reducing the population of traditional Mentawai communities in the process. Consequently, specific traditional knowledge is fading away, including the memory of historical earthquakes.

6. TRADITIONAL KNOWLEDGE AND ORAL TRADITION ON NATURAL DISASTERS

It is a common perception among traditional Mentawaians that earthquakes do not always bring unfortunate consequences. Instead, little shakes on earth are expected to bring good fortunes. Indeed, a small earthquake is perceived as a sign of blessing. Chthonic spirits provide people with prosperity and luxurious amenities in the forests. Fruits and mushrooms are expected to bloom after an earthquake. Therefore, for Mentawaians, earthquakes do not always indicate bad fortunes or cause miserable lives. Mentawaians believe that earthquakes, especially great ones, are perceived as a sign of disaster. It is instigated by chthonic spirits upon the request of a kin group living in a village. This kin group may perform a ritual to request help from chthonic spirits to successfully achieve its desires. Shaking earth is perceived by the ritual performers as the

spirits' response to their request. Mantras, songs, and ritual formulae are verbally learnt by heart through the process of repetition.

In Mentawai, especially in Siberut Island, there is a popular song called *Teteu Amusiat Loga* ("Grandfather, Squirrel Shrills"). According to the Mentawaians in Siberut, this is just an ordinary song. However, after the 2004 earthquake in Aceh and the 2005 earthquake in Nias, some scholars and practitioners of disaster risk reduction have referred to this song as an earthquake song from Mentawai Islands (Yulianto et al. 2008). They are probably misled by the word *teteu* in the song lyrics, which resembles another word from a dialect spoken in the southern part of Mentawai Islands (i.e. Pagai Islands) that means "earthquake". In fact, this is just a popular song in Siberut whose lyrics were written in a local dialect where *teteu* means "grandfather" and not "earthquake". The lyrics are presented in Table 2 below.

Mentawaiian	Indonesian	English
• <i>Teteu, amusiat loga,</i>	• <i>Kakek, tupai menjerit,</i>	• Grandfather, squirrel shrills,
• <i>Teteu, ka tinambut leleu,</i>	• <i>Kakek, di perbukitan,</i>	• Grandfather, on a hill,
• <i>Teteu, girisit, nyau-nyau,</i>	• <i>Kakek, terjadi longsor, bunyi jeritan tupai,</i>	• Grandfather, landslides and squirrel shrills,
• <i>Amugolu teteuta Peilebu,</i>	• <i>Kakek kita Peilebu marah</i>	• Peilebu, our grandfather, is angry,
• <i>Arataddeake baikona,</i>	• <i>Pohon 'baiko'-nya ditebang,</i>	• His 'baiko' (bark tree) was chopped off,
• <i>Kuilag, paipai gougou, leilei gougou,</i>	• <i>Burung kutilang, dubur ayam, helai panjang bulu ayam,</i>	• Finch bird, chicken cloaca, rooster's sickle feather,
• <i>Bara sitak teteu,</i>	• <i>Ada yang tidak berkakek,</i>	• There would be a person without grandparents,
• <i>Lalalak paguru seilet.</i>	• <i>Ketokan sembarang masuk.</i>	• Knocking anywhere to get in.

Table 2. *Teteu Amusiat Loga*, Mentawaiian Song of Natural Disaster.

In Siberut, the song reflects how Mentawaians understand natural changes around them. Since 1970s, logging companies have been cutting off timbers in Mentawai, and this caused landslides. The song says that a tree's owner is angry because his tree has been cut down. The finch bird serves as a sign of death. Chicken cloaca represents the mouth of a person that repeatedly mutters mantras to call upon spirits of the people who cut off the tree. A rooster's sickle feather refers to a shaman who uses a headband decorated with sickle feathers. In sum, this is a song about an unhappy shaman who uses his magical power in a ritual to call out the soul of a person who had cut off a tree and hide the soul somewhere in order to punish him to death. This song is still related to a disastrous event but not necessarily to an earthquake.

7. MENTAWAIAN NARRATIVE OF THE ORIGIN OF EARTHQUAKES

Pumumuan sigegeugeu is the term referring to stories about the origin of earthquakes in most Mentawaiian spoken dialects in Siberut Island. The stories are called *pumumuan teteu* in the spoken dialects of two southern islands of Sipora and Pagai. On 19 April 2019, I visited a 75-year-old shaman living in Saibi Samukop named Marinus Siribetuk (see Picture 1). According to Marinus Siribetuk, "The earthquake occurred because some Mentawaians ancestors built their communal house (*uma*) in a wrong way, and the source of earthquake was the chthonic spirits". He added, "By shaking the earth, the chthonic spirits reminded human beings to fix and rebuild their communal house properly."



Picture 1. Marinus Siribetuk and His Wife (The photograph was taken by the author in 2019).

He then explained, "People should notice the wooden poles and planks before using them. The base points of the wooden poles should be in the ground and their top points should be facing the sky. Beams must be placed correctly. All base points of the beam must be in the same position, and they cannot be mixed up with top points. To obey this idea is to bring fortune to the house and its occupants." To the Mentawaians, everything has a spirit. In order to respect the spirit of woods, wooden materials for houses should be placed and used properly. People would stay happily and harmoniously in their house if they build it by placing the materials in a proper way. If a house is built properly, it would happily accommodate the spirits of the occupants, the spirits of the ancestors, and other spirits in nature whenever those spirits are summoned together in rituals.

Marinus Siribetuk explains that Mentawaians, especially shamans, believe in chthonic spirits; therefore, they give offerings through holes in the wooden floor of their communal house at the beginning of a healing ritual that symbolizes the opening of the gate between the human world and the domain of the chthonic spirits. By offering a small piece of meat or boiled egg, the Mentawaians, especially shamans, show their good gesture of respecting and honouring the spirits in the hope that the spirits would nurture them and make fruits trees grow abundantly. Marinus' explanation emphasizes an idea that earthquakes are related to human life through the way humans use natural materials to build their houses.

Earthquakes are constructed as a sign of error or mistake made by humans, as well as a blessing from the chthonic spirits to humans in the form of fruits such as durian. Rituals are human gesture to bring together and reconcile the chthonic spirits with humans living on earth. Marinus' story confirms that Mentawaians do have some traditional knowledge about earthquakes. Unfortunately, only few older people are still familiar with this knowledge, while the younger generations tend to adopt new forms of knowledge from outside, abandoning their traditional knowledge.



Picture 2. Teu Taloi Sanambaliu (centre) is Telling an Earthquake Story in Ugai Village.¹¹

Some Mentawai storytellers narrate short stories whose main themes revolve around earthquakes. Some utter longer narratives with more details. Nonetheless, all of these stories generally have similar plotlines and elements related to the origin of earthquakes. After comparing those stories, I use a story narrated by a 78-year-old Mentawaian named Teu Taloi Sanambaliu (see Picture 2) because his story represents all of the elements and plotlines of Mentawaian earthquake folklore. Teu Taloi Sanambaliu lives in a village called Ugai in Rereiket area in the interior of Siberut Island. Teu Taloi Sanambaliu narrated this story in the Rereiket dialect of Mentawai language on Friday, 13 June 2014. Below is my English translation of the story.

The Narrative of the Origin of Earthquakes (*Pumumuan Sigegeugeu*)¹²

There was a man named Sikeppai Laggai. He was a *rimata*, a social and ritual leader of his clan. One nice day, he called on his two sons and two nephews to come and sit near a shamanic fireplace (*abut kerei*) situated in the middle of *uma*, the communal house, in order to discuss a plan to build a new house because their current house was about to collapse.

The father commenced their discussion. "I call four of you to sit here near *abut kerei* (shamanic fireplace) in order to talk about our plan to build our new house. You have seen that our house is about to collapse."

The sons and nephews replied, "Indeed, we have seen that our house is not strong enough for us to live in anymore. What are we going to do?" They wanted to hear what their father would tell them.

"We are going to prepare ourselves for executing this plan by having enough food and other necessary housing materials," the father answered them.

"We need to process sago to obtain enough sago flour for several months. We will also collect bananas, taros, and sweet potatoes. Meanwhile, we also need to collect housing materials such as

11 This image was taken on 5 May 2019 from "Repdeman", a documentary film produced in 2018 by Neneng Susilawati and Dr. Udrekhan Hanif and directed by Dandhy Dwi Laksono of WatchDoc.

12 There are several dialects in Mentawai. Earthquake is referred to as *sigegeugeu* in most valleys in Siberut Island. In Sipora and Pagai Islands, it is called *teteu ka бага* or *teteu* in short. Earthquake stories from these islands were documented by Spina (1981, 269–278 in Indonesian; and 1981, 483–489 in Mentawaian). The word *teteu* in most dialects in Siberut Island may mean 'grandfather', 'grandmother', or 'grandchild'.

strong and hard woods like *attei porak* and *ribbu* that can be used to support the whole construction of our future communal house.”

They agreed to gather the food supply. They cut several sago palms and processed them to obtain sago flour. The women harvested bananas, taros, and sweet potatoes. They also went to collect bamboos in order to cook their meals. The men processed the sago palms for several weeks. Afterwards, they put the resulting sago flour into a cylindrical tube plaited out of sago leaves. They damped the cylinders in a small pond in order to maintain the freshness of the sago flour inside. Thereafter, two sons and nephews went to hunt in the forest where they would also select woods for housing materials. There they found two sorts of local forest tree, *attei porak* and *ribbu*.

Keppai Laggai, the father of the clan, invited all his family members, “When making our new house, I ask you all to obey all taboos, so that we can avoid any misfortune.” He added, “Ladies, you are not allowed to catch shrimps in your taro field while we are cutting the trees.” He then conveyed this particular message to young girls, “You are not allowed to eat eels and coconut palm frond, and to drink sour juice of citrus.” He emphasised that they should always be in the mind-state of a ritual. All family members agreed to follow what the father just said. The father prepared a ritual and all family members gathered to support the idea of making a new communal house. Men slaughtered pigs and chicken while women prepare sago and taro for their ritual meals. As soon as the meals were ready, the ritual was about to begin.

After the ritual, the men went to inspect two trees found earlier by the sons while they were hunting in the forest. After performing a small ritual, they cut the trees and made 28 pillars out of them. Family members were mobilized to carry those 28 pillars home. On the next day, they dug a hole and erected one wooden pillar. They waited for any bad or good signs from the pillar. In the next morning, they found out that none of the family members was injured, sick, or dead. The pillar remained standing, and this was construed as a positive sign. The father decided to build the house in the selected location by making 27 other holes. The father requested his younger nephew to get into a hole. However, the older nephew questioned his uncle’s motives and thought that the uncle planned to murder his little brother. “Why did you do that? You could’ve killed my little brother.” He said that to his uncle. The uncle ignored him and did not say a word in reply.

Every time the younger nephew got into a hole, his uncle immediately inserted a wooden pillar to seal the hole. However, he failed to kill his younger nephew because his younger nephew always escaped from danger and stood atop of the wooden pillar on time before the pillar was inserted to the hole. The uncle was surprised that his nephew was always able to escape. The older nephew loathed his uncle’s plan and went to his little brother in order to warn him that their uncle had a malicious idea to kill them. In order to separate themselves from their uncle, the older nephew suggested his little brother to let himself be sealed inside the hole in order to fulfil their uncle’s plan. In this way, the little brother could live forever and stay in the earth and joined the spirits of the earth (*tai ka baga*) in the domain of chthonic spirits. Thus, the little brother accepted his big brother’s advice to stay in a hole to be sealed under a pillar forever in order to complete the house’s construction. As the little brother did not come out anymore, they then proceeded to complete the construction of the common house until they finished the roof. Then, the whole family worked together to build a small house for the older nephew and his nuclear family.

One night, the older nephew’s little brother visited him in a dream, telling him what to do in order to survive from any hazards of earthquake that can occur anytime. “When you put the roof of your house, you should not bind it tightly, not like what they did to our uncle’s house,” the little brother said. After roofing the house, the little brother who now resided in the domain of chthonic spirits visited his older brother again, telling him to gather all goods and placed them in the banana grove. If they want to eat, their meal should be brought there as well. If they wanted to bless their meals, they should say the blessing loudly so that the little brother living in the chthonic world would hear and know that his older brother and his family were performing a ritual and going to eat. That moment would be a sign for the little brother to shake the earth and the houses would be affected by the quakes. The older brother took his little brother’s advice into consideration.

After building the new common house, the clan decided to perform a ritual. Pigs were slaughtered and pork was divided among family members. As they commenced to eat, the older

nephew and his family went to the banana grove and finished their meals there. The father of the clan was surprised to witness that his older nephew went to a banana grove to eat. "Why do you stay there in the banana grove? You can join us and eat your meals at home!" The father invited his older nephew and family to return home. However, the nephew refused, "We've decided to stay here as we like it." Before eating, the nephew blessed the meal loudly, "Here is our meal, bless us and bring us prosperity and a healthy life". The nephew's little brother residing in the chthonic world heard the blessing. Thereafter, they began to feel the earth shaking. It quaked more and more violently. The father and his family in the common house could not stand up and their meals spilled on the floor. Their house collapsed, and the roof was destroyed. Meanwhile, the roof of the older nephew's house was fallen apart but not destroyed. Their house was not really damaged and they were safe as they stayed in the banana grove.

The next day, the nephew erected his house again by using former materials. His uncle could not build his house anymore as all of the housing materials had been damaged by the earthquake. The uncle had to collect new housing materials.

After the house of the older nephew was completely built, his younger brother in the chthonic world visited him again in his dream. The younger brother said to his older brother, "Someday you have to come and visit me."

The older brother was surprised to see a durian tree growing to be a huge tree; it gave various fruits, not only durian but also mango and other fruits, "How is it possible that you have a tree with many different fruits?" The little brother explained, "This tree has been blessed, and it provides us with many different fruits. You can harvest whatever fruits you want. But you have to eat them here. You are not allowed to bring them away from here, unless you ask for my permission first to have this type of tree."

The huge tree gave fruits ceaselessly, and the older brother regularly visited his younger brother in the domain of chthonic spirits. In his last visit, the older brother took a durian seed without asking for his little brother's permission. He planted the seed, and it grew into a huge tree. The durian tree gave many fruits, and the older brother did not visit his little brother anymore. This made the little brother wonder why his older brother did not visit him anymore. One night, the little brother visited his older brother and found out that his older brother had the magical durian tree. Moreover, he found out that his older brother did not come to visit him because he had his own durian tree. However, his durian tree did not give any other fruits, except durian. It only gave durian fruits. He asked his older brother, "Where did you get the fruits, older brother?" The older brother felt ashamed, "I got it from your tree when I came to visit you last time." The little brother was upset, "Why did you not ask for my permission to have the durian seed? As you did not ask for any permission, you would not get the same tree as I have in the underworld: a tree that bears many different fruits. Now you have to plant many different trees in order to get different fruits, and you will get exhausted clearing and tending your garden as you have to clean those fruit trees one by one. And yet, you will not get fruits in all seasons. You have to wait until I shake the earth."

The younger brother explained, "If you should feel an earthquake in the morning, you could expect that the fruit season will begin. However, you should also expect the coming of several illnesses like flu, headache, cholera, fever, cough and stomach-ache. Some people may even die at the beginning of the fruit season. However, when fruits get bigger and are about to ripe, people may not die. You have to be prepared for protecting your fruits from pests. You have to prepare your bow and arrows because bats, squirrels, and birds will destroy your fruits. Your wife and other family members have to follow taboos so that you may not fall from fruit trees while climbing them to harvest the fruits." He also added, "However, if you feel any earthquakes during midday and midnight, that could be the sign of enemies approaching your place or outbreaks of particular disease, provided that you perform a ritual beforehand and ask for my help. You should stop making any new canoe or build any new house when you feel that type of earthquakes."

Thereafter, the younger brother returned to the chthonic world to join other chthonic spirits, separated forever from his older brother. Since then, earthquakes have occurred to serve as signs of different events that would befall earth. Following a morning earthquake, a week later different types of mushrooms would grow on the ground and dead timbers. Sometimes, it was the sign

of the beginning of durian and other trees season. Otherwise, it could be a portent of a horrible disaster such as the one that we witnessed recently. The difference is that nowadays, after an earthquake, there was no more mushroom growing. Instead, many buildings were damaged, and many boxes of instant noodles and humanitarian aids arrived at the sorrowful island.

The story told by Teu Taloi Sanambaliu is not related to any particular earthquakes occurring some hundred years ago. It is a general, ordinary mythical story telling about the origin of earthquakes. It conveys different elements of spiritual connections between people and spirits. The story also comprises some metaphoric and symbolic ideas of a human-spirit connection. The story says that the family head attempted to sacrifice one of his relatives by burying a younger nephew in a hole instead of sacrificing pigs or chicken. The younger nephew is described to have a special power that made him capable to escape from the threat of death. The younger nephew then sacrificed himself and chose to reside in the domain of the chthonic spirits, and this symbolises the link between a house and chthonic spirits that are expected to protect the house from any damage. This symbolises that a house is built on a special foundation that forms a mystical bound with spirits.

From this story, we know that the Mentawaians will first erect one pole in order to get a bad or good sign from the spirits. This pole is left to stand overnight before erecting the other remaining poles. It is indispensable to sacrifice animals such as chicken or pigs in order to place a mystical foundation and spiritual protection for the house (Schefold et al. 2003). Pigs or chicken offering is considered as a replacement for a human life as a bridge between the human world and the domain of chthonic spirits, and this connection is essential for preventing earthquakes. The story does not indicate how massive the earthquake was. Nonetheless, the fact that roof fell down suggests that it was a massive earthquake. Guidelines on how to prepare oneself during a great earthquake are also specified in the story. People are reminded to gather themselves around banana trees, not under big trees, coconut palms, or other hardwood trees. However, there is no information about tsunami after the occurrence of an earthquake. Instead, an earthquake is portrayed as the sign of the beginning of a fruit season and the arrival of diseases that may cause human deaths.

8. DISCUSSION

Examples of earthquakes and tsunamis from Simeulue and Solomon Islands show that the cycle of earthquakes is relatively short as it tend to reoccur in less than 100 years. Because of this, it is possible that one generation still remembers the tragedy and transmits it to a number of future generations. Stories such as *smong* which have been gathered from various Simeulue islanders by Syafwina (2014), Suciani *et al.* (2018), Gadeng *et al.* (2018), Yogaswara and Yulianto (2005), and Ayat S. Karokarodo (2014) is one obvious example. Some researchers could even meet with the witnesses of the 1907 disaster. In sum, information about the cycle of earthquake and tsunami can still be passed on using the concept of "remembering". People maintain memories of past events through various forms of oral tradition such as storytelling.

According to existing historical accounts, earthquakes and tsunamis that occurred around Mentawai Islands (near Sipora and Pagai Islands) in 1797 and 1833 are not found in Mentawai oral traditions. These events occurred about 200 years ago. The story about these earthquakes and tsunamis is rarely told or has never been heard at all in Mentawai. Therefore, they did not have any knowledge about collapsing houses or devastating tsunamis that may have referred to the 1797 and 1833 great earthquakes. Instead, Mentawaians generally recount stories about small earthquakes that are considered as a sign of prosperity without indicating any particular period of time. Earthquakes are simply known as signs of the beginning

of fruit and mushroom seasons. However, the Mentawaians' perspective gradually changes after the 2004 great earthquake in Aceh. The event was extensively covered by the media and evoked scary images. The characteristics of Aceh earthquake and tsunami, which was marked by a magnitude of above 9.0, receding seawater after several minutes, and the coming of tsunami afterwards, have been widely disseminated among Mentawaians in order to prepare them for similar great earthquakes and tsunamis in the future.

For a large majority of the Mentawaians, the characteristics of Aceh earthquake and tsunami are new pieces of knowledge since they did not have personal experience of any great earthquakes and tsunamis in the last 100 years. Then, great 7.9 and 8.5 magnitude earthquakes occurred in 2007. During the earthquake, the Mentawaians ran uphill, built a shelter, and stayed there for more than three months. There was no significant damage, no receding seawater, and no tsunami in this event. Only one casualty was reported. Therefore, the characteristics of the 2004 Aceh earthquake and tsunami were not found in the 2007 Mentawai earthquake. Then, another earthquake took place in 2010 in Mentawai. The earthquake occurred with a magnitude of 7.7 and not above 9.0, but it endured for two to three minutes. The seawater did not significantly recede, but a tsunami devastated several villages in the southern-western part of Mentawai Islands some minutes later. The earthquake, which was supposed to be a sign of prosperity, became a terrifying disaster. It incurred more than 500 casualties, while more others were missing during the event. A survey carried out by several scientists found that the characteristics and factors of the 2010 Mentawai tsunami were different from those of the 2004 Aceh tsunami (Hill et al. 2012; Mikami et al. 2014).

The Mentawai case becomes interesting because of the absence of any oral tradition that should have played a great role in saving people's life, while their current knowledge about earthquakes and tsunamis was not sufficient either. More than 200 years after the last tragedy, the memory of earthquakes and tsunamis did not survive the passage of time, nor is it found in family stories or any particular oral tradition. This missing information can be caused by different social events that have taken place in the life of Mentawaians over the past 200 years. People's migration and family separation that took place over several generations can be seen as two contributing factors. Social and political suppressions endured by the community may have also eradicated some collective memory of a historical event. People have discontinued recounting their oral traditions. Consequently, the missing oral tradition could not save many people's lives during the 2010 Mentawai earthquake and tsunami.

In addition to that, the 2004 Aceh earthquake occurred with a magnitude of 9.1–9.3 Richter scale and generated tsunami in Aceh. The 2007 earthquake led people in Mentawai to take the wrong decisions: they did not immediately evacuate themselves. However, a small number of survivors did notice some natural phenomena that occurred some days prior to the 2010 earthquake and tsunami. The odd flying patterns of birds and ducks around villages as well as barking dogs were seen as unusual phenomena. Apparently, the nature was sending a message. Accordingly, those who noticed prepared themselves for the worst. This is another piece of traditional knowledge and ancestral wisdom that the Mentawaians still preserve. Some of the 2010 tsunami survivors relied on this type of knowledge. In this way, local wisdom can also serve as mitigation knowledge for the local people. Hence, the oral tradition pertaining to the origin of earthquakes do exist; however, the historical narratives of specific earthquakes in the past, especially the ones that happened some hundred years ago, are absent due to various factors such as family migration, family segregation, and political pressures. Those factors have disconnected these people from their local wisdom pertaining to natural disasters. This local wisdom involves specific animals that sound and behave strangely such as dogs that are continuously barking or birds that are flying around a village a few days prior to the occurrence of an earthquake. These phenomena serve as a sign that people have to prepare themselves for potential disasters that may affect their lives. In Mentawai, many people had witnessed peculiar behaviours of animals

three days prior to the earthquake and tsunami on 25 October 2010. They were quite familiar with such circumstances, which alert them to the impending disaster.

9. CONCLUDING REMARKS

Oral tradition is a collection of verbal products based on social and cultural practices of a society. A set of personal experiences shared by some members of the community to others is part of oral tradition. In the course of time, it becomes a communal heritage comprising historical accounts and lessons from past events which have occurred in the society. This heritage is disseminated by telling stories about great disasters and events that took place three or four generations earlier to the next generations in various family occasions. Taking these stories as containing important messages, current generations would remember essential information of historical events and disasters, so that they can better prepare themselves for similar occurrences in the future. The point is that the whole community is aware of the great consequences of natural disasters that have devastated the lives of their ancestors.

Several communities in Indonesia still remember well the earthquakes and tsunamis that occurred some decades ago, while others do not because the last events occurred more than 200 years ago. For those who do remember such past natural disasters, stories about earthquakes and tsunamis really evoke fear and nightmare. To save their descendants' lives, the old survivors regularly shared stories about natural disasters with the younger generations. In this way, the younger generations can obtain enough knowledge that may save themselves from the devastating effects of any future earthquakes and tsunamis. Dissemination, memorising, and raising awareness of verbal historical accounts are the actions that the local people must take in order to respond to the messages of past events and prepare themselves for any future events, including the cycle of earthquakes and tsunamis that has always plagued an area called the "Mentawai megathrust" (McCloskey et al. 2008; Sieh 2005). Hopefully, the Mentawaians' experience of dealing with the 2010 tsunami may help them cope with future catastrophes.

REFERENCES

- Badan Pusat Statistik. 2016. *Statistik Daerah Kabupaten Kepulauan Mentawai 2016*. Tua Pejat: Badan Pusat Statistik.
- Bakker, Laurens. 1999. *Tiele Turis! The Social and Ethnic Impact of Tourism in Siberut (Mentawai)*. M.A. Thesis, Leiden University: The Netherlands.
- Briggs, Charles L. 1986. *Learning How to Ask: A Sociolinguistic Appraisal of the Role of the Interview in Social Science Research*. Cambridge [ect.]: Cambridge University Press.
- Briggs, Richard W., Kerry Sieh, Aron J. Meltzner, Danny H. Natawidjaja, John Galetzka, Bambang W. Suwargadi, Ya-ju Hsu, Mark Simons, Nugroho Hananto, Imam Suprihanto, Dudi Prayudi, Jean-Philippe Avouac, Linette Prawirodirdjo, and Yehuda Bock. 2006. "Deformation and slip along the Sunda megathrust in the great 2005 Nias Simeulue earthquake". In *Science* 311 (5769): 1897–1901.
- Bernard, H.R. 1994. *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. London: Sage Publications.
- Coronese, Stefano. 1986. *Kebudayaan Suku Mentawai*. Jakarta: Grafidian Jaya.
- Coser, Levis A. 1992. "Introduction: Maurice Halbwachs 1877–1954". In *Maurice Halbwachs, On Collective Memory* (edited, translated, and with an introduction by Levis A. Coser), 1–34. Chicago: The University of

- Chicago press. [Translated from *Les Cadres Sociaux de la Mémoire*, published by Presses Universitaires de France, Paris, 1952].
- Finnegan, Ruth. 1992. *Oral Traditions and Verbal Arts: A Guide to Research Practices*. London and New York: Routledge.
- Fritz, Hermann H. and Nikos Kalligeris. 2008. "Ancestral heritage saves tribes during 1 April 2007 Solomon Islands tsunami". In *Geophysical Research Letters* 35 (L01607): 1–5.
- Gadeng, A.N., E. Maryani, and D. Rohmat. 2018. "The value of local wisdom *smong* in tsunami disaster mitigation in Simeulue Regency, Aceh Province". In *Earth and Environmental Science* 145: 1–6.
- Halbwachs, Maurice. 1992. *On Collective Memory* (edited, translated, and with an introduction by Lewis A. Coser). Chicago: The University of Chicago Press. [Translated from *Les Cadres Sociaux de la Mémoire*, published by Presses Universitaires de France, Paris, 1952].
- Hayes, Gavin P., Emma K. Myers, James W. Dewey, Richard W. Briggs, Paul S. Earle, Harley M. Benz, Gregory M. Smoczyk, Hanna E. Flamme, William D. Barnhart, Ryan D. Gold, and Kevin P. Furlong. 2017. *Tectonic Summaries of Magnitude 7 and Greater Earthquakes from 2000 to 2015: U.S. Geological Survey Open-file Report 2016–1192*. Reston: Virginia. <http://doi.org/10.3133/ofr20161192>.
- Hill, Emma M., Jose C. Borrero, Zhenhua Huang, Qiang Qiu, Paramesh Banerjee, Danny H. Natawidjaja, Pedro Elosequi, Hermann H. Fritz, Bambang W. Suwargadi, Ignatius R. Pranantyo, Linlin Li, Kenneth A. Macpherson, Vassilis Skanavis, Costas E. Synolakis, and Kerry Sieh. 2012. "The 2010 Mw 7.8 Mentawai earthquake: Very shallow source of a rare tsunami earthquake determined from tsunami field survey and near-field GPS data". In *Journal of Geophysical Research* 117 (B06402): 1–21.
- Hoskins, Janet. 1998. *Biographical Objects: How Things Tell the Stories of People's Lives*. New York: Routledge.
- Karokarodo, Ayat S. 2014. "Kearifan lokal selamatkan warga Simeulue dari amukan tsunami." In *Mongabay, Situs Berita Lingkungan*. <https://www.mongabay.co.id/2014/12/20/kearifan-lokal-selamatkan-warga-simeulue-dari-amukan-tsunami-bagian-1/>.
- Loeb, Edwin M., 1929. "Mentawai Myths". In *Bijdragen tot de taal-, land-, en volkenkunde* 85: 66–244.
- McAdoo, Brian G., Lori Dengler, Gegar Prasetya, and Vasily Titov. 2006. "Smong: How an oral history saved thousands on Indonesia's Simeulue Island during the December 2004 and March 2005 Tsunamis". In *Earthquake Spectra* 22 (S3): 661–669.
- Meltzner, Arron J., Kerry Sieh, Hong-Wei Chiang, Chuan-Chou Shen, Bambang W. Suwargadi, Danny H. Natawidjaja, Belle E. Philibosian, Richard W. Briggs, and John Galetzka. 2010. "Coral evidence for earthquake recurrence and an A.D. 1390–1455 cluster at the south end of the 2004 Aceh–Andaman rupture". In *Journal of Geophysical Research* 115 (B10402): 1–42.
- Mikami, Takahito, Tomoya Shibayama, Miquel Esteban, Koichiro Ohira, Jun Sasaki, Takayuki Suzuki, Hendra Achari, and Teguh Widodo. 2014. "Tsunami vulnerability evaluation in the Mentawai islands based on the field survey of the 2010 tsunami". In *Natural Hazards* 71: 851–870.
- McCloskey, John, Andrea Antonioli, Alessio Piatanesi, Kerry Sieh, Sandy Steacy, Suleyman Nalbant, Massimo Cocco, Carlo Giunchi, Jiandong Huang, and Paul Dunlop. 2008. "Tsunami threat in the Indian Ocean from a future megathrust earthquake west of Sumatra". In *Earth and Planetary Science Letters* 265: 61–81.
- Morris, Max. 1900. *Die Mentawai-Sprache*. Berlin. N.W.: Verlag von Conrad Skopnik.
- Natawidjaja, Danny H., Kerry Sieh, M. Chlieh, John Galetzka, Bambang W. Suwargadi, H. Cheng, R.L. Edwards, Jean-Paul Avouac, and S.N. Ward. 2006. "Source parameters of the great Sumatran

- megathrust earthquakes of 1797 and 1833 inferred from coral microatolls". In *Journal of Geophysical Research* 111 (B06403): 1–37.
- Oliver-Smith, Anthony and Susanna M. Hoffman (Eds.). 1999. *The Angry Earth: Disaster in Anthropological Perspective*. New York, London: Routledge.
- Persoon, Gerard A. 1994. *Vluchten of Veranderen: Processen van Verandering en Ontwikkeling bij Tribale Groepen in Indonesië*. Ph.D. Dissertation. Leiden: Faculteit Sociale Wetenschappen, Universiteit Leiden.
- ____ and Reimar Schefold (Eds.). 1985. *Pulau Siberut: Pembangunan Sosio-ekonomi, Kebudayaan Tradisional, dan Lingkungan Hidup*. Jakarta: Bhratara Karya Aksara.
- Puy, J. du. 1845. "Een paar aantekeningen omtrent vuurbergen en aardbevingen op Sumatra". In *Tijdschrift voor Neêrland's Indië* 9: 110–116.
- Rappoport, Dana. 2016. "Why do they (still) sing stories? Singing narratives in Tanjung Bunga (eastern Flores, Lamaholot, Indonesia)". In *Wacana, Journal of the Humanities of Indonesia* 17, no. 2: 163–190.
- Schefold, Reimar. 2017. *Toys for the Souls: Life and Art on the Mentawai Islands*. Brussels: Primedia.
- ____. 1991. *Mainan Bagi Roh: Kebudayaan Mentawai*. Jakarta: Balai Pustaka.
- ____. 1989. "The origins of the woman on the raft: On the prehistory of the Mentawaians". In W. Wagner (ed.) *Mentawai: Identität im Wandel auf Indonesischen Ausseninseln*, 1–26. Bremen: Veroeffentlichungen aus dem Uebersee Museum Bremen, Reihen C, Deutsche Geographische Blaetter, N.F. Band 5.
- ____. 1988. *Lia: Das Grosse Ritual auf den Mentawai-Inseln (Indonesien)*. Berlin: Dietrich Reimer.
- ____, Gaudenz Domenig, and Pieter Nas (Eds.). 2003. *Indonesian Houses: Tradition and Transformation in Vernacular Architecture*. Verhandelingen van het Koninklijk Instituut voor Taal-, Land-, en Volkenkunde 207. Leiden: KITLV Press.
- Sather, Clifford. 2017. *A Borneo Healing Romance, Ritual Storytelling and the Sugi Sakit: A Saribas Iban Rite of Healing*. Sarawak, Malaysia: Borneo Research Council.
- Sieh, Kerry. 2005. "Sumatran megathrust earthquakes: From science to saving lives". In *Royal Society*, London. <http://www.tectonics.caltech.edu/sumatra/downloads/papers/Ssm.pdf>.
- ____, Danny H. Natawidjaja, Aron J. Meltzner, Chuan-Chou Shen, Hai Cheng, Kuei-Shu Li, Bambang W. Suwargadi, John Galetzka, Belle Philibosian, and R. Lawrence Edwards. 2008. "Earthquake supercycles inferred from sea-level changes recorded in the corals of West Sumatra". In *Science* 322 (5908): 1674–8.
- Sihombing, Herman. 1979. *Mentawai*. Jakarta: Pradnya Paramita.
- Spina, Bruno. 1980. *Mitos dan Legenda Suku Mentawai (Bahasa Indonesia)*. Jakarta: Balai Pustaka.
- Steadly, Mary Margaret. 1993. *Hanging without a Rope: Narrative Experience in Colonial and Postcolonial Karoland*. Princeton, New Jersey: Princeton University Press.
- Stumpff, Dr. 1845. "Aan de redactie van het tijdschrift voor Neêrland's Indië". In *Tijdschrift voor Neêrland's Indië* 7: 156–158.
- Suciani, A., Z.R. Islami, S. Zainal, Sofiyani, and Bukhari. 2018. "'Smong' as local wisdom for disaster risk reduction". In *Earth and Environmental Science* 148 (012005): 1–7.
- Syafwina. 2014. "Recognizing indigenous knowledge for disaster management: Smong, early warning system from Simeulue Island, Aceh". In *Procedia Environmental Sciences* 20: 573–582.
- Yogaswara, Herry and Eko Yulianto. 2005. *Smong: Local Knowledge and Strategies on Tsunami Preparedness in Simeulue Island, Nangroe Aceh Darussalam*. Research Report. Jakarta: UNESCO and LIPI.
- Yulianto, Eko, Fauzi Kusmayanto, Nandang Supriyatna, and Mohammad Dirhamsyah. 2008. *Surviving a Tsunami: Lessons from Aceh and Southern Java, Indonesia*. Jakarta: UNESCO.
- Thompson, Paul. 2000. *The Voice of the Past: Oral History*. New York (etc.): Oxford University Press.

- Tulius, Juniator. 2012. *Family Stories: Oral Tradition, Memories of the Past, and Contemporary Conflicts over Land in Mentawai-Indonesia*. Ph.D. Dissertation. Leiden: Universiteit Leiden.
- _____. 2014. "Stranded people: Mythical narratives about the first inhabitants of Mentawai Islands". In *Wacana, Journal of the Humanities of Indonesia* 14, no. 2: 215–240.
- _____. 2018. "Clifford Sather, A Borneo healing romance: Ritual storytelling and the Sugi Sakit, a Saribas Iban rite of healing" [A Book Review]. In *Bijdragen tot de Taal-, Land-, en Volkenkunde*, (Journal of the Humanities and Social Sciences of Southeast Asia) 174 (4): 532–534.
- Vansina, Jan. 1973. *Oral Tradition: A Study in Historical Methodology*. Middlesex, England: Penguin University Books.
- _____. 1985. *Oral Tradition as History*. Madison, Wisconsin: The University of Wisconsin Press.
- Whittaker, D. J. 2009. "Phylogeography of Kloss's Gibbon (*Hylobates Klossii*) Populations and Implications for Conservation Planning in the Mentawai Islands". In *The Gibbons: New Perspectives on Small Ape Socioecology and Population Biology*, eds. Susan Lapan and Danielle June Whittaker, 73–89. New York: Springer.
- World Wildlife Fund (WWF). 1980. *Saving Siberut: A Conservation Master Plan*. Bogor: WWF-Indonesian Programme.