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The Critical role of Community Engagement (CE) in the Early Warning System (EWS): The case of Aceh, Indonesia

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Introduction

- **Disasters** are global challenges–> great impacts
- DP→ important to prepare for these impacts
- **EWS →** critical element
- **CE is fundamental** for effective EWS
- **BUT often focus on technology**

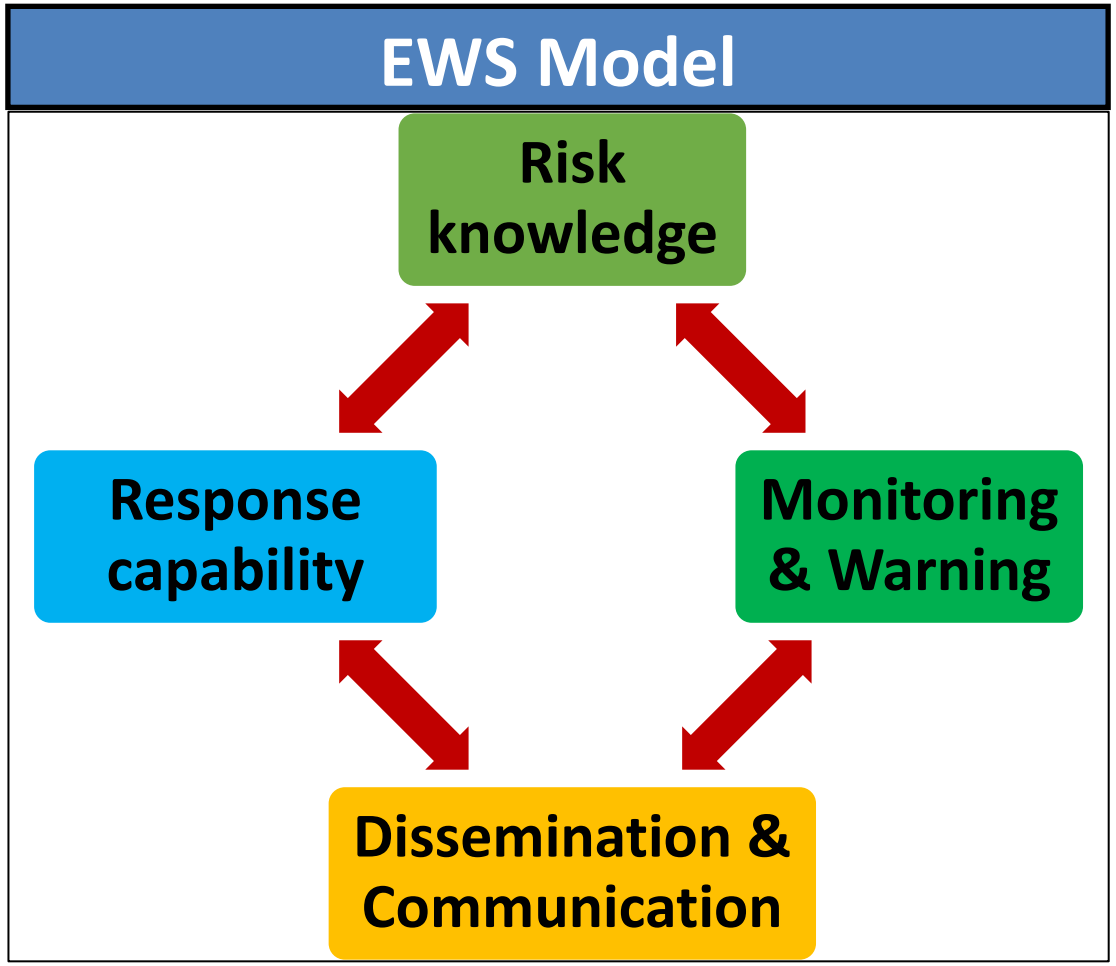
- This presentation provides research rationale for assessing CE in EWS .
- Aceh, a province in Indonesia→ vulnerable to disasters

(UNISDR, 2015;Knight, 2009; de Leon et al., 2006; basher, 2006; UN, 2006; Oktari, 2014)

Outline

- ❑Introduction
- ❑Early Warning System (EWS)
- ❑Community Engagement (CE) and its benefits
- ❑Aceh
- ❑Research Rationale
- ❑References

EWS Model



All elements need:

- Interact each other
- good coordination with relevant stakeholders
- People centered

One element fail→ whole systems

(UN, 2006;UNISDR, 2015; IEWC, 2006)

In summary

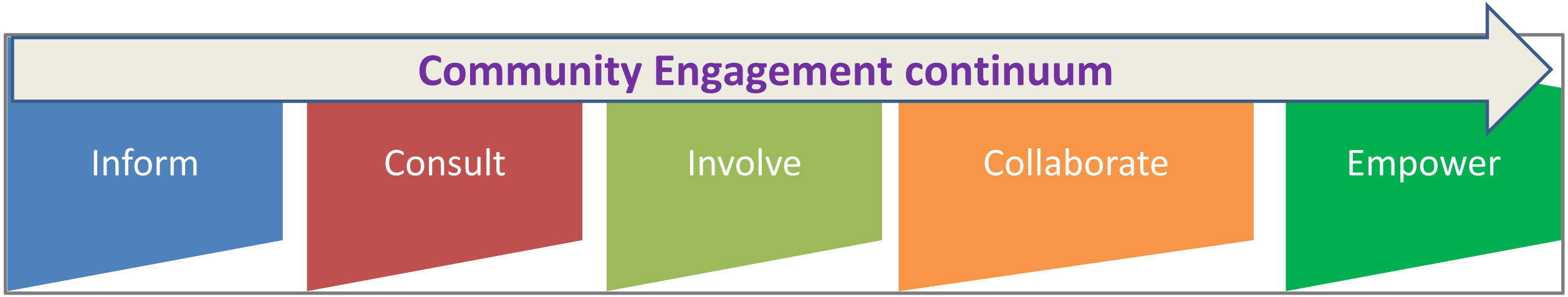
- EW→ **system**, not ONLY technology
- It requires **understanding of risk**,
- **Need for strong connection→ producers & users**
- Technology will be **useless→ people→ inappropriate response**

(EWC, III, 2006; Knight, 2009)

Challenges for EWS

- Each component works **in isolation** (Garcia, 2015)
- **Scientists control warnings** (Guru & Santha, 2013b).
- **↙community engagement** in EWS--> **↙response** (Paton, 2009;Twigg,2006)

Community Engagement processes



(Bell & Hindmoor, 2009a; Center for Disease Control and Prevention [CDC]. 2011; Head, 2007; Chu, 1992)

CE principles in EWS

- Based on local context
- Embrace multiple knowledge
- Focused on multi-hazards
- Partnership

(Baudoin et al., 2016; EWC III,2006;IFRC, 2012)

Benefits of CE in EWS

- **CE in EWS** → meet community **needs**
- **Partnership** with local governments→ **contextually appropriate**
- **Knowledge exchange** between experts & vulnerable people
- CE facilitate **risk reduction measures**

(Glantz et al., 2014;Ian Kelmen & Glantz, 2014; Baudoin et al., 2016; Kelman & Glant, 2014)

Examples of CE in each EWS Element

Nghe An Province in Vietnam was involved in drawing hazard maps (CECI, 2012)

Risk knowledge

Japanese people are successful in **reducing panic** during disaster response (Foster, 2017)

Response capability

Monitoring & Warning

A community in Sri Lanka→ using fiberglass to monitor rain (Wijesinghe, 2014).

Dissemination & Communication

Community in Malawi disseminate warnings→ **megaphones, whistles** and **community flags** (Ngokwey, 2010)

Aceh Profile

Geography:

- 18 districts,5 cities
- 73 main rivers
- Dry and wet seasons

(Aceh Bureau Statistics, 2014)

Geology:

Aceh is Faults zone,

(Johar et al., 2013;Syamsidik, 2013; Jarwansyah, 2012)

Demography:

- Nearly 5 million people
- Main job→**farmers**
- **18.5% poverty**

(Aceh Bureau Statistics, 2014)

Hazard profile

=> high risk level

=> medium risk level

=> low risk level

(BNPB, 2013)

Infrastructure improvements for disaster management

Legislation & capacity improvements for disaster management & preparedness

- By-laws on the **establishment of BPBA**
- Contingency plan **for floods**
- Regulation on **(SOP) for TEWS**

Sub-optimal response to disasters, EWS failure

The 2012 earthquake, many people:

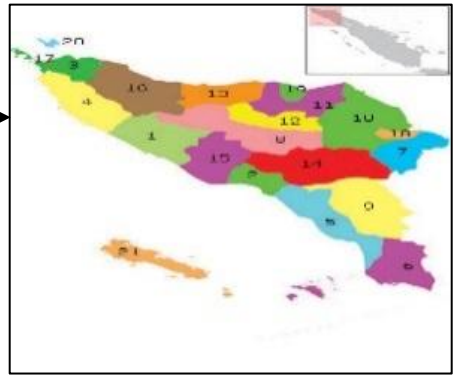
- **panicked causing10 people died**,
- running away→ **traffic jam on main roads** ***(Kristanti&Nasser, 2012;suppasri et al., 2011)***

The 2014, 2016 floods & flash-floods:

- many people were stranded, killed
- **warning was not timely**
- **no much time to escape** **(Afif, 2014)**

Research rationale

To improve



For enhancing CE in EWS

despite

Research aims

Investigate challenges & opportunities

Potential capacity for improving CE in EWS in Aceh

Locally based institutions

- **Community centres, coffee-shops→ make decisions**
- **Mosque→ for a disaster evacuation centre**

(Dally, 2015;Romo-Murphy, James, & Adams, 2011;Rachmalia, Hatthakit, & Chaowalit, 2011)

Community structure

Social capital is strong in Aceh

(UNISDR, 2007;McCarthy, 2014)

Study area

- **Sukon village** has a CBDRR program
- It is **regularly cyclones, storm surges**.
- **HOWEVER, Pekan sot** no CBDRRP
- While has **similar multi-hazard threats**
- Exploring potential challenges & opportunities
- for ↗CE in EWS from both villages

SP. Tiga Sub-district, Pidie District

(Hanafiah, 2015; BPBD, 2014a,b)

Research timeframe

Research activities	2016			2017				2018				2019
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Literature review and writing research proposal												
Confirmation seminar												
Ethical clearance												
Development of data collection tools												
Data collection												
Data analysis												
Literature review												
Publication												
Thesis writing												

Contact person

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Terima kasih

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