

Gender Vulnerability, Risk Prevention and Resilience Building

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1.1 Focus of the Talk and Main Questions

- Why are women and other social vulnerable groups so highly exposed to natural risks and hazards?
- What are the possible policies and measures to improve resilience for these social groups and to reduce their risks?

2. Basic Concepts and Focus of the Talk: Gender Security, Identity, Capacity Building and Resilience



2.1. Gender Security and Identity

- Gender security refers to the process of **raising consciousness** to be a human being as a **man or a woman** or a bisexual, depending on the position in the social structure.
- **Gender security** is normally **taken for granted**. The relationship to the model of reference is linked to the **status as gender** – understood as indigenous, poor, minority, women, elders and children.
- **Equity and identity are values at risk**. The **source of threats** emerges from the **patriarchal, hierarchical and violent order**, characterized by exclusive and totalitarian institutions such as non-democratic governments, churches and élites.
- The symbolic distribution assigns to the **man** the **public space**: production, *res publica, homo sapiens*; and to the **woman** the **private** one: reproduction, home, *homo domesticus*.
- The distribution of power acquires also generic forms. Men exercise a hierarchical and vertical power of domination and superiority.

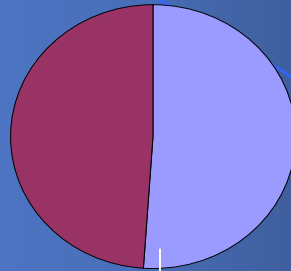
2.2. Human, Gender and Environmental Security (HUGE)

Level of expansion	Determination Which security?	Mode of expansion Reference object Security of whom?	Value at risk Security of what?	Source(s) of threat Security from whom or what?
Without expansion	National security (political, military dimension)	The State	Sovereignty, territorial integrity	Other States, terrorism, sub-state actors, guerrilla
Increased	Societal security	Nations, social groups	National Unity, national identity	(States), Nations, Migrants, Alien cultures
Radical	Human security	Individuals (Humankind)	Survival, quality of life, cultural integrity	The State, globalization, nature, GEC, poverty, fundamentalism
Ultra-radical	Environmental Security	Ecosystem, urban and agricultural system	Sustainability	Nature Humankind
Trans-radical	Gender security	Gender relations, indigenous, minorities	Equity, identity, social relations	Patriarchy, totalitarian institutions (élites, governments, religions, culture), intolerance

2.3. Inequality for Women

Women in the World

50.3%



67%

68%

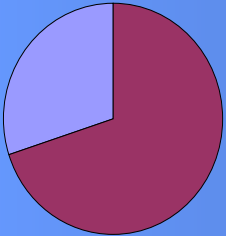
36%

41%

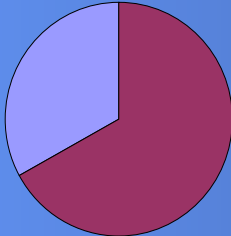
70%

12%

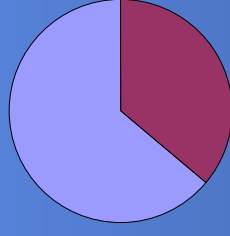
113%



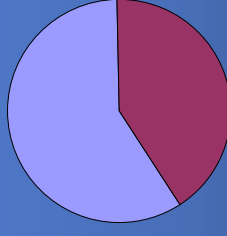
Illiterate
Adults
1 billion



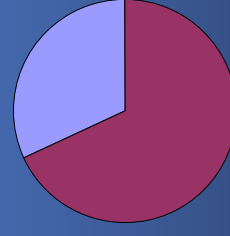
Without Access
to Basic School
300 million



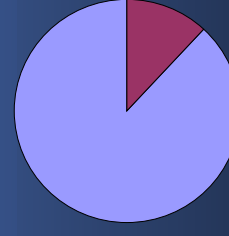
With Access
to Secondary
School



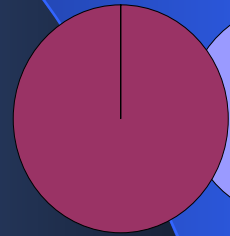
% of Women
infected by
HVI/AIDS of
all Infected



Extreme
Poverty



Representation
in
Parlament



Charge of Daily Work
for Women in
Developing
Countries
(% of Work of Men)

Source: UNIFEM, 2000 and UNAIDS, 2000

90% of all Maternal Deads occurs in Developing Countries: (500,000 deads/year)

2.4. Main Attributes of Social Identity

- Thousands of years of experience have created a society in a specific socio-historic environment where **symbolic elements** have developed –class, ethnicity, age, religion, race, nationality, professional attribution, political ideology, education, etc. However, they are permanently changing, but its **main attributes** –**gender, sex and race**- and **the socioeconomic conditions** –**rich, poor**- are stable (Habermas). Each process of classification implies relations of identity; inclusion or rejection and exclusion, what constitutes the basis of any power exercise.

2.5. Social Representations

- “*Systems of values, ideas and practices*” simultaneously creating a **system of order**, are able to offer a person the possibility to get familiar with the social and material world. The communication within a community offers a **code of common social interchange**, where several aspects of life, personal and collective history are **classified without ambiguity** (Moscovici, 1976: xiii).
- Therefore, social representations originate in **daily life**, where society is the **thinking and acting system**.
- The theory of social identity establishes a continuum between personal and social identity with a *processual*, relational, multidimensional, contextual and essentialist character.

2.6. Social Identity

- Tajfel (1979:31) affirms that social identity is generated in a world where processes of **unification and diversification** are occurring with giant steps, faster than ever in history.
- Hogg and Abrams (1988: 78) argue that persons have a **basic necessity to simplify** and order reality, where the **categorization** of the social environment is elaborated by **social comparison**, basically to improve self-esteem.
- Social representation of gender is specifically charged with **stereotypes**, to be weak, incapable, dependent and vulnerable. These are **social categories** that are rich and complex in a symbolic system that has been socially and dialogically constructed (Habermas, 1998, 2000, 2001). Both are part of an inalienable collective life, enriched by ideologies, rites, beliefs and daily practices.

2.7. Characteristics of Social Identity

Social identity is:

- *processual* resulting from and leading to permanent change;
- *relational* due to its transformation linked to interaction;
- *multidimensional* operating inside, between individuals, groups and ideologies (Doise, 1986);
- *contextual* forging relationships in specific contexts;
- *essential* due to the diversity and complexity of social interactions that are sustained and transformed by identity processes (Serrano, 2004, 2005).

A photograph of two young girls with dark hair, wearing purple shirts, standing against a teal background. The girl on the right is smiling slightly. The text '3. Threats, Challenges, Vulnerabilities, Risks and Resilience' is overlaid in red at the bottom of the image.

3. Threats, Challenges, Vulnerabilities, Risks and Resilience

3.1. Vulnerability



- Results from “**poverty**, exclusion, marginalization and inequities in material consumption” O’Riordan (2002: 369).
- “The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards” (ISDR, 2004: 7)
- “Is conceptually located at the **interaction of nature and culture**” that also links “social and economic structures, cultural norms and values and environmental hazards” (Oliver-Smith, 2004:11).
- Increases the **empowerment of victims**. Wisner (2004: 194-205) distinguishes four approaches for dealing with social vulnerability: demographic, taxonomic, situational, contextual or proactive.

3. 2. Challenges, Capacity and Resilience



1998
Hurricane Mitch, Central America



1998
Blizzard, Canada and USA

- **Challenges** are a combination of potential and real institutional, societal, economic and political processes, that are able to deal with risks, fears and hazards.
- **Capacity** is “a combination of all the strengths and resources available within a community, society or organization that can reduce the level or risk, or the effects of a disaster.” (ISDR, 2004: 2)
- **Resilience** is “the capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better futures, protection and to improve risk reduction measures.” (ISDR, 2004: 6)

3.3. Risks



1999
Winter Storm Lothar, Europe



2000
Flood, Mozambique

- **Risk = Hazards x Vulnerabilities** (sometimes multiplied by **Exposure** to a physical threat, Segob, Mexico); **H** and **V** are estimated probabilistically; **E** in money.
- “The **probability of harmful consequences** or expected losses –deaths, injuries, property, livelihoods, economic activities, resulting from interaction between natural or human-induced hazards and vulnerable conditions” (ISDR, 2004: 6).
- Social contexts can **change the perception of risks** and their underlying causes.

4. Vulnerability and Gender

A black and white photograph of a group of people, likely in a public gathering or protest. In the foreground, a woman with dark hair is looking upwards and to the right with a concerned or hopeful expression. To her right, another woman is partially visible, also looking in the same direction. In the background, a person is making a peace sign with their hand. The overall atmosphere is one of collective action or shared concern.

4.1. Elements of Vulnerability Assessment

Vulnerability assessment requires collecting and analyzing data linked to building consciousness on:

- Types of hazards and frequency
- Elements at risk and how to reduce them
- Socioeconomic conditions and types of shelter
- Gender and family structure
- Genuine coping strategies
- Mapping specific hazard prone locations
- Learning from previous disasters and coping strategies
- Training for evacuation
- Resettlement of people at risk
- Evaluation of training and hazard mitigation process

4.2. Women and Disasters Management

Water and food production in hand of women:

- Under normal conditions women produce **half of world food**; in developing countries even **60% to 80%**;
- But women in México only **own** 17% of their land and in Africa 2 %;
- Women practice **survival strategies** in coping with **long-term disasters** such as economic crises and **famine**.
- They contribute in Africa to:
 - 33% of the paid labor force
 - 70% of agricultural labor days
 - 60-80% of subsistence production
 - 100% of food transformation
 - 80% of food storing
 - 90% of spinning and weaving
 - 60% of harvesting and market activities
 - 2% own land or have land rights (FAO, 2002)



**5. Gender Sensitive Risks,
Vulnerabilities
and their Management**

5.1. Gender, Threats and Disasters

Women contribute subjective and objective values

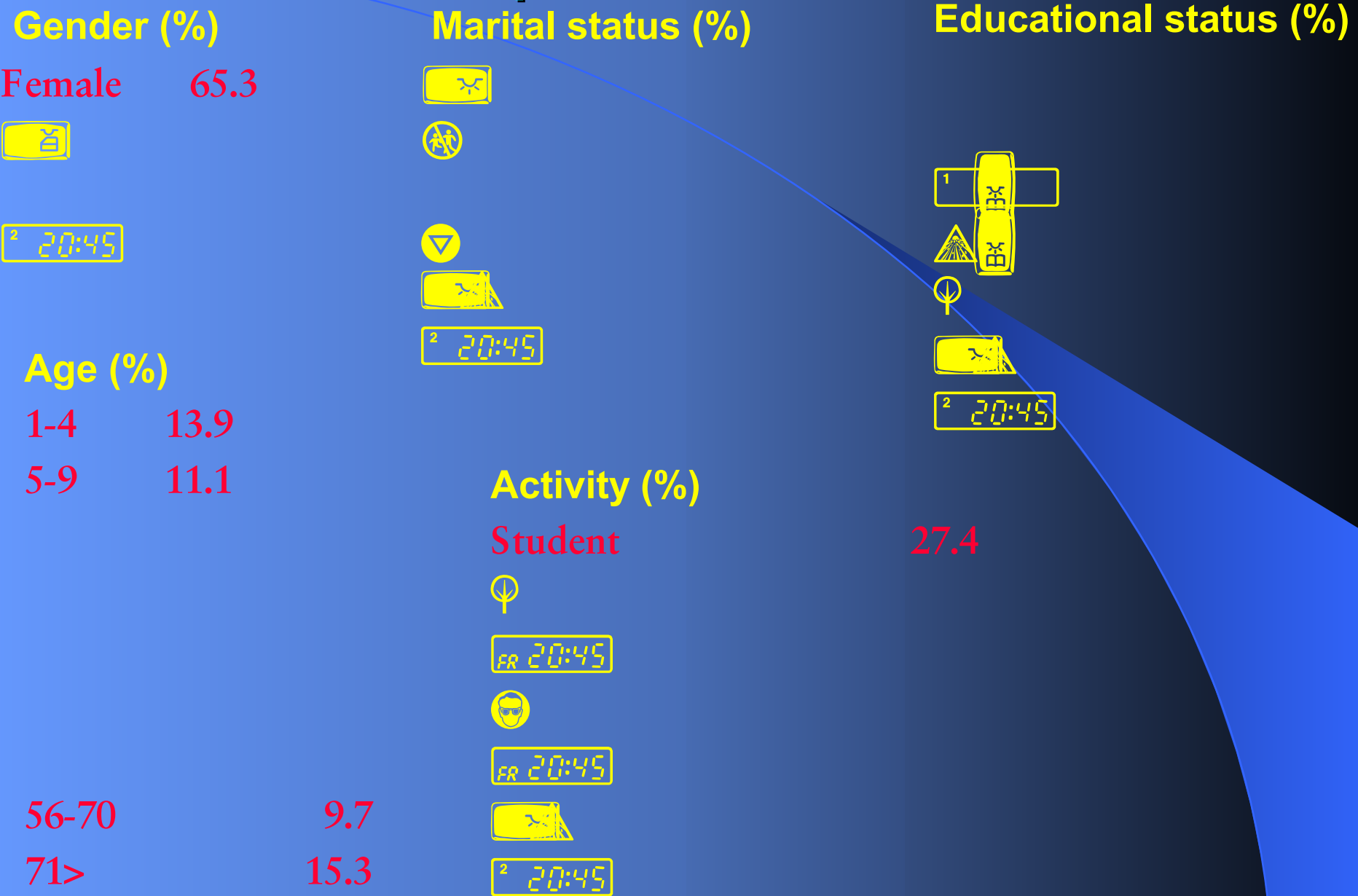
Subjective values (social identity):

- **Caring** about their families, children, neighbors and those in need
- Positive **self-esteem** in crisis situations
- Emotionally **stabilizing** families before, during and after a disaster
- Guardians of **traditions and values**
- Locally attached

Objective values (social representation):

- **Flexible, adaptable and able** to shift activities immediately by diversifying (refugee camps, survival activities, collection, reconstruction, services, agriculture, reforestation, ecotourism,)
- Open to **collaborate in rescue** activities
- Generate **survival strategies** in case of disasters
- Contribute **to the national economy**
- Create **local employments**, incomes and stabilize emigration
- Generate political stability and **conciliate conflicts**

5.2. Gender Aspects in Sri Lanka's Tsunami



Source: Siri Hettige – University of Colombo & UNU-EHS
 Sarath Amarasinghe – University of Ruhuna
 Nishara Fernando – University of Colombo

5.3. Activity : Gender Sensitive (Unemployed & Poor): %



FR 20:45



Unemployed	14.0	21.4
Employed	37.3	27.5

FR 20:45

1

N/A	7.9	7.6
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2 20:45



Income (%)



1-4999	43.5	50.8
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Source: Siri Hettige – University of Colombo and UNU-EHS
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo



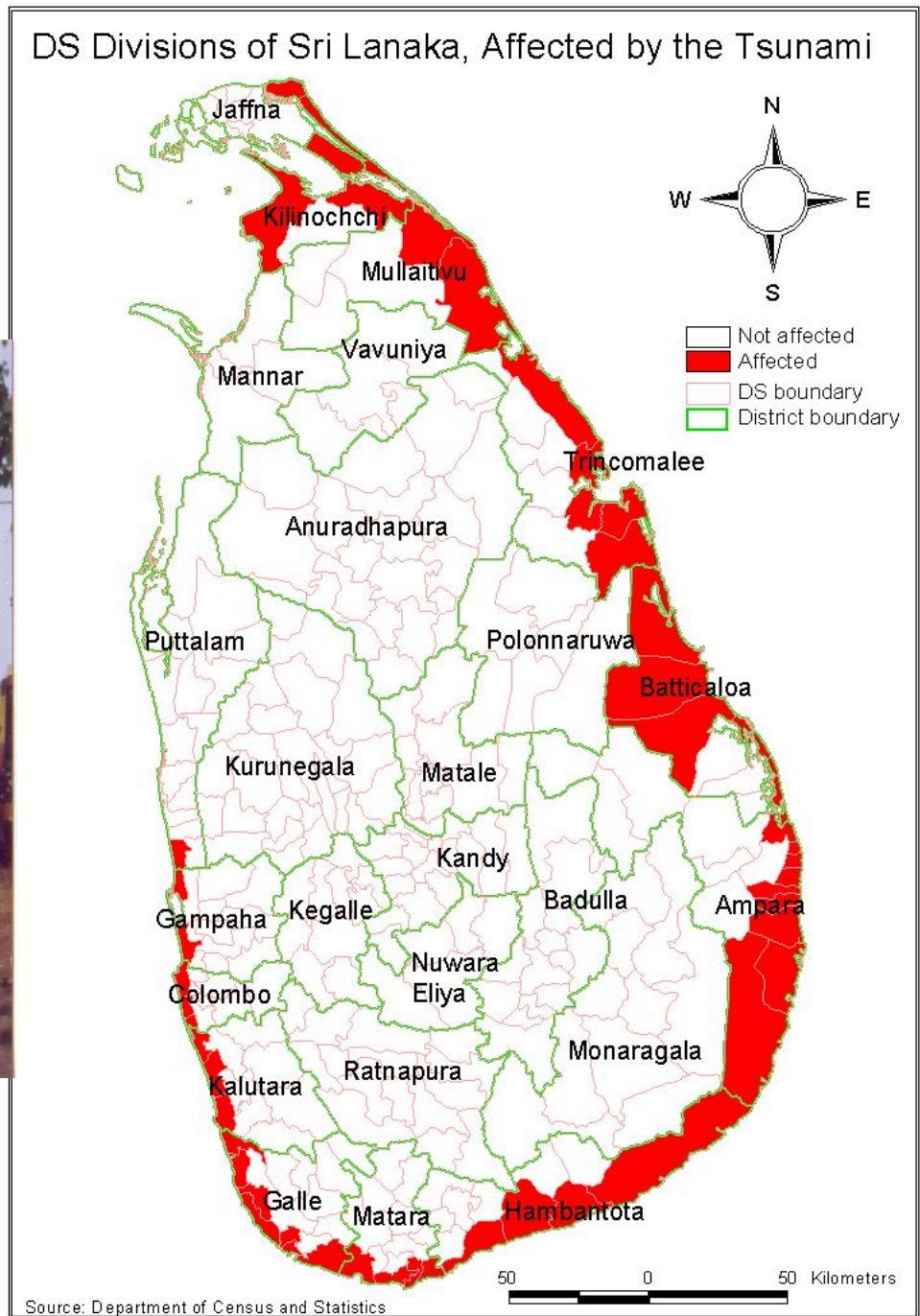
2 20:45

6. Regional Vulnerability

6.1. Case Study on Sri Lanka



Source: Siri Hettige – University of Colombo & UNU-EHS
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo



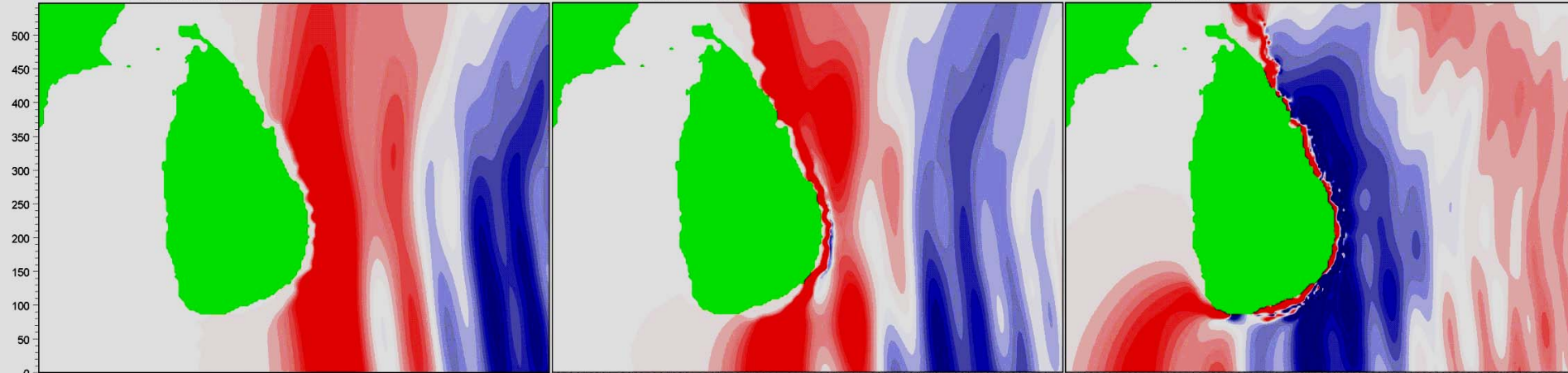
6.2. Variability of Wave Attack

(snapshots from a computer simulation)

26/12 08:50

26/12 09:00

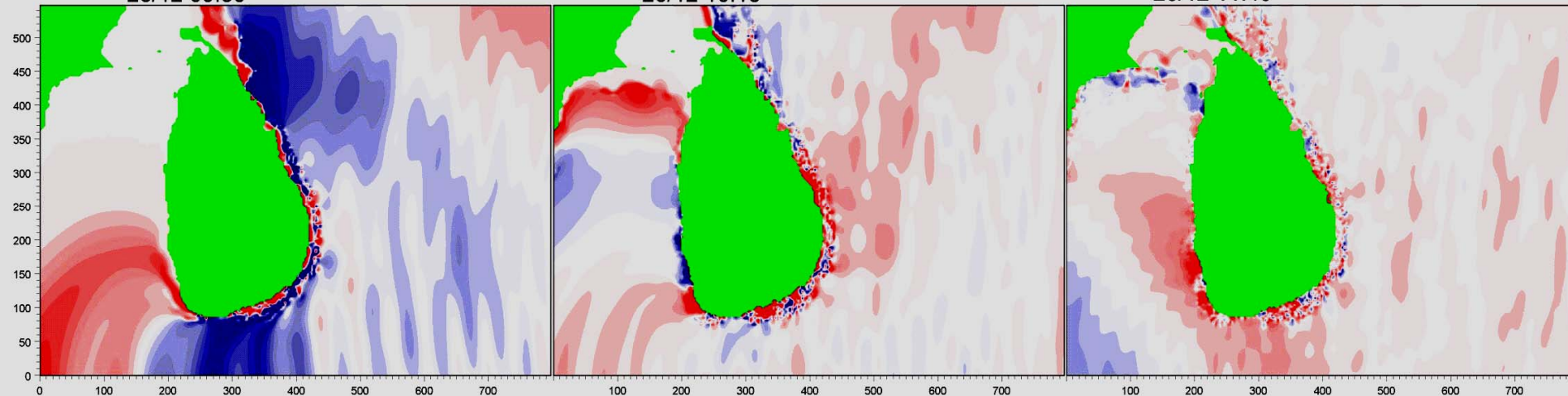
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26/12 09:30

26/12 10:15

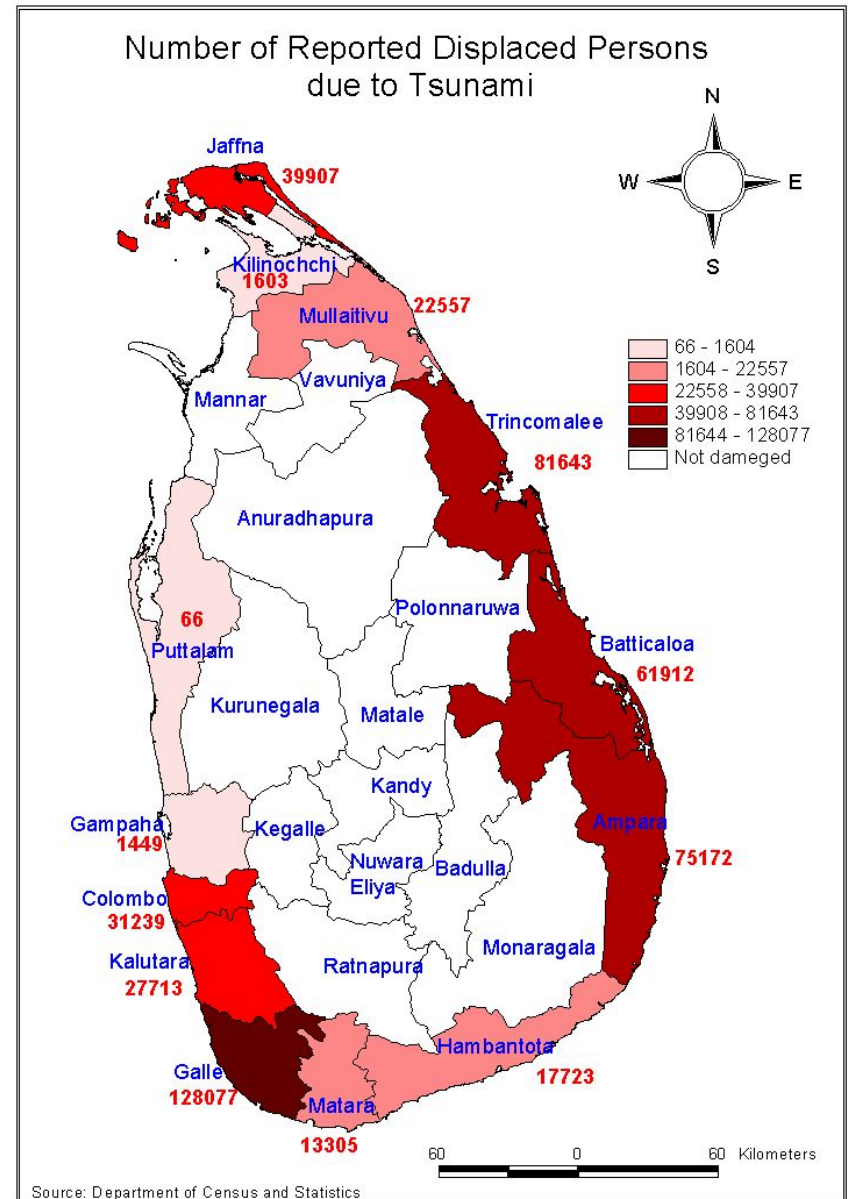
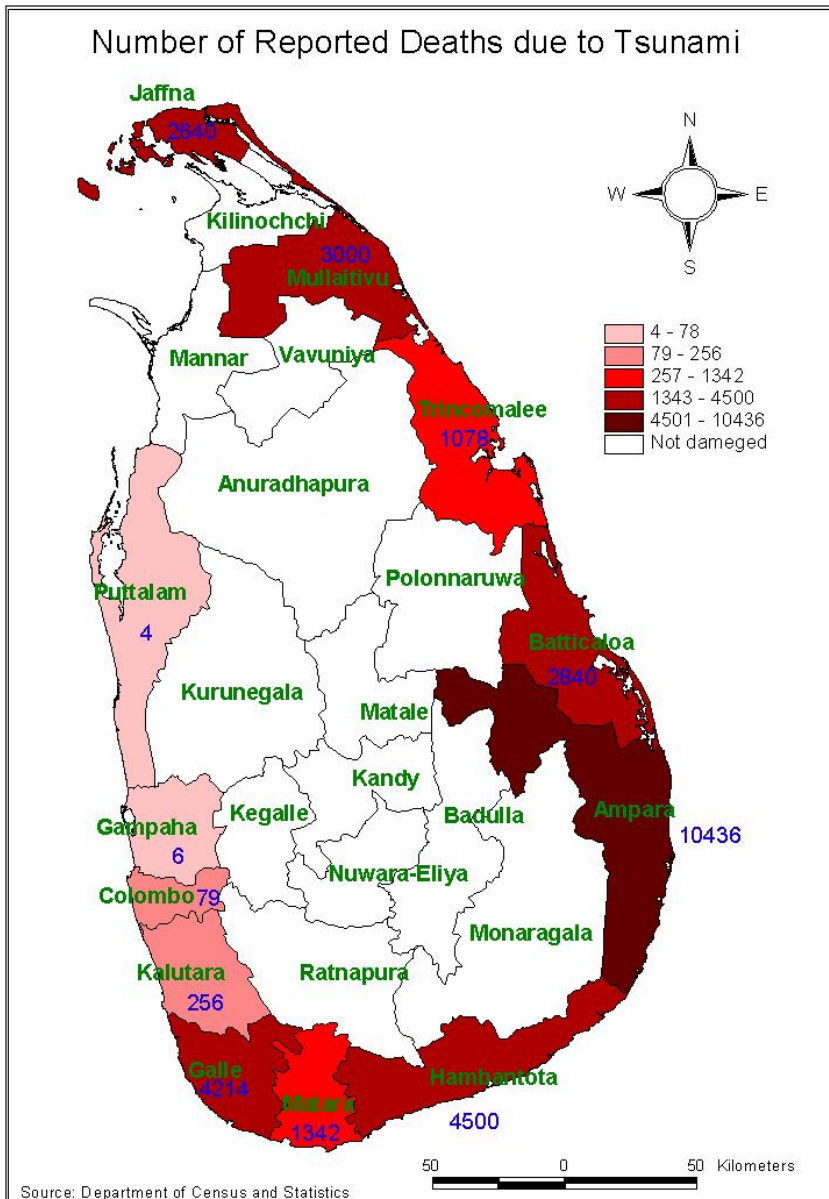
26/12 11:40



red = raised sea level
blue = lowered sea level

by courtesy of DHI Water & Environment

6.3. Regional Vulnerability in Disasters



Source: Siri Hettige – University of Colombo and UNU-EHS
 Sarath Amarasinghe – University of Ruhuna
 Nishara Fernando – University of Colombo

6.4. Environmental and Social Lost in Batticaloa



Navalady – eroded foundation 22 8:44 AM



Kalmunai – decimated settlement 21 2:24 PM

Source: Siri Hettige – University of Colombo & UNU-EHS
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo



Mangroves damaged, War



Breached sand dunes



7. Needed Adaptation and Mitigation Measures: Combating Vulnerabilities, Threats & Avoiding Violence: A Long-term Task with Gender Sensibility

Source: Siri Hettige – University of Colombo & UNU-EHS
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo

7.1. Empirical Data with Household Characteristics of Local Population



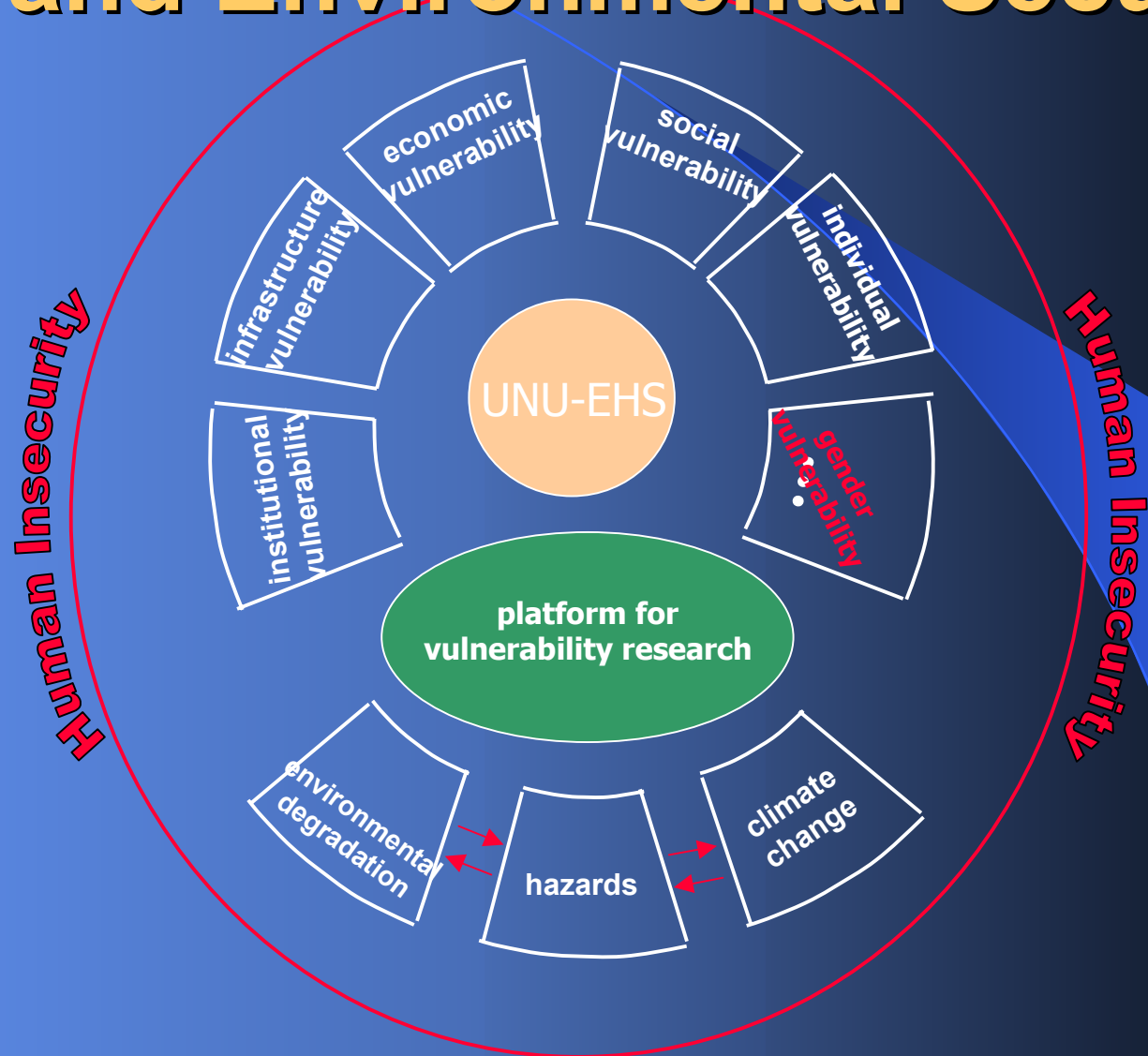
Source: Siri Hettige – University of Colombo
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo

7. 2. Do you agree to move to a safer place vacating the present coastal residence by “risk zone” (Gale District, Sri Lanka)

100 meters	Owned	Encroached	Rent/Lease	Joint owner-ship	Relatives	Official house	Total
Yes	268	43	17	4	5	3	340
	78.8%	12.6%	5.0%	1.2%	1.5%	.9%	100
	66.5%	75.4%	85.0%	50.0%	100.0%	75.0%	68.4
No	135	14	3	4		1	157
	86.0%	8.9%	1.9%	2.5%		.6%	100
	33.5%	24.6%	15.0%	50.0%		25.0%	31.6
Total		57	20	8	5	4	497
	81.1%	11.5%	4.0%	1.6%	1.0%	.8%	100

Source: Siri Hettige – University of Colombo and UNU-EHS, 2005
 Sarath Amarasinghe – University of Ruhuna
 Nishara Fernando – University of Colombo

7.3. UNU-EHS Working Areas: Human and Environmental Security

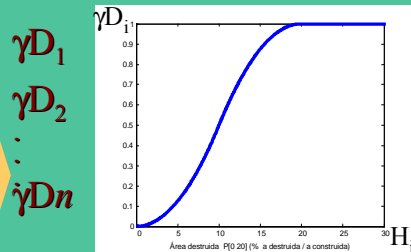


7.4. HAZARDS

$$H_i(I(t), t) \mid i = 1, 2, \dots, m$$

EXPOSED ELEMENTS (COMPLEX DYNAMIC SYSTEM)

VULNERABILITY FACTORS $V(\gamma D_i(t), \gamma F_i(t), \gamma R_i(t), t) \mid i=1, 2, \dots, n$



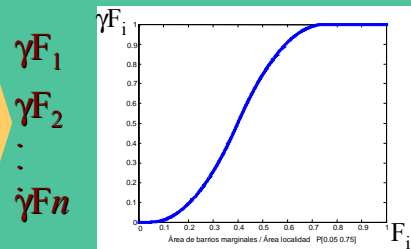
Exposure and Physical Susceptibility
hazard dependent

Gender coping training

Physical Damage

$$D_\phi(\gamma D_i)$$

first order impact



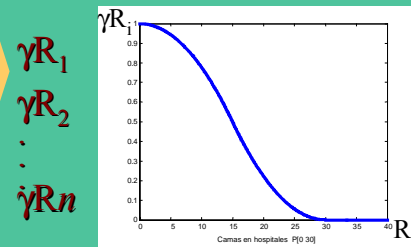
Social and Economic Fragilities
non hazard dependent

Gender Specific Management

Impact Factor

$$I_f(\gamma F_i, \gamma R_i)$$

second order impact



Lack of Resilience or Ability to Cope and Recovering
non hazard dependent

Gender Specific Education

RISK

$$R(D_\phi, I_f)$$

ACTUATION SYSTEM

CORRECTIVE AND PROSPECTIVE INTERVENTION

- ✓ Risk Identification
- ✓ Risk Reduction
- ✓ Disaster Management
- ✓ Risk Transfer
- ✓ Risk Gender Bias

CONTROL SYSTEM

RISK MANAGEMENT SYSTEM

Source: Cardona, 2005



7.5. Resettlement and Culture of Prevention and Coping Capacity with Gender Sensitivity

Source: Siri Hettige – University of Colombo and UNU-EhS
Sarath Amarasinghe – University of Ruhuna
Nishara Fernando – University of Colombo

8. Conclusions

- All existing statistics on disasters of the World Bank, UN system, Red Cross, MunichRe, except some anthropological local studies do **not distinguish between different grades of vulnerability** within regions, social groups and gender.
- Women, children, elders and other social vulnerable groups are **highly exposed to natural risks and hazards** due to their cultural accepted social identity and social representation, developed within their cultural systems.
- The possible policies and measures to improve resilience for these social groups and to reduce their risks are:
 - **compiling gender sensitive statistics;**
 - **training** specifically and **gender sensitively** people for disasters and risk reduction;
 - **using** the **gender potential** represented in subjective and objective values to improve human and environmental security.

The background of the slide is a heavily blurred photograph of a group of people. The individuals are indistinct due to the low resolution and motion blur, but they appear to be in a social setting, possibly a party or a meeting. The colors are muted and the overall tone is somewhat dark and busy.

Thank you for your attention