COMMUNITY RESILIENCE TO URBAN FLOODING: A CASE STUDY OF THE 2011 FLASH FLOOD IN MATINA, DAVAO CITY, SOUTHERN PHILIPPINES

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Problem: **Reducing vulnerability for disaster in urban area**

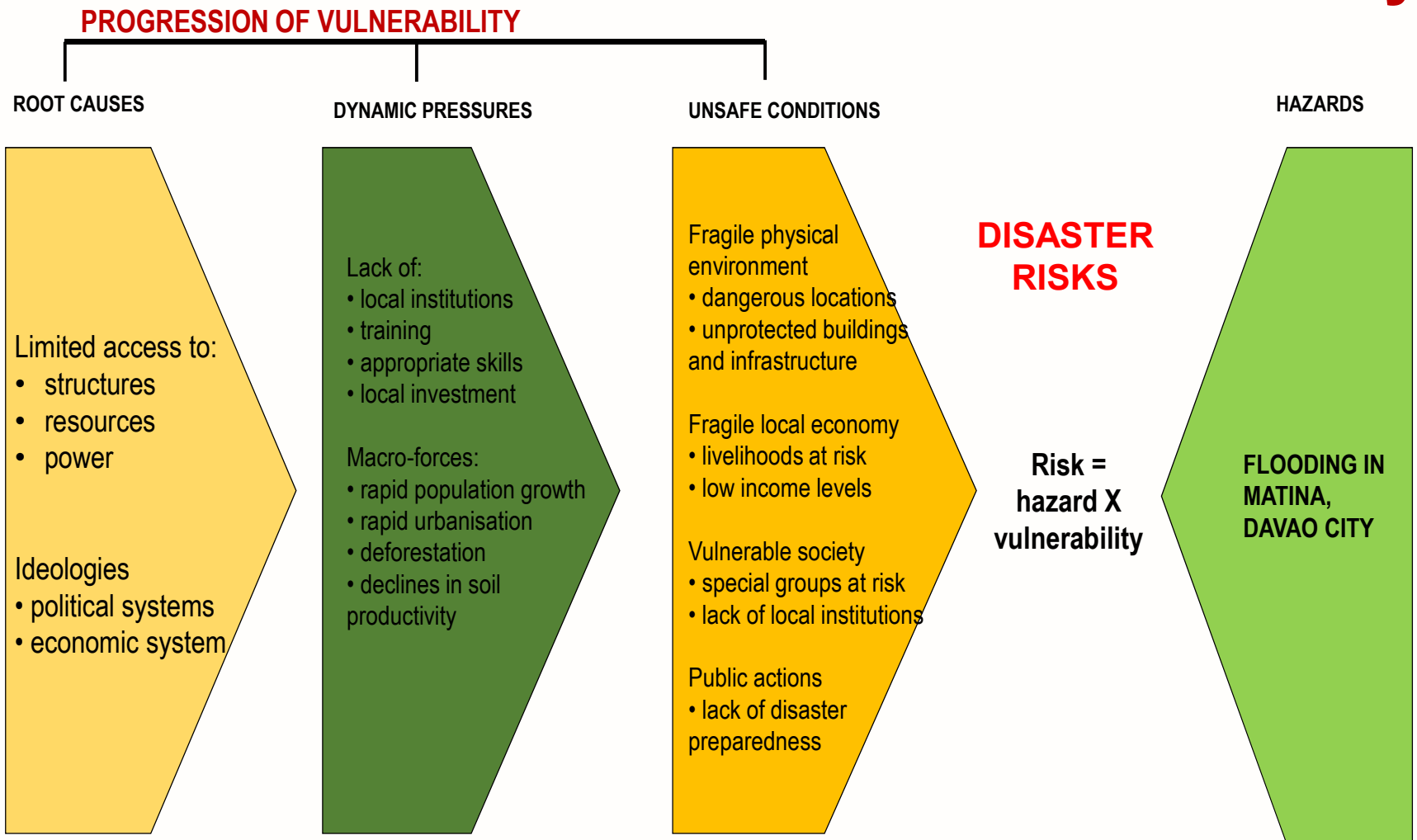
Keywords:

- Disaster and risk reduction
- Vulnerability
- Flash floods
- Urban Settlement
- Disaster communication

Objectives:

- What is the general background/situation of the study area?
- What are the consequences (e.g., casualty, damage to properties, etc.) of the 2011 Flashflood?
- How did local institutions, groups, individuals' response measures during and after the flash floods?
- What are some of the factors that contributed to the disaster?
- What are some of the post crisis program undertaken and some insights drawn from the disaster experience?

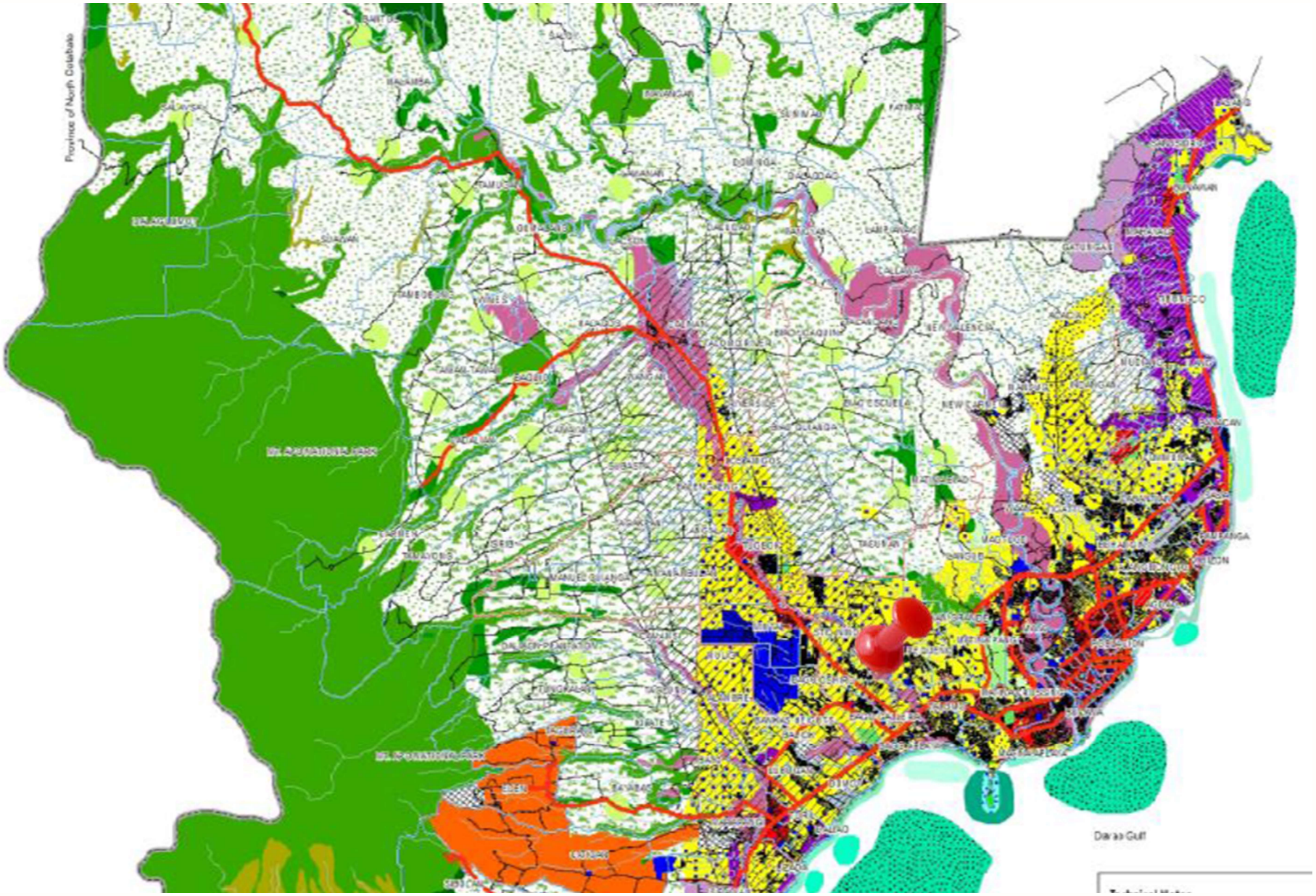
The Crunch Model as Analytical Framework for the Study



Wisner et al, 2004 pressures that result in disasters: the progression of vulnerability

Methodology

- Review of literatures consisting of reports, existing plans
- Descriptive information were tabulated in tables and other matrices
- Analysis of data and information generated from secondary sources were interpreted using literature on disaster, vulnerability and development from related literature


Province of North Cotabato
Davao Gulf

Scope and Limitations

- Limited to only 3 heavily populated barangays affected by the flash flood: **Matina Aplaya**, **Matina Crossing**, and **Matina Pangi**

Barangay	Household Population	Number of Household	Average Household Size
Matina Aplaya	29,619	8,022	4.2
Matina Crossing	34,003	3,083	4.2
Matina Pangi	13,625	13,545	4.3
TOTAL	**77,247**	**24,650**	

Classified as Urban area as identified by OCPDC based on the guidelines of National Statistics Office

AFFECTED BARANGAYS AND FAMILIES

Barangay	Affected Areas	Affected Families	% to Total Number of Families
Matina Aplaya	13	1,304	9.49%
Matina Crossing	13	5,660	40.45%
Matina Pangi	8	1,500	10.91%
TOTAL	**34**	**8,464**	61.57%

Source: NDRRMC Siterep #8, 3 July 2011

Total # of Affected Families in **Davao City = 13,746** from **46 areas** , including 2 other barangays, namely: Talomo Proper and Ma-a

CASUALTIES and DAMAGES

29 drowned at Matina Pangi, Aplaya & Matina Crossing - 15 (women) & 14 (Males);

- 10 (Ages 30 & Up; 14 (Ages 8 mos to 16 years old); & 1 Missing


ROLAND JUMAWAN PHOTOGRAPHY


DAVAO CITY


ROLAND JUMAWAN PHOTOGRAPHY 2011

Emergency rescue operation and relocation of flood victims

Temporarily sheltered in the 2nd and 3rd floors of Matina Barangay Hall

First aid measures were administered & Medical Formed

Community kitchen to feed victims

- Relief goods arrived & distributed disaster

1st 6 hours (June 28, 2011)

(June 29, 2011)

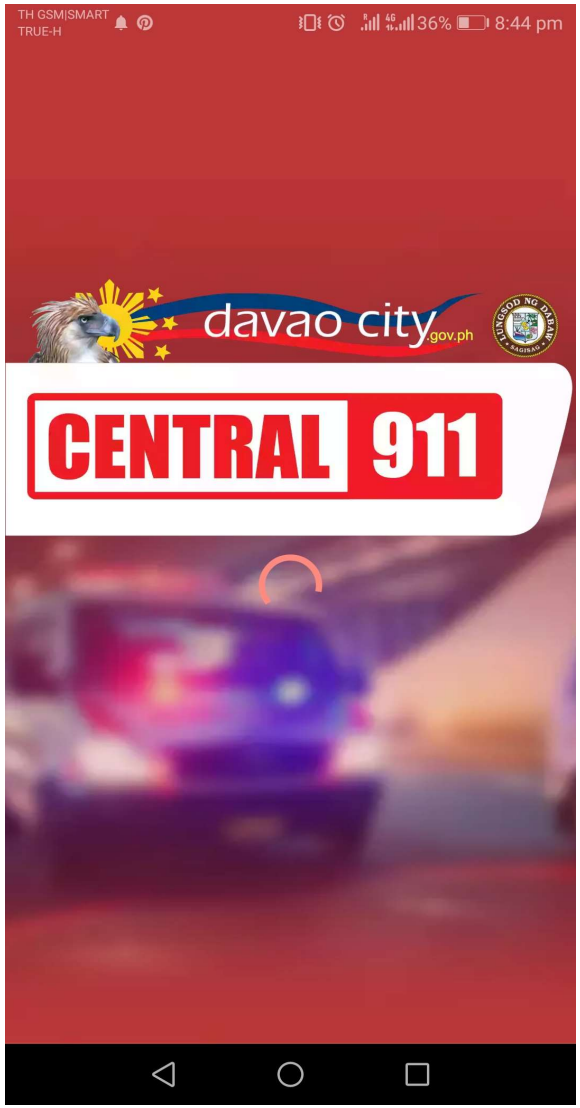
CONTRIBUTORY FACTORS & INSIGHTS

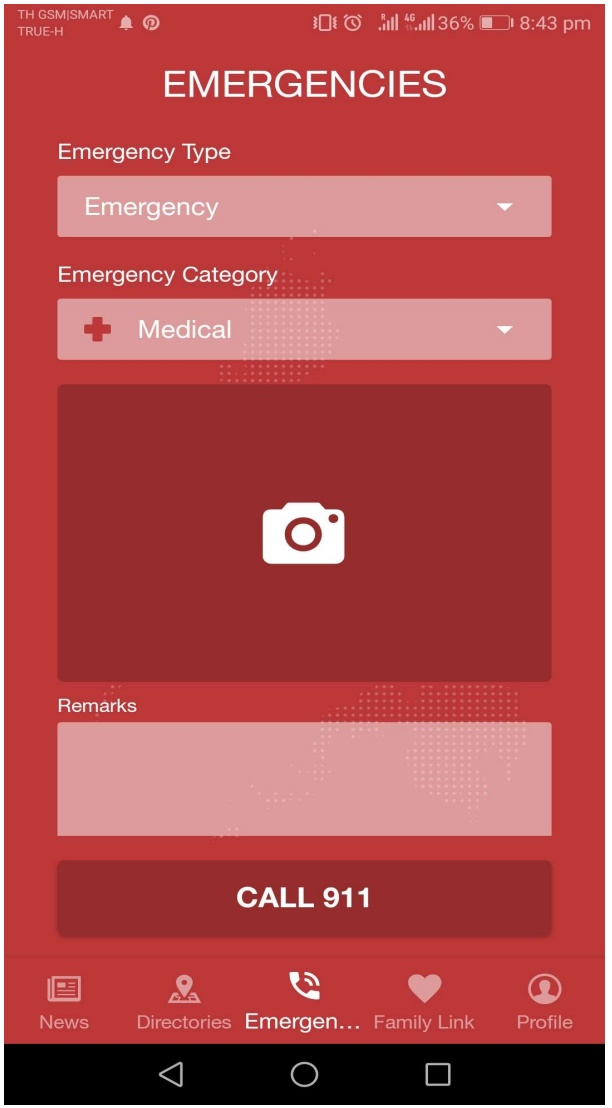
- High rainfall w/in the watershed of Matina-Pangi River (60mm for 3 hours between 10PM – 1AM as recorded by Pagasa)
- Expansion of agricultural activities upstream
- Expanding urbanization resulting in increase of run offs
- Siltation, development of sandbar at the mount of the river
- Backflow of Matina-Pangi river due to high tide level

Conclusion:

- Davao City is naturally a flood prone - its serious implication is magnified with the population density and human settlements found along the river banks or nearby river tributaries
- 2011 flash flood in Matina shows a higher level of social capital among its residents, various groups and institutions
  - community engagement with local institutions (i.e., 911) is evident but remains to be improved
- Casualties recorded is consistent with what the crunch model implies – prone are the most vulnerable groups, i.e., women, children and senior citizens
- Flooding in Davao City should not only be approached within the confines of its geographical boundaries
  - It has multi-dynamics, and cross boundary issues
  - Increase effectiveness in stakeholders engagement to harmonize efforts and initiatives and find areas to effectively work together given their varying interests
- Instill the principle of shared growth and accountabilities in disaster management, reduction of risks, among others

Recent developments…





Thank you!

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