

Case Study:

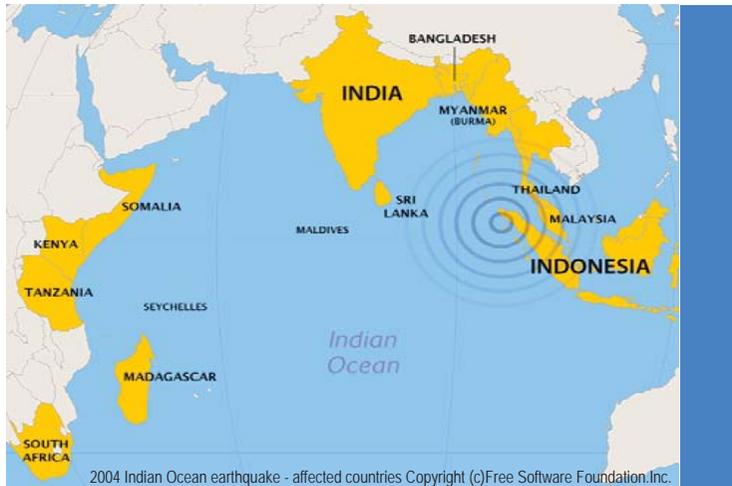
Traditional Knowledge about Smong in Aceh

The earthquake followed by tsunami on 26 December 2004, struck several regions of Aceh and Nias Island, North Sumatra, taking a toll of hundreds of thousands of lives and causing the destruction of various physical facilities and infrastructure including houses owned by the population. However, in Simeulue Island with 95% of its population living on coastal areas close to the earthquake's epicenter, the number of victims that died was relatively minimal. According to an official report issued by the district government, the number of dead was 7 people out of the total population of over 78,000.

Simeulue Island, off Aceh's west coast, offers lessons on surviving a near-source tsunami without technological warnings. Generated near the earthquake epicenter just 50 km from the island's north end, waves meters high reached most the island's shores a few tens of minutes after the shaking began. The islanders received no advance notice from radios, sirens, cell phones, or tsunami warning centers. Yet just seven people died. What saved thousands of lives was a combination of natural and traditional defenses: the island's coastal hills and the islanders' knowledge of when to run to them.

Islanders had passed along this knowledge, most commonly from grandparent to grandchild, by telling of smong—a local term that covers this three-part sequence: earthquake shaking, withdrawal of the sea beyond the usual low tide, and rising water that runs inland. Smong stories filled free time, taught good behavior, or provided perspective on a fire or earthquake. The teller often concluded with this kind of lesson: "If a strong tremor occurs, and if the sea withdraws soon after, run to the hills, for the sea will soon rush ashore." Smong can be traced to a tsunami in 1907 that may have taken thousands of Simeulue lives. Interviews in 2006 showed islanders familiar with tangible evidence of the 1907 tsunami: victims' graves, a religious leader's earlier grave that the 1907 tsunami had left unharmed, stones transported from the foundation of a historical mosque, coral boulders in rice paddies.

Langi, barely 50 km from the epicentral area where the tsunami began, evacuated in 2004 with astonishing speed and success. The tsunami is said to have started coming ashore there 8 minutes after the earthquake. The waves, reaching heights of 10-15 meters, swept houses off their concrete



2004 Indian Ocean earthquake - affected countries Copyright (c)Free Software Foundation, Inc.

foundations. Yet none of the village's 800 residents died. When Simeulue's system for early warning saved thousands from the 2004 tsunami, its only hardware consisted of reminders of a preceding tsunami, such as the mosque foundation, graves, and coral boulders pictured here. Storytelling reinforced by these reminders had taught the islanders to use earthquake shaking as a natural signal to run to nearby hills.



Source: Assessing and Recognizing Community Preparedness in Natural Disaster in Indonesia Smong. The Local Knowledge of Semeulue: History and Sustainability LIPI, UNESCO, UNISDR

e-Media: IRP Facebook Page



International Recovery Platform has recently expanded its web presence following the launch of a Facebook page. The page provides updates, links and opportunities to discuss issues, cases and experiences relevant to disaster recovery. Online users have access to weekly updates and information from IRP partners.

We appreciate if you disseminate this information to help spread "BUILD BACK BETTER"

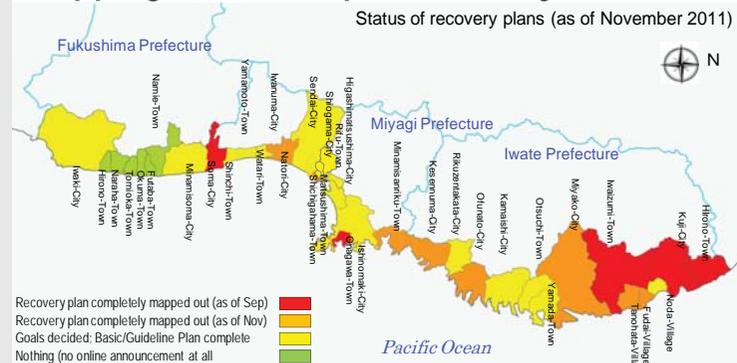
<http://www.facebook.com/pages/International-Recovery-Platform/146131622116745?ref=pb>

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Case Study:

Minami Sanriku Town: Mapping out Municipal Recovery Plans



As of 12 December 2011, Japan Government reported 15,841 people confirmed dead and 3,490 people missing from the Great East Japan earthquake and tsunami of 11 March 2011. The total damages to stock in 7 prefectures is estimated at 17 trillion JPY (211 billion US\$). This is almost double of total damaged caused by Hurricane Katrina (125 billion US\$) and the Kobe earthquake (100 billion US\$).

Minami-sanriku town is one of the most severely damaged municipalities. This town lost 24.7% of the disaster response related workers. Minami Sanriku's recovery concept will include reconstruction of a safe community, building an environmentally friendly society, and revitalization of industry.

(i) Issue 1: Relocation to higher area - land use plan. For protection from tsunami, altitude is critical. If the houses were built on higher land, they suffered no damage. In the new plan, Minami-sanriku town evacuation area, residential and public facility area is planned to be relocated to higher ground above the maximum level of tsunami. The industry and tourism facilities will be located closer to the sea above the frequently occurring tsunami level (8.7m). A green belt area is planned to slow down the tsunami wave reaching the residential and evacuation areas.

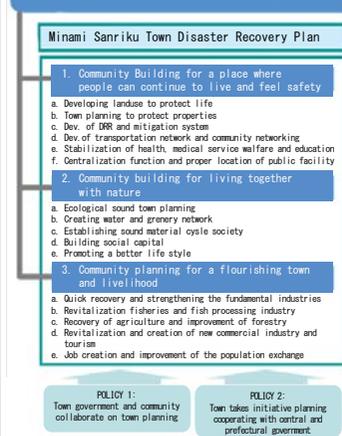
(ii) Recovery Project: Consists of the land adjustment project and the group relocation project.

The community will be relocated to a newly developed higher area on the hill. Coastal areas will be used for parks, commerce, and industry. Sea dikes will also be constructed. The total project cost is estimated at 160 billion yen. But the annual budget scale of the town is only 8 billion yen. Central government support is being considered.

(iii) Residents involvement in the planning process: A disaster recovery planning committee was formally set up to develop a recovery plan. In addition to this formal committee, a disaster recovery planning residents' committee was also established. Town planning meeting at neighborhood and community level were held several times. Miyagi University, a local university, plays a key role coordinating these activities.

(iv) Support among local governments: An alliance of 7 Prefectures in Kansai region has supported the disaster affected regions using a counterpart system. Miyagi Prefecture is supported by Hyogo, Tottori, and Tokushima Prefectures. Iwate Prefecture is supported by Osaka and Wakayama Prefecture. Fukushima Prefecture is supported by Kyoto and Shiga Prefecture. This resembles the twinning support concept utilized in China. The prefectures provided staff for initial response. Later, they have been providing staff to help in the recovery planning process. This is critical support as many local municipalities lost significant numbers of staff to the tsunami.

Minami Sanriku Town Future Vision: Connecting nature, people, work, safety and prosperity



Population	17,431 (2010 National Census)
Senior Citizen	Approximately 30% over 65 years old
Incorporated Town	164km ²
Livelihoods	Shizugawa Town and Utatsu Town
Economic Strength Index	19% of work related to fishing (2005)
Index	Economic strength index 0.31 (within Miyagi Pref, ranking 34 out of 35)

Dissemination of Guidance Notes for Effective Recovery Planning



Guidance Note: Telling Live Lessons

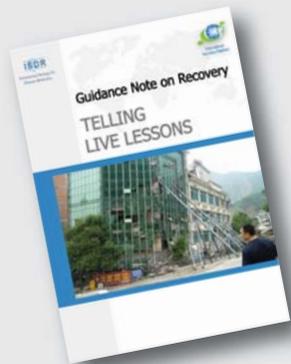
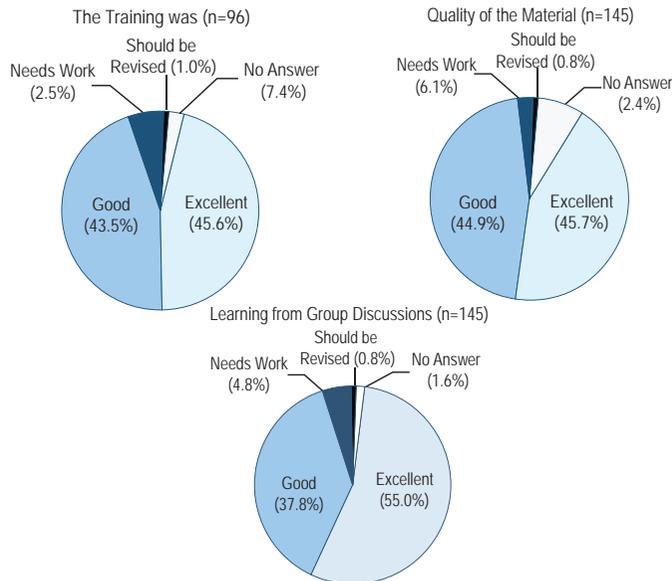
It is important to share the lessons of recovery so we learn from the experiences of survivors. Not only can we prevent damage from disasters in the future, but also in the event of a disaster, we can learn from the lessons of past recovery, and engage in a recovery process that is the most beneficial to the people of the stricken area. Live lessons can contribute to disaster preparedness, mitigation, and a recovery that builds back better. It can be transformative and therapeutic for individuals and communities, by communication of the experiences and the lessons learned by the survivors, across generations. We must remember what was wisely said: "Disasters occur when people forget the last one".

This document can be downloaded at: http://www.recoveryplatform.org/resources/guidance_notes_on_recovery

A few national governments (Vietnam, the Philippines, Sri Lanka, Pakistan, Haiti, and Serbia) with a total number of more than 220 officials have received training on resilient recovery since IRP developed the module in 2010. Core materials are based on the Guidance Notes on Recovery for eleven sectors i.e. shelter, livelihoods, environment, gender, infrastructure, governance, health, psycho-social, climate change adaptation, pre-disaster recovery planning, and telling live lessons. The format includes case studies presentations, group discussions, and presentation of outputs/recommendations. By the close of the learning-training, participants develop recommendations for organization of recovery along various sectors. Group discussions were organized to provide an avenue for participants to discuss different recovery issues, share knowledge and experience, and reflect on wide array of options and examples from global

experiences. Recommendations were fine-tuned through comments from other participants and experts from IRP member organizations. Three general observations are important. Firstly, the guidance notes dissemination strategy and the learning event attracted significant interest of participants who intend to further disseminate lessons and knowledge on recovery to other stakeholders in their areas. Secondly, the cases-driven approach utilized was deemed most appropriate to reflect and apply lessons or options in recovery. Participants were comfortable with such an approach which guaranteed greater understanding of the issues and better grasp of the options applicable to different complex situations. Finally, the materials used, especially the guidance notes, were believed to have addressed the knowledge gaps on recovery and reinforced recovery initiatives of the government.

<http://www.facebook.com/media/set/?set=a.227899317273308.57727.146131622116745&type=1>



Case Study:

Hurricane Ivan: CARILEC Hurricane Action Plan

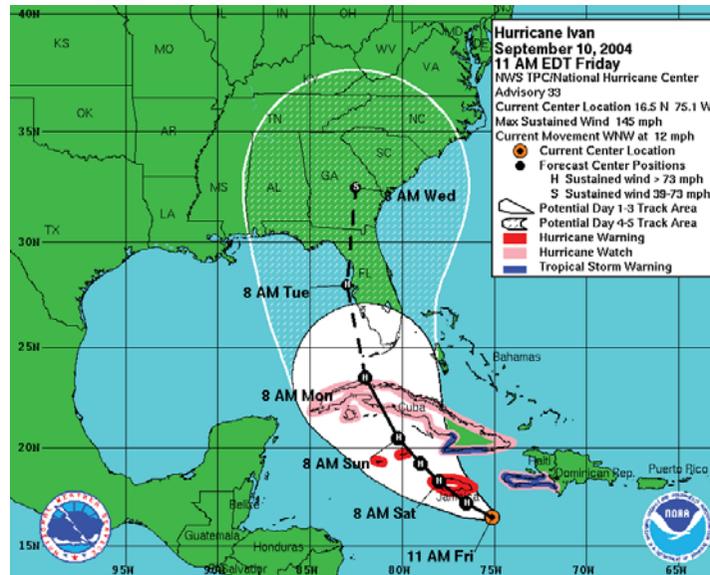


Image Source: National Hurricane Center: <http://www.nhc.noaa.gov>

Hurricane Ivan has been categorized as one of the most powerful hurricanes to hit the Caribbean in recorded history. On September 2 Ivan developed into a tropical depression, it became a tropical storm on the following day and reached hurricane status on 5 September. On September 7 and 8 it damaged 90 percent of the homes in Grenada and killed 16 people. By Thursday morning on September 9, Ivan's sustained winds reached 160 mph making it a rare category 5 hurricane on the Saffir-Simpson scale.

The Caribbean Electric Utility Services Corporation (CARILEC) facilitates communication among its members and serves as a focal point for information, advocating reform in the electric utility industry throughout the Caribbean. It provides services to members including the CARILEC Hurricane Action Plan (CHAP). CARILEC created CHAP to provide for the assembly, dispatch and coordination of emergency teams of linemen from member utilities.

Their role is to help restore electric transmission and distribution systems in a country affected by a serious hurricane. To be eligible for assistance and training under the program, each utility pays an annual fee of US\$2,000 to the Hurricane Fund. After Hurricane Ivan, Grenlec requested assistance through the CHAP, which deployed 100 linemen from the region to help repair and restoration of Grenlec's operations. This assistance provided an important boost to recovery in the immediate aftermath of the hurricane. An often cited reason for delays in any large scale reconstruction program is

difficulties encountered in sourcing materials. Reconstruction in Grenada is no different as suppliers initially had difficulties delivering materials. The main warehouses on the island, severely damaged during Ivan, created initial challenges in the distribution of materials. To overcome this obstacle, site vendors located throughout the country supplied materials before the main distribution centers came back on line. For the first four to six months post-Ivan, distributors faced significant challenges in sourcing supplies, although this ultimately improved. For the first six months, it is estimated that all suppliers combined could meet only 60 percent of Grenadian market demand. By the end of March this had risen to 80 percent. Immediately after the passage of Hurricane Emily, nearly 100 percent of demand was met.

Lessons

- (1) Trained infrastructure utility experts can be inventoried prior to a disaster in order to better understand quickly the resources available once an actual disaster occurs
- (2) Site vendors located throughout the affected areas can be tapped for materials until main distribution centers are able to begin providing centralized assistance

Source: The World Bank. 2005. Grenada: A Nation Rebuilding. An Assessment of Reconstruction and Recovery One Year After Hurricane Ivan. WB Hazard Risk Management Unit. http://siteresources.worldbank.org/INTLACREGTOP/HAZMAN/Resources/grenanda_rebuilding.pdf

Guidance Note:

Pre-Disaster Recovery Planning

(To be developed and launched in 2012)

Pre-Disaster Recovery Planning is the pro-active process of anticipating future recovery issues, developing a scenario-based recovery plan, and building capacity to improve recovery outcomes – all before a disaster happens. It is a logical step towards ensuring that communities "build back better" following a natural disaster. This document aims to offer guidance on developing a planning framework ex-ante. The document attempts to present the key steps, present relevant examples, and provide recommendations grounded in the experiences of others.

This document can be downloaded at: http://www.recoveryplatform.org/resources/guidance_notes_on_recovery

