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TOO GOOD TO BE TRUE? HOW A REMOTE ISLAND COMMUNITY DEVELOPED A 100% EFFECTIVE RISK COMMUNICATION STRATEGY AND WHAT AUSTRALIA CAN LEARN FROM IT

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INTRODUCTION

On 13 October 2005 the leaders of the island of Simeulue were presented with a prestigious award by the United Nations. The Sasakawa Award for Disaster Reduction was given in recognition of the island community losing a remarkably low number of people during the 26 December 2004 Indian Ocean tsunami. The award paid tribute to the fact that Simeulue accomplished a "unique achievement in the midst of all the death in Aceh due to the tsunami" and acknowledged that an oral story saved the community. In fact, of a population of 80,000, only 7 people died during the incident – and locals insist that 6 of those died during the earthquake and only one – a man named Laksahmin – died from the tsunami.

Research published soon after the tsunami indicated that the essence of this unique achievement was a traditional story which included information on the signs of an impending tsunami and the action to be taken to minimise loss of life.

In the indigenous story tsunami is called "smong" and the knowledge of smong is based on the community's experience of a previous smong event. This earlier tsunami occurred on 4 January 1907 and affected 950 km of the Sumatran coast.

The core of the old story (from both the literature and from the interviews that comprise this research) is that the big tsunami struck Simeulue in 1907 killing a great proportion of the population. The survivors were those who ran to the nearby hills. Ever since then the story has been repeated in many private and public social contexts. Old people and grandmothers in particular reiterate the story. The principal story elements are:

1) Jika gempa kuat	1) If there is a strong earthquake
2) Jika laut surut	2) If the sea recedes
3) Lari ke gunung	3) Run to the mountains
3b) Ngakk menunggu - lari saja!	3b) Don't wait - just RUN!

This paper sets out the preliminary results of a PhD research project which is exploring the Simeulue DRR phenomenon. This project aims to generate an understanding of how the simple narrative described above came about and in particular, why it was so effective in minimising loss of life in 2004. It is hoped that these findings can be adapted to improve risk communication and DRR in other locations in Indonesia and indeed the rest of the world.

PULAU SIMEULUE

Simeulue lies at the end of the string of islands off the coast of Sumatra that parallel the Sunda megathrust and that mark the edge of the Sunda tectonic plate. Simeulue itself is located about 80km from the subduction zone. Following the 9.2 Mw earthquake on the morning of 26 December 2004. Simeulue was the first place to be struck by the subsequent tsunami.

Pulau Simeulue is the largest of a group of 62 islands that constitute Simeulue Regency in the province of Aceh, Indonesia (see Figure 1). In total, the Regency covers an area of about 205,000 ha, lying about 155km off the Sumatran coast. Until 1999, Simeulue was part of Aceh Barat but seems to have maintained its own distinct sense of identity and, apart from travel restrictions, seems to have been relatively untroubled by the long-running conflict between Acehnese separatists (GAM) and the Indonesian government.

Most of the 93,499 people on Simuelue live in 138 villages spread along the coast, with a sparsely occupied and steep rainforest hinterland. The population has been growing at approximately 2.5 percent. The economy is dominated by agriculture and fishing with a relatively small influx of surf-based tourists.

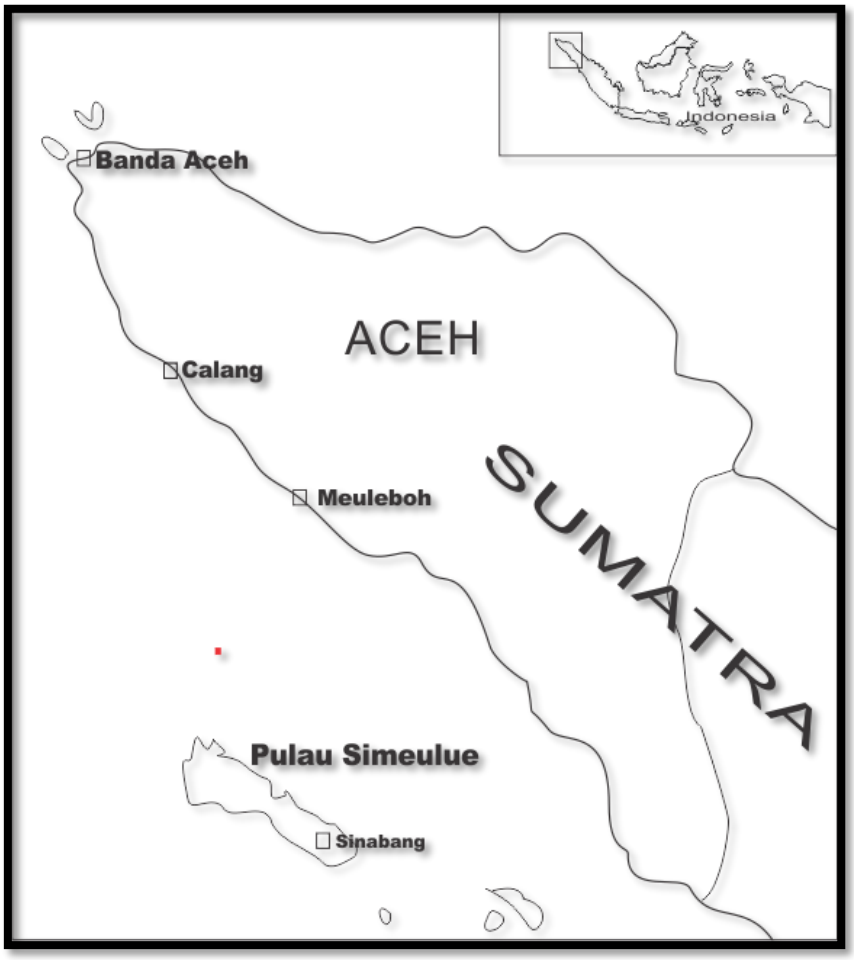

FIGURE 1 - LOCATION OF PULAU SIMEULUE

While few people died in the 2004, the earthquake and tsunami had a devastating effect on Simeulue's infrastructure. Of the 171 schools on the island, 169 were completely destroyed. Sixty bridges collapsed and 210 km of roads were damaged, as were three fishing ports, 40 medical clinics and the general hospital in Sinabang, the island's capital. More than 85 per cent of Simeulue's people saw their homes or livelihoods destroyed.

PRELIMINARY FINDINGS

Narrative interviews were conducted in Simeulue in 2016 and 2017. Most interviewees volunteered that they felt a duty to contribute to the research.

Ahmadi: "We hope that many researchers come to Simulue to do research and I wish you all the best with your research because I want the story to become popular so that more people can be saved from the disaster."

They expressed a sense that the local tsunami story in Simeulue was a 'gift' that they wished to provide to their countrymen. They felt that they were given so much by others after the tsunami demolished towns and communities that they should give something back.

KEEPING THE DRR NARRATIVE ALIVE

ISOLATION AND POVERTY

With respect to the issue of maintenance of a story over 100 years and its salience, several threads of evidence seem important. First the island was isolated and poor. Infrastructure inhibited mass transit and people were responsible for their own affairs.

Denny said: Prior to the tsunami "things were not good. There were only 6 cars on the island. There was no petrol station. The roads were gravel and in poor condition. There was only a clinic, no hospital."

As Rampengan et al. (2014) point out, while poverty and isolation are not desirable, island communities can develop considerable degrees of resilience through a self-reliance born of necessity. On Simuelue isolation may have contributed to a relatively reduced immersion in national or international news and information and a self-reliant program of entertainment and information sharing. Much of this devolved to typical cultural pursuits such as music "ngangdong" and story-telling "inafi-inafi".

PEACE

For most of the 20th Century Simeulue was relatively peaceful century. In this situation, personal and family security was not threatened by warfare. While occupied by the Japanese during WWII, participants tacitly indicate that this period was relatively benign. Further, the long-running civil conflict between the GAM separatists in Aceh (of which Simeulue is a part) and the Indonesian government (Gaillard et al., 2008; Sukma, 2006) seems not to have touched Simeulue. A number of participants seemed proud to mention that 'GAM was not here'.

CULTURAL 'FOUNDER EFFECT

Another factor that may be contributing to the strength of the tsunami narrative in Simeulue might be called 'cultural founder effect'. Founder effect is a phenomenon well described in biology. Schwaegerle et al (1979:1210) note that "[d]uring the course of migration and dispersal, new populations of a species may be founded by a small number of initial colonists. The genetic material of such a population will be limited to those alleles introduced by these few founders and may not be representative of the species as a whole."

On Simeulue, the small number of survivors of the 1907 tsunami founded a cultural tradition of 'smong'. Survivors repeated the story regularly and put great emphasis on its key messages.

A SIMPLE FORMULA WITHIN A MORE TEXTURED NARRATIVE

The key messages grandma reiterated comprise the 'essential knowledge' required to take appropriate action when a tsunami threatens are incorporated in the four-point list in the introduction. While the actual story may be transmitted differently by individuals, local colour added, references made to specific family members etc., research participants consistently reported the four elements of the story that really mattered.

This very simple construction provides critical information about the signs that indicate a high likelihood of an impending tsunami. There are other natural signs and these may be reported as embellishments to the main story.

The key elements also gives a clear direction about what action to take if the tsunami signs are present. And the instruction is readily achievable in Simeulue, with no inhabited land being more than a few kilometres from a suitable elevation. This means that the story recommends action which is readily achievable. This realistic action contributes to self-efficacy on Simeulue in a way that may not be as effective in other geographic settings.

Finally, element 3b provides a mental prod to action. Once you have identified that a tsunami is likely, do not think about it, do not wait to see what happens, just act.

'HERD IMMUNITY'

Interviews indicate that not everyone on Simeulue knew the story of smong in 2004. One woman interviewed had moved to live in Sinabang from the mainland only months before the tsunami.

In the midst of the shock and confusion of the massive earthquake which destroyed her home, she was aware of people, all of them, all around her yelling "smong" and "lari". In a sense the 'peer group pressure' was immense and she ran to the nearby hill with the rest of the village.

So in another analogy, this time to vaccinations, not everyone knows the smong DRR story. But the percentage of people who do is so high that the few outliers are protected and almost literally swept up in the spontaneous evacuation that occurred following the earthquake.

TAKING ACTION

INFORMATION FROM A TRUSTED SOURCE

There is one observation arising from the testimony of participants in the project so far that may go some way to explaining why people did not just repeat the tsunami story, but took direct action when the signs materialised. This is the fact that grandmothers are central to the transmission of the story. All but one participant related the importance of the telling and re-telling of the tsunami story by their grandmother. The story was told in many family contexts and many participants told how grandma told them the story at bedtime. In Simeulue as much as anywhere, grandmothers are held in very high esteem and many participants described their 'special' relationship with their grandma as a child.

Abdi: "My grandmother told me about smong. The role [of nenek] in my period is like - she always spoil her grandchildren - so we are closer to our nenek than our parents. She send us to bed, she gives us money. So we are closer to her than to our parents. So before she sends us to bed, or while sitting and relaxing she tells us that if some day the big earthquake happens usually a big wave will come. In Simuelue grandma used to be someone I report about everything to. So for example if my dad or my mum were angry at me, or people disturb me I report it to my grandma because nenek plays dominant role, and it's very common that people are really close with their grandmother."

Andre's grandma told the story every Thursday night after the family read the Koran:

"The earthquake happened my grandma said. Her skin was wrinkled but her hair was still black and her teeth were good. She said "If earthquake happens - run, don't bring anything. After the earthquake take the rice, the water, clothes, trousers and check the sea, if the water recedes RUN FAR."

She said shaking her finger. She was still young in 1907, she knew many people died. In her version only her tribe survived. After one month when the water had retreated my family went down from the mountain and they found that other tribes had survived. After that they had two children."

The inculcation of the simple tsunami DRR story by highly esteemed and much loved grandmas may be an important aspect of the Simeulue DRR phenomenon. Trust has been identified as one fundamental component of effective risk.

There is possibly no more trusted information source than grandma.

CONCLUSION

The tsunami DRR model on Simeulue invokes a simple program of observation and action that is phrased in highly local terms. The smong story is autochthonous and repeated so frequently that it may not be thought of as a DRR message. Smong is simply part of the culture of Simeulue - part of the island's particular character. Three (older male) participants described how they had not passed the story on when living in cities on the mainland. They gave a sense that the story was attached to Simeulue, it was parochial and they did not think it was relevant to life in the big city – at the time.

The story is in a real sense public information. While the periodicity of tsunami is long and the likelihood of a tsunami event in any given year is low, the story has become widely accessible. It is 'open-access'.

On Simuelue then, the responsibility for taking action in the event of tsunami is placed upon each individual via the recurrent telling of the story. Some participants described their own actions in rousing their neighbours or village to action, but it is clear from the pervasive testimony that these actions, while not redundant, merely make a timely reinforcement of a course that everyone already knows. Following the massive earthquake many people in a community are yelling "smong, smong". This spurred on Simeulue locals, but was not understood or acted upon in Meulaboh or Banda Aceh.

The widespread and regular repetition of the simple core message of the Simeulue tsunami story means that there is little risk of the narrative changing or losing its veracity as in the game "Chinese Whispers". Everyone knows the terms and repeats them accurately. This public re-verification of a simple wisdom enlists everyone in the DRR program. It may be that by combining this with the delivery of that information by grandmothers (as opposed to teachers or agency officers) the people of Simeulue have created the ultimate risk communication program. Rather than being 'Too good to be true' the granting of the Sasakawa Award for Disaster Reduction to the people of Simeulue seems entirely appropriate.

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