Disaster Prevention and Recovery: 
Learning From Experiences of Nansalu Village in Taiwan

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The purpose of this research:

- To find the causes of social aspects led to disasters. The risk awareness, social behavior, activity, or disaster prevention management could be the main causes of lives losing or lives saving.

- To learn what are important of disaster mitigation, preparedness, response and recovery through Nansalu experiences.

- To understand the influence of recovery policy on those Nansalu families with stress and struggles.
Introduction of Nansalu village

They are Christians mostly, especially indigenous people.

Social networks are tight and firm, also are their precious resources for living.

225 households
801 residents
56% are indigenous population
includes Bunan, Tsou, paiwan tribes and few han people

Most residents are farmers, part-time labors

The purpose of earning money is for basic expense of life, not to accumulated savings
Introduction of disasters in Nansalu village

Nansalu village (tribe) 2009 after Typhoon Morakot

35 people were dead
80 houses were damaged or destroyed (comprise approximately 124 households)

Many public buildings also were demolished.

Main road no. 21 were broken, isolated village from outside world.

3/5 people were dead
80 houses were damaged or destroyed (comprise approximately 124 households)

Many public buildings also were demolished.

Main road no. 21 were broken, isolated village from outside world.

8/7 A power outage. Telephone line was disconnected. Water had been cut.

8/8 Two nearest weather stations show that highest accumulated rainfall are 849mm/24h - 974mm/24h. It is a new record high.

8/9 Severe Debris flow happened suddenly around 17:00 while rainfall decreased.
few villagers evacuated to church for sheltering, but most residents still remained home

Source: Council of Indigenous People
ROAD NO. 21

Source: villager
Administration area

- Public activity center
- Namaxia Township office center
- Public library

Source: Council of Indigenous People
Elementary school

Public health center

Police station

Household registration office
Social cause analysis

Floods are acts of god, but flood losses are largely acts of man
by Gilbert White (Burtan, 2010)

What did they do or didn’t do?

What were they thinking?

What are the critical points of stay alive?
Social Factors of Morakot disaster in Nansalu village

**Natural system FACTORS**
- Typhoon Morakot
- Heavy rainfall 8/6-8/8 (1235mm/24h)
- Small Debris flow or landslide
- Rainfall decreased
- Severe debris flow occurred suddenly
- Rainfall decreased

**Social system FACTORS**
- Without disaster experience
- Low risk perception
- Out of Power, phone line disconnected
- Can’t receive weather forecast Information and warnings
- No evacuation drills or training experiences
- Without DPOs training
- Organized a team to patrol environment
- Small group of people evacuated
- Residents organized a rescue team
- Evacuated to a safe location
- Youths Carried elders and children to evacuate
- Evacuees back home to get belongings
- Remain home

**Lives losing**
- Critical point 1
- Critical point 2
- Critical point 3
- Critical point 4

**Lives Saving**
- Lacking of shelters, medical supply, food etc.
- Lacked channel to Call for help
- Rescue team delayed till 8/11
- 8/9 5:00 p.m.
- 8/10
Things have Learnt from Nansalu disaster

- Risk perception, disaster experiences and disaster prevention training influence evacuation decisions.

"we all at home, we didn’t go up the mountain (to work), we didn’t drive anywhere, our home was a shelter. ….. I was prepared (refers to the supplies) ….. only a bit slow, a bit slow at leaving the house." said by a villager C.

- Developing risk perception by knowing that home isn’t always safe, especially under extreme weather condition.
- No disaster experience doesn’t mean you won’t face one.
- Disaster prevention drills and publicity should specially organized and designed for the village.
- More than 2 Nansalu villagers join the training program and become Disaster Prevention Officers now. The training teaches them how to measure rainfall, when to advise villagers to evacuate, and what hazardous environment clues are, also to build the connection with SWCB and local government.
Things have Learnt from Nansalu disaster

- Safe shelters are the essential requirement for evacuees.

"the shelter provided by the township office would have killed me" said by a villager A.

- Two announced public shelters were destroyed by debris flow initiated the issue of shelter safety assessment.
- Nansalu villagers gathering money to buy the land, and with the support of World Vision and The presbyterian church, they can finally build shelters in evacuation location (they named it Nansalu platform).
- Residents should join in the process of shelter assessment to choose or to decide the location of shelters for themselves.
Nansalu platform
completed in 2012
Things have Learnt from Nansalu disaster

- Out of power several days led villagers losing weather forecast information and also missing the red warning of debris flow informed by SWCB.

- Namaxia township office also didn’t response well cause they can’t receive any further instructions or information.
  - Improving the response ability of township is important, and in order to improve their ability of response, sufficient resources and training is required.
  - Township officers and villagers should build trust relationships in order to cooperate with each other while facing hazardous events, and sharing the information.

- After the disaster, villagers couldn’t find the way calling for help, with limited power of cellphone, they can only reached their relatives from other region who can help to connect with EOC of county.
  - In deep mountain area, satellite phone or other equipment of communication should distributed in several spots in order to make an emergency call while the others are unable to function.
Things learnt from Nansalu recovery experiences

In primary stage, Tzu Chi Foundation strongly recommend residents who live in Da Ai to stop drinking, eating meat and smoking, according to their believes.

Tzu Chi Foundation is in charge of Da Ai community housing construction project. Their ambition is to become a model of permanent housing.

Residents (disaster affected population)

Government

NGOs

In primary stage, Tzu Chi Foundation strongly recommend residents who live in Da Ai to stop drinking, eating meat and smoking, according to their believes.

Reconstruction policy: Permanent housing
Relocate villages had environmental hazard risks.

20 households who refuse to move into permanent housing have lesser resources to rebuild their home town.

Residents from Nansalu feel disrespectful of these rules.

Nansalu villagers were expected to move down to Da Ai permanent housing in shanlin township, 24 miles away from Nansalu. Limited time for Nansalu villagers to reach the consensus resulted in villagers divided into two groups
1. Agree relocating in Da Ai
2. Remain staying in Nansalu

Tzu Chi Foundation is in charge of Da Ai community housing construction project. Their ambition is to become a model of permanent housing.
Things learnt from Nansalu recovery experiences

"you give us beautiful houses, but nothing else, how could we live in here while our resources are all in the deep mountain.....Do you know why there are no beggars in tribes, cause indigenous people always take care of each other."
said by villager A.

- Relocation villages are not just a matter of choosing location and building houses, it also involves livelihood, education, lifestyle, social network, culture, religion recovery, which means it needs lots of time to discuss and to plan, voices of residents should be heard and influential, they are the subjects of the reconstruction plan, they should involve in the whole process of relocation discussion.

- Culture sensitivity is required of managing housing reconstruction, especially when it involves different religions and ethnic groups.
Thank you for your attention