

THE DISASTER CRUNCH MODEL:

Guidelines for a Gendered Approach



OXFAM

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These Guidelines should be considered as a working document and will be improved with inputs from field experiences by practitioners. Your comments or inputs are highly appreciated. Please send them to Ines Smyth: ismyth@oxfam.org.uk

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INTRODUCTION

Globally disasters are occurring more often and in larger scale. Many policies and measures have been developed to analyse their causes and consequences, in order to strengthen the resilience of individuals, communities and institutions.

Such measures and policies often disregard that the effects of disasters are likely to be different for women, men, girls and boys. Women's and men's (of whatever age) different roles, responsibilities, and access to resources influence how each will be affected by different hazards, and how they will cope with and recover from disaster. Inequality between women and men means that, despite the incredible resilience and capacity for survival that women often exhibit in the face of disaster, they also experience gender-specific vulnerabilities.

For this reason, understanding how gender relations shape women's and men's lives and translating this understanding into appropriate practices, is critical to disaster risk reduction (DRR). The Hyogo Declaration, which sets out the Hyogo Framework for Action (HFA) (2005–2015), states that a gender perspective should be integrated into all DRR policies, plans and decision-making processes.

The "Disaster Pressure and Release Model" also known as the disaster "Crunch Model", helps practitioners to understand and react to people's vulnerability to disasters. The current Guidelines introduce new elements into the 'Crunch Model' so that it is able to take into consideration how women and men experience different levels and types of vulnerability to disasters. This booklet is intended for practitioners and researchers engaged in disaster risk reduction (DRR) work in the context of a changing climate.



Photo credit: Ruby Thursday More/Oxfam



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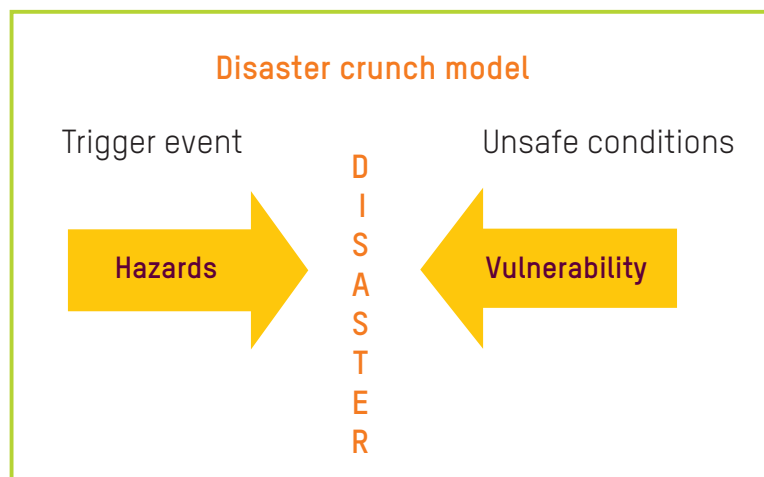
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PART A

ENGENDERING THE 'CRUNCH MODEL'

1. Background – Why make the 'Crunch Model' more gender sensitive?

A framework that can be useful for understanding and reducing disaster risk is the “disaster pressure and release model” also known as the disaster “Crunch Model”. This model shows that vulnerability (pressure), which is rooted in socio-economic and political processes, has to be addressed (released) to reduce the risk of disaster.



The disaster Crunch Model states that a disaster happens only when a hazard affects vulnerable people. A disaster happens when these two elements come together. A natural phenomenon by itself is not a disaster; similarly, a population maybe vulnerable for many years, yet without the “trigger event”, there is no disaster. We can therefore see that vulnerability – a pressure that is rooted in socio-economic and political processes – is built up and has to be addressed, or released, to reduce the risk of a disaster. These processes may include poverty, age-related discrimination, exclusion or exploitation based on gender, ethnic or religious factors. The outcome will be “safe” as opposed to “unsafe conditions”, “resilient or capable communities” as opposed to “vulnerable communities” and “sustainable livelihoods” as opposed to “unsustainable livelihoods”.

The “progression of vulnerability”¹, provides an explanation for the interrelationships between different elements that cause vulnerability. This model was the first attempt to bring the “human factor” into the disaster management picture. Disaster risk management practitioners have used the model since then to examine the causes of vulnerability during disaster risk assessment.

¹ First developed by Blaikie, Wisner et al, in 1994. Terry Cannon, one of the original developers of the Disaster Crunch Model, has further identified five components of vulnerability to help practitioners to obtain a more comprehensive understanding while analyzing risk. The most important links are those that affect livelihood strength and social protection, both of which are largely dependent on governance to determine how effective they are. Cannon argues that vulnerability should be defined in terms of five interrelated components that capture all aspects of the exposure to risk from natural hazards: livelihood strength and resilience; well-being and base-line status; self-protection; social protection, and governance. The linkages between these are important in understanding the causes of vulnerability and therefore how to design policies to address it.

A “Release Model” was introduced as a counter model and has helped practitioners to identify disaster risk reduction measures in a more comprehensive manner.

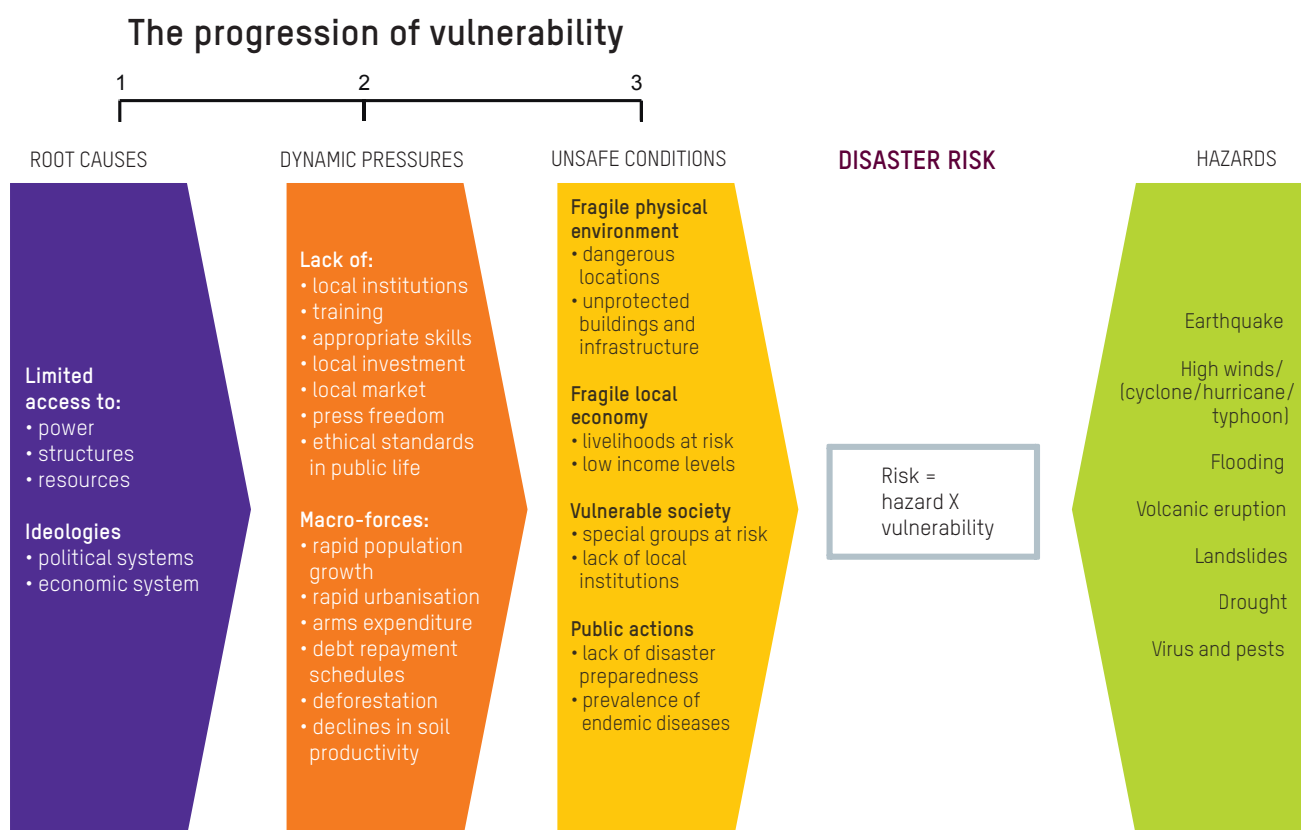
Oxfam has used these models as a framework for situation analysis in its guidelines for Participatory Capacity and Vulnerability Assessment (PCVA). However, to date these models **have not provided reference to the gender aspects of vulnerability and capacity.**

In order to realise Oxfam’s ambition of: *“putting women’s rights at the heart of all our work”*, country humanitarian teams in the East Asia region (now Asia), with support from the Global Gender Advisor and East Asia Regional Change Lead for Building Resilience, have modified the “Crunch Model” to make it more gender sensitive. The expectation is that DRR practitioners will switch gradually to using this version, replacing the original model, which will help to identify gender inequality issues at the same time as analysing vulnerability and capacity.

2. The original “Crunch Model”

The original “Crunch Model” illustrates that a disaster occurs only if a hazard impacts upon a vulnerable group of people. People are vulnerable when they are unable to adequately anticipate, withstand and recover from a hazard.

Figure 1 “The Crunch Model”



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

This original model has two main dimensions: hazards and vulnerability, both of which influence the disaster risk. The level of disaster risk therefore depends on the magnitude of the hazard and degree of vulnerability of the people. As explained above, a disaster will not happen if there is only hazard without a vulnerable community and vice versa. *For example: When an earthquake occurs in a deserted, isolated and uninhabited area, there is no vulnerability and therefore no disaster risk, as there is no damage or loss to human beings.* In order to understand the complexity of a community’s vulnerability, both dimensions should be analyzed.

The behavior and trends of a hazard can be understood through examining its force, any warning signs, forewarning, speed of onset, frequency, time of occurrence and duration. Climate, or weather related hazards, should also be considered and analysed in the context of a changing climate, as the frequency, intensity and seasonality of climate related hazards, such as typhoons, floods and droughts may be affected.

Three layers of social processes that cause vulnerability are: root causes, dynamic pressures and unsafe conditions. The root causes lead to dynamic pressures that explain how the unsafe conditions have arisen and persisted.

For example, for people living by a river prone to sudden onset flooding:

- **“unsafe conditions”** may be: poor housing conditions, dangerous location, risky livelihoods, lack of disaster preparedness skills, etc.
- **“dynamic pressures”** may be: no community organization for collective efforts to reduce flood risks, rapid migration tendencies that change the social structure, the lack of local markets for small farmers to sell their produces or buy agricultural inputs, etc.
- **“root causes”** may be: government negligence of sand mining in that river, the lack of government policy on flood warning systems and land use planning, poor men and women are not allowed to attend meetings on flood mitigation and emergency response preparedness, etc.

3. What is the “Gendered Crunch Model”?

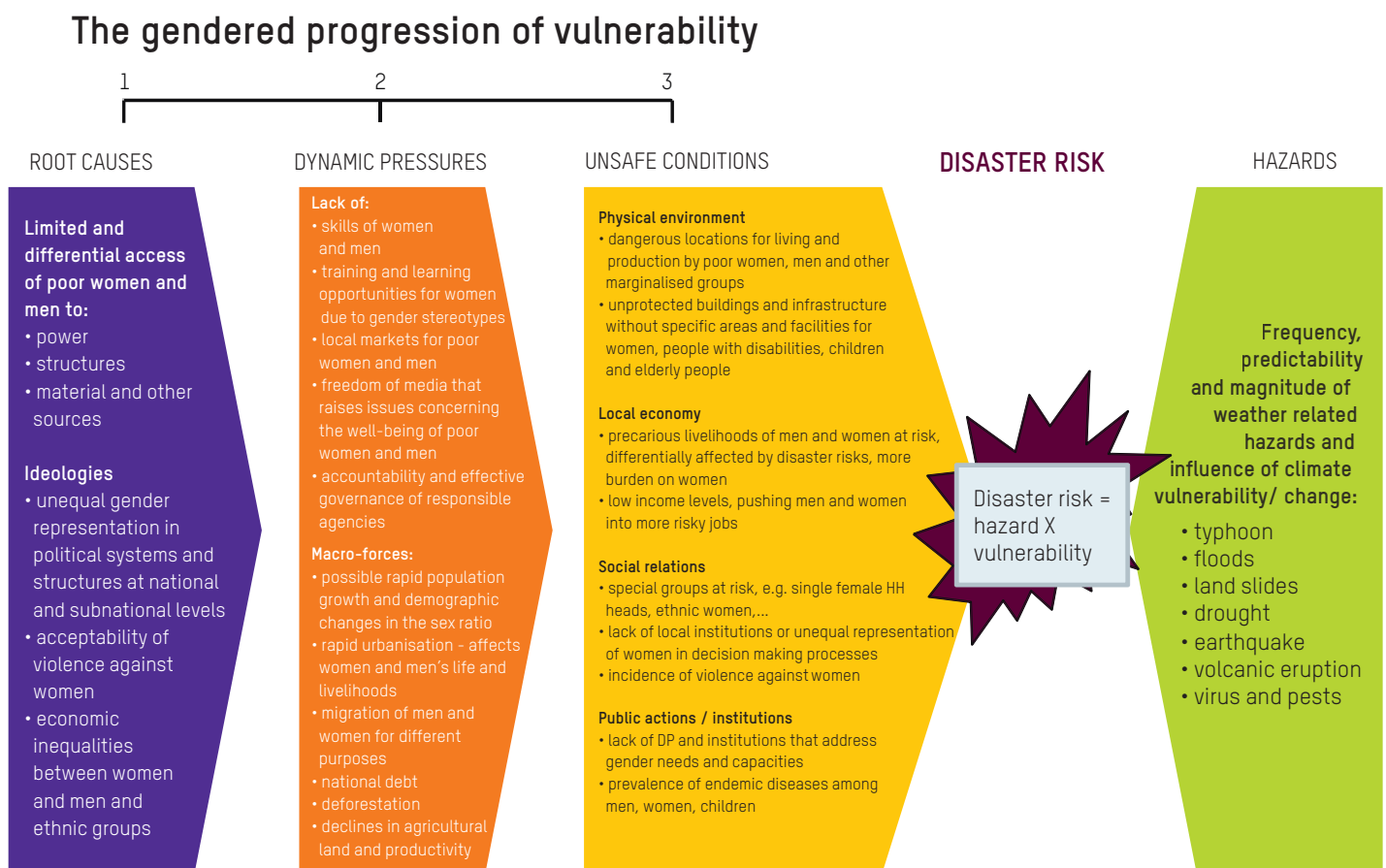
As already mentioned, the “Crunch Model” helps practitioners to understand and react to people’s vulnerability to disasters. Gender relations underpin the roles and status of men and women in a certain socio-economic, religious and cultural context. This means that women and men experience different levels and types of vulnerability to disasters, including those caused by climate change.

The “Gendered Crunch Model” (see Figure 2 on the following page) essentially examines the gender aspects of each element, or layer of the existing “Crunch Model”, to help us better understand how each differently influences the vulnerability of poor women and men, boys and girls.

PART B

HOW TO USE THE GENDERED CRUNCH MODEL?

Figure 2 The gender sensitive progression of vulnerability



Modified from Wisner et al, 2004

- Hazard and vulnerability are the two main dimensions that should be analysed when undertaking a disaster risk assessment. Therefore, for each hazard identified, the respective causes of vulnerability - with regards to both men and women, boys and girls - should be assessed.
- In the process of analysing gendered vulnerability for the purpose of designing projects or programme (whether in development, advocacy or DRR) the practitioner(s) is encouraged to ask a series of questions (not exhaustive) relevant to each element of the "progression of vulnerability", to best ensure that gender aspects of each are comprehensively considered. Many of those will provide a "yes" or "no" answer.
- Depending on the answer, the DRR practitioner(s) should attempt to find out the reasons behind the answer. This is meant to initiate thinking and discussion amongst team members and with partners and other stakeholders.

- The practitioner(s) can start at any point within any element to address these questions. It is an iterative process (responses maybe amended through further analysis of the situation). In developing a programme or project, the practitioner should essentially examine each element through addressing a series of questions to best ensure that gender aspects of each are comprehensively considered.

The purpose of this exercise is to identify how a hazard affects men, women, boys and girls differently; the specific aspects of gender relations and inequalities in their vulnerability; their specific needs, concerns and priorities in reducing disaster risks; as well as to examine the implications of these issues for programme design and implementation to promote more effectively gender equality, address poverty and lessen suffering.

1. Root causes

Power

- What are the roles of women and men in existing governmental and non-government structures, within the local society and the home? Do their opinions, especially of poor women and men and ethnic groups have equal weight in decision-making processes?
- Do women have similar access to and control over resources – natural, economic, social, health and legal to men?
- Are women represented equally to men in governance and management structures, including in positions of leadership?

Ideologies

- What are the beliefs about gender roles and responsibilities that influence the involvement of women and men in the political system/involvement in the public arenas?
- Do similar beliefs and values also apply in the economic context? Are women mainly responsible for household tasks? Are they vulnerable to forms of violence or discrimination?
- Does economic development as well as DRR policies, strategies, plans integrate women's needs and rights? Do they promote gender equality?
- Is violence against women condoned or condemned in dominant discourse?

2. Dynamic pressures

- How aware of disaster risks are women compared to men?
- Do women have equal access to education and skill training opportunities to men? Are women's

educational levels comparable to men?

- Do religious or cultural practices mean that women have less access to or engagement with other people in local society or access to information?
- Are there any restrictions on the media to raise issues related to gender inequality or gender based violence?
- Is there an awareness of the differential impacts of disaster on women and men?
- Is need assessment for response and recovery gender sensitive?
- Can both men and women have equal access to local markets?
- What is the level of accountability of government agencies responsible for DRR? Are they transparent in the way they are managing DRR? Do they get local women and men involved in DRR?

Macro forces

- Has the population in the country/locality increased significantly in the last decade? Are there significant changes in the sex ratio?
- Is urbanisation taking place in an organised/planned manner considering potential risks that may affect women's and men's lives and livelihoods?
- Are both men and women migrating to urban areas? What are the impacts of their movement to their families and communities at both ends?
- What is the level of national debt? How is it affecting taxation or commodity prices?
- What is the total percentage of forested area in the country/programme areas? Are local men and women involved in preserving or afforesting or reforesting?
- Are there national or local declines in the area of agricultural land? Have major crops declined in productivity per hectare over the last decade? If yes, how are they affecting the livelihoods of men and women?
- Do national or international socio-economic development policies/strategies consider their impacts on poor women and men?
- Are there major infrastructure developments within the locality/region (such as a reservoir, dam, road, etc.) that may impact upon the lives and livelihoods of men and women differently?

3. Unsafe conditions

Physical environment (individual and community level)

- Are settlements located in locations unsafe for vulnerable groups?
- Are men and women aware of the risks posed by their location (e.g. landslide, flash flood prone areas, sea surge or tropical storms in the coastal areas, flood plain)?
- Are public and private buildings available as "safe haven" for evacuation at the time of disaster? Are there suitable water, sanitation facilities for men and women?
- Are local government staff able to consider specific needs of women and men?
- Is there access to adequate health care and water and sanitation facilities, health insurance for both men and women, especially for women who are pregnant, lactating or with babies, elderly men and women?

Local economy

- Do women and men face risks in accessing natural resources for their livelihood activities?
- What livelihood risks do women and men face? Would women and men's workloads be similar before, during and after a disaster?

- What are the differences in the access that men and women have to paid work? Are women and men paid the same amount for a similar activity? If men migrate for livelihood purposes, how does this impact upon women's workloads at home/generally?
- If women migrate for work, what impact does it have on men and their families at home?
- Is there evidence that women in the locality are taking on high-risk income generation activities (e.g. unsafe working environment or commercial sex work)?
- Are there options for poor men and women to take any form of insurance?
- Are there existing community support mechanisms, e.g. women's groups, saving scheme, contingency fund?

Social relations

- Which groups are at risk? E.g. single female, single headed households, some ethnic women?
- Is there evidence of violence against women?
- What social and health benefits exist for women?
- Is there evidence of trafficking of women and children?
- Are women involved in DRR decision-making or in collective initiatives?
- Are there organisations that work on gender or women's rights issues? Does the State protect women's rights (through laws, policies, etc.)?

Public actions and institutions

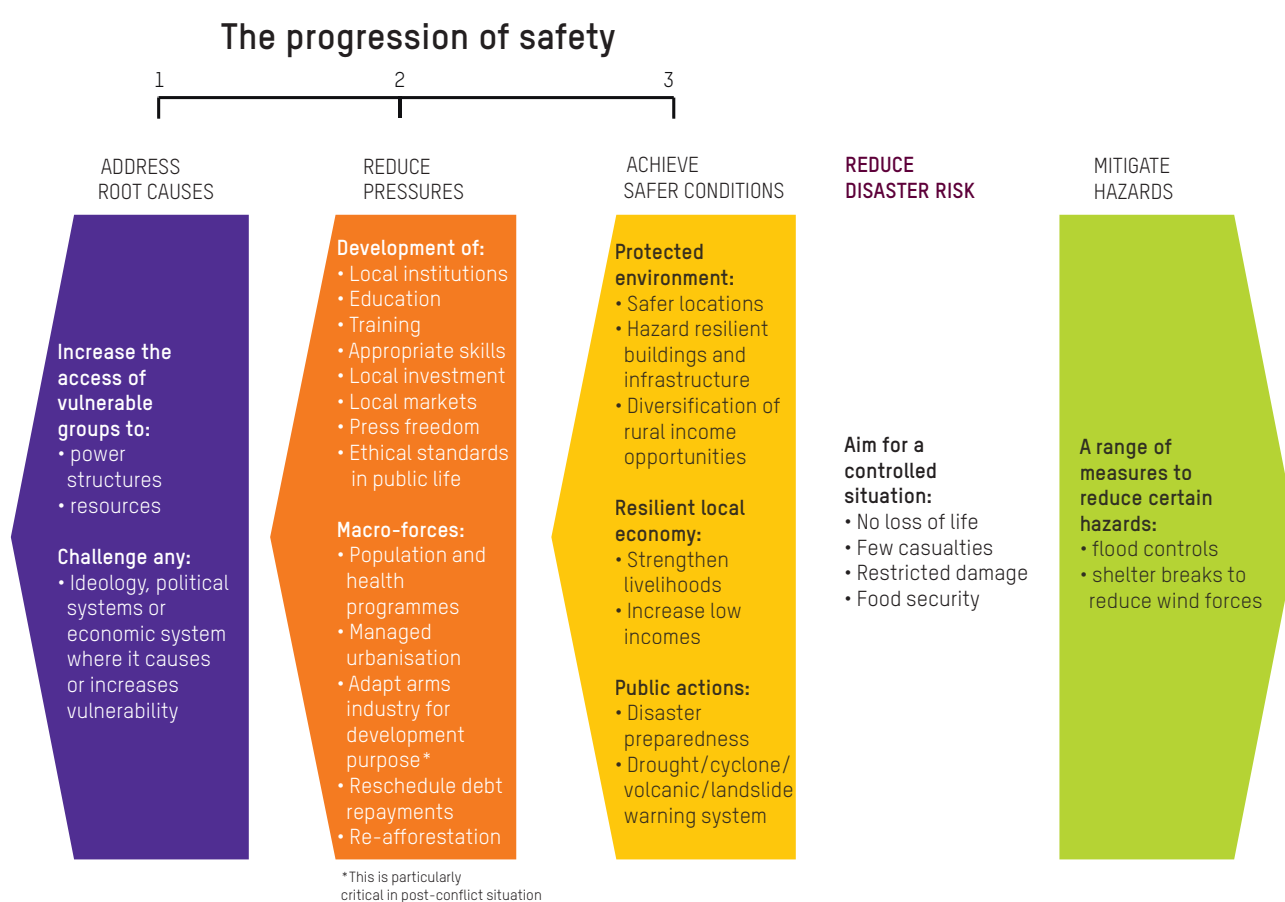
- Are there DRR institutions/organizations that address: both men's and women's needs and capacities, or involve women and men in decision-making, or mention women and men equally specifically in policies, strategies and plans?
- Are there women's groups that take collective action to overcome their vulnerabilities (e.g. savings and loan groups/self-help groups)?
- How are women, men, girls and boys differentially impacted by endemic diseases especially during/in the aftermath of disasters?

After analysing and understanding all causes of women's and men's vulnerabilities, and inequalities in the programme/project areas, DRR practitioners can use the "Release Model" to help to identify measures to address the causes of vulnerabilities at different layers, which eventually creates a safe environment, a resilient community and a society where both men and women enjoy gender equality.

PART C

DISASTER RELEASE MODEL: GUIDANCE ON HOW TO COUNTER DISASTER RISK

Figure 3 The original “Release Model”

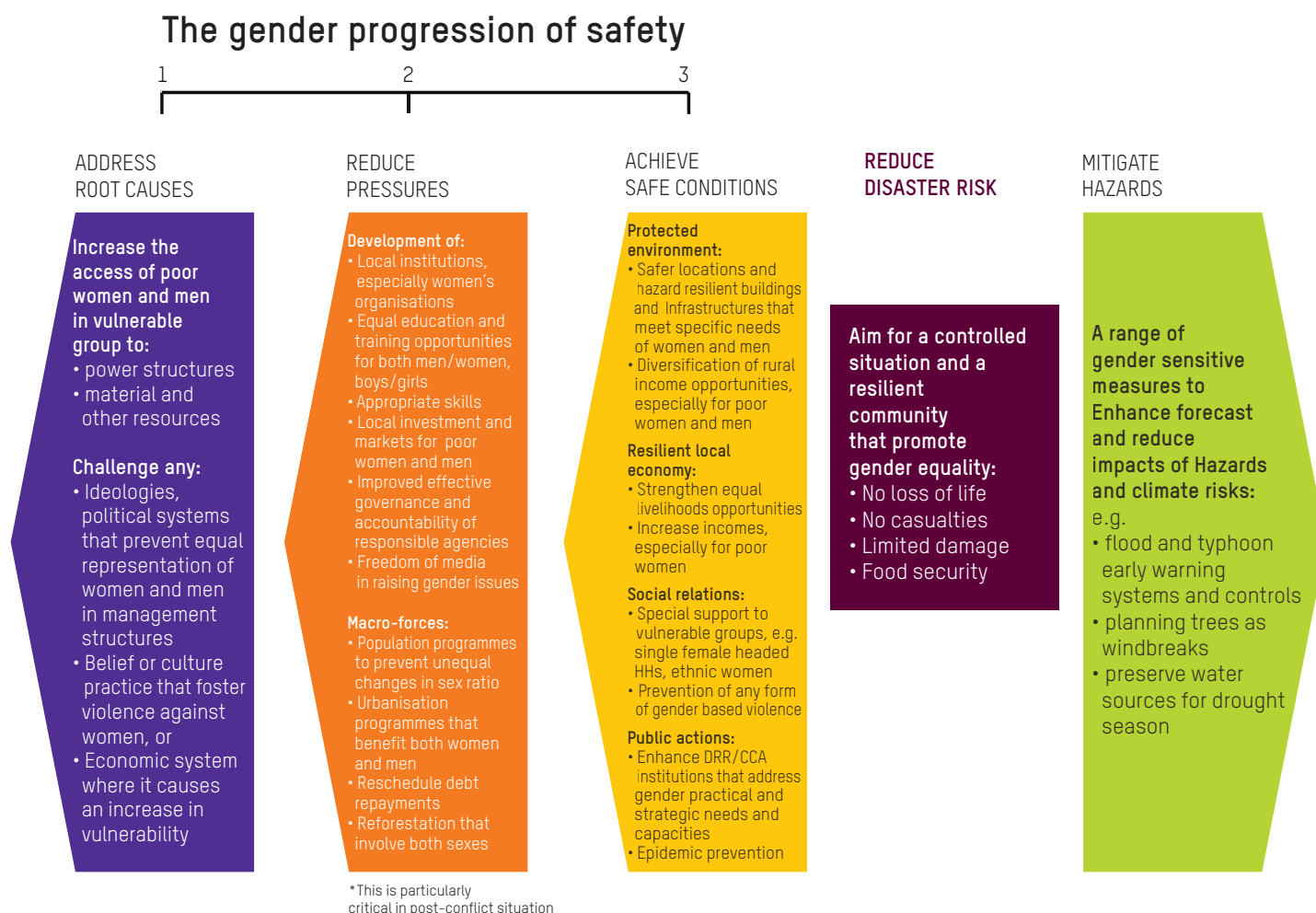


Wisner et al, 2004: The release of “pressures” to reduce disaster: progression of safety

Theoretically, the “pressure” between hazards and vulnerabilities should be released to reduce disaster risk. Hazards should be mitigated to reduce their intensity, thus affect vulnerable population less. Vulnerability should also be reduced at different levels: activities need to be undertaken to turn “unsafe conditions” into “safer conditions”, “dynamic pressures” will be reduced and “root causes” will be addressed. These DRR activities aim to achieve a controlled situation and a resilient community, where there is no loss of life, few casualties, restricted damage, food security and capacity to recover quickly from any impact of a hazard.

Similar to the original “Crunch Model”, however, the original ‘Release Model’ provides few insights into the gender aspects in the DRR arena. The following “Gendered Release Model” is an attempt to provide practitioners with some reminders for consideration of gender issues when identifying DRR measures.

Figure 4 The “Gender Sensitive Release Model”



Modified from Wisner et al, 2004

This model may be best used side by side the “Gendered Crunch Model”, following the analysis steps.

For each identified issue or problem, gender sensitive measure(s) should be defined, and practitioners should discuss:

- What positive changes in the life of men and women, boys and girl will the measure bring?
- How will they be involved in decision making processes and implementation of the measure?
- Are their gendered needs, concerns and capacities addressed equitably?
- What more can be done to achieve gender equality in this?
- Are human, financial and material resources allocated adequately by the local authorities, government and the responsible agencies to realise the measure?

PART D

CONCLUSIVE NOTES

Additional uses of the “Gendered Crunch and Release Models”

It is hoped that practitioners will gradually familiarize themselves with the ‘gendered’ version of the tool and use it in ways that enhance their effectiveness and that of their organizations, for example, in the context of:

- a) An analytical framework for PCVA: instead of using the original model, from now on, the “Gendered Crunch and Release Models” can be used, as explained above, during the relevant processes. The steps of PCVA are maintained.
- b) Sex disaggregated information collected as a result of the PCVA process should form the baseline data for future use.
- c) Monitoring and evaluation of programmes/projects: The “Gendered Crunch and Release Models” can also be used as a tool for monitoring and evaluation to check whether our programme/project is achieving gender equality goals, or if women’s rights are being promoted.
- d) Advocacy and campaigns: From the analysis above, especially in the “root causes” of women and men’s vulnerability, advocacy and campaign messages can be developed.

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