

# VULNERABILITY AND DISASTER RESILIENCE

UNESCO CHAIR WORKSHOP



IMAGE BY THE WALL STREET JOURNAL



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1. Gender, Vulnerability and Resilience: Planning, Acting and Educating for Disaster Risk Reduction	48

# Vulnerability and Disaster Resilience

## Venue: Mae Fah Luang University, Thailand

### 2 May 2019

- 08.30 am Registration  
09.00 am Background of the project by Prof. Ronni Alexander
- 09.15 am Opening Remarks by Assoc. Prof. Dr. Siriporn Wajjwalku
- 09.25 am Group photo
- 09.30 am Keynote Speech  
Key issues: "Disaster Resilience Effort in Thailand and ASEAN" by Ms. Pannapa Na Nan
- 10.15 am Q & A
- 10.30 am Break
- 10.45 am Presentation from each partner  
What is each partner's RESEARCH PLAN?
1. "Identifying issues in disaster risk, vulnerability and resilience from a gender and peace studies perspective" by Prof. Dr. Ronni Alexander
  2. "Rural women's role in disaster resilience and risk adaptation options" by Prof. Dr. Jin Long Lu, Assoc. Prof. Dr. Hui-Lung Yu and Assoc. Prof. Dr. Jyh-Shyen Sun
  3. "Development of Climate Hazards Decision Support System for Cameron Highlands, Malaysia" by Assist. Prof. Dr. Tan Kok Weng
  4. "The Disaster Occupational Recovery at Local Level: Policy Direction and Practical Guidelines in Chiang Rai Province" by Dr. Wanwalee Inpin
- 11.45 pm Discussion
- 12.15 pm Lunch
- 13.15pm Continue the presentation
1. "Gender in Disaster from the social scientific perspective" by Assoc. Prof. Dr. Junko Okada
  2. "Integrating Elderly Care System with Set-top Box for Enhancing Social Capital" by Assoc. Prof. Dr. Kuo-Tsung Tseng
  3. "Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective" by Mr. Hafiz Amirrol
  4. "Voluntarism and Disaster Resilience at Local Level in Thailand: Institutional Design" by Dr. Thanikun Chantra
- 14.15 pm Discussion
- 14.45 pm Break
- 15.00 pm Brainstorming on development of research proposal **based on** the presentation in the morning session
- 18.00 pm Dinner

### 3 May 2019

- 09.00 am Continue the presentation
1. "Mainstreaming Gender into Disaster Recovery Policy and Practice: The case study of Post-earthquake in Jogjakarta, Indonesia" by Ms. Maya Dania
  2. "Local Government Initiative Practice on Post Tsunami in Coastal Community in West Java, Indonesia" by Ms. Rani Juwitasari
  3. "Gender Sensitivity in Disaster Management in Indonesia" by Ms. Uki Noviana
- 09.45am Research Proposal
- Joint Research Proposal – Collective Proposal (JSPS, JICA)
  - Individual Research Proposal - Institutional or Personal Proposal
- 11.00 am Break
- 11.15am Source of Funding
- JSPS (Kobe University as a leader)
  - Partners University
  - JICA (Mae Fah Luang University as a leader)
- 12.00 pm Lunch
- 13.00 pm Excursion (Optional)
- Visiting the post-earthquake area in Chiang Rai and discuss with local authorities and people
- 18.00 pm Dinner

# Background of the Project

Professor Dr. Ronni Alexander  
 Director, Kobe University Gender Equality Office, Japan

Kobe University UNESCO Chair: Gender and Vulnerability in Disaster Risk Reduction Support

**Focusing on our task**

Ronni Alexander  
 Director, Kobe University Gender Equality Office



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### What is a UNESCO Chair

- Objective: creation of a university network for:
  - Teaching
  - Research
  - Cross-border sharing of knowledge
- Approval
  - Needs approval by UNESCO headquarters
  - Four-year period
  - No accompanying funding
- Role
  - Research, education, partnering, community outreach

Worldwide:  
Japan:

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### Kobe University UNESCO Chair



- Title: Gender and Vulnerability in Disaster Risk Reduction Support
- Purpose:
  - Share experience of disaster from Kobe University to the world
  - Deepen connections with other countries, institutions to create a safer and more inclusive world
- Duration: 4 years; 2018.4~2022.3
- Only UNESCO Chair on gender & disaster
- Under supervision of UNESCO Women's Division

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### Partner Institutions



- UGM: Gadjah Mada University, Indonesia
- NKUST: National Kaohsiung University of Science and Technology, Taiwan
- NWEC: National Women's Education Center, Japan
- NIDC: Network for International Development Cooperation, Thammasat University, Thailand
- UTAR: Universiti Tunku Abdul Rahman, Malaysia
- Mercy Malaysia, Malaysia
- Kobe University, Japan

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### Tasks

RESEARCH	EDUCATION/AWARENESS	GUIDELINES	POLICY RECOMMENDATIONS	DDR NETWORK EXPANSION
Joint research with partners <ul style="list-style-type: none"> <li>• Gender sensitive and inclusive guidelines for disaster risk reduction</li> <li>• Build multidisciplinary model for DRR</li> </ul>	Awareness strategy implementation <ul style="list-style-type: none"> <li>• Training for students, professional, policy makers</li> <li>• DRR awareness activities for local community</li> </ul>	Establish guidelines <ul style="list-style-type: none"> <li>• Circulate and disseminate through seminars, HP, etc.</li> </ul>	Policy recommendations <ul style="list-style-type: none"> <li>• Should meet local needs</li> <li>• Should aim to build more resilient and inclusive society</li> </ul>	Expansion of DRR network <ul style="list-style-type: none"> <li>• Build international DRR network based on gender equality and social inclusion</li> </ul>

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### Our task here

- Begin work to establish guidelines
- Those guidelines must be:
  - Gender sensitive (based on gender equality)
  - Inclusive (based on social inclusion)
- Guidelines will be used for
  - Policy recommendations
  - Dissemination to local communities
  - Dissemination to international network

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# Opening Remarks

Associate Professor Dr. Siriporn Wajjawalku  
Dean, School of Social Innovation

Good morning

Welcome all of you to the workshop titled “Vulnerability and Resilience”, which is a part of the project called “Kobe University UNESCO Chair: Gender and Vulnerability in Disaster Risk Reduction Support”. As mentioned by Prof. Ronni Alexander, this project is a collaboration among partners from several institutes of 5 countries including Indonesia, Japan, Malaysia, Taiwan, and Thailand. Mae Fah Luang University is very pleased to host this workshop, as a partner institute, to support the Project to move forward and achieve the agreed goal.

As you may know, Chiangrai Province is the area that is prone to disaster. In 2014, the earthquake of 6.3 magnitude had occurred and caused damage of lives, construction, as well as properties. Besides this serious earthquake, flood and landslide occur every year, which, partly, leads to the limited progress of development in the area.

In addition, Chiangrai Province, as a border area, has hosted people who are migrants from neighboring countries. As non-Thai and, sometimes, ethnic, they are more vulnerable to disaster. Some of them, in case that they stay illegally, cannot access to public services provided for affected people during emergency and compensation for recovery and rehabilitation later.

As being university in the area, Mae Fah Luang University has realized that it is responsibility of academic to help affected people and support the local authority to manage the disaster and its impacts.

In terms of disaster management, the idea of disaster risk reduction has been promoted with an aim to support the country and people to protect themselves, prevent and mitigate damage caused by disaster. On top of that, it also tries to strengthen local communities and authorities involved in this matter. In order to do so, concrete measures which are applicable at local level are needed.

This workshop has objectives firstly, to share experiences of all partners related to disaster and disaster risk reduction focusing on vulnerabilities including women, children, disable and ethnic people; secondly, to brainstorm and create a research and action plan project for disaster resilience at the local level with emphasis on local context of each country.

Without support from many people and organizations, this workshop will not be materialized. As the host, I would like to thank Mae Fah Luang University for financial support to this workshop. I also would like to thank Kobe University for having Thailand and our university as a partner; all of our partners from Indonesia, Malaysia, and Taiwan for your active preparation and participation. Lastly, my thanks and gratitude go to my staff of School of Social Innovation who enthusiastically take part in this project.

I am confident that this 2 day workshop will be fruitful and produce a useful output for both policy and practical levels.

Thank you very much.

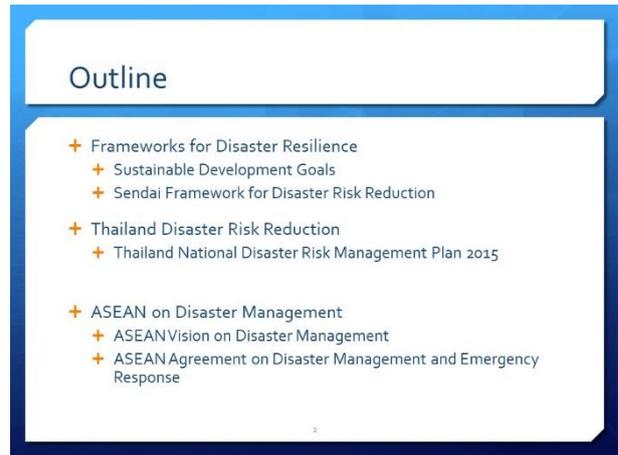
# Keynote Speech

Ms. Pannapa Na Nan  
Foreign Relations Officer (Senior Professional Level)  
Research and International Cooperation Bureau  
Department of Disaster Prevention and Mitigation



**Disaster Resilience Efforts  
in Thailand and ASEAN**

Pannapa Na Nan  
Department of Disaster Prevention and Mitigation



### Outline

- + Frameworks for Disaster Resilience
  - + Sustainable Development Goals
  - + Sendai Framework for Disaster Risk Reduction
- + Thailand Disaster Risk Reduction
  - + Thailand National Disaster Risk Management Plan 2015
- + ASEAN on Disaster Management
  - + ASEAN Vision on Disaster Management
  - + ASEAN Agreement on Disaster Management and Emergency Response



## RESILIENCE



'the ability to recover from negative life experiences and become stronger while overcoming them'



**Survive**  
How we respond

**Thrive**  
How we grow

**Adapt**  
How we adjust

**Recover**  
How we bounce back

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## Vulnerability

Vulnerability is described as the characters and circumstances of elements at risk that make them susceptible to the damaging effects of a hazard.



## DISASTER RESILIENCE

Illustrated by ERM-QRM Co., Ltd.

## DISASTERS ARE NOT NATURAL

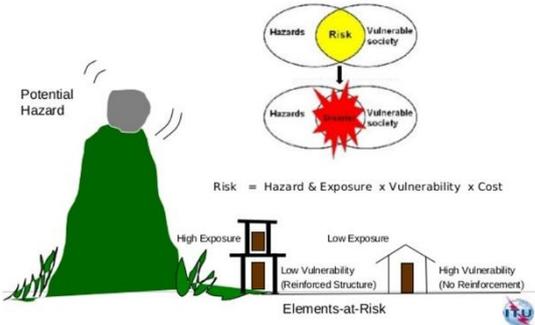


**UNDERSTANDING DISASTER RISK= HAZARD × EXPOSURE × VULNERABILITY**



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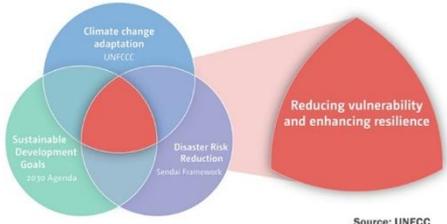
## Defining Hazard, Vulnerability and Risk



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## Framework for Disaster Resilience

Integrating adaptation with the Sustainable Development Goals and the Sendai Framework



Source: UNFCC

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## SDG: Sustainable Development Goals

- + Adopted by UN General Assembly on 25 September 2015
- + 194 countries + Global Civil Society
- + "Transforming our world: the 2030 Agenda for Sustainable Development"
- + 17 Global goals with 169 targets
- + 3 core elements must be harmonized: Economic growth, social inclusion, and environmental protection
- + Inclusive, Sustainable, and Resilient

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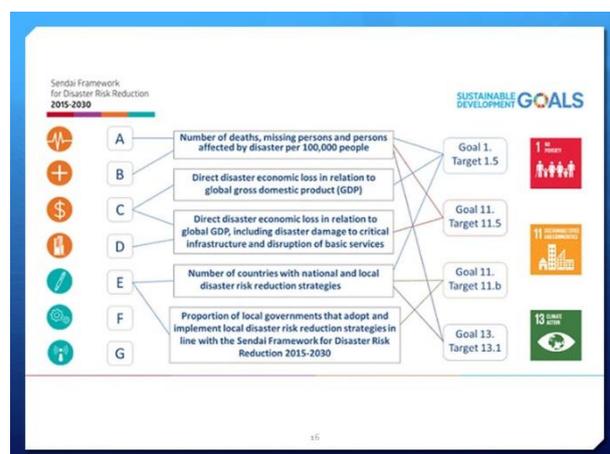
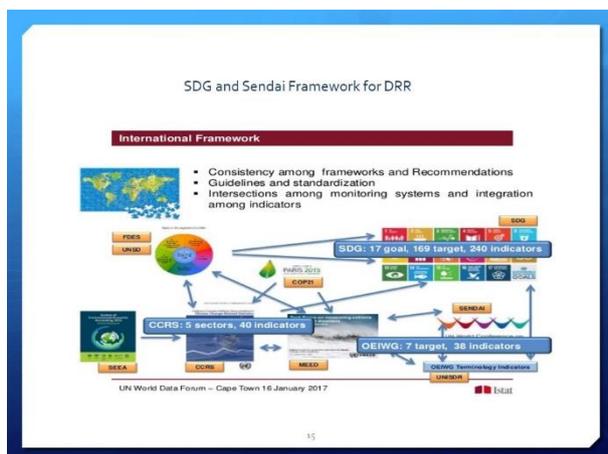
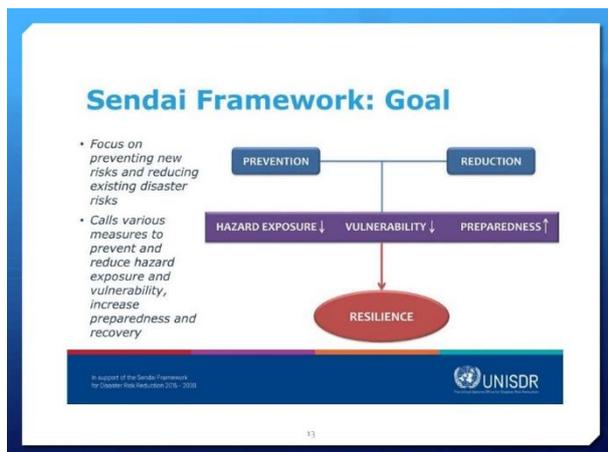
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## Sendai Framework for Disaster risk Reduction (2015 – 2030)

- + International document adopted during 3<sup>rd</sup> World Conference on Disaster Risk Reduction, March 14 – 18, 2015 in Sendai Japan
- + Endorsed by UN General Assembly in June 2015

**Sendai Framework for Disaster Risk Reduction**  
2015 - 2030

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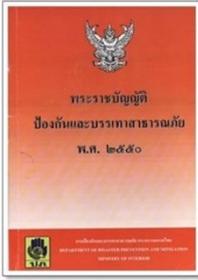
## Thailand Disaster Risk Reduction

- Legal Framework:
  - The Disaster Prevention and Mitigation Act 2007 (B.E. 2550)
  - National Disaster Prevention and Mitigation Plan 2015
- Core agency: **DDPM as the central government agency to operate any related activities on national disaster prevention and mitigation**
- Mechanisms to ensure the implementation of disaster management system:
  - National Disaster Prevention and Mitigation Committee (NDPMC)
  - Disaster Management Committee (National, Provincial and District level)
  - Disaster Prevention and Mitigation Plan

## Thailand: Disaster Management System

- Legal Framework:
  - The Disaster Prevention and Mitigation Act 2007 (B.E. 2550)
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- Core agency: **DDPM as the central government agency to operate any related activities on national disaster prevention and mitigation**
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  - Disaster Management Committee (National, Provincial and District level)
  - Disaster Prevention and Mitigation Plan

## Disaster Prevention and Mitigation Act 2007 (B.E.2550)



- Entry into force on 6 Nov 2007
- Authorize DDPM as the Central Agency responsible for Disaster Management
- Mandate DDPM to formulate the National Plan

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## National Disaster Prevention and Mitigation Plan 2015



- Principle plan for national disaster management aimed to minimize disaster risks and losses of live and properties of people and State property
- Approved by National Disaster Prevention and Mitigation Committee
- The Cabinet on 31 March 2015 endorsed the National Disaster Prevention and Mitigation Plan mandating all parties concerned to fully support and implement the plan.

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## Thailand National Disaster Prevention and Mitigation Plan 2015

- Participatory Process
- From 'disaster management' to 'disaster risk management'
- Concept of Operation (CONOP): Framework and providing guidelines
- Each agency required to develop their own plan base on the CONOP
- Toward building 'resilience'

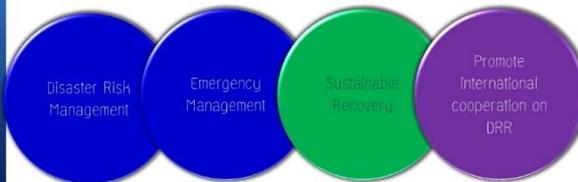
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## National Disaster Risk Reduction Plan 2015

Under the concept of "Disaster Risk Management" toward building Resilience" (Risk Inform - Adjustment - Fast Recovery - Sustainable) with 4 strategies

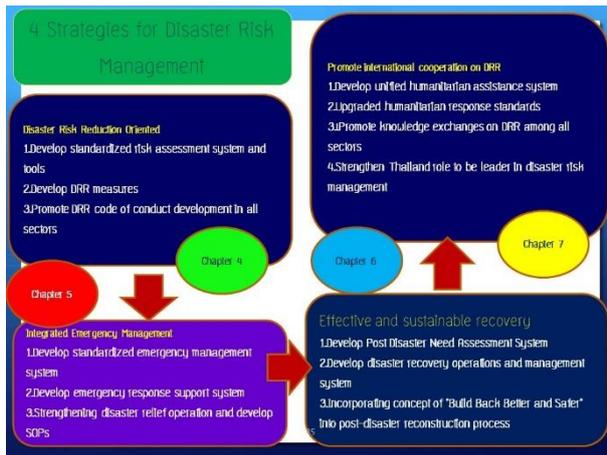


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## Thailand National Disaster Prevention and Mitigation Plan 2015

- 3 Goals, 4 Strategies





### ASEAN and Disaster Resilience Efforts

- + ASEAN as the most disaster prone region
- + 3 notable high-impact, large scale disasters:
  - + 2004 Indian Ocean Tsunami
  - + 2008 Cyclone Nargis
  - + 2013 Typhoon Haiyan (Yolanda)
 Combined damage cost reach over USD 22.5 billion, with 278,000 fatalities
- + ASEAN is the only once regional cooperation with agreement specifically address on the issue of disaster management and climate change

### The ASEAN Agreement on Disaster Management and Emergency Response (AADMER - 2005), and the Agreement on the Establishment of the AHA Centre (2011), provide the Centre with a strong mandate as the regional operational coordination engine

*The AHA Centre shall be established for the purpose of facilitating co-operation and co-ordination among the Parties, and with relevant United Nations and international organisations, in promoting regional collaboration (AADMER Article 20.1 and Agreement on the Establishment of AHA Centre Article 3.1)*

*The AHA Centre shall work on the basis that the Party will act first to manage and respond to disasters. In the event that the Party requires assistance to cope with such situation, in addition to direct request to any Assisting Entity, it may seek assistance from the AHA Centre to facilitate such request (AADMER Article 20.2 Agreement on the establishment of AHA Centre Article 3.2)*

### At the 19th of ASEAN Summit, witnessed by ASEAN Heads of States, the agreement on the establishment of AHA Centre was signed by the ASEAN Foreign Ministers on 17 November 2011 in Bali Indonesia

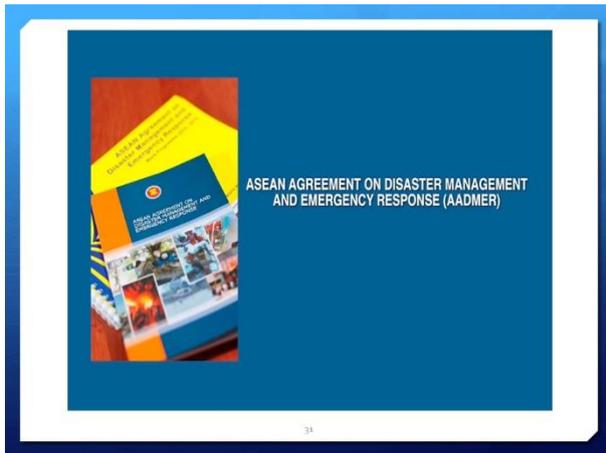
**AGREEMENT ON THE ESTABLISHMENT OF THE ASEAN CO-ORDINATING CENTRE FOR HUMANITARIAN ASSISTANCE ON DISASTER MANAGEMENT**

### Other strategic and operational documents that support in carrying out our mandate and functions

**Strategy Documents**

*The AHA Centre functions to implement operational strategies and procedures to enable rapid, joint, and effective response to disasters within ASEAN to respond to natural disasters. However, this current focus of the AHA Centre may need to be expanded in the next ten years. (ASEAN Vision 2025 on Disaster Management)*

- Affirm that the AHA Centre is the primary ASEAN regional coordinating agency on disaster management and emergency response;
- Endorse the ASEAN-Emergency Response and Assessment team (ERAT) as the official resource of ASEAN... managed and coordinated by the AHA Centre
- recognise the role of the AHA Centre, at a later stage, to enable ASEAN to respond to disasters outside the region... (ASEAN Declaration on One ASEAN One Response)



### AADMER Work Program 2016 - 2020

- + Contribute to the aims of the AADMER
- + GOAL: to build resilient ASEAN Community
- + 8 Priority Programme with specific goal and outputs
  - + AWARE: Risk Aware ASEAN Community
  - + Build Safely: Safe ASEAN Infrastructures and essential services
  - + ADVANCE: Disaster resilient and climate adaptive ASEAN
  - + PROTECT: protect economic and social gains
  - + RESPONSE AS ONE: transforming ASEAN response mechanism
  - + EQUIP: enhance response capacity
  - + RECOVERY: ASEAN resilience recovery
  - + LEAD: ASEAN leadership for excellence and innovation in disaster management

### Building Resilience "TOGETHER"

- + With Civil Society: Through AADMER Partnership Group
  - + ASEAN Safe School Initiative
  - + Climate Change Adaptation and Resilient cities
- + With UN: Through ASEAN-UN Joint Strategic Plan of Action on Disaster Management 2016 – 2020
- + With ASEAN Economic Pillar: Disaster Risk Financing and Insurance Programme
- + With academia: knowledge management and ASEAN 1<sup>st</sup> edition of ASEAN Risk Monitor and Disaster Management Review

### Final take away ...

# Presentation from each partner

## 1. Identifying issues in disaster risk, vulnerability and resilience from a gender and peace studies perspective

Professor Dr. Ronni Alexander, Director, Kobe University Gender Equality Office, Japan

### Identifying issues in disaster risk, vulnerability and resilience from a gender and peace studies perspective



Ronni Alexander  
Kobe University  
UNESCO Chair International Seminar  
2019.5.2 Chiang Rai  
Mae Fah Luang University

### Content and objectives

- My thoughts about guidelines and definitions
- What does peace studies tell us?
- My interest and focus
- Research plan?
- References



### My thoughts about guidelines

- What are we creating?
  - Advice for policy makers
  - Advice for support practitioners
  - Advice for educators
- For what time frame?
  - Policy: Pre/post?
  - Practitioners: Pre/post?
  - Educators: Pre?
- For how long?
  - Long term support and social transformation
- It should take a
  - Gender sensitive approach
  - Address multiple and overlapping categories of vulnerability (category/ies)
  - Based on feminist theory and praxis; focus on practice
- Common approach?
  - Need to understand one another's definitions and coordinate them
  - Need to have a shared understanding of how to measure success/failure

### Vulnerability as...

<b>Social vulnerability</b> <ul style="list-style-type: none"> <li>• Initial well being</li> <li>• Livelihood</li> <li>• Self-protection capacity</li> <li>• Social protection availability/access capability</li> <li>• Coping capacity</li> <li>• Internal/external: double structure</li> </ul>	<b>Strategies reflecting</b> <ul style="list-style-type: none"> <li>• Non-discrimination</li> <li>• Access to goods and services</li> <li>• Access to livelihoods and skills training, documentation</li> <li>• Access to social protection – VAW, trafficking prevention</li> <li>• Access to information</li> <li>• Access to autonomy</li> </ul>
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### From feminist critical thinking

- Gender as power relations
  - Multiple masculinities, femininities
  - Social constructed rules and expectations for men, women
  - Need to challenge gender binaries that:
    - Privilege men, masculinity
    - Underlie social institutions and relations
    - Deny equal opportunities to women and marginal masculinities
- Vulnerability
  - Subjection to violation
  - Struggle for freedom
  - Ethical obligation
- Protection of vulnerable people as bio-politics
  - Othering and recreation of binaries
  - Violence in the name of protection

### What does peace studies tell us?

- Right to live in peace (UNGA 2016)
  - War condemned
  - all human rights promoted and respected
  - development is fully realized
- Peace as absence of violence, including structural, cultural, direct violence (Galtung)
- Societies with strong patriarchal systems tend to be less peaceful
- Disaster as cause and obstacle to peace making
- Interventions work better if strategies are adopted before disaster happens
- Levels of gender equality are a good indicator of tendency toward violence
- Gender sensitive approaches need to be in place before disaster

## My interest and focus: strategies for invisible minorities

Invisible minority problem: How to address needs without outing them

- SOGI sexual and gender minorities
- Mixed race
- Mental illness
- Undiagnosed illness
- Multiple vulnerabilities
- Language minorities



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## Women, Peace and Security Index 2017-2018



- A gender-sensitive approach to measuring peacefulness
- Stresses women's autonomy and empowerment
  - Inclusion: economic, social, political
  - Justice: formal laws; informal discrimination
  - Security: family, community and societal levels

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## Positive Peace index or SDGs?



- Positive peace
- Measures "Pillars of Positive Peace"
  - Measures resilience in relation to positive peace
  - Gender equality is treated as essential but not a separate category
- SDGs
- All or numbers 5 and 11



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## Research plan....

- Background research
  - Strategies
  - Success and failure
  - Local and general practices
- Coordination with other areas?
- What to do???



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## Some references

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- National Disaster Management Authority (Pakistan) (Ndma), National policy guidelines on vulnerable groups in disasters 2014

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## 2. Rural women's role in disaster resilience and risk adaptation options

Professor Dr. Jin-Long Lu, Associate Professor Dr. Jyh-Shyen Sun, Associate Professor Dr. Hui-Lung Yu and Professor Dr. Wen-Jui Tseng, National Kaohsiung University of Science and Technology, Taiwan

國立高雄科技大學  
National Kaohsiung University of Science and Technology

# Rural women's role in disaster resilience and risk adaptation options

Lu, Jin-Long  
Sun, Jyh-Shyen  
Yu, Hui-Lung  
Tseng, Wen-Jui

## Background

### Earthquake

- 1999.9.21 Jiji
- 2016.2.16 S. Taiwan
- 2018.2.16 Hualien

### Typhoon (Flood)

- 2001.7 & 9 Toraji & Nari
- 2009.8.8 Morakot
- 2015.8.8 Soudelor
- 2016.9.7 Meranti
- 2017.7.28 Haitang

## Are women, as expected, more likely to be injured /killed in disasters?

## Numbers

Disaster	Death		Injury		Missing
	Male	Female	Male	Female	
1999 Jiji	1,141	1,206	11,305	29	0
2016 S. Taiwan	60	57	252	231	0
2018 Hualien	8	9	117	174	0
Typhoon					
	Male	Female	Male	Female	Missing
2001 Toraji & Nari		205		N.A.	113
2009 Morakot		643		33	60
2015 Soudelor <sup>a</sup>	8	5	454	377	3
2016 Meranti <sup>b</sup>	9	4	612	470	0
2017 Haitang	1	0	70	77	0

<sup>a</sup>: Typhoon Soudelor and Dujan    <sup>b</sup>: Typhoon Nepartak, Meranti, and Megi

## However,

CH: <12; YP: 12-18; AD: 19-64; OD: 65+

Jiji (deaths)

Earthquake Injuries

Typhoon Injuries

Women more than 65 years old are more vulnerable.

## Women's role

- Survived female adults have to take the full responsibility to take care of family and maintain lives after the disasters.
- Particular in rural areas, women's role is more important: they are also the producers.

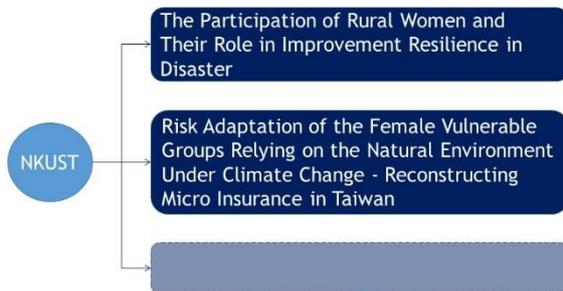
But,

- Post-disaster's recover decisions/actions/management were lack of perspectives from women.
  - Very few women had participated in the committee → male-centric point of view.
  - The needs of women were ignored.

Another important thing

- Women in rural area are actually the biggest victims in natural catastrophes.
  - Their income deeply relies on natural resources.
  - Micro-insurance could be a good mechanism to transfer the risks of lost welfares: natural resources.

Therefore,



One more thing,

- “Gender stereotype”
  - Engineer, Doctor, Policeman, Firefighter, Nurse, Military, Lawyer, Technic, Manager, Public servants, Salesmen, Chef, ...

Are women, **as expected**, more likely to be injured /died in the disasters?

Education

- Developing materials that involve issues related to gender equality for the supplements of disciplines.
  - Airline industry

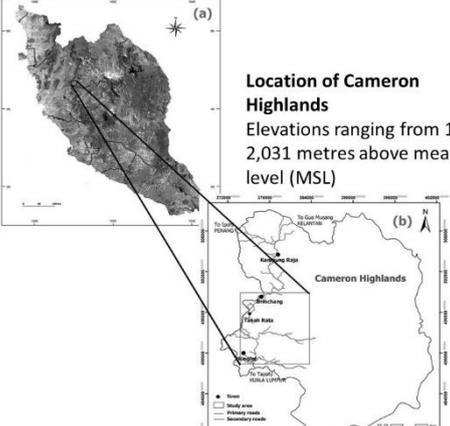
Back stage	Front stage
Male dominated	Female dominated

Thank you.

### 3. Development of Climate Hazards Decision Support System for Cameron Highlands, Malaysia

Asstant Prof. Dr. Tan Kok Weng, Universiti Tunku Abdul Rahman, Malaysia

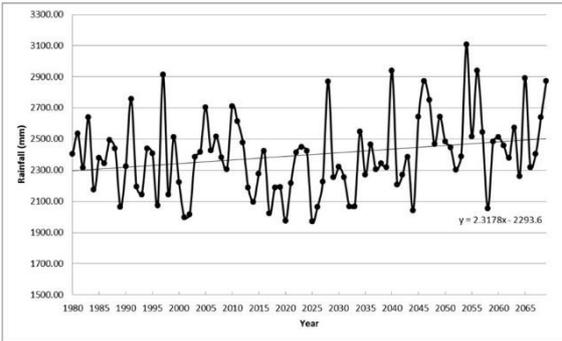
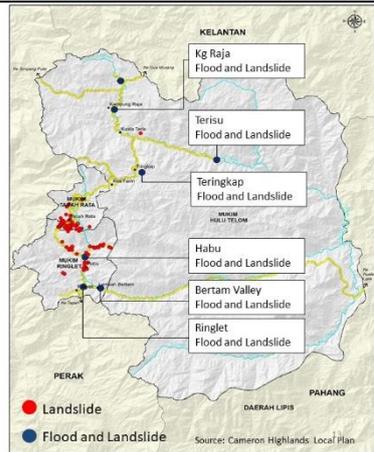
<p>International Seminar of the Kobe University UNESCO Chair Project on Gender and Vulnerability in Disaster Relief and Recovery Support Mae Fah Luang University 1-4 May 2019</p> <h2 style="text-align: center;">Development of Climate Hazards Decision Support System for Cameron Highlands, Malaysia</h2> <p style="text-align: center;"><b>TAN Kok Weng, LOH Phui Nying &amp; HUANG Yuk Feng</b> Faculty of Engineering and Green Technology Universiti Tunku Abdul Rahman Kampar Campus, Malaysia</p>  <p style="text-align: right;">1</p>	<h2 style="text-align: center;">Introduction</h2> <ul style="list-style-type: none"> <li>• As part of decision support system for urban city management and development, the <u>well-defined climate hazard indicators</u> play an important role.</li> <li>• This study aims to identify a set of indicators for decision support system that <u>suits the local climate hazard situation</u> in Cameron Highlands.</li> <li>• The climate hazard Decision support system (DSS) development is based on <u>Driver-Pressure-State-Impact-Response (DPSIR) conceptual framework</u></li> </ul> <p style="text-align: right;">2</p>
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<h2 style="text-align: center;">Background of study area</h2> <ul style="list-style-type: none"> <li>• Cameron Highlands is chosen as the case study area.</li> <li>• Elevation of the catchment area is between 1,000 and 2,031 m above sea level.</li> <li>• Diverse population of 38,000 (2010).</li> </ul> <p style="text-align: right;">3</p>	 <p style="text-align: center;"><b>Location of Cameron Highlands</b> Elevations ranging from 1,000 - 2,031 metres above mean sea level (MSL)</p> <p style="text-align: right;">4</p>
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 <p style="text-align: center;">Tea Plantations</p>  <p style="text-align: center;">Agro-tourism</p>  <p style="text-align: center;">Agro-tourism e.g Flower, fruit and vegetable farming</p> <p>Source: <a href="http://www.fullloftravel.com">www.fullloftravel.com</a></p> <p style="text-align: right;">5</p>	  <p style="text-align: center;"><b>Semai People of Bertam, Cameron Highlands</b></p> <p>(Sources: <a href="http://www.lankran.com/Semai-people-of-bertam-living-with-no-light/">http://www.lankran.com/Semai-people-of-bertam-living-with-no-light/</a>; <a href="http://www.cameronhighlandsinfo.com">www.cameronhighlandsinfo.com</a>)</p> 
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## High risk of natural disaster areas in Cameron Highlands



Precipitation simulation (1980 – 2069) for Cameron Highlands using PRECIS Regional Climate Model (Tan and Loh, 2017)

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## Methodology

- This study adopted quantitative and qualitative approach in order to develop the climate hazards decision support system.
- Total 85 Local residents were interviewed using close-ended questionnaire.
- Three statistical tests were carried out in Statistical Package for the Social Sciences (SPSS), 1. Reliability test 2. principal component analysis (PCA) 3. Sensitivity analysis.

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- Identifying the climate change vulnerable domains and indicators for Cameron Highlands based on drivers–pressure–state–impacts–response (DPSIR) framework.
- The pre-defined indicators were then given a weightage and rating by the 11 experts from different local institutions, that are from Universiti Kebangsaan Malaysia (UKM), Universiti Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM) and Universiti Teknologi Petronas (UTP).

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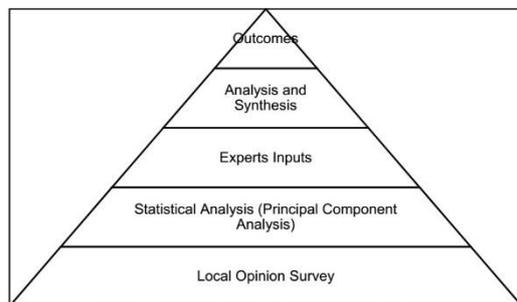


Figure 2. Pyramid model in selecting indicators

17

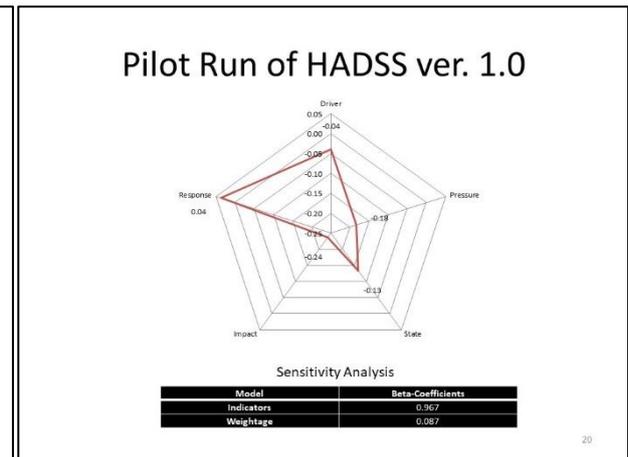
## Outcomes

- Climate Change Hazard Decision Support System Conceptual Model (HADSS ver. 1.0) based on DPSIR framework.
- It comprises of 13 sub-domains and 25 indicators

18

Component	Sub-component	Indicator description	Unit	Weightage
Drivers	D1-Population	1.Changes in population	No.	0.029
	D2-Solid waste	1. Individual solid waste generation	kg/cap/day	0.027
		2. Land area for recreational purpose	%	0.025
		3. Land area for transportation purpose	%	0.029
	D3-Landuse changes	3. Land area for agricultural use	%	0.031
4. Land area for residential development		%	0.029	
5. Land area for commercial/industrial development		%	0.029	
Pressure	P1-Flood/Disaster	1. Number of floods events	No.	0.056
	P2-Developments/Investment Opportunities	1. Gross domestic product in primary sector	%	0.050
		2. Gross domestic product in secondary sector	%	0.047
3. Gross domestic product in tertiary sector		%	0.048	
States	S1-Climate Change Indicators	1. Average daily maximum precipitation	mm/yr	0.040
		2. Annual mean surface temperature	°C	0.044
		3. Annual maximum temperature	°C	0.058
S2-Health and Sanitation	1. Number of health facilities/hospital/clinic	No.	0.025	
	2. Drinking water supply by PAIP	m <sup>3</sup>	0.028	
Impacts	I1-Soil Quality	1. Sediment deposition rate in Ringier Reservoir per year	kg/yr	0.035
		1. Total populations affected by flood per year	No.	0.041
		2. Total losses of properties	RM (million)	0.042
I2-Socioeconomy	3. Money spent to repair landslide prone slopes	RM (million)	0.042	
	1. Number of tourist visit to Cameron Highlands	No.	0.036	
	2. Water quality index	No.	0.038	
Response	R1-Private and Public Sectors	1. Law enforcement performance – illegal plantation estates	ha.	0.051
		2. Number of trees replanting	No.	0.059
R2-Individuals	1. Recycling rate	metric ton	0.069	

(Kok Weng Tan & Phui Nying Loh, 2017)



### HADSS ver. 1.0 - Three scenarios

Output	Scenario
-1.00	The -1.00 scenario describes a situation of rapid economic growth and development. It focuses on the negative consequences of excessive consumption. Cameron Highlands faces enormous development pressures resulted in major environmental issues e.g. local climate change, climate related disasters are more likely to occur with unsustainable development i.e. irresponsible planning and environmental degradation. Over and unsafe development magnifies the impacts of hazards i.e. landslides and mud flood in Cameron Highlands. These impacts will be the greatest for the least vulnerable group i.e. farmers.
0.00	The 0.00 scenario describes a situation of balance circumstance. This scenario is also oriented towards ecological balance and social equity. The current relationship between development and climate hazard remain relatively stable and manageable.
+1.00	The +1.00 scenario describes a situation of economic, social, and environmentally sustainable. It will not deplete the natural resources of Cameron Highlands. The highland is well conserved and managed in a sustainable manner by authorities. It maintains environmental quality socioeconomic conditions. Existing natural resources stocks are well maintained and strengthened. Sustainable development practices are also able to reduce future hazard losses.

- Three scenarios were also developed for HADSS ver. 1.0 to analyse the possible future events in Cameron Highlands.
- The computed output value found to be - 0.5573 indicated Cameron Highlands may be gradually being deteriorated .
- The on-going development of the area has brought many climate change hazards such as floods and mudslides.
- The local residents have to bear the brunt of this massive environmental destruction.

### Conclusion

- The changing climate is threatening the socio-economic welfare of farmers, the environment, ecology and sustainable agriculture in Cameron Highlands.
- The communities in the area seem to be struggling to cope with such changes.
- Indicators/index for different characteristics of cities should be identified and consolidated to support the better decision making process

### Acknowledgement

- UTAR - Research Fund (IPSR/RMC/UTARRF/2015-C2/T01)
- UTAR IPSR
- District Council of Cameron Highlands, PWD, DID, DOA and DOE.
- REACH NGO, local farmers and residents.

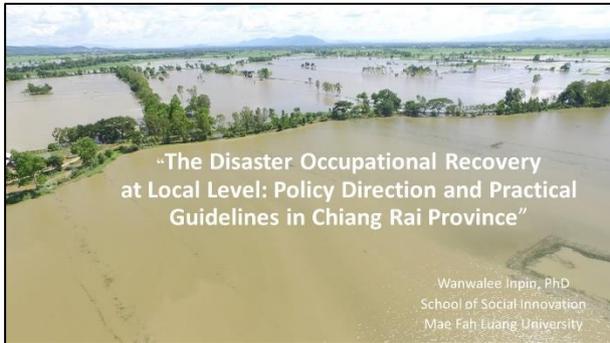


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2. Kok Weng Tan & Phui Nying Loh. 2017. Climate Change Assessment On Rainfall And Temperature In Cameron Highlands, Malaysia, Using Regional Climate Downscaling Method. Carpathian Journal of Earth and Environmental Sciences. 12,(2)413 - 421.
3. Himan Shahabi & Mazlan Hashim. 2015. Landslide susceptibility mapping using GIS-based statistical models and Remote sensing data in tropical environment. Scientific Reports 5(9899).

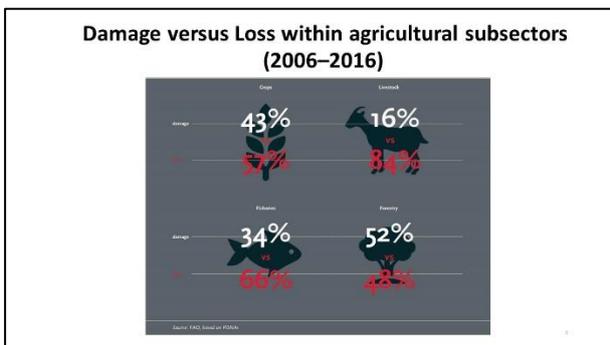
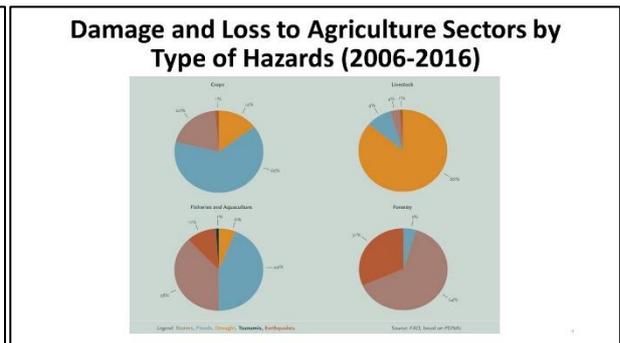
#### 4. The Disaster Occupational Recovery at Local Level: Policy Direction and Practical Guidelines in Chiang Rai Province

Dr. Wanwalee Inpin, Mae Fah Luang University, Thailand



**Background**

In the past several years, numbers of disaster increase, causing losses and damages not only to the people, but their properties.





**Chiang Rai Province**  
 Area: 60.85 km<sup>2</sup> (23.49 sq mi)  
 Elevation : 390 m (1,280 ft)  
 Population: Total 75,890  
 Density 1,200/km<sup>2</sup>  
 (3,200/sq mi)

### Economic Crops growing in Chiang Rai

-  Rice
-  Maize
-  Soybean
-  Garlic
-  Ginger

### Economic Crops growing in Chiang Rai



### Economic Animals of Chiang Rai

-  Dairy Cattles
-  Beef Cattles
-  Buffaloes
-  Pigs
-  Native Chickens
-  Broiler Chickens
-  Layer Chickens

Vulnerability is not simply about poverty, but extensive research over the past 30 years has revealed that it is generally the poor who tend to suffer worst from disasters (DFID, 2004; Twigg, 2004; Wisner et al., 2004; UNISDR, 2009b).

The Thai government and the World Bank use poverty lines calculated by the number of poor people.

The World Bank uses the criteria of 1.9 US dollars per person per day (or about 2,000 baht per person per month)

Thailand uses 2,667 baht per person per month. (Royal Thai Government, 2018)

When considering in details, farmers in Thailand have an average of 20 land holdings per household. For the amount of 1 ton of rice, it will be about 2.22 Rais. (Farmers can grow rice 2 times each year, resulting in a net profit of 28,035.5 baht per year.)

From the survey of 2012, a production cost of Thai farmers was about approx. 9,763.4 baht per rai, with the income of approx. 11,319.37 baht, resulting in the remaining amount of 1,555.97 baht. (The Chamber of Commerce, 2014)

**Summary of Agricultural Economic Information 2011/12 by Regions**

Details	Country	Northern	Northeastern	Central	Southern
1. Agricultural cash income (baht / household)	141,134	161,746	76,585	245,483	186,609
2. Agricultural money expenditure (baht / household)	84,190	96,131	45,588	192,683	81,982
3. Agricultural net cash income (baht / household)	56,944	71,615	30,917	82,800	104,627
4. Non-agricultural cash income (baht / household)	108,326	78,488	197,388	134,768	101,168
5. Household net cash income (baht / household)	157,270	158,103	138,305	217,568	205,795
6. Cash out of agriculture	113,258	107,559	96,065	198,663	147,460
7. Cash balance before debt settlement	44,012	42,544	42,240	26,905	58,335
8. Debt at the end of the year (Baht / household)	76,697	84,530	74,577	87,525	61,666
9. Amount of land holding	25.25	23.94	23.82	36.68	23.43

Office of Agricultural Economics, 2018

Situated in a highland and groups of mountains, previously, Chiang Rai province was suffered from flood, flash flood, and landslide.



From damages caused by the flood and landslide, the government took responsibility in order to provide a compensation in agricultural areas to those affected farmers until recovered.  
(Ministry of Agriculture and Cooperatives 2013)

However, under the Fund Advances for Disaster Relief and Emergency Assistance B.E. 2556 (2013), the amount of compensation provided by the government is inadequate comparing to the amount of damages and losses the farmers have.

**Crops**

Types	Rice	Filed Crops	Horticultural Crops
Crops are totally dead or damaged (paying no more than 30 Rais)	1,113 Baht/Rai	1,148 Baht/Rai	1,690 Baht/Rai
Landslide to Agricultural Area (paying no more than 5 Rais)		7,000 Baht/Rai	

**Fishery**

Types	Amount of Payment
Lobster, Sea Shrimp, Sea Crab or Sea Shell (paying no more than 5 Rais)	10,920 Baht/Rai
Fish or Fresh Water Animals (Earthen Pond) (paying no more than 5 Rais)	4,225 Baht/Rai
Fish or Fresh Water Animals (Floating Basket) (paying no more than 80 Square Meters)	315 baht/Square Meter

**Livestock**

Types	Amount of Payment
Public Grass Field for livestock damaged (Paying no more than 250 kilograms per Rai)	In the amount that corresponds to the size of the damaged area, by using no more than 2 kilograms forage seeds.
Private Grass Field for livestock damaged (Paying no more than 20 Rais) (Paying no more than 250 kilograms per Rai)	In the amount that corresponds to the size of the damaged area, by using no more than 2 kilograms forage seeds.
Cow (2 Animals as maximum/ person)	
Age less than 6 month	6,000 Baht/Animal
Age between 6 to 1 year	12,000 Baht/Animal
Age more than 1 to 2 years	16,000 Baht/Animal
Age more than 2 years	20,000 Baht/Animal
Buffalo (2 Animals as maximum/ person)	
Age less than 6 month	8,000 Baht/Animal
Age between 6 to 1 year	14,000 Baht/Animal
Age more than 1 to 2 years	18,000 Baht/Animal
Age more than 2 years	22,000 Baht/Animal

Types	Amount of Payment
Pig (10 Animals as maximum/ person)	
Age between 1-30 days	1,300 Baht/Animal
Age more than 30 days	3,000 Baht/Animal
Goat (10 Animals as maximum/ person)	
Age between 1-30 days	1,000 Baht/Animal
Age more than 30 days	2,000 Baht/Animal
Sheep (10 Animals as maximum/ person)	
Age between 1-30 days	1,000 Baht/Animal
Age more than 30 days	2,000 Baht/Animal
Native Chicken/ Turkey (300 Animals as maximum/ person)	
Age 1-21 days	25 Baht/Animal
Age more than 21 days	50 Baht/Animal
Layer Chicken (1,000 Animals as maximum/ person)	
Age 1-21 days	20 Baht/Animal
Age more than 21 days	80 Baht/Animal
Broiler Chicken (1,000 Animals as maximum/ person)	
Age 1-21 days	20 Baht/Animal
Age more than 21 days	50 Baht/Animal

Types	Amount of Payment
Layer Duck (1,000 Animals as maximum/ person)	
Age 1-21 days	20 Baht/Animal
Age more than 21 days	50 Baht/Animal
Broiler Duck (1,000 Animals as maximum/ person)	
Age 1-21 days	20 Baht/Animal
Age more than 21 days	50 Baht/Animal
Quail (1,000 Animals as maximum/ person)	
Age 1-21 days	8 Baht/Animal
Age more than 21 days	15 Baht/Animal
Ostrich (10 Animals as maximum/ person)	2000 Baht/Animal
Goose (300 Animals as maximum/ person)	100 Baht/Animal

Source: Regulation of Ministry of Finance on Contingency Fund Allocation for Handling Disaster Affected Person B.E. 2556 (2013).

## Objectives of the study

1. To assess the local government officials who are tasked with putting the policy under the Fund Advances for Disaster Relief and Emergency Assistance B.E. 2556 (2013) into practice effectively.

## Objectives of the study

2. To assess and examine the inter-relationships between local government vertically and horizontally and affected farmers. The focus of this issue is to determine the degree of cooperation, support and interaction under a concept of consensus-oriented, which affect the local government's task in building community resilience;

## Objectives of the study

3. To identify the nature of problems affecting the local government' officials in deliver disaster relief to affected farmers.

## Theoretical Framework

This study focuses on the idea of resilience (build back better) (UNISDR 2017) which is an approach to post-disaster recovery performed by local governments in reducing vulnerability to future disasters as well as to build community resilience.

The study will also focus on a concept of good governance (Surendra Munshi 2012; UNESCAP 2014) under a consensus-oriented dimension where both local governments and affected people agree to help supporting, accepting, and making decisions for the best benefit for their affected areas.

## Methodology

The purpose in this research is to outline and analyze disaster relief policy implementation through the case study of local governments (Municipality and Subdistrict Administrative Organization) in Chiang Rai province, Thailand. In addition, the following are groups identified for collecting research data:

1. Local government's officials (Municipality and Subdistrict Administrative Organization);
2. Provincial government's officials (Office of Disaster Prevention and Mitigation, Chiang Rai province);
3. Affected agricultural famers in selected areas.

## The form of analysis proposed

1. Primary data will be obtained from in-depth interviewing of a focus group with key personnel on the following topics related to governmental policy in providing compensation, resilience and governance:

2. Secondary data will be obtained from both English and Thai published material, including books, articles and government documents. Additional data will be drawn from articles in previous research, newspapers and magazines.

In this research study, there are two different forms of analysis proposed:

1. A quantitative form including
  - an in-dept interview
  - Focus group
2. A qualitative form made up of questionnaires.

Data will be collected from a random sampling of interviewees in examining research questions on The Disaster Occupational Recovery at Local Level in Chiang Rai Province. Results will be analyzed and then related to the research objectives, research framework and the hypotheses.



## 5. Gender in DRR from social scientific perspective

Associate Professor Dr. Junko Okada, Deputy Director, Kobe University Gender Equality Office, Japan



**Kobe University UNESCO CHAIR**  
*Focusing on Gender and Vulnerability in Disaster Risk Reduction Support*  
**Gender in DRR from social scientific perspective**

2019/05/02~03

Junko Okada  
Kobe University





### Why DRR gender-sensitive?

Dr A Singh from UNESCO stated in his opening speech at the International Conference on Gender and Disaster Risk Reduction (Beijing, 2009) that "adding gender to our perspective forces us to take a wider view of what constitutes disaster. When the gendered effects of disasters are taken into account, disasters are no longer simply physical in nature; they also become social in nature."  
 As he succinctly stated "disasters do not discriminate against people; humans most certainly do."

2



**UN CEB (Chief Executives Board)**  
*common principles*  
*:implementation of the 2030 Agenda for SD*

- ✦ The 2030 Agenda: "People-centered, Rights-based and Leaving No One Behind"
- ✦ =the core of a strategy for sustainable and inclusive development

3



### Basic concept by UNISDR

- ✦ Making disaster risk reduction gender sensitive : central to achieving sustainable development.



### 20-Point Checklist on Making Disaster Risk Reduction Gender Sensitive

4



**The Technical Process**

- ✦ technically sound gender sensitive approach is required in the following areas

1) carry out gender-sensitive risk assessments, based on a gender-based vulnerability analysis

the practices of gender inequality in political, social, cultural, and economic areas

the different roles that men and women play at national and local levels

5



2) enhance national and local early warning systems from a gender perspective



taking the different needs and different access between men and women to early warning messages on potential and devastating hazards

Early warning systems: people-centred, integrate four elements (from Hyogo Framework)

- a) Risk knowledge
- b) A monitoring and warning service
- c) Dissemination of meaningful warnings to those at risk
- d) Response capability.

6



3) take action to increase women's capacity and knowledge on gender-sensitive risk assessment and vulnerability analysis in disaster risk reduction

7



4) develop gender-sensitive indicators for disaster risk reduction

UNISDR  
*Making Disaster Risk Reduction Gender-Sensitive: Policy and Practical Guidelines*

Establish gender specific data and statistics on impact of disasters, carry out gender-sensitive vulnerability, risk and capacity assessments and develop gender-sensitive indicators to monitor and measure progress;

8



*What is 'indicator'?*

- ✦ Indicators: quantitative measures  
ex. how many men and women...?
- ✦ Indicators: reflect subjective aspects of society  
ex. how free women feel to speak?
- ✦ Indicators: specific situations or conditions

9



*Indicators;*  
*a measure of the extent to which society is realizing gender equality.*

- ✦ meaningful and realistic measures of change(s) overtime
- ✦ bring to light issues and trends not otherwise easily observed or evident
- ✦ allow for the impact of policy and programmes to be evaluated and for improvements to be made in all phases

10



*Using indicators*

- ✦ how to include women's knowledge, experiences, and perspectives in planning and implementing the DRR
- ✦ Monitoring and evaluation of indicators

↓

what extent a community or society is upholding "the dignity and worth of the human person, in the equal rights of men and women and of nations large and small" (UN Charter preamble).

11



*Quantitative indicators*

- ✦ countable, measurable  
ex. numbers, percentages of women and men

The percentage of women who have newly acquired boats in a community due to an initiative.

12



### *Qualitative indicators*

- ✦ not directly quantifiable,  
ex. opinions, perceptions, judgments
- ✦ have an explanatory and analytical purpose,  
ex. the quality of women's participation and  
experience is important,

Women's perceptions in the community about whether the new boats have improved their quality of life and if not, why not.

13



### *References*

- ✦ UNISDR, UNDP and IUCN, *Making Disaster Risk Reduction Gender-Sensitive*, 2009
- ✦ Elaine Enarson, *Women Confronting Natural Disaster From Vulnerability to Resilience*, Lynne Rienner, 2012
- ✦ [https://www.unisdr.org/files/42360\\_20p\\_ontchecklistforgendersensivived.pdf](https://www.unisdr.org/files/42360_20p_ontchecklistforgendersensivived.pdf)

14

## 6. Integrating Elderly Care System with Set-top Box for Enhancing Social Capital

Assistant Professor Dr. Kuo-Tsung Tseng, National Kaohsiung University of Science and Technology, Taiwan and Associate Professor Dr. Akira Kawai, Shiga University, Japan

### Integrating Elderly Care System with Set-top Box for Enhancing Social Capital

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Where

What

Why

How

Conclusion

Where  
do we come from?

Taiwan is also called "**Formosa**". In Portuguese, it means the **Beautiful Island**.



**Taiwan:**  
Area: 36,000 km<sup>2</sup>  
Population: 23,571,990  
GDP: US\$ 25,977 (2018 estimate)



Where

What

Why

How

Conclusion

What is an  
**Elderly Care System?**

### Elderly Care System

*An **Elderly Care System** is a system that helps elderly people to live healthy and to have a good quality of life.*

Physical		Spiritual	
Dietary Record	Medicine Reminder	Interpersonal Relationship	Community Activities

Where

What

Why

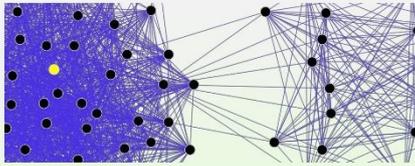
How

Conclusion

What is  
**Social Capital?**

## Social Capital

There are many definitions presented for **Social Capital**. It may be regarded as the connections among people.



## Effects on Health

A growing body of research has found that the presence of social capital through social networks and communities has a protective quality on health. Social capital affects health risk behavior in the sense that individuals who are embedded in a network or community rich in support, social trust, information, and norms, have resources that help achieve health goals. For example, a person who is sick with cancer may receive information, money, or moral support he or she needs to endure treatment and recover. Social capital also encourages social trust and membership. These factors can discourage individuals from engaging in risky health behaviors such as smoking and binge drinking. Furthermore, neighbourhood social capital may also aid in buffering health inequities amongst children and adolescents.

Where

What

Why

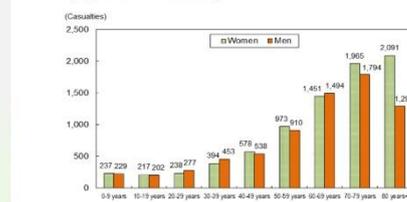
How

Conclusion

### Why do we study This Topic?

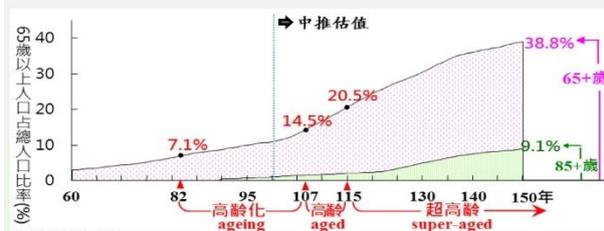
## Older Adults Face More Danger in Natural Disasters

Figure 1: Casualties by Gender and Age Group in the Great East Japan Earthquake (Iwate, Miyagi, Fukushima Prefectures)



(Notes) 1. The data source is: 'Cause of Death for Casualties in the Great East Japan Earthquake, 11.03.11-11.03.12', National Police Agency.  
2. Figures do not include casualties whose gender or age is not identified.

## The Super-aged Society Is Coming in 7 Years.



## Every Two Aged Citizens Share One Caregiver in Average.



Where

What

Why

How

Conclusion

### Why do Older Adults Face More Danger in Natural Disasters?

### Reasons

- Evacuate without access to medication
- Too weak to evacuate
- Too slow to evacuate
- Reluctant to evacuate
- Cannot evacuate without help (nearly invisible to neighbors)
- No information to evacuate

Where	<h2>Why do we use Set-top Box?</h2>	Reasons		
What		Smart phones are too small.	Tablets are too complicated.	It takes time to learn new stuff.
Why				
How		TVs are big enough.	Remote controllers are more familiar.	No need to learn new stuff.
Conclusion				

Where	<h2>How do we Solve the Issue?</h2>	Features of Our System		
What		Check health status by recording bio signals of elders.		
Why		Remind to take meals, medicines or time to sleep.		
How		Encourage participating community activities by providing info.		
Conclusion		Support elders' interests by providing a showing platform.		

Where	<h2>UAA UAG UGA</h2> <p>(Stop/Termination codon in the genetic code)</p>	<p>Finally, we have our conclusions here.</p> <ul style="list-style-type: none"> <li>➤ Older adults face more danger in natural disasters.</li> <li>➤ The super-aged society is coming for every country in the world since the average lifetime is longer and the trend of fewer children.</li> <li>➤ We do need a system to help our elders to live healthy and to have a good quality of life.</li> <li>➤ Our system is still in experimental mode and has a long way to go.</li> <li>➤ Any suggestions would be greatly appreciated.</li> </ul>
What		
Why		
How		
Conclusion		

## 7. Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

Mr. Hafiz Amirrol, Head of Strategic Planning, MERCY Malaysia

<p></p> <h3>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</h3> <p></p> <p>HAFIZ AMIRROL Head of Strategic Planning, MERCY Malaysia Vulnerability and Disaster Resilience Workshop Mae Fah Luang University Thailand 2 May 2019</p> <p>1</p>	<p></p> <p>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</p> <h2>BUILDING RESILIENCE</h2> <p>2</p>
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<p></p> <p>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</p>  <p>3</p>	<p></p> <p>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</p> <h3>Total Disaster Risk Management</h3>  <p>Total Disaster Risk Management (TDRM)</p> <p>LOW RESILIENCY Less prepared = More response and recovery needed</p> <p>HIGH RESILIENCY More prepared = Less response and recovery needed</p> <p>4</p>
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<p></p> <p>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</p> <h2>ON INCLUSIVITY</h2> <p>5</p>	<p></p> <p>Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective</p> 
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## Most vulnerable people in disaster

1. Children and adolescents
2. Women (including female headed households, victims of domestic violence)
3. People with disabilities (PWDs)
4. Religious minorities groups
5. Trafficked persons
6. HIV-positive individuals
7. Older persons/ elderly citizens
8. Indigenous minorities
9. Very poor and homeless
10. Refugees and stateless persons

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## Most vulnerable people in disaster

**“Social exclusion describes a process by which certain groups are **systematically disadvantaged** because they are **discriminated against** on the basis of their ethnicity, race, religion, sexual orientation, caste, descent, gender, age, disability, HIV status, migrant status or where they live”**

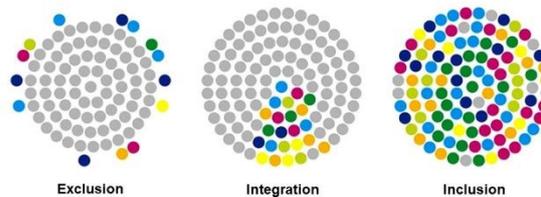
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## Social exclusion

Situation of these groups as a form of social exclusion on the following grounds:

1. These groups are, in various ways, **kept away from full participation** in the wider economic, political, cultural, and social life;
2. These groups are **lacking in power and access to decision-making** that could influence policies or create opportunities for improving their standard of living.

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## CIVIL SOCIETY

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**No matter where in the world disaster strikes, disaster management is all about people.**

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 



Affected Individuals    Special Needs Individuals    First Responders    Recovery Workers    Volunteers

**SOCIAL CAPITAL**

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 



**Managing oneself/ a small group/ a community, before/ during/ after the event of disaster in an appropriate way.**

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 

**DISASTER MANAGEMENT**

**A collective approach in problem solving, and is seen as the most appropriate way in managing disaster situations.**

Context and Condition → Inclusion and Participation

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 

**STRATEGIES: AN OVERVIEW**

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 

**Roles of civil society**

- 1 Translating Global Frameworks and its Directions to Local Level 
- 2 Collaboration and Partnership 
- 3 Amplifying Local Voice 
- 4 Capacity Enhancement for Effectiveness and Efficiency 
- 5 Strengthening Accountability 
- 6 Innovation 

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective 

**DRR/DRM Plan** (Authority) ↔ Two-way interaction ↔ **CBDRR/M Plan** (Community)

<ol style="list-style-type: none"> <li>1. Emergency Communication</li> <li>2. Public Warning and Alert Guidelines</li> <li>3. Planning Guidelines</li> </ol>	<ol style="list-style-type: none"> <li>1. Establish Committee</li> <li>2. Identify Strength and Weaknesses</li> <li>3. Develop Capacity and Community Strength</li> </ol>
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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

## Why CBDRR/M is strategically viable?

With involvement of communities risk reduction efforts can be much strengthened

Number of death/affected people

5  
4  
3  
2  
1

Can increase participation of communities and mindset

Behavioral change

Economic loss

Protection of assets and property through DRR actions

Require stable start-up cost, but can be easily scaled-up by communities

Cost effectiveness

Some places such as in Philippines and Indonesia have showed good acceptance (other places still require buy-ins)

Level of application/penetration

Environmental friendliness

Negative impact on the environment can be reduced by involvement of local communities and leaders

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

## SOCIAL INCLUSION

community

governments

public sector

INGOs

academia

private sector

"CSOs AS SOCIAL LEADER"

from societal point of view

from micro level; community development, capacity building

"CSOs AS SOCIAL WORKER"

from communal point of view

from macro level; geographical, political-economical, socio-cultural

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

## Aspects in communities' involvement

Aspect	Question
Identification	Are stakeholders identified (through a proper process - including prioritisation)?
Representation	Are all relevant social groups represented?
Engagement	Are all relevant social groups motivated to engagement?
Access to Information	Share of stakeholders that regularly take part in information meetings
Interest	Are the stakeholders interested in having information, in the outcome?
Trust	Do the stakeholders trust the decision makers, institutions and information available?
Acceptance - Process	Do the stakeholders accept the process?
Acceptance - Outcome	Do the stakeholders accept the outcome?
Dialogue	Are stakeholders engaged in dialogue with listening and mutual understanding?
Financial	Do the financial resources available meet the needs of the governance process defined?
Personnel	Do the personnel resources available in expertise and capacity meet the needs of the governance process defined?
Time	Is there calendar time to meet the governance process defined?

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

PROMOTE INTEGRATION

to strengthen and homogenize the social fabric

SUSTAIN LIFE

in communities where children and youth lack adequate care

MOBILISE THE COMMUNITY

to collectively prevent and reduce the prevention and protection of child and human rights

MAKE SAFE PLACES

in all areas where children can live, play and grow

PROMOTE INTEGRATION

to influence the management and planning of resilient spaces that are responsive to and inclusive of children, youth, girls and boys

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

## OBJECTIVE

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Inclusive DRR and Resilience Building Strategies from the Civil Society Perspective

## The resilient agenda

Humanitarian leadership

Higher resiliency

Opportunities for development

Stakeholders growth and sustainability

Peace and security

Healthy and developed nation

REDUCING DISASTER RISK, PROTECTING SUSTAINABLE DEVELOPMENT

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**Thank you**

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## 8. Volunteerism and Disaster Resilience at Local Level in Thailand: Institutional Design

Dr. Thanikun Chantra, Mae Fah Luang University, Thailand



**Volunteerism and Disaster Resilience at Local Level in Thailand: Institutional Design**

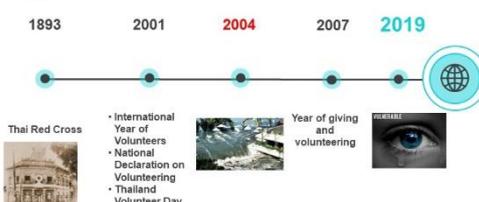
Thanikun Chantra  
School of Social Innovation  
Mae Fah Luang University

### What is volunteerism?

*“activities undertaken of **free will**, for the general public good and where **monetary reward is not the principal motivating factor.**”*

UN Volunteers (UNV) Programme, 2015

### Volunteering in Thailand



**1893** Thai Red Cross

**2001** International Year of Volunteers  
National Declaration on Volunteering  
Thailand Volunteer Day (21 October)

**2004** Year of giving and volunteering

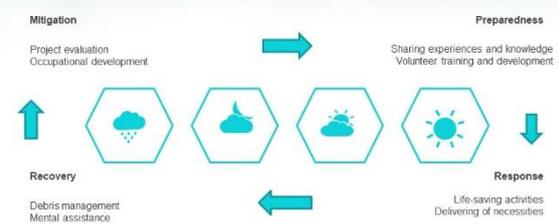
**2019**

### Volunteering by countries, 2016

Source: United Nations Volunteers (UNV) Report 2018

Country	Population aged 15 or older	Total Volunteering	Men	Women
Japan	110,770,000	1,852,797 (1.67%)	1,011,596	841,201
Philippines	64,936,000	748,794 (1.15%)	400,214	348,580
Thailand	55,238,000	842,353 (1.52%)	459,173	383,179
New Zealand	3,626,000	234,063 (6.46%)	90,421	143,642

### Roles of Volunteers in Disaster Management Cycle



**Mitigation**  
Project evaluation  
Occupational development

**Preparedness**  
Sharing experiences and knowledge  
Volunteer training and development

**Response**  
Life-saving activities  
Delivering of necessities

**Recovery**  
Debris management  
Mental assistance

*“(Disasters) bring social vulnerability to the forefront in considering how disasters unfold, clearly revealing that disasters are not created from the physical event alone. Equally important, people—even those considered vulnerable—respond in innovative and resilient ways that unveil the strength of human ingenuity and spirit. It is not a foregone conclusion that a hazard event, even a large one, will result in catastrophic loss.”*

Source: Thomas et al (2013), Social vulnerability to disasters, Florida: CRC Press





**Social vulnerability**

## Statement of the problem



Disaster can pull group of people together to fight and help their communities to revive strongly again

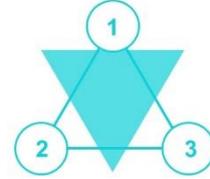
This research looks at "volunteer" as a new actor that can encourage participation and strengthen community before and after disaster strikes.

Under the concept of volunteerism, the vulnerabilities will not be able to only develop themselves to be able to survive and have stronger life, but also be able to help community that they live to build back stronger and better.

So, instead of waiting for help from the government, it is better, as this research argues, for people and NGOs to strengthen themselves through appropriate institutional design that can promote partnership and participation in the long-term.

## Research Objectives

1. To be able to explain how volunteers can participate in disaster resilient activities.

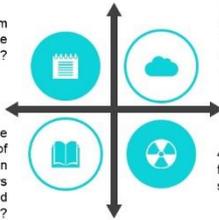


2. To be able to analyze how volunteerism can strengthen the abilities of vulnerable people.

3. To be able to suggest institutional design for volunteering development and disaster management in Thailand.

## Research Questions

1. How does volunteerism impact disaster resilience at local level in Thailand?



2. Can volunteerism act as a way of enabling vulnerable people to be active participants in disaster management and support resilient communities?

3. Can institutional structure facilitate the works of volunteers and strengthen the capabilities of volunteers in building resilient and sustainable communities?

4. How institutional design for volunteerism in Thailand should be?

## Theoretical Framework



## Research Methodology

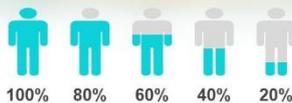


## Output

1. Recommendations on the proper strategies to improve the roles of volunteers in enabling vulnerabilities and strengthening disaster resilience.

2. Institutional design for volunteering development and disaster management in Thailand in order to encourage resilient community at local level.

## Indicators



1. Total number of **volunteers** in resilient activities.
2. Total number of **vulnerability-become-volunteers** in resilient activities.
3. Total number of **activities** that volunteers participate.

As someone who has had health problems get in the way, and mostly prevent every single activity I do, including anything work related, my confidence in my abilities is extremely low".



I really felt that someone as worthless as I felt I was at the time could make a difference, even with my limitations



I really felt like a waste of space and so ashamed of what I am and how my body is a failure. But now I actually do something important.



I almost feel like my volunteer role was created as much for me as for the people I help

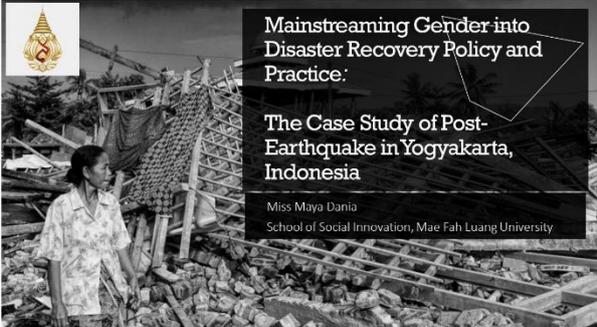
Source: O'Brien et al (2011), *Volunteering in nature as a way of enabling people to reintegrate into society*, *Perspect Public Health*. 2011 Mar; 131(2):71-81.



Vulnerabilities are not necessary to always be vulnerable. Volunteers can build resilient community.

## 9. Mainstreaming Gender into Disaster Recovery Policy and Practice : The Case Study of Post-Earthquake in Yogyakarta, Indonesia

Ms. Maya Dania, Mae Fah Luang University, Thailand



**Mainstreaming Gender into Disaster Recovery Policy and Practice:**

**The Case Study of Post-Earthquake in Yogyakarta, Indonesia**

Miss Maya Dania  
School of Social Innovation, Mae Fah Luang University

### Presentation Plan

This presentation will be delivered in several parts

1

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Background

Research Questions and Objectives

Theoretical Framework

Literature Review

Research Methodology

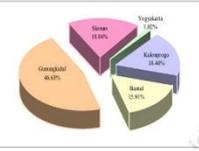
# 1

## Background



**Earthquake in Yogyakarta**

Yogyakarta Special Province  
4 districts, 1 city, 78 sub-districts, 438 villages, 4mil population  
Bantul District had the worst impact






**Earthquake in Yogyakarta**

27 May 2006  
05.53 a.m.  
5.9 SR/57s  
US\$ 3.1mil

damaging 150,000 houses  
killing almost 6,000 lives  
injuring more than 30,000  
breaking main infrastructure

Homes constructed with mud bricks, flattened

Tectonic earthquake, followed by Volcanic eruption quake

Province's GDP per capita so low (Rank 25 out of 33 provinces)

not a natural resource dependent province, income from service and Tourism Hospitality Industry

**Bantul Districts**

110,000 houses damage  
4,100 deaths  
20,000 injured people  
95% level of infrastructure damage

**Most of the lost and injured people were women**



Women did morning domestic works in the kitchen and well



Traumatic pregnant women got complications, spontaneous abortion



Elderly women could not move fast to save their lives

### Beijing Declaration and Platform of Action (1995)

Determined to advance the goals of equality, development and peace for all women everywhere in the interest of all humanity

**23<sup>rd</sup> Special Session on Women (2000)**  
natural disaster was identified as the latest challenge for women that would prevent the implementation of Beijing Declarations and Platform for Action

The same disaster might give different impact for different gender  
community capacity to anticipate, prepare for, protect one's self and recovery

**Elaine Enarson**

*"Gender Equality, Work, and Disaster' Reduction: Making the Connection"*

*"Gender mainstreaming is vital to achieving sustainable development through reconstruction"*

Disaster risk perception is constructed differently in the local community through a complex concept, influenced by many factors (e.g., social power, privilege, domination, vulnerability, empowerment, political economy, and social change)

Women are included in the most vulnerable group when a disaster strikes.

Women and girls may not have access to equal resources and information in a disaster situation or face discrimination in the aftermath because of gender stereotypes and gender bias in the design, funding, implementation, monitoring, and evaluation of emergency shelters, water and sanitation, healthcare, and other post-disaster initiatives.

Nevertheless, in Indonesia, there are only few studies offer a detailed elaboration of specific strategies for mainstreaming gender within recovery policy and practice.

Following a natural disaster, men's and women's roles are equally essential to the survival and growth of households, communities, and societies. Yet, too often, women are not effectively engaged and represented in post-disaster recovery (GFDRR, 2011).

This area is still underexplored and thus calls for investigation into how gender mainstreaming is linked to disaster recovery policy and practice and how it could help policy makers to design better policies and frameworks to achieve community resilience to disaster.

## 2 Research Questions and Objectives

### Research Questions

This study proposes two questions:

1. How does Indonesia implement gender mainstreaming policy for post-disaster recovery?
2. How does the practice of Indonesia's post-disaster recovery policy based on gender mainstreaming in Yogyakarta Special Province?

### Objectives

This study purposes to:

1. Find gender mainstreaming policy for post-disaster recovery implemented in Indonesia.
2. Discover the post-disaster recovery practice based on Indonesia's gender mainstreaming policy in Yogyakarta Special Province.

## 3 Theoretical Framework

### Gender Equality and Equity

By the **definition** of UNESCO, **gender equality**, does not mean that women and men have to become the same, but that their rights, responsibilities, and opportunities will not depend on whether they were born as male or female. On the other hand, **gender equity** means fairness of treatment for men and women according to their respective needs.

**Gender** shapes the disaster experience and the ability to recover. Building back better encompasses a number of dimensions with gender-specific implications, beyond the construction of strengthened physical infrastructure (WBI, 2009, in IRP 2009).

This may include equal treatment or treatment that is different but which is considered **equivalent** in terms of rights, benefits, obligations, and opportunities (UNESCO, 2000)

### Gender Equality and Equity

In this perspective, **the strength of post-disaster recovery lies with how well it responds to the needs of both women and men equally and equitably** (GFDRR, 2018). Gender equality principles must guide all aspects of disaster mitigation, response and reconstruction.

While, **gender mainstreaming** is a globally **accepted strategy** for promoting **gender equality**. It is the process of assessing the implications for women and men of any planned action, policy or program in all areas and at all levels before any decisions are made and throughout the whole process (United Nations, 2002).

# 4

## Literature Review

Some literature tends to discuss gender mainstreaming and disaster recovery policy and practice as two separate components, however, the two issues are fundamentally interrelated.

Gender mainstreaming is not a goal in itself but an approach for promoting gender equality (UNICEF, 2017).

Gender issues cannot be discussed separately from disaster management policy and practice (Drolet, 2015)

The goal for the implementation of gender mainstreaming is for development policy and programs to achieve a real, sustainable contribution toward equality between women and men (Yumarni, 2018).

Gender mainstreaming is a strategy to promote decision making and policy that considers the needs and interests of women and men (Bradshaw, 2015).

Disaster recovery plan is a documented, structured approach with instructions for responding to unplanned incidents (UNDP, 2015)

The need to integrate gender mainstreaming into post-disaster recovery has been emphasized by many studies (Enarson and Chakrabarti, 2009; Amarutunga and Haigh, 2011; Yi and Yang, 2014; Gotham and Cheek, 2017).

In the recovery efforts, Indonesia perceives natural disasters exposed the underlying weaknesses and vulnerabilities in Indonesian community.

There are a number of key challenges that women face in different elements of post-disaster reconstruction and recovery: (1) housing and property rights, (2) health and post-disaster violence, (3) community services and infrastructure restoration, (4) poverty reduction, livelihood restoration and economic development (GFDRR, 2011).

A term "building back better" introduced during the 2004 Indian Ocean Tsunami recovery efforts in Aceh, Indonesia

# 5

## Research Methodology

### Research Methodology

#### Mixed Method

Exploratory and Intrinsic case study

An exploratory case study is a suitable design that can facilitate the answering of the how and what questions of events within real-life contexts.

An intrinsic case study is selected as it is suitable to identify a special case.

#### Sida's model for gender mainstreaming

The tool for the research to highlight the differences between and among women, men, girls and boys in terms of their relative distribution of resources, opportunities, constraints and power in a given context.

#### Data Collection and Analysis

In-depth interviews and distribution of a set of questionnaire measuring gender mainstream to policy makers and beneficiaries who dealt with and had knowledge of Yogyakarta earthquake reconstruction.

### Sida's Model

#### Gender Analysis

Any cooperation process must always begin by analyzing the gender equality situation in the given context and identify the expected results in terms of strengthened gender equality.

#### Identify How

Based on the gender analysis, Sida must identify relevant areas for collaboration, the approach to use and how to reach the expected results.

#### Three main approaches

Integration of gender equality in interventions in general, Targeting specific groups or issues through special interventions, Dialogue with partners on gender sensitive issues and aspects.



### Data Collection

#### In-depth interviews

Policy makers and beneficiaries who dealt with and had knowledge of Yogyakarta earthquake reconstruction. Beneficiaries' interviews will be conducted separately between women and men in order to avoid male bias as well as to reveal women voices.

#### A set of questionnaire

Measuring gender mainstream its determinants. A checklist of good practice for ensuring gender sensitivity in disaster recovery phase adopted from World Bank (2009) will be used to provide guidance for in-depth interview and questionnaires

#### Data Analysis

Content analysis will used to explore types and pros toward gender mainstream. Questionnaires will be analyzed using factor analysis and t-test in particular to identify prominent types and key determinants of gender mainstream in post-earthquake reconstruction context.



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## 10. Local Government Initiative Practice on Post Tsunami in Coastal Community in West Java, Indonesia

Ms. Reni Juwitasari, Mae Fah Luang University, Thailand



### Local Government Initiative Practice on Post Tsunami in Coastal Community in West Java, Indonesia

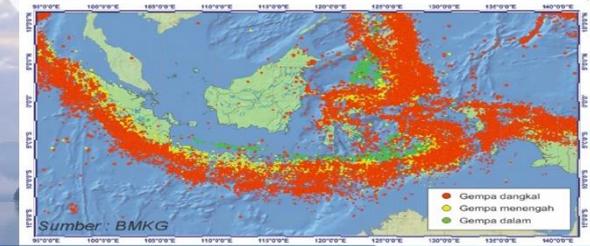


Miss Reni Juwitasari  
Mae Fah Luang University

### Presentation Plan

- Background
- Research Questions and Objectives
- Theoretical Framework
- Literature Review
- Research Methodology

## Background



Sumber: BMKG

**Tsunami in West Java**  
Five times Tsunami from 1823  
The worst one was in Pangandaran on July 17, 2006 with 664 people died, following Tsunami was in Sunda Strait on 22 December 2018 with 429 fatalities.

**\*\*No Earthquake**

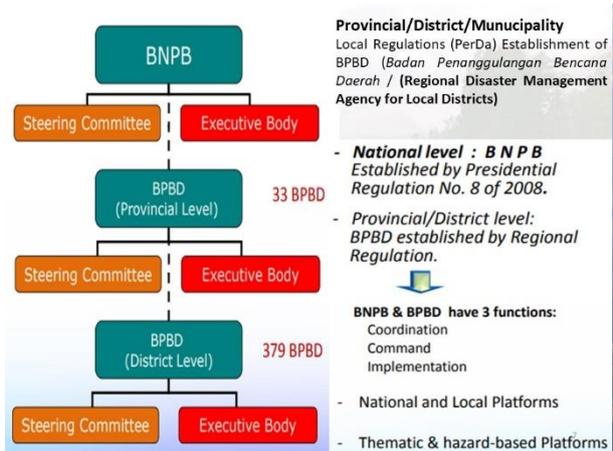


### Role on Post Tsunami

1. National Government Law 24/2007 on Disaster Management, creating the plan of DRR, such as developing and improving early warning system, infrastructure preparedness and capacity preparedness for government and coastal community by using local wisdom. In fact, the action on disaster from central government is slowly responding.
2. Local Government Law 32/2004 on autonomy and decentralization leads Regional Regulation 2/2010 West Java Local Government Disaster Management

### Indonesian Policies of Coastal Community

- President's Regulation 05/2010 was created as derivation of Law 17/2007 about the National Long Term Development Plan for 2000-2025.
- Law 26/2007 on spatial planning was enacted to account for the decentralization system.
- Law 1/2014 was conducted on coastal and small island management.
- Law 22/2008 on budgeting and disaster aids management.
- Ministry Home Affairs Decree 46/2008 about the establishment of regional disaster management agencies.



During the recovery process, the local government can perform an emergency response phase as an initiative, divided into three sub-phases: 1) emergency preparedness, 2) emergency response, and 3) the transition period from emergency phase to the recovery phase (rehabilitation and reconstruction) phase (GFDRR, 2014).

Disaster initiative recovery practice can be approached from two viewpoints: first, operational outlook. This includes emergency management approach, recovery support functions (RSF) and the National Disaster Recovery Framework; and second, outcome-oriented outlook. This includes policies and engagement that guide re-development.

## Research Questions and Objectives

### Research Questions

This research rises two questions:

1. How does disaster recovery planning from the local government enhance coastal community resilience in West Java province?
2. How does the local government engage multi-stakeholder to bring resilience to economic recovery of the coastal community in West Java province?

### Research Objectives

This research is expected to:

1. Elaborate operational and outcome-oriented disaster recovery planning initiative from the local government to enhance coastal community resilience in West Java province.
2. Expound the multi-stakeholder engagement committed by the local government to bring resilience to economic recovery of the coastal community in West Java province.

This research will apply the concept of resilience as the theoretical framework. Disaster resilience is part of the broader concept of resilience, which means the ability of individuals, communities and states and their institutions to absorb and recover from shocks, whilst positively adapting and transforming their structures and means for living in the face of long-term changes and uncertainty (UNISDR, 2005).

Disaster resilience concept act as a guiding principle behind an effective hazard risk management. Moreover, disaster resilience is determined by the degree to which individuals, communities and public and private organizations are capable of organizing themselves to learn from past disasters and reduce their risks to future ones, at international, regional, national and local levels (United Nations, 2007). Resilient communities will experience less damage and tend to recover quickly from disasters (Pedcris, 2012).

## Theoretical Framework

# Literature Review

Coastal zones are critical to life and livelihoods, people and planet. They are conduits to trade, to communications, they provide resources and livelihoods, and they are often **centers of economic growth** (UNDP, 2018). However, coastal communities around the world are experiencing unprecedented change resulting from population growth in coastal regions and increased vulnerability to natural hazards. **Resilient coastal communities plan for** and take action to mitigate the risks from coastal hazards, increase the pace of recovery from destructive events, and adapt to changing environments (UNISDR, 2013). Furthermore, coastal communities are at the frontline of sea disasters, like Tsunami.

In post-disaster literature, the idea of turning the adversity of the disaster into an opportunity for achieving development is increasingly recognized (IFRC 2006, ERRA 2006b). A **resilient coastal community** is one that is prepared for a range of future scenarios and can adapt to change in a sustainable, integrated and inclusive way, at an acceptable cost. It is believed to be of importance for a successful disaster recovery to cease this **"window of opportunity"**. **Recovery efforts** should, at minimum, ensure that communities become safer than they were before the disaster (Office of the UN Secretary-Generals, 2006). Moreover, **the government can apply innovative solutions across all stages of the infrastructure planning cycle: from assessing risks to adjusting responses, if need be** (OECD, 2018).

As the complicated act to be synergized, definitely local government, as main actor, has implemented the existed policy of disaster risk reduction. It will be measured the effectiveness of its implementation, moreover it will also be described the **initiative practice** that have been implemented by **local government**. The main intended **outcome of local government initiative practice is to minimize of destruction in the coastal area as well as community resilience** (UNDP, 2010).



Figure 1. Infrastructure planning and construction cycle

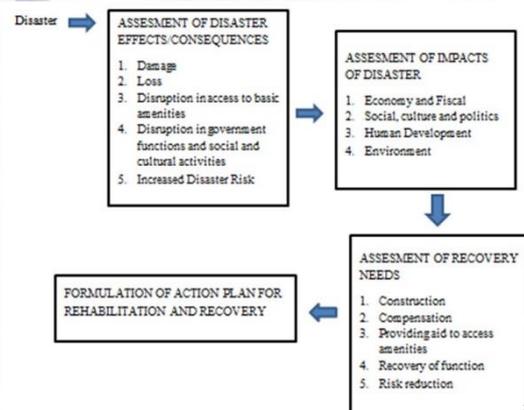
# Research Methodology

## Research Methods

A qualitative approach will be followed in this research. Four research techniques will be applied data collection, as follows (GFDRR, 2014):

- a. A review of available literature
- b. Interviews with the key stakeholders
- c. Focus group discussions
- D. Observation, including:
  - Field observation: and
  - Participant observation, involving the process of PDNA as well as participant observation on several issues/aspects relating to the implementation of the Recovery Action Plans in post-tsunami Pangandaran, West-Java.

Figure 2. Flow Chart of PDNA Process



The following table provides information on the data that will be sought and the collection technique that will be applied.

Table 1. Data Collection and Technique

Data that will be sought	Main data collection technique
Regulations on institutional arrangement and policy framework on post-disaster recovery, e.g. the role of BNPB and other government ministries, the guidelines for disaster recovery, PDNA, Action Plan, Financing, monitoring, and evaluation of post-disaster recovery.	-Review of existing regulations on post-disaster recovery such as national laws, government regulations of Head of BNPB among others
Planned priorities and recovery activities in post-tsunami <b>Pangandean</b> and <b>Banten</b>	-Review of Action Plans for Rehabilitation and Recovery post tsunami -Participant observation
Planned institutional arrangement, funding, monitoring and evaluation mechanism for recovery in <b>Pangandean</b> and <b>Banten</b>	Review of Action Plans for Rehabilitation and Recovery post tsunami -Participant observation
Implementation of recovery activities, institutional arrangement, funding, monitoring, and evaluation mechanism for recovery in <b>Pangandean</b> and <b>Banten</b> ; Challenges and Obstacles in implementation and ways of resolving those challenges.	-Interviews with key stakeholders such as relevant BNPB officials at the national level and BPBD officials at the province and district level in West Java and <b>Banten</b> -Review of government document such as monitoring reports -Field and participant observation

The level of people's satisfaction with the recovery programmes run by the government and other actors.	-Interviews with key stakeholders and/or focus group discussion with beneficiaries of recovery programmes. -Review of government documents regarding the recovery process. -Field observation
Inclusion of the community in the planning and implementation process, monitoring recovery programmes with regard to the inclusion of protection of vulnerable groups	-Interviews with key stakeholders such as relevant BNPB officials at the national level and BPBD officials at the province and district level in West Java and <b>Banten</b> and focus group discussion with beneficiaries of the recovery programmes -Field and participant observation
Incorporation of DRR measures into recovery programmes.	-Review of Action Plans for Rehabilitation and Recovery on post tsunami areas -Interviews with key stakeholders such as relevant BNPB officials at the national level and BPBD officials at the province and district level in West Java and <b>Banten</b> and focus group discussion with beneficiaries of the recovery programmes -Field and participant observation

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Thank You

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# Brainstorming on joint research proposal

## 1. Gender, Vulnerability and Resilience: Planning, Acting and Educating for Disaster Risk Reduction



4 Theoretical framework

- **Multidisciplinary, Transdisciplinary**
  - Social Science
  - Health Science
  - Technology
  - Bridging disciplinary gap

5 Data collection

- **Mixed method**
  - 1. Documentary research
  - 2. In-depth interview
  - 3. Field research
  - .....
  - .....

6 Expected outputs

- **Collective outputs**
  - 1. mechanism and tools for disaster resilience that reflect gender and vulnerability sensitivity
  - 2. policy guidelines of disaster resilience for diversified contexts and cross-sectors involvement
  - 3. educational materials for classes
    - Book
    - Manual for teachers
    - Recommendations for educators
- **Individual outputs**
  - 1. research reports based on each research project
  - 2. an edited book compiled of chapters based on research reports
  - 3. an individual article published in academic journals
    - Special edition
    - Only some sections of the project

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## Structure of the research project

- Introduction
  - Prof. Alexander and Dr. Sirbom
  - Identifying issues in disaster risk, vulnerability and resilience from a **gender and peace studies perspective**
  - Link with Sendai Framework, SDGs
  - Part of UNESCO Chair
- Part I: Gender and disaster resilience
  - 4 projects
- Part II: Disaster resilience in local context
  - 4 projects
- Part III: Civil society and voluntarism in disaster resilience / Aging / aged society and disaster resilience
  - 4 projects
- Conclusion and recommendation
  - Prof. Alexander and Dr. Sirbom

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## Gender and disaster resilience

- **Linking Ideas : Definition (vulnerable groups), function, timeframe, area, age,**
- **4 projects**
  - 1. **Gender** in disaster from the social scientific perspective
  - 2. **Rural women's role** in disaster resilience and risk adaptation option
  - 3. **Mainstreaming gender** into disaster recovery policy and practice: the case study of post earthquake in Jogjakarta, Indonesia
  - 4. **Gender sensitivity** in disaster management in Indonesia

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## Disaster resilience in local context

- **Linking ideas : vulnerable groups, administrative boundary, timeframe**
- **3 projects**
  - 1. Development of climate hazards decision support system for **Cameron Highlands, Malaysia**
  - 2. The disaster occupational recovery at local level: Policy direction and practical guidelines in **Chiangrai Province, Thailand**
  - 3. Local government initiatives practice on Post Tsunami in coastal community in **West Java, Indonesia**
  - 4. Risk Adaptation of the Female Vulnerable Groups Relying on the Natural Environment Under Climate Change – Reconstructing Micro Insurance in **Taiwan**

## Civil society and voluntarism in disaster resilience

- **Linking ideas: state obligation, civil society, voluntarism, social capital, timeframe, institutionalization**
- **4 projects**
  - 1. Inclusive DRR and resilience building strategies from the *civil society perspective*
  - 2. **Voluntarism** and disaster resilience at local level in Thailand: institutional design
  - 3. Professor Alexander
  - 4. Integrating **elderly care system** with set-top box for enhancing social capital

