
manuales

Socio-economic impacts
of natural disasters: a gender
analysis

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Human Settlements División
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Index

Abstract	5
Introduction	7
I. Methodology and approach	9
A. Sources of information	9
B. Basic concepts.....	10
II. Impacts of hurricane Mitch from a gender perspective	25
A. Direct impacts	25
B. Indirect impacts	30
III. Strategies for dealing with crisis situations and their consequences	35
A. Coping strategies	35
B. Reconstruction initiatives	37
IV. Summary and recommendations	45
A. Summary of the situation post hurricane Mitch	45
B. Recommendations.....	46
C. On information relating to vulnerable groups	47
D. On monitoring the impact of the disaster and subsequent interventions, from a gender perspective	49
E. On women's participation in the planning, design and monitoring of emergency programmes and rehabilitation projects.....	52
Bibliography	55
Serie Manuales: issues published	59

Index of tables

Table 1	Types of vulnerability.....	11
Table 2	Proposed vulnerability index using a gender approach.....	16
Table 3	Gender-related development index	17
Table 4	Aspects of a gender-focused analytical framework: holistic analysis of the situation facing people before and after disaster and response planning	21
Table 5	Emotional impact and need for care in Nicaragua	32
Table 6	Strategies for dealing with crises	36
Table 7	Variables and relation in the process of change	41

Index of figures

Figure 1	Internal and external aspects of vulnerability.....	11
Figure 2	Transformation and reconstruction: the theory	20
Figure 3	Relations within households.....	24
Figure 4	Productive work by women before and after hurricane Mitch in four nicaraguan communities by headship of households and by age (women in male-headed households)	27
Figure 5	Change of roles-change of relations (simple model)	41
Figure 6	Frustration and impact on conflict and violence.....	42

Abstract

This paper analyses the socio-economic effects of hurricane Mitch using a gender approach and proposes new analysis indicators for crisis situations that may better reflect women's disadvantageous position relative to men. The first section of the document discusses key concepts used in gender and disaster analysis, in the context of the region and hurricane Mitch. The following section examines the direct and indirect impacts, and looks at how they have affected women, as well as the responses to Mitch at three levels: first, that of individuals and their strategies for coping with the crisis; second, the actions of governments and the coordinated bodies of civil society; and third, reconstruction initiatives carried out by national and international organizations. The final section attempts to draw together the salient points and challenges suggested by the analysis. It also offers some recommendations for integrating this approach into future emergency and reconstruction scenarios and for reducing women's current vulnerability.

Introduction

“Disasters tend to reveal existing national, regional and global power structures, as well as power relations within intimate relations” (Enarson and Morrow, 1998:2).

Hurricane Mitch emerged as a tropical depression on the afternoon of 21 October 1998. By the following morning it was already a grade 4 hurricane. Four days later, Mitch attained grade 5, becoming the fourth most intense hurricane in the Atlantic in the Twentieth Century. On 28 October, Mitch battered south-western Honduras, the Pacific coastline of Nicaragua and El Salvador.

Mitch caused damage to Honduras' 18 territorial departments. Strong winds wreaked havoc in the northern departments of Cortés and Colón. The lowlands in the east also experienced severe flooding, while flooding in the Sula Valley caused the Ulúa and Chamelecón Rivers to join, forming one river five miles wide that covered the cities of El Progreso, Tela and San Pedro Sula. The storm flooded the Choluteca Valley, as well as the cities of Comayagüela and Tegucigalpa.

The heavy rains unleashed by Mitch battered the western and north-western parts of Nicaragua. Chinandega received an entire year's rainfall (1,600 mm) in the space of five days. The cities of Estelí, Madriz, Nueva Segovia and Matagalpa were flooded, and around 2,000 people died and 980 disappeared when part of the hillside of the Casitas volcano, located close to Chinandega, gave way, triggering a mudslide that reached speeds of up to 200 kilometres per hour and completely buried three small villages in the municipality of Posoltega.

As it moved northward, hurricane Mitch brought higher-than-usual rainfall, floods and high tides on the Salvadoran coast. The hurricane had a major impact on the Gulf of Fonseca, the Bajo Lempa Valley and the departments of La Unión and San Miguel, particularly in the Chilanguera River, which was where the majority of deaths in El Salvador occurred.

It is estimated that the hurricane had a direct impact on one out of 10 people in the region and caused damage totalling US\$ 4 billion to the productive sector, including two thirds of the infrastructure of Honduras and Nicaragua; US\$ 1,2 billion in total physical infrastructure in the region; US\$ 800 million in housing, health and education; and US\$ 3 billion in raw materials and plantations (ECA 2000).

Disasters such as Hurricane Mitch are natural phenomena, but their impacts are not. Rather, their effects are the result of the actions of human beings and are determined by the circumstances of the country in question, i.e., poverty, social inequalities, and the extent of deforestation, among other factors. Blaikie et al. (1994:3) point out that there is a risk inherent in treating disasters as something peculiar or as events detached from people's daily lives. In the countries of Central America, this serves as a warning against analyses that separate natural disasters from their political and socio-economic context, from economic growth in line with the neoliberal model, and from the vulnerabilities inherent in this process, which affect the impact of a hurricane such as Mitch.

Moreover, where disasters take place in societies governed by power relations based on gender, age or social class, their impact will also reflect these relations and, as a result, people's experience of the disaster will vary. Today, the importance of the gender perspective during times of crisis and emergency is acknowledged, both on account of the differentiated impact on men and women and on account of the different strategies adopted by them to deal with such situations (Byrne, 1995; CAW, 1998). Despite the recent activities and publications of a small group of experts on disasters (Enarson and Morrow, 1998; Peacock et al., 1997), a gender perspective has not become mainstream within disasters research. Moreover, although a number of gender training manuals and guides have been made available, often the so called 'tyranny of the urgent' wins out over good practice.

I. Methodology and approach

A. Sources of information

Up until early 2000, few studies had been conducted on the impact of Hurricane Mitch on the Central American region. The most important of these were three regional evaluations, with both a social and an economic focus, which constitute an important source of information: the first was commissioned by the Disasters Emergency Committee (DEC), of the United Kingdom (ECA, 2000), the second was issued by the Inter-American Development Bank (IDB) (Gomáriz, 1999) while the third was put out by the World Bank (WB) (Delaney and Shrader, 2000). In addition, a paper published by the Central American Symposium of Women involved in Reconstruction (CEM-H, 2000) provides an overview of the situation of women in the region, both before and after Mitch.

This study is based on the analysis of existing documents and reports on the impact of Mitch, complemented by interviews with key informants. During the initial stages of this study, it became evident that there was a dearth of information available in general, and about the socio-economic situation of women in the countries of the region in particular. Two exceptions were however noted:

- The Survey on Gender, El Salvador (IUDOP, 1999). Carried out at the initiative of the Association of Women for Dignity and Life (Las Dignas), in coordination with other organizations, this survey reached some reliable conclusions about women's perceptions and opinions, and provided some

basic statistics. It included, **inter alia**, questions about violence, women's rights, women's attitudes as regards stereotypical roles, and information on environmental and vulnerability reduction initiatives in El Salvador.

- The Social Audit, Nicaragua (CCER, 1999a; 1999c). This survey, which was promoted by the Civil Coordinator for Emergency and Reconstruction, comprised two stages. The first stage, conducted in February 1999, covered all the departments affected by the hurricane and involved 10,000 interviews of households concentrated in the emergency period. The purpose of the questions was not only to estimate the damage sustained, but also to understand the perceptions of those affected by Mitch as regards the aid received (distribution, effectiveness, usefulness). The second stage, in September 1999, focused on the reconstruction process, and sought to quantify how much progress had been made, and learn about the actions of the various actors involved, and people's opinions about assistance. At the time this report was prepared, in September 2000, planning was under way on the third stage.

To round out the data, the results of a primary investigation conducted in Nicaragua in 1999 were examined (Bradshaw et al., 2000); in addition, the study took into account the observation of activities carried out over a year and a half by participants in various institutions of organized civil society in Nicaragua. In the case of Honduras and El Salvador, the information is based on interviews of key respondents. Given that there are few experts on disasters with a gender focus, respondents were selected from among representatives of the women's and feminist movements who had some experience of Hurricane Mitch. This ensured there was an overall view of the situation, including a general analysis, examples of good and bad practices, discussion of the processes at the macro and national levels, and specific recommendations.

B. Basic concepts

Before the regional situation post Hurricane Mitch is examined, it is important to clarify a number of concepts. The issue of vulnerability in general, and that of the men and women of the countries in the region in particular, needs to be addressed. It is also essential to know what is meant by a gender perspective with respect to a focus on women. Lastly, it is also necessary to examine one of the most important places in times of crisis: the household.

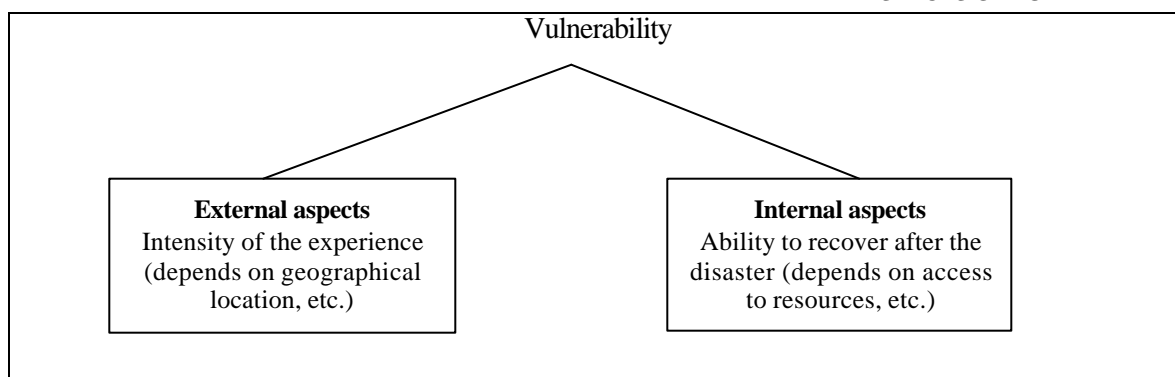
1. Vulnerability

Vulnerability is a key concept in predicting and understanding the existence of differentiated impacts on the various groups in a society (Blaikie et al., 1994). The concept of vulnerability takes into account people and the differences among them; in other words, it facilitates analysis of the social situation, affirming that people's circumstances change and can be changed, in this case, by an event such as a hurricane. Consequently, the concept does not look at the resources available to the different social groups in order to describe their current place in society (vulnerability as a passive concept), but rather to gauge the prospects for changing the situation (vulnerability as an active concept).

The concept of vulnerability focuses on limitations or lack of access to resources; that notwithstanding, many investigations have attempted to foreground to a greater extent the "positive", i.e., the uses to which people put the available resources, together with their self-help strategies in crisis situations. This notion of vulnerability considers the combination of external aspects –the risks or intensity of an external shock or disaster (such as a hurricane) – and internal aspects –the ability to cope with such disasters without sustaining major damage, or ability to recover after the event.

Figure 1

INTERNAL AND EXTERNAL ASPECTS OF VULNERABILITY



Source: Author's elaboration.

a) Types of vulnerability

It is possible to identify different types of vulnerability: economic, social, political, physical, psychological. It is also necessary to take into account the intensity of the disaster and the ability to recover from it, though often the two are related. Table 1 sets out some different types of vulnerability and their definition.

Table 1
TYPES OF VULNERABILITY

Situation involving "lack of..."	Leads to
Integration in the community (e.g., recently arrived migrant)	Social vulnerability
Inclusion in the decision-making process (e.g., woman)	Social vulnerability
Feeling of power or control over one's life (e.g., woman in a violent relationship)	Psychological vulnerability
Feeling of security (e.g., high crime rate)	Psychological vulnerability
Health (e.g., Disabled person)	Physical vulnerability
Physical resources, such as money, housing, etc.	Physical vulnerability

Source: Author's elaboration.

Vulnerability is directly related to impact. For example, Hurricane Mitch affected not only people who were deemed vulnerable, but also, as in the case of Tegucigalpa, the middle class. The loss of one's dwelling led to a situation of physical vulnerability (being homeless), social vulnerability (dependency on others) and psychological vulnerability (the trauma of the experience of loss), among others. However, even when these types of vulnerability are significant, especially for reconstruction plans, it is the vulnerabilities experienced by people prior to a disaster occurring that require the greatest attention.

In this respect, case studies indicate that prior resources are reliable indicators of vulnerability, that is to say the extent of the damage caused by the impact and people's ability to bounce back (Enarson, 1998b). Research carried out by this author has identified major aspects of post-disaster survival and recovery:

- Income, savings, loans, insurance policies.
- Land, livestock, tools.

- Secure employment; work experience.
- Health and nutrition; food security.
- Appropriate, secure housing.
- Functional education; administrative skills.
- Close family networks.
- Low rate of adult dependency in the household.
- Access to public and/or private transport.
- Time.
- Social networks; community integration.
- Political power and influence.
- Power in the household; access to, and control of, household resources.
- Access to emergency resources (information, shelters).

These resources essential to survival and recovery are unequally distributed in all societies, which means that in equally dangerous environments, people and social groups are impacted in different ways. The following categories are the hardest hit (Enarson, 1998a):

- Poor and low-income households.
- Single-parent households.
- Socially isolated households.
- Recently arrived residents, immigrants, foreigners.
- Senior citizens, children and young people.
- People with a disease or a mental or physical disability.
- Undocumented residents; refugees; war veterans.
- Indigenous populations and subordinate ethnic groups.
- Institutionalized populations; homeless residents.
- Women.

It is possible to predict based on Enarson's analysis that the following groups of women will be especially hard hit:

- Poor and low-income.
- Elderly.
- Having a disability or disease.
- Heads of household.
- Homeless.
- Indigenous.
- Immigrants.
- Isolated.

- Rural.
- Affected by violence.

Much of the work on gender and disasters, including the studies by Enarson, is based on research carried out in the United States. It is therefore important to evaluate to what extent this reflects the reality of the countries of Central America. With that aim in mind, it is useful to study a summary of the data drawn from various sources (Pan American Health Organization, PAHO; United Nations Children's Fund, UNICEF; International Organization for Migration, IOM) concerning female disaster victims and refugees in Honduras (Tábora, 2000). In regard to people made homeless by Mitch in Honduras, the data show the following:

- The majority are women (51%).
- The majority of the women are heads of household (51%), a figure which is significantly higher than the national percentage of female-headed households, according to the household survey (26%).
- A high proportion (37%) did not attend school or did not complete primary education; only 7% completed secondary education, and less than 1% had access to tertiary study.
- The women are mainly on low incomes.
- Children and teenagers account for more than half (56%) of all people taking refuge in shelters. 16% of women in shelters reported that they were pregnant. A significant number are heads of household and/or young single mothers, between 13 and 22 years of age (7% of all female-headed households in shelters).

It is important to analyse this last point in light of the conclusions of a study conducted in Nicaragua (Bradshaw et al., 2000). This study found that, prior to Mitch, the situation of young women in independent households (female heads or young live-in partners) was worse than that of women aged over 25, in terms of their access to financial resources and perception of their own contribution, and that this situation worsened still further after Mitch, in both absolute and relative terms. This means that, in the context of the region, young women in independent households should be viewed as a group in a particularly vulnerable situation.

b) Vulnerability in the region

A mapping of risks and vulnerability in the region, published shortly after the hurricane hit (Ordóñez et al., 1999), offers major insights into vulnerability in countries before Mitch.

The conceptualization of vulnerability as seen by these authors involves three aspects: technical, political and social. The technical component is primarily concerned with infrastructure and the ability to resist the impact of the disaster. The second component, political vulnerability, is defined as the degree of a community's autonomy in respect of decision-making. It contends that the greater the autonomy, the lesser the extent of the community's political vulnerability. The third component is social vulnerability. The analysis is based on various elements used to "measure" the vulnerability indices of different countries in the region, along with various groups within them. These are:

- Poverty index.
- Health condition (mortality, morbidity).
- Malnutrition index.
- Percentage of households headed by women.
- Illiteracy index.

- Housing conditions.

These elements provide a solid foundation on which to analyse the situation in each country, but they do not provide for gauging the real situation of women in the region. One of the criticisms levelled at the study by Ordóñez et al. is that it uses a concept of vulnerability that is more passive than active, with a greater focus on the circumstances facing individuals than their prospects for recovery in the wake of a disaster.

The problem is that it is more difficult to measure the opportunities or ability to use the resources available than it is to measure limitations or lack of resources. Placing the emphasis on abilities makes it necessary, at the least, to carry out studies in the local sphere, which means earmarking more resources for research in the region. However, the core of the problem is that the effectiveness of the research methods and the accuracy of the qualitative results have been called into question.

For these reasons, the discussion that follows builds on the vulnerability components used by Ordóñez et al. and proposes the inclusion of some indicators that may provide a better picture of the situation facing women compared to that facing men. At the end of the section, a blueprint is outlined for measuring vulnerability from a gender perspective.

(i) Poverty and access to, and control of, financial resources

Poverty is important as a component of the vulnerability of individuals and the various social groups, but the way in which it is calculated limits its usefulness. In terms of gender, the methods that are generally used to “measure” poverty fail to reflect the unequal situation of women, especially within the home. Put differently, secondary poverty is as significant as poverty per se for women, because it reflects the fact, for example, that men do not hand over all their income to the household but rather use some of it for their “social” activities (drinking alcohol, among others). There may be cases of households that are not considered poor, in terms of income, but in which women and children actually live in (secondary) poverty because the resources available to them are far fewer than the total household resources. In this regard, a number of studies in the region indicate that it is very common for men to hold back income for themselves and that, on average, they allocate between 50% and 70% of their total income to the household (Chant, 1985, on Mexico; Bradshaw, 1995, on Honduras). The studies further point out that women use all or almost all of their income to satisfy the needs of the household and to care for their children. Therefore, women who do not have access to their own income constitute a vulnerable group.¹

In order to obtain data on secondary poverty, it is necessary to incorporate a component that reflects women’s degree of financial dependence in households headed by a man. The proportion of male-headed households where the woman is not gainfully employed might be a proxy for secondary poverty.

Lastly, where women are concerned, it is important to think more about access to, and control of, resources than about poverty per se. Again we run up against the difficulty of measuring “control”, hence the need to formulate a proxy. One possible solution would be to consider property ownership, i.e., the percentage of women who hold title to land or homes. In this way, it is also possible to reflect changes in how vulnerability is defined, when housing is identified as a potentially important resource for the generation of income and, by extension, for reducing vulnerability/poverty, as the World Bank has done in several of its studies.

Moreover, the concept of poverty also reflects the way in which income is generated. Job security, together with the range of sources and options available to households to obtain jobs, are

¹ Other studies show that the income generated by women living in male-headed households does not necessarily represent a supplement to men’s contributions. Often men perceive such a situation as an opportunity for reducing still further their contributions, given that women now have money.

important in terms of vulnerability. A household that depends on a single source of income is more vulnerable than one that can count on a variety of sources for generating income.

In addition, the source of employment is relevant when assessing the impact of a disaster. Accordingly, vulnerability mapping projects should include the most important sources of employment in each area, so as to ensure a rapid response in terms of economic recovery after any disaster.

Lastly, there is a need to take into account the importance of credit for survival. In that regard, the impact of a disaster is twofold: it signifies the loss of items purchased on credit, such as seeds, as well as the loss of productive capacity for paying the debt. The ECA (2000) report states that, “peasants also found themselves heavily in debt due to the emergency...and some of them sold the bulk of their crops at very cheap prices, in order to be able to pay some of the debts related to financing the crops that Mitch destroyed.”

(ii) Health conditions

General mortality and morbidity reveal the extent of health vulnerability in the wake of a disaster. However, it might also be useful to consider a number of indicators focusing on specific groups, such as women of child-bearing age and the population aged under 6, in relation to cases of maternal mortality and diarrhea, respectively.

On account of their health status, it is also possible to identify other vulnerable groups in disaster situations:

- Abused women.
- People living with AIDS, who experience greater physical vulnerability not only due to their disease, but also because of their social status or social exclusion. AIDS indices in the region, especially Honduras, underline the importance of taking such people into consideration.
- Street children.

In order to prevent discrimination against these and other vulnerable groups and be able to meet their specific requirements, it is necessary to implement, among others initiatives, awareness-building and training programmes for all people involved in emergency situations (firemen, civil defence and Red Cross personnel).

(iii) Malnutrition

Though other indicators may be of use in measuring the degree of food security enjoyed by a particular population, the malnutrition index broken down by sex and age is an important indicator in itself.

(iv) Female-headed households

It is important to take into account the proportion of female-headed households, but the way in which this is done is subject to debate. Some experts believe that its importance lies in it being a line of analysis rather than as an indicator of vulnerability per se. Including the proportion of female heads of household as an indicator implies that it is not necessary to draw distinctions between women in urban and rural areas, young and older women, or among indigenous, and black and mixed-blood women. Advocates of this approach argue that the reality of vulnerability is the same for all these women, and that their vulnerability is different and more pronounced than that of women who live with a partner. Although the vulnerability of women heads of household is different from that of female spouses in male-headed households, both groups are in fact vulnerable (Bradshaw, 1996). Placing the spotlight on women heads of household may detract attention from those who live with a partner, which is the reality of most women.

(v) Illiteracy

The illiteracy index constitutes a significant factor when gauging the population's opportunities for access to information, services and resources. However, it is also important to consider the degree of community organization, since this enables the factor of political vulnerability to be incorporated. Participation would be the most significant indicator, but presents conceptual problems. Furthermore, registries of non-governmental and community organizations are increasingly common in various countries and could serve as an indicator of the level of organization, but these were still not complete at the time this report was prepared.

The inclusion of an indicator on the level of community preparedness for a disaster or, at least, awareness of the existence or lack of emergency/evacuation planning, should be an important indicator in this context.

(vi) Housing conditions

In addition to housing, the state of local infrastructure in general is also important; this covers schools, health posts, and especially transport links. Damage to highways may impact seriously on men and women's ability to recover from a disaster. For example, in Nicaragua, many women who were employed in buying and selling clothing were unable to continue doing so owing to the destruction of transport routes.

Table 2 below presents a set of indicators that could be used as a vulnerability index for countries and communities, men and women, adults and young people.

Table 2
PROPOSED VULNERABILITY INDEX USING A GENDER APPROACH

Variable	Indicator
Poverty	
Poverty index	Dissaggregated by the sex of the person heading household.
Households that are economically dependent on a man	Proportion of women without paid work in male-headed households (proxy for secondary poverty).
Lack of stable income	Proportion of the population that is unemployed or without stable employment, broken down by sex.
Access to financial resources	
Access to resources with the potential to generate income	Proportion of the population with land and/or house title, broken down by sex (proxy for control of resources).
Range of sources of income	Proportion of households with a single source of income, broken down by sex of the person employed.
Loans	Proportion of households with loans, broken down by sex of person named.
Health conditions	
Mortality, morbidity	Population broken down by sex.
Diarrhea in children aged less than 6 years	Population broken down by sex.
Maternal mortality	Population broken down by age.
Security	
Malnutrition indices	Population broken down by sex.
Housing conditions	Population broken down by sex of the head of household.

Table 2 (continuation)	
Disaster preparedness	Existence of a contingency plan (proxy for knowledge of a plan).
Marginalization	
Illiteracy indices	Population broken down by sex.
Organization of the community	Broken down by type of women's groups/mixed groups (proxy for participation).
State of transport links	Analysis of sources of work broken down by sex.

Source: Author's elaboration.

c) Women's vulnerability prior to Mitch

Each year, the United Nations Development Programme (UNDP) prepares a document entitled the *Human Development Report* which sets out the progress (or lack thereof) in each country with respect to the Human Development Index (HDI) and the Gender-Related Development Index (GDI).² According to this source, the GDI of Nicaragua, Honduras and El Salvador was as follows:

Indices/Indicators	Table 3 GENDER-RELATED DEVELOPMENT INDEX		
	Nicaragua	Honduras	El Salvador
GDI Value 1997	0.609	0.631	0.667
GDI Value 1998	0.624	0.644	0.693
HDI-GDI Category 1997	2	-1	1
HDI-GDI Category 1998	1	1	3
GDI Position 1997	100	114	106
GDI Position 1998	97	94	83
Life expectancy at birth (1998)			
Women	70.9	72.5	72.7
Men	66.1	67.7	66.7
Adult literacy rate (1998)			
Women	69.3	73.5	75.0
Men	66.3	73.4	80.8
Combined gross enrollment rate (1997)			
Women	65.0	59.0	63.0
Men	61.0	57.0	64.0
Real per capita GDP (PPP US\$, 1998)			
Women	1 256	1 252	2 779
Men	3 039	3 595	5 343
Gap W/M (veces)	2.4	2.9	1.9

Source: The data for 1997 relate to the *Human Development Report 1999*. The data for 1998 were obtained from the *Human Development Report 2000*, both published by UNDP.

In addition, several studies reveal that the women of the region face a range of vulnerabilities, the main ones being:

² UNDP takes into account three variables when measuring HDI: life expectancy at birth, educational attainment (adult literacy and the combined primary, secondary and tertiary gross enrolment rate) and real Gross Domestic Product (GDP) per capita (PPP in dollars). GDI measures attainment using the same dimensions and the same variables as HDI, but in addition considers disparity in attainment between men and women.

- Financial. In a context of widespread poverty, women are even poorer, on account of lower incomes, lack of job stability, dependence on men's incomes, scant recognition of their productive labour, limited access to resources with potential to produce income, and secondary poverty.
- Social, due to the high proportion of women heads of household and teenage mothers.
- Psychological, due to high rates of widespread violence including violence towards women.
- Physical, in that a poor population is concentrated in areas of risk, without contingency planning or disaster preparedness.

When drawing up the vulnerability profile of women prior to Mitch, we are again faced with the shortcomings of official sources of information, due to the lack of reliable data broken down by sex and age, and in respect of disparities between men and women. Nevertheless, it is possible to have an approximate idea of women's vulnerability by considering Nicaragua, the country that, according to several studies, has the best sources of information.

In Nicaragua:

- 68% of the population lives in poverty. The results are not broken down by sex (EMNV, 2000).
- 63% of women are not gainfully employed. However, other sources estimate that women make up almost half the working population (Renzi and Agurto, 1995).
- 28% of rural households are dependent on just one male worker, and therefore a single source of income (Bradshaw et al., 2000).
- 13.5% of women and 10.6% of men in the labour force are unemployed (EMNV, 2000).
- 80% of women in the labour force work in the informal sector (Renzi and Agurto, 1995).
- On average, for equivalent jobs, women's incomes are 30% lower than men's.
- 56% of farming households hold title to the land that they work (EMNV, 2000).
- Women receive less than 10% by value of agricultural and livestock loans (Renzi and Agurto, 1995).

Security and marginalization indicators:

- One in every four children aged less than 5 suffers from degree of malnutrition. The figures are not broken down by sex (EMNV, 2000).
- 48% of the population lived, in 1998, in a home with an earth floor, and only 29% had walls made of blocks.
- Even after Mitch, barely 17% of households interviewed by the Social Audit reported carrying out some preventive or preparatory activity in anticipation of a disaster in the community.

Women who could possibly be in a more vulnerable position

- Female heads of household: 27.7% of all households are headed by women.
- In one study, 27% of the women indicated that they had been subjected to physical violence in the previous 12 months, and 60% said they had been subjected to some type of physical, sexual or psychological violence at some time in their lives (Ellsberg et al., 1998).

- Women aged over 65: 21% of the population.
- Women with AIDS: 24% of people with AIDS (CENIDH, 1999).
- Adolescent women: 24.9% of the total between 15 and 19 years of age were either mothers or pregnant.

2. Gender approach

Women are invisible in emergency and reconstruction situations due to their exclusion from relief and assistance projects. Just as this is a problem, so their participation in such projects also appears problematic. The degree and nature of women's exclusion/inclusion in reconstruction work covers a wide range, depending on who makes up the meta group.

A focus on people, for example, contends that in periods of emergency and relief all people suffer loss and that it is necessary to look at them without taking into account their specific characteristics. Such an approach makes women invisible in all respects, including that of their specific needs (for example, sanitary napkins had not been included in relief parcels; this was also true of medicines for particular diseases caused by flooding, such as vaginal fungi). Delaney and Shrader (2000:14) also stress the importance of giving consideration to pregnant and breast-feeding women, both during the emergency –due to their lack of mobility– and on account of their subsequent needs for a greater quantity of food and water.

The fact that women are not treated as a separate category extends to the point where they are not counted as women. Delaney and Shrader (2000:14) state that, more than one year after Mitch, “there are still not many statistics on impact differentiated by gender. Most of the agencies interviewed indicated that they did not explicitly take gender into account and did not break down their data on the disaster by sex nor analyse their results from a gender perspective.”

Therefore, the first step towards ensuring that the specific basic needs of women are addressed over the short and long term is to collect data broken down by sex and age segment immediately after a disaster.

Nevertheless, addressing those needs in isolation creates the risk of confusing them with those of the family. Many of women's so-called practical needs –identified as such because it is they who take on the responsibility of fulfilling them– benefit all members of the family (provision of water, health, housing, basic services and food). These practical needs stem from women's position within the division of labour; they result mainly from the roles of women which, at the same time, reinforce them; they are a response to an immediate need; they originate under specific conditions and do not question the subordinate position of women, though they are the product of this position (see Williams et al.,1994).

Giving exclusive consideration to these practical needs may lead as a result to a perception of women as the most efficient providers of services (in point of fact, an approach centred on the family). In addition, the failure to take into account the range of activities that women undertake or their triple role–reproductive work, productive work and community work– translates into an absence of recognition of women beyond their role as mothers and housewives. In other words, there is a risk that the unequal relations of power that exist between men and women in a society will not be acknowledged.

For these reasons, the inclusion of women's practical needs in mitigation and aid projects in the wake of a disaster like Mitch does not amount to a gender perspective.

A gender perspective does not solely address women's practical needs; it also looks at the responsibilities of men and women and the relations between them. Such a perspective points towards what are termed “strategic” needs and is formulated on the basis of an analysis of women's subordination in society. Delaney and Shrader (2000) contend that a gender focus “helps to ensure

that the impacts of ‘second-generation disasters’ are prevented or mitigated, which involves minimizing the possibility of negative consequences, such as rape and domestic violence, as a result of reconstruction responses and projects.” Women’s strategic needs call into question the nature of the relationship between men and women; they are designed to overcome women’s subordination; they include access to credit and other resources; and they involve the elimination of institutionalized forms of discrimination, initiatives to counter domestic violence and alleviation of the burden of household tasks (Williams et al., 1994).

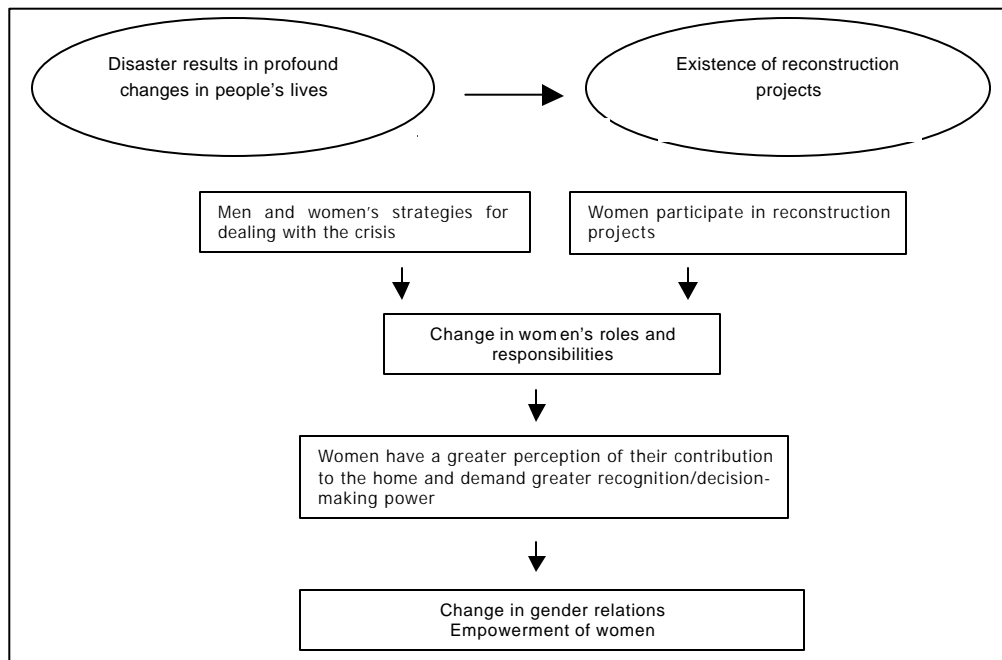
It is perhaps easier to think of the strategic needs of gender as changes necessary for tempering inequality between men and women. Underpinning the design of reconstruction programmes with a gender perspective makes it possible to acknowledge not only people’s needs but also their self-help strategies and actions. It also goes some way to recognising the existence of unequal relations between men and women, which forms the basis for understanding the various needs and abilities of both sexes.

Today, civil society organizations, international agencies and the governments of the region endorse the idea of considering reconstruction as an opportunity for transformation. Nevertheless, what is actually meant by this “transformation” depends on each player’s viewpoint. For example, in the opinion of the women interviewed, joint civil society organizations in the various countries have not included changing gender roles or relations on their work agendas.

Some experts on gender and disasters believe, however, that crisis situations provide a real opportunity for changing inequality in relationships between men and women.

Figure 2

TRANSFORMATION AND RECONSTRUCTION: THE THEORY



Source: Author’s elaboration.

Working from a gender perspective, as detailed in Table 4, makes it possible to achieve more effective outcomes, as it enables organizations:

- To learn about the differentiated impact of emergencies on men and women in relation to their needs and their multiple roles.

- To understand changes in access to, and control of, resources in post-disaster situations.
- To identify and develop the strategic capabilities of men and women.

Table 4

ASPECTS OF A GENDER-FOCUSED ANALYTICAL FRAMEWORK: HOLISTIC ANALYSIS OF THE SITUATION FACING PEOPLE BEFORE AND AFTER A DISASTER AND RESPONSE PLANNING

Aspect	Description
<i>Needs assessment</i>	<ul style="list-style-type: none"> • What are the priority needs of women and men? • What factors are causing these needs? • How can we meet these needs? • What problems can we resolve at the local level? • What capabilities exist in the community? • What problems required outside intervention? • What type of intervention is necessary: training, money, etc.?
<i>Activity profile</i>	<ul style="list-style-type: none"> • Who used to do/is currently doing what? • What did men, women, children, etc. used to do, and what are they doing currently? • When do they do these activities, each day, twice a year, etc.? • Where do they do these activities, are there special risks associated with the activities? • Have the activities of different people changed? • What is the division of labour on gender lines like? Is it flexible or not in terms of these activities? • What is the significance of the division, power relations, the vulnerability of individuals, etc.? • Have the people who carry out the various activities changed? • What are the consequences of these changes?
<i>Resources, access and control profile</i>	<ul style="list-style-type: none"> • What resources are used by men and women to carry out their activities? • Have they lost these resources? • What resources –land, skills, money, savings, loan arrangements, etc.– are available to men and women? • Do men and women have control of resources or the ability to decide how and when to use them, etc.? • How are they using these resources to deal with the situation? What are the effects? • Are there new sources of resources, credit, etc.? • Who has access to these sources, and what are the effects in terms of power relations etc.?
<i>Limitations and opportunities</i>	<ul style="list-style-type: none"> • What vulnerabilities do the various groups of people in the community have? What differences exist in terms of power, access and control of resources? • What capabilities, skills, knowledge and strategies do various groups of people in the community have? • What opportunities are there to develop existing capabilities? • What laws, policies, rules, etc., of various organizations –government, donor organizations– are important in this situation? • What are the outcomes of these policies? • What financial resources are available and what opportunities exist? • What skills do organizations have in terms of gender training, planning and practical skills such as housing construction? • What sort of planning, monitoring and evaluation processes are there? • What sort of information do community organizations have, and what are they lacking?

Source: Adapted from the study by Moser (1996).

3. Power relations in the household

The places of power where unequal relations are constructed in a society are myriad: the community, the workplace, and the street, to name a few. One of these places, the household, acquires greater significance in disaster situations as it becomes a major focus for the distribution of

emergency aid and reconstruction projects, as well as for disaster and vulnerability impact studies (Blaikie et al., 1994; Enarson, 1998b; Morrow, 1997).

The importance of the household is recognized in the literature on gender and disasters because of the range of activities that take place within it: production, reproduction (in the broad sense) and consumption. Many relief and assistance projects are directed at “the family” and treat all its members as direct beneficiaries.³ The household is also significant in disasters and crises, in view of the changes that take place there and the disintegration that may result. Moreover, in emergencies, the gender and generational relations that exist in households are shifted to and reproduced in the communal areas of shelters.

Many people give the family and the household a central role in their relief and reconstruction efforts, but few take into account the way that households operate. When implementing any project with a gender focus, it is necessary to pay particular attention to the unequal power relations in those spheres. Projects aimed at the family that do not take these relations into consideration are doomed to fail, since unequal gender relations within the home often mean that resources cannot reach women and children.

a) Household structure

A significant proportion of households, in both rural and urban areas of Central America, do not conform to the image of the nuclear family comprising the father, the mother and their children. Moreover, the concept of the male-headed household does not apply to many of them. In Nicaragua, for example, official sources indicate that 28% of households are headed by women, with similar figures for other countries of the region. There are also a significant number of extended households (Elson and Giddeon, 1996).

Household structure is a key factor in emergencies in terms of their response capability and resilience, as well as their needs and their responses to relief and reconstruction efforts. For example, an evaluation of reconstruction projects made by ECA (2000) points out that, “the distribution of relief parcels to all families without consideration for the number of family members resulted in conflict.”

Household headship is another basic element. As a general rule, female-headed households are considered to be “vulnerable” on account of their poverty and lack of access to other social and economic resources. Reasons for this include the fact that they are situated in areas at greater risk or because women must choose between the two roles that they perform, that of a woman –caring for the children– and that of a man –protecting assets–, which causes greater losses. In addition, female-headed households are believed to be less resilient in the wake of a disaster than male-headed ones.

However, it has not been proven that the damage sustained by female-headed households is in fact greater than in male-headed ones. In Nicaragua, the results of the Social Audit (CCER, 1999a, 1999c; and Bradshaw and Linneker, 2001) do not show a significant difference depending on the sex of the head of household. This may be explained by the pervasive vulnerability of households in all of the regions affected by Mitch, which meant that the impact was borne equally by all.

That notwithstanding, the Social Audit undertaken in Nicaragua points out that where there were differences was in the ability to recover. For instance, female heads of household were less likely to sow in Mitch’s aftermath than their male counterparts; this held true even for female heads of household who were given help to do so.

³ Though there has been a great deal of discussion about differences between the family and the household, many observers still consider the family, rather than the household, as the place where people reside; in actual fact, they are referring to the household. The family is the group of people that shares a relationship bond and can include people living both outside a single site and within it.

Some studies indicate that even when female-headed households may be poor, they are not necessarily poorer than male-headed households in the same situation. Hence, it is important to learn what is really going on within households, as well as the type of poverty they experience, in terms of access to and control of resources. It is also necessary to understand the gender and generational relations that are established in those spheres.

b) How households operate

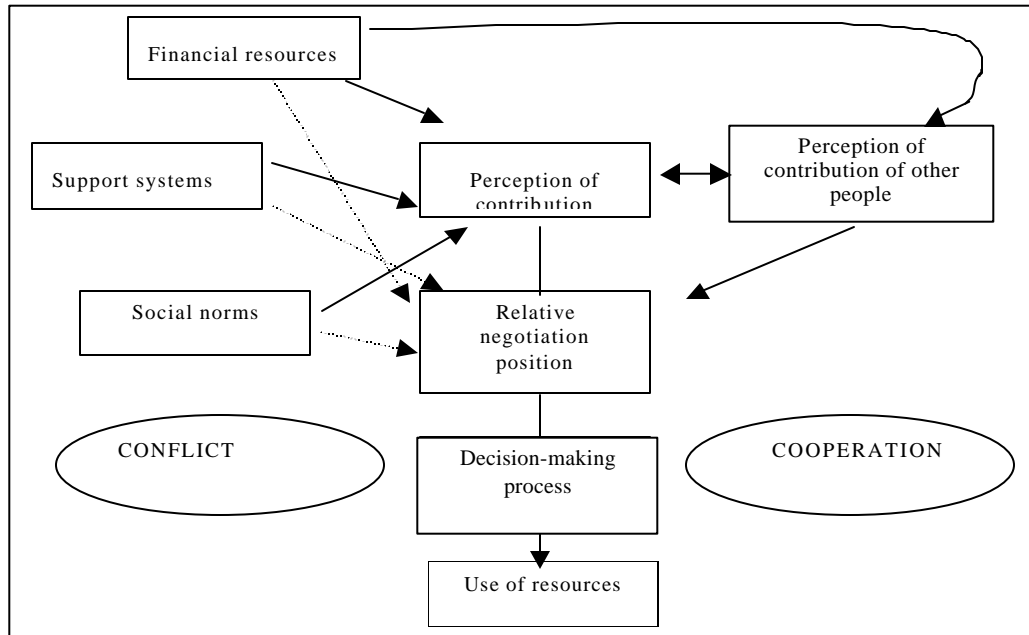
Studying the way households operate offers insight into their response to crises and their effects; it also increases knowledge about the impact of relief and reconstruction initiatives, in terms of access to resources, the roles and responsibilities of individuals in their households, and changes in each person's degree of well-being. Reconstruction initiatives may also impact on support systems and social norms. In addition, all such actions may have an effect on perceptions of one's own contribution to the household, and therefore open up the possibility of changes, whether positive or negative, in the status of women (Bradshaw et al., 2000).

One of the models that facilitates understanding of how households operate is that of "cooperative-conflict", formulated by Sen (1987; 1990), in which negotiation plays a central role. This author contends that the members of a household seek to improve both their own situation and the collective "well-being" of the household, and establish different priorities for this. Resolving these differences is a function of each member's ability to bargain. The factors that have a bearing on bargaining ability or position are each member's self-perception with respect to his or her worth as a person and the perception of worth that other people in the household confer on him or her. Both, in turn, depend on the value placed on each member's contribution to the household's well-being, which often translates into the quantity of resources –e.g., income– that can be obtained. Women are generally in a weaker bargaining position than men because their contribution is invisible, is not recognized or is considered less worthy, which affects their self-esteem.

Agarwal (1997) has produced an overview of the most important and useful characteristics of the different models for understanding the functioning of households and has proposed the inclusion of qualitative aspects. According to this model, other factors in addition to financial considerations also affect the bargaining position of each of the household's members; such factors include support systems, whether communal or external (participation in a group, family exchange networks, among others), and social norms and institutions that provide the setting for power relations within that sphere.

Thus, the various people in a household have over time different roles in the decision-making process, or different positions of power for deciding on the use of resources. The members of a household cooperate with one another for the benefit of all; however, although all have the potential to emerge with equal benefit, some members stand to benefit less than others. Women figure among the less favoured group as a general rule. There is cooperation as long as all benefit in some way, but conflict arises when some get more than others due to differences in their negotiating positions. The opportunities that exist outside the home also have a bearing on the relative position of people within it; those who do not have many opportunities outside that sphere will accept unequal access to resources far more readily.

Figure 3
RELATIONS WITHIN HOUSEHOLDS



Source: Author's elaboration

II. Impacts of hurricane Mitch from a gender perspective

In this section, the methodological premises characteristic of an analysis with a gender perspective are applied to the effects of hurricane Mitch, bearing in mind the above-mentioned limitations due to scarcity of information and lack of consideration paid to gender in the available data.

A. Direct impacts

1. Material damage disaggregated by sex

Loss of life

There is no reliable data on mortality broken down by sex, but it is estimated that the figure was higher for men. In Nicaragua, for instance, 54% of the victims were male (Gomáriz, 1999).⁴ The reason for this is most likely to be men's more reckless behaviour in the face of risks (Blaikie et al., 1994).

Housing

The number of houses destroyed or damaged by Mitch was estimated to total 85,000 in Honduras and 145,000 in Nicaragua (CEM-H, 2000). These data are not broken down by sex of the owner or head of household.

⁴ In Nicaragua, statistics broken down by sex were published several months after Mitch. These show a striking similarity as regards the proportion of men and women in the various departments and throughout the whole country.

It was predicted that Mitch would wreak greater damage in dwellings where the woman was head of household (due to their poverty and marginalization), but research carried out in Nicaragua failed to support this prediction; the research shows that there were no significant differences compared with dwellings where the man is head of household.

Social infrastructure

Hurricane Mitch damaged 4,113 classrooms in Honduras, and 1,600 in Nicaragua. In Honduras, 12 out of 27 public hospitals suffered serious damage, while 50 health centres were put completely out of action, with seven of them destroyed. In Nicaragua, 90 health centres were destroyed and 417 damaged (CEM-H, 2000).

Rather than evaluate the impact differentiated by gender on education, based on the proportion of males and females affected by schools shutting down, a more appropriate course of action would be to examine the indirect effects that could impact on the student population's ability to continue their studies, as well as examine the effects of the destruction of schools on community work, given their role as community meeting places.

In El Salvador, CIDEP (1999) stressed the magnitude of the damage sustained by so-called "popular schools" managed by non-governmental organizations (NGOs), unions and communities, and whose facilities do not come under the public system. For example, in just one sample of four NGOs working in the areas affected by Mitch, 5,600 children were receiving basic and secondary education and a further 1,300 initial and preprimary education. In addition, many young people and adults were taking literacy or remedial courses.

These popular schools, together with community houses and women's houses, are not as a general rule included in official data on the destruction and deterioration of infrastructure.

Productive labour

- Agriculture

Estimates of the impact on the region's agricultural and livestock sector give greater weight to production losses – a macroeconomic focus – than to losses in subsistence capacity of individuals and households, a microeconomic focus.

In the Social Audit undertaken in Nicaragua in February 1999 (CCER, 1999a), 84% of people reported losses in the aftermath of Mitch. The greatest loss was felt to be "the harvest" (46% reported it as the most significant loss for their family and 45% as the most significant for the community). More men than women cited the harvest as the most significant loss (50% of men and 36% of women), but both sexes cited it as the most important.

The Social Audit of September 1999 (CCER, 1999c) also shows that only 76% of farming households (those that generated income from their own farm or whose members worked as day labourers before the hurricane) were able to plant the year after Mitch; in other words, 24% of those households lost their source of income, the majority of which were female-headed households. This means that 32% of farming households headed by a female did not plant the following year, compared to 23% of male-headed farming households. To sum up, the loss of sowing capacity was more marked in female-headed households.

Research conducted by Bradshaw et al. (2000) also reveals changes in women's productive activities before and after Mitch. Whereas 33% of female heads of household working in agriculture continued to do so after the hurricane, only 20% of partners of male heads of household continued to work. In other words, one direct impact of Mitch on male-headed households was reduced participation by women in rural work.

- Backyard production

National statistics neither account for damage to backyard production nor estimate their value. Nevertheless, using the National Household Survey on the Measurement of Standard of Living in Nicaragua (EMNV, 2000), it is possible to estimate the value of losses in egg production alone at between US\$90,000-US\$120,000 per month.

- Employment in the formal sector

Estimates of the impact concentrate more on production than employment, and are not broken down by sex. Nonetheless, if we consider first the degree of female participation in the various occupational categories, and second the losses sustained in them, we can get an idea of the impact on female employment. By way of example, in Honduras, women's labour force participation was greatest in manufacturing (26% women, 13.6% men), commerce (34.9% women, 14.1% men) and services (27.8% women, 4.2% men). Recorded losses ran to US\$100,000,000 in the *maquila* industry, US\$1,558,000 in manufacturing and US\$18,000,000 in tourism.

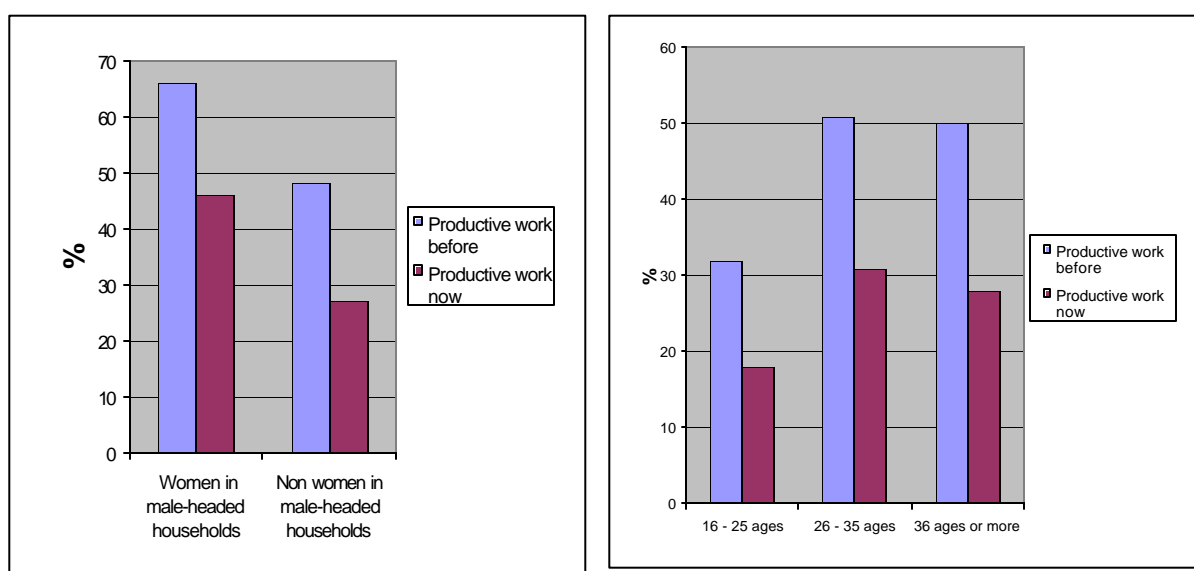
- Work in the informal sector

It is more difficult to quantify the impact on the lives of women in the urban informal sector and those involved in informal income-generating activities in rural areas, the main sources of subsistence for the vast majority of these women.

The research carried out on four communities in Nicaragua (Bradshaw et al., 2000) reveals that the proportion of women involved in productive activities declined markedly after the passage of the hurricane. There are, however, differences between various groups of women. A total of 48% of women who were not heads of household were working before the hurricane, a figure which fell to 27% afterwards. In the case of female heads of household, the percentage dropped from 66% to 46%. The proportion of women working declined overall, but the drop was greater among spouses than female heads of household. In addition, 16% of female heads of household without productive work before Mitch became involved in productive activities afterwards, compared to 10% of women non-heads of household.

Figure 4

PRODUCTIVE WORK BY WOMEN BEFORE AND AFTER HURRICANE MITCH IN FOUR NICARAGUAN COMMUNITIES BY HEADSHIP OF HOUSEHOLD AND BY AGE (WOMEN IN MALE-HEADED HOUSEHOLDS)



Source: Author's elaboration.

It is important to note that:

All households suffered damage of a similar magnitude, regardless of headship, but women heads of household were more likely to continue to work, in one form or another, than those women who lived in households where the man was the main breadwinner; as these women could not work in their jobs, they “returned” home instead of looking for alternative paid work.

In terms of coping strategies, more women heads of household became engaged in productive work after Mitch than women non-heads of household.

Young women worked proportionately less before and after the hurricane.

At first glance, the impact on productive work is greater among women who are not heads of household, but this does not take into account the priority that female heads place on finding some form of generating income.

It is a matter of concern that the female spouses have “returned” home, as that could reinforce women’s traditional status and constitute a serious setback for many as regards gender roles and relations.

The situation of young women who are not heads in independent households is even more alarming and underlines the need to include them as a category for study with a specific impact.

However, productive and income-generating activities form only a part of women’s daily work. Information sources of civil society organizations, as well as official and national sources, have failed to count women’s reproductive and community work as a contribution to GDP, either before or after Mitch.

Reproductive work

Studies carried out by the International Foundation for the Global Economic Challenge (FIDEG) (Renzi and Agurto, 1995) in Nicaragua suggest that household tasks performed by women are worth 500,000,000 dollars. This figure is equivalent to 80% of the country’s exports in 1995 and 85% of the international aid received that same year.

Likewise, the 1998 National Household Survey on the Measurement of Standard of Living in Nicaragua (EMNV, 2000) estimates that women devote 5.4 hours a day to housework, with women aged over 20 putting in more than 6 hours on average. In the wake of the damage and destruction of sources of water and food occasioned by Mitch, it can be assumed that household tasks became more difficult and that the number of hours set aside for them increased.

In addition, the tasks were made even more difficult owing to damage to the equipment used to perform them. The study prepared by the Foundation for International Community Assistance (FINCA) of Honduras indicates that 37% of female clients lost some household equipment.

Losses in reproductive “output” are conservatively estimated at US\$2,000,000 per month.⁵

Community work

The economic impact on community work, especially by women, is difficult to quantify. According to figures contained in EMNV, in Nicaragua, women devoted on average three hours per day to “social and community” activities. In the aftermath of Mitch, it is likely that this has increased, given that, for instance, in two of the four communities examined in Nicaragua, more than half the women who worked on reconstruction projects had not participated previously in community activities. A substantial number of women were involved in reconstruction (75% of

⁵ In Nicaragua, it is estimated that 17% of all dwellings were damaged. If one third of these lost some household equipment, that would mean reduced capacity for reproductive work in at least 5% of households. Given that reproductive work is worth US\$500,000,000 annually, according to FIDEG estimates, the loss is equivalent to US\$25,000,000 per annum or US\$2,000,000 per month.

interviewees in one of the communities), though to varying degrees and with different effects on their time.

It is not clear whether the high number of women involved in reconstruction was due to the increase in time available to them, due to the lack of productive work, or whether the proportional reduction in such work was due to lack of time on account of their involvement in reconstruction. The opportunity cost associated with the increase in women's community work after Mitch is estimated at almost US\$350,000 per month in Nicaragua.⁶

Furthermore, among women, female heads of household were the most likely to pursue their productive activities and to participate in reconstruction.

2. Recognition/lack of recognition of work carried out by women to deal with the crisis

Women worked alongside men in rescue and clean-up operations doing the same kind of things, both in communities and outside; however, their efforts received scant recognition. In Nicaragua (Bradshaw and Linneker, 2001), for instance, only a small percentage of men reported that women remained inactive during the emergency period. Some indicated that women did not take part at all. Others acknowledged that women did do something, but failed to appreciate their contribution.

Most men acknowledged the major role played by women only when this involved non-traditional tasks. It should be pointed out that this recognition is still perceived as a "help" to men, rather than as a contribution by women to dealing with the crisis situation.

The women interviewed said that immediately after Mitch, they played a major role in repairing streets and searching for food. However, many women indicated that men did not value those activities. They also stated that while men acknowledged their contribution during the emergency period, afterwards they forgot about it. The findings in El Salvador were the same.

Women in El Salvador also noted differences between the tasks performed by them and by men: women distributed emergency aid, but it was the community board, made up of men, which decided who would benefit from it. In other words, women were involved in the physical distribution, but not in the decision-making process. This situation occurred not only in the communities, where it is perhaps more difficult to envision changes in traditional roles, but also in shelters, new and distinct environs.

Out of a sample of 281 shelters in Honduras, 190 (68%) were coordinated by men. That did not mean that women did not work in those structures; rather, as Delaney and Shrader (2000) point out, "women appear to be more occupied and committed than men in the daily activities associated with emergency and rehabilitation in the short term." Moreover, the fact that men were without productive work did not signify a change of roles that would mean them becoming involved in reproductive activities; as a general rule, they responded by leaving the community, the shelter or their home, in search of productive work.

Therefore, it is possible to conclude that, during emergency periods:

- the traditional divisions of roles and responsibilities of men and women remain in place;
- the myriad "extra" activities performed by women do not lead to their inclusion in decision-making processes;

⁶ The basic monthly minimum wage is 450 córdobas, less than US\$40 per month or US\$ 2 per day. The working day is 7.5 hours for women. An increase in community work from 3 to 7.5 hours means a loss of US\$0.60 per day. The proportion of women involved in productive activities declined from 50% to 30%, according to Bradshaw et al. (2000). Given that 145,000 households were affected, this means that the number of households with a working woman dropped from 72,500 to 43,500. A loss of US\$0.60 per day for these 29,000 women without productive work is equivalent to US\$17,400 per day or almost US\$350,000 a month.

- men's recognition of women's work –in rescue operations, for instance– is short-lived and limited in scope;
- the work performed by women was not highlighted, even in research on the impact of Mitch which noted the sex of people coordinating shelters, but not the sex of people working in organizations providing food, health-care, clothing and other essential services during the emergency, activities normally carried out by women.

B. Indirect impacts

ECA (2000) states that “damage to the productive capacity of these impoverished and indebted countries caused secondary catastrophes such as: unemployment, migration in search of work, poorer standards of social services and public health, and widespread poverty. Later on these problems led to a decline in productive capacity, and vice versa”. Accordingly, this section focuses on some secondary impacts, with specific consequences for women: migration, mental health and violence.

1. Migration: rise in the number of female-headed households

According to ECA (2000), one of the most significant decisions taken by many peasant families was “to remain in their normal places of residence rather than emigrate (migration is a common response throughout the world to a disaster), and continue working with whatever seed and tools they had in their farms”. This notwithstanding, it was very common for one member of the family to migrate.

In Nicaragua, 17% of households surveyed reported migration by one or more people after Mitch. 48% of migrants were women, which is not surprising in light of migration flows in the region. One in four migrants returned after some time (Bradshaw et al., 2000).

Honduras had the largest number of migrants, even though there is a dearth of data to confirm this. Delaney and Shrader (2000), along with the women interviewed, indicate that one major outcome of Mitch was the migration of male heads of household. The reasons are twofold: frustration at not being able to fulfil one's role as breadwinner; and the intention to seek work and send remittances to the family, even when they did not subsequently do so. For women who had to remain behind, the impact was twofold: not only await a remittance that took time to arrive, but also be left without subsistence resources, because in order to finance the migration, the household (i.e., the man) had had to sell land or the house.

The impact on women of migration by male heads of household has more than just a financial dimension: women must assume headship of their households and the responsibilities that this entails. The women interviewed cited migration as one of the reasons for the increase in female-headed households post hurricane Mitch. In Honduras, Delaney and Shrader state that “the proportion of households with a female head has doubled” (2000).

Nevertheless, the reports are characterized by a certain degree of confusion regarding the hurricane's impact on female headship and its direct relationship with migration by men. For example, the statement that ‘it is really amazing just how many households with female heads are living in shelters and are receiving a housing benefit’ (Delaney and Shrader, 2000) is somewhat exaggerated, since there is no reliable research that proves this to be the case, neither before (baseline of the proportion of female heads) nor after. The high proportion of female heads of household in shelters may be attributable to either under-reporting of the real proportion in the population or the vulnerability of households with a female head prior to a disaster. Vulnerability (the lack of recovery options) may also explain why, one year after the disaster, the majority of shelters in Honduras had 50-52% of households with a female head (IOM, 1999).

Delaney and Shrader suggest different scenarios to explain the “massive” increase in female headed households and indicate that some households stated that they had a female head in order to obtain assistance. Anecdotal information from Nicaragua and Honduras suggests this to be the case. In El Salvador, some of the women interviewed declared that the proportion of female heads was overstated by community boards or by the men in the community. This has an explanation: the men declared their spouses as “the head” in community censuses on account of women’s traditional involvement in community work. Put differently, men see the woman as the person who represents the household in terms of community work. But this does not mean that women are the heads of household, since they do not make the decisions. Similarly, it is important to be cautious with the idea put forward by Delaney and Shrader that, although a woman’s identification as the head of household is due to her partner’s insistence, the end result would be female empowerment.

The research by Bradshaw et al. in Nicaragua shows that, generally speaking, women’s opinion as to who makes the more important contribution to the household, before and after Mitch, has changed. A greater number of women said afterwards that they made the more important contribution (16%, before; 19%, after), a smaller number said both partners made an equal contribution (18%, before; 13%, after), and a smaller number still indicated that the man made the more significant contribution (49%, before; 47%, after).

Examining the opinion of women who stated, prior to Mitch, that they made the greater contribution to the household, we see some interesting changes. Some 65% continued to hold that view while only 4% changed their view in favour of the man. Of the women who thought prior to Mitch that the man contributed more, the percentage that continued to hold that opinion rose (75%), but the same was also true of those who changed their view to consider their contribution as the more important (10%).

Changing opinions as to joint contribution are more interesting. Only 43% of women who thought, prior to Mitch, that the man and the woman made an equally important contribution continued to hold that view after the hurricanes’ passage. Of those women who had mentioned both, 42% continued to hold the same opinion afterwards (only 10% mentioned the woman).

In conclusion although the proportion of women who think that their contribution is the more important had increased after Mitch, this hides a significant proportion of women who stated that the man now makes the most important contribution.

2. Psychosocial impact

In the interviews conducted in Honduras, all the women cited the psychosocial or emotional impact as a major problem. There was widespread concern among women leaders about the population’s mental health, and about the lack of resources for dealing with the situation. Most of them also noted the feeling of insecurity in the streets, crime, drugs, the high number of teenage mothers and pregnant adolescents, and the sense of pervasive violence post Mitch. These social problems are not directly attributable to the hurricane, but worsened afterwards, and may be associated with the emotional and economic impact of the disaster.

In Honduras, in particular, research shows a significant link between emotional impact and the following variables: property damage caused by Mitch, a period spent in a shelter and, above all, the death of a family member. A total of 50% of households which reported the loss of one or more of their members indicated that one of more people suffered an emotional impact, compared to 22% of households which had not lost any of their members. However, it is again El Salvador and Nicaragua that provide evidence of the emotional impact of Mitch on large population groups.

In El Salvador, where thousands of people were evacuated from their communities between 31 October and 18 November 1998, the Ministry of Health recorded 778 cases of trauma and 299 cases of psychiatric disorder. The study by CIDEP (1999) states that, owing to the fact that the

hurricane severely damaged the areas previously wracked by armed conflict, the emergency has the effect of “reviving the traumas of violence and loss from the conflict of the recent past. The impact on children is more severe...”

In Nicaragua, more than 20% of the people interviewed during the two stages of the Social Audit (Bradshaw and Linneker, 2001) stated that one member of their family had been highly affected emotionally by Mitch (22% in February and 24% in September). In El Salvador, at least half the population (men and women) in four communities indicated having experienced feelings of fear, anxiety or insecurity. In one community, 90% of people cited headaches as a secondary symptom (Las Mélicas, 2000).

As regards differences between the sexes, in Nicaragua, in the two stages of the survey, most of the people affected were women. In households with a male head, the female spouse was more likely to report some person affected (24%, compared to 20% of male heads). A smaller number of female heads or young spouses (less than 26 years of age) reported a problem of this nature. The psychological impact was greater in households with a female head aged over 26 than in households with a male head (27% and 23%, respectively).

In addition, people’s opinions as to the need for care changed substantially between the two stages of the Social Audit in Nicaragua: in February, 18% mentioned that someone needed professional care, a figure that increased to 82% in September. This data gives rise to concern, given that in February, 44% of households with a person affected emotionally reported that they had received some form of care. Both the extent of the emotional impact and the need for care were greater among households that had received some form of assistance after Mitch, and this was equally valid in February and September.

Table 5
EMOTIONAL IMPACT AND NEED FOR CARE IN NICARAGUA

By households that:	February Percentage of households reporting		Percentage of households which received care	September Percentage of households reporting	
	Emotional impact	Need for care		Emotional impact	Need for care
Received assistance	26%	21%	46%	21%	82%
Did not receive assistance	15%	13%	39%	13%	74%

Source: Social Audit Nicaragua (CCER, 1999a; 1999c).

This could have two explanations: the first is that organizations working in reconstruction were active in communities where the impact was greatest and the needs most acute; if this is the case, the conclusion is that the organizations did not deal with the problem, despite the obvious need, or that their psychosocial programmes were not successful. The second explanation is that the very existence of physical or material reconstruction projects leads to greater awareness of emotional impacts and the need for care, but that this demand is not satisfied.

Lastly, the Social Audit of Nicaragua also indicates that most of the population (71%) did not feel safe in their place of residence. Men felt more secure than women (35%), while female heads of household (31%) felt more secure than women in male-headed households (only 25% of female spouses said that they felt safe in their place of residence).

3. Violence against women

The literature on gender and disasters suggests that violence increases after a disaster such as Mitch; however, the data available on the situation is not conclusive.

In this regard, information is only available for Nicaragua, in the form of the Social Audit. The two stages point to the following facts:

- The situation is not clear. 21% of people interviewed stated that post Mitch there had been an increase in violence against women; 32% said that there was no change; and 34% expressed the view that violence towards women had decreased.
- The “causes” of the upsurge in violence towards women are neither obvious nor direct. There are no significant links between the perception of increased violence and the key variables of impact and reconstruction, emotional impact or the need for professional help.
- The impact recorded is inconsistent over time and space. Between the February and September stages of the Social Audit, there were major shifts concerning the perception of violence. The two places that in February reported the highest levels of violence also showed the most significant changes (a reduction) in levels in September.

Furthermore, the research by Bradshaw et al. (2000) indicates that even though there is a significant link between perceptions of violence and conflict within the couple and material losses and problems with reconstruction projects, there is no direct link between them; in other words, there is no greater probability that people who perceive conflicts within the couple will report increased violence.

In Honduras, analysis of the information points to the existence of phases or stages of violence. This is not believed to have manifested itself immediately after the disaster, because, as a general rule, women took refuge with their children in shelters, while men remained in their homes or in the community. There was little chance of violence where couples were separated. Nevertheless, violence by women towards their children could be an important factor to monitor.

It is important to note that when entire families take refuge in shelters, there is a shift from “private” units to the public sphere. There are no changes in people’s behaviour. Domestic violence perpetrated against women prior to the disaster continues, and although it takes place in a public sphere, there is no change in its private nature. Acts of violence continue to be overlooked, since they are still considered a private matter between a man and a woman rather than a social problem.

One particular problem that occurs in shelters is rape and sexual harassment of young women and teenagers, and even young girls. While formal complaint procedures exist, it is difficult to lay a complaint when the woman is young and the young man is known to the family and lives in the same place; things are made worse if the shelter management are not aware of this situation or if health services specifically designed for women are not available.

It is difficult to establish that living in a shelter entails greater violence if there are no figures for “normal” periods. However, violent behaviour persists in such environments and may increase, owing to frustration (on account of living conditions), jealousy (women are in “public” spaces with other men) or opportunity. Some people reported, for example, that women’s former spouses would arrive at the shelters for the sole purpose of beating them up; this makes it necessary to consider the safety of women in violent relationships and guarantee that family reunions are conducted under the minimum conditions required to ensure their protection.

According to women interviewed in Honduras, one year and a half after Mitch, overall levels of violence had risen, as had violence directed towards women, including domestic violence. However, the evidence suggests that this violence is not attributable to Mitch per se, but rather due

to previous processes that result in an increase in violence generally, and lack of public safety in the months immediately after Mitch.

To sum up, it is difficult to quantify the impact of Mitch as regards violence, given that general socio-economic impact evaluations are still lacking. The cost of maintaining safe houses for women who are subjected to violence is not counted, since these did not exist before the passage of the hurricane. The cost in terms of pressure on health services is not significant either, given the dearth of health centres for women. The cost of working days lost is difficult to measure, given that women are concentrated in the informal sector. Lastly, the cost in terms of complaints procedures is only appreciable when these function properly and are accepted by the population. Psychosocial costs, like trauma, fear, lack of self-esteem among women and their daughters, are even more difficult to quantify. Nevertheless, it is vital to monitor violence in general, and violence towards women in particular, in order to head off secondary consequences in the wake of catastrophes such as Mitch.

The most important direct and indirect effects of Hurricane Mitch on women were:

Time: More time devoted to reproductive work; community work was sometimes more important than productive work (financial cost to the family). Migration by men meant that women's responsibilities increased still further. This had a cost in terms of their health and the well-being of their families, in addition to opportunity costs.

Safety: The emotional impact caused by Mitch resulted in feelings of fear and insecurity. The inability to meet the need for psychosocial care may have consequences over the long term. High levels of violence in general, and violence towards women in particular, contributed to a sense of a lack of safety on the streets. This had an effect on women's health and the well-being of their families.

Income: Female heads of rural households experienced a reduction in their sowing capacity, and this meant the loss of a source of income. This represented a cost as regards generation of income, with consequences for their health and that of their children.

Production: There were costs as regards the backyard economy, an important source of income and subsistence for the family, and as regards production for reproductive purposes.

Costs can and should be included in calculations of the impact on GDP.

III. Strategies for dealing with crisis situations and their consequences

A. Coping strategies

Specialists in humanitarian disasters have stressed at length the importance of immediate personal actions and strategies implemented by the affected populations of their own accord as key to their successful recovery and the reduction of losses in the aftermath of a disaster. In this regard, ECA states, “In the initial days after the passage of the hurricane, prior to international agencies becoming involved, sending staff and offering financed assistance to the affected communities, the inhabitants of Central America had already decided how to respond to the threats and hazards caused by the hurricane” (ECA, 2000).

Defence mechanisms, be they individual or collective, short or long-term, conscious or unconscious, reflect people’s considerable efforts to survive. Furthermore, households tailor their strategies according to the resources available and their ability to mobilize them, which, on occasion, can mean changes in gender roles (Byrne, 1995; CAW, 1998).

The are different types of strategies, which relate to different levels of need.

Table 6
STRATEGIES FOR DEALING WITH CRISES

Stage 1. Safety mechanisms: minimize risks and manage losses	
Strategies include:	Changing the farming system Selling small animals (eg, chickens) Reducing consumption Collecting items from the forest Using transfers between households and obtaining loans Working more in the informal sector Migration of one or more members of the family Selling household goods.
Stage 2. Selling goods	
Strategies include:	Selling animals and tools Selling or mortgaging land Taking advantage of stores' credit schemes and using money-lenders Reducing levels of consumption still further
Stage 3. Indigence	
Strategy:	Migration of the family

Source: Adapted from Byrne, 1995.

Reconstruction initiatives must take into account the following facts:

- The strategies adopted by people and households have long and short-term effects. A positive effect in the immediate term may be negative in the long term.
- Strategies that have positive effects on the well-being of the household may have negative consequences for one or more of its members.
- Sometimes the strategies that women adopt on their own initiative benefit the household, but have a negative impact on themselves.

The strategies implemented by households and their members post Mitch were not overly different from those they were accustomed to implement. Against a background that some describe as a permanent crisis, the majority of the region's population do not have many options after a "blow" that forms part of a series of blows. Nevertheless, it is important to outline some of the strategies adopted:

- Migration by one or more people, both male and female, in search of work. When their plans came to nothing, many people returned home after a few months.
- The importance of support networks and the exchange of informal/family resources. Women, for instance, shared activities such as child care and food preparation. However, research by Bradshaw et al. (2000) in Nicaragua shows that the capacity of families to use these exchange networks may have been negatively impacted by a phenomenon such as Mitch, owing to the loss of material resources that could have been exchanged.

Men adopted two strategies:

- The more common strategy was to leave in search of work in other parts of the country, neighbouring countries or the United States.

- Many consoled themselves with alcohol, which led to an increase in psychosocial problems. (For more information on the consequences of the men's departure, see III. B.1.)

As for the women, the female leaders interviewed spoke of their "creativity" in seeking out forms of subsistence, but there are few concrete examples of their actions. The evidence indicates that after Mitch, some women became involved in productive activities, but they were few in number, and were mainly female heads of household. Moreover, the research conducted in Nicaragua shows that after the hurricane, there were fewer women working in productive activities while a greater number indicated that they only worked in the house or did not work at all. Many women were involved in reconstruction projects, but did not view their efforts as work.

Given the lack of "hard" data on the strategies adopted by women, we will limit ourselves to pointing out a number of changes in four communities in Nicaragua (Bradshaw et al., 2000).

After Mitch, there was a decline in the percentage of women involved in productive work. Nonetheless, a greater number of women cited their contribution to the household. This was true both among women with productive work and among those without. For their part, men valued the women's contribution more when they had productive work, but their assessment of the worth of reproductive work declined. In other words, while women without productive work acknowledged their own contribution to a greater extent, their partners placed less value on the work performed by them. This situation is a potential source of conflict between partners.

B. Reconstruction initiatives

An analysis of proposals put forward by governments and civil society relating to the inclusion of a gender approach as a central focus makes it possible to establish the context in which reconstruction initiatives take place.

One positive element of this context was the formation of bodies coordinating civil society organizations and the formulation of joint reconstruction proposals.

1. National plans

The Meeting of the Consultative Group for the Reconstruction and Transformation of Central America was staged in May 1999 in Stockholm; the meeting, whose purpose was to discuss guidelines for reconstruction plans, was attended by representatives of the governments of the region, the Inter-American Development Bank (IDB), specialist organizations and agencies of the United Nations system, and non-governmental and inter-governmental organizations.

El Salvador was the only country that managed to prepare a joint document between the government and civil society for presentation at that meeting. From a gender perspective, the document is noteworthy for specific achievements, such as the inclusion of the gender issue in various sections, including an analysis of the situation facing women prior to Mitch and recommendations by the committee on gender on each of the items discussed (health, housing, infrastructure, microenterprises, the environment and arrangements for disaster preparedness and response). That notwithstanding, gender does not figure as a central focus, nor was it incorporated into any of the main objectives of the proposal. By way of example, the recommendations formulated by the committee on gender appear at the end of each thematic section and are not included in the general discussion. However, as an official government document, inclusion of the issue and the analysis of gender that it contains constitute a significant achievement, so long as they have not been included only as a condition of the facilitating organizations, which, according to the Salvadoran women interviewed, was precisely what happened.

In Nicaragua, there are very clear differences between civil society and the government as regards the inclusion of the gender perspective. The government document focuses on the country's infrastructure. Where women are mentioned in this document, they are presented essentially as mothers. The civil society document, which was prepared by CCER, was perhaps the most radical of all the proposals, in terms of its view of gender and reconstruction. CCER proposed, as its main objectives, "to build solid foundations for sustainable human development transforming inequitable power relations at all levels, as an indispensable condition for overcoming the population's economic and social vulnerability..." and "to reduce the gaps in access and control of resources that arise as a result of conditions of class, gender, age, ethnicity and disability" (CCER, 1999b).

The civil society document from Honduras, presented by INTERFOROS, lacks a real gender focus. The women of Honduras explained that they were consulted late and had only one day to study the document; as the document made no mention whatsoever of such an approach this did not provide sufficient time to include a true gender perspective in the report.

As regards reconstruction projects, the Nicaraguan document presented by CCER adopts an approach along the lines of authors such as Blaikie et al., acknowledging the need to tackle fundamental problems that cause vulnerability, as well as unequal power relations. The documents from Honduras and El Salvador place greater emphasis on preventing disasters and reducing the vulnerability of the environment.

Thus, in Stockholm, a range of views was aired, not only concerning gender, but also disaster management. At one end of the spectrum was the Nicaraguan Government's perspective, which presented women exclusively as mothers and housewives, while at the other end, we have the CCER's focus on inequitable power relations.

In addition, Mitch led to changes in the working methods used by many national and international NGOs operating in the region. In the wake of the hurricane, a number of new international agencies also set up operations in the region.

Some national NGOs did not make any significant changes to their work plans or their projects. Others adapted their work plans, but did not alter their work methods. Some women's organizations continued using the same mechanisms, such as accompanying women in their communities, though they placed more emphasis on the formulation of reconstruction plans.

Mitch had a major impact on some women's organizations, as the new focus they brought to their projects called for the inclusion of men in their activities. This was not a simple process for some of them, while others viewed it as an achievement. For example, one women's organization realized that sexually transmitted diseases were a serious problem in the communities. It decided, therefore, to stage workshops for women and their partners, who were invited in this capacity, but during the training the men began to ask for workshops with a greater focus on gender awareness. Given that it was the men making the requests, the process was promising, but not without problems.

The experience of the international agencies depended, also, in large part, on the way they conducted their activities. In the opinion of some women, especially in Honduras, after Mitch many new international agencies arrived with their own staff of "experts" on reconstruction, and this led to a situation where discussion and debate on the issue were appropriated in that country. Over and above the feelings of exclusion and frustration that these actions generated, the lack of knowledge of the particular circumstances in the country may have negative consequences over the long term. This situation also arose in the communities, where, for instance, international agencies preferred to work with mixed NGOs, instead of women's organizations, to implement gender-focused projects.

Other aspects of reconstruction activities considered problematic are as follows:

- Focus on physical reconstruction.

- Lack of reliable information.
- Methods used to identify needs.
- Lack of follow-up and monitoring.
- Use of unsustainable credit schemes.
- Inadequate food distribution for the work required.
- Opportunity cost of participation.

As regards self-help house construction projects, the recommendations on good practices in existence since the 1980s were not followed. The problems flagged as the most important were as follows:

- Concentration of donor organization resources in specific communities and selection of traditional leaders for their work, which engendered feelings of exclusion and frustration among people in the community.
- Lack of coordination among donor organizations, which caused duplication of activities at the expense of other needs, as well as waste of time and resources.
- Lack of a focus taking into account the actual circumstances facing people and their survival strategies, which caused a host of problems in communities.
- Lack of focus in community reconstruction centred on people.

2. Women's experience

The evaluation of reconstruction projects is not specifically an analysis from a gender perspective, but the inclusion/exclusion of women has an impact on both men and women. In addition, the problems that arose during the execution of reconstruction projects, and differences between the community and their leaders, had a negative (indirect) impact on the situation of women.

In the research conducted by Bradshaw et al. in Nicaragua, the majority of the women interviewed (70%) stated that the reconstruction groups or projects took their opinions into account. However, one in every three women indicated that the priorities of the organizations differed from those of the community. Furthermore, more than half of the women who reported problems (52%) believed that projects had caused conflict within the couple. In contrast, only 19% of those who did not report differences between the community and the organizations thought that they had caused marital problems.

This suggests that, in situations where there is contention between the community and the project, there is a greater chance of conflict within the couple over participation and use of resources.

There is also a significant link between, on the one hand, differences in opinion between organizations and the community and, on the other, the perception of changes in levels of violence towards women. Of women who cited problems between both groups, 43% indicated that after Mitch there was more violence towards women, compared to only 24% of those who had not cited problems. Therefore, one indirect impact of reconstruction projects where there were difficulties may be an increase in conflicts within the couple and violence towards women in their homes.

a) Focus on women

Different research papers have underlined the focus on women as beneficiaries of reconstruction in the post-Mitch period. For example, ECA's assessment of projects that received

aid funds from the DEC is that they “tendered to favour women and children in the distribution of products and services.” Women are believed to have benefited owing to a range of factors: through being the main holders of titles to self-help houses; through involvement in construction projects (roads, dwellings, bridges) which served to break down stereotypes as regards their ability to work; and by participating in productive activities (chicken-rearing programmes, farming projects, among others), which helped reduce their financial vulnerability.

Some projects included a financial assistance package with a portion of money in cash, which directly benefited the woman in each farming family. Some assessments of such projects spoke of “a step forward for women.” Problems with this approach were acknowledged both in interviews with women in Honduras and El Salvador and in existing studies, including that by ECA; this indicates that for some women, these economic assistance packages “do not assist women to free themselves from oppressive power struggles in the home and the community” due to men’s domination of traditional grain production.

The Social Audit in Nicaragua also shows that a greater proportion of women heads received assistance towards the reconstruction of their homes than did male-headed households in the same situation.

Moreover, women heads received assistance for agriculture, as did male heads, but one year after Mitch a smaller proportion of them were in a position to sow (68% in comparison with 77% of male-headed households). A total of 40% of rural households with a female head were living off donations in 2000, compared to 22% of male-headed households.

In explaining their reduced ability to sow, the women interviewed cited the lack of land as the main factor (52% of women, compared to 46% of men who did not sow). They also indicated that they had received less financial assistance (13%) than male-headed households (26%) even though they had to pay day labourers to carry out certain tasks. In addition, a smaller proportion of female heads received training than male heads of household (20% versus 31%).

This underscores the fact that equitable supply of material resources for men and women is indispensable, but is not sufficient. Projects need to take heed of women’s specific socio-economic circumstances and address them.

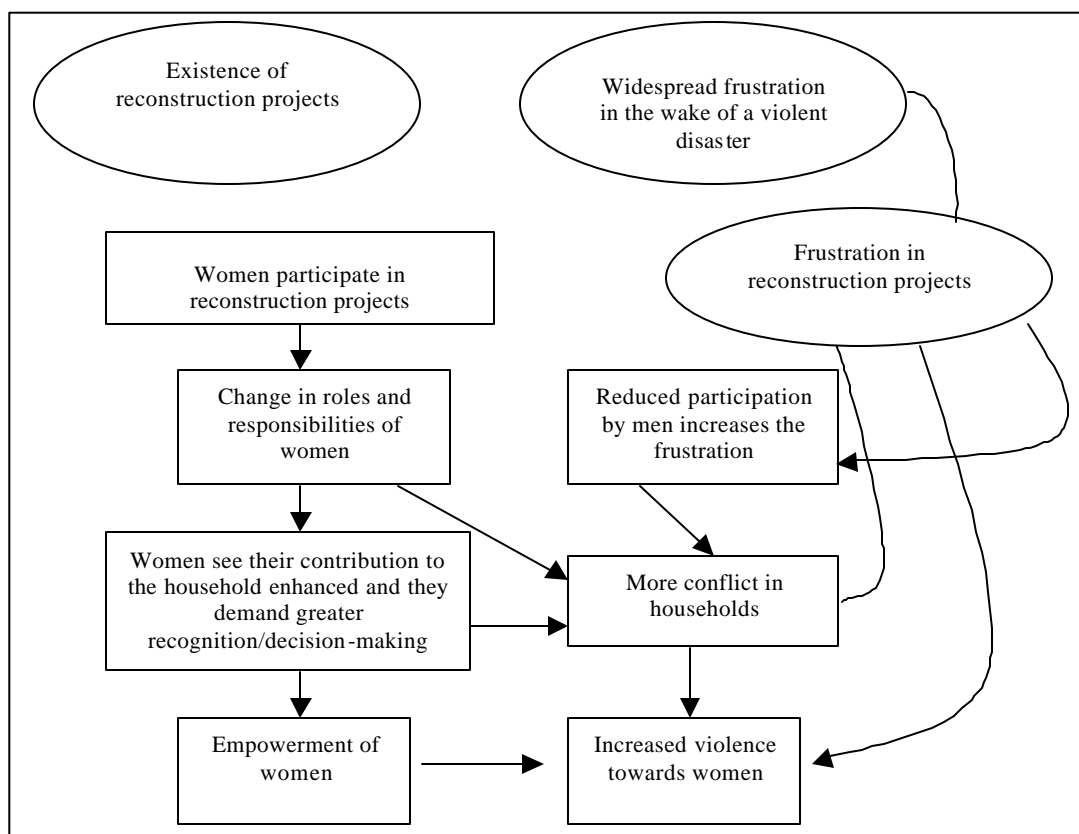
3. Reconstruction with transformation?

Women’s participation in reconstruction projects creates an opportunity for modifying not only their roles but also their relations with men. This also goes some way towards changing the power imbalance facing women, by improving their access to, and control of, resources. Women’s involvement may, furthermore, lead to an improved perception of their position and their worth, and, as a result, of their rights as regards decision-making. Gender-focused reconstruction projects, with a primary goal of transforming unequal power relations, have the potential to promote sweeping change.

There is a risk that women’s participation, their access to resources, their demands for recognition or appreciation may lead to conflict within the couple. Disharmony may increase when men are not involved in projects, or when they lack access to reconstruction resources, in general, and this increases their feelings of frustration after a natural disaster. In situations like this, conflict can easily turn into violence.

The results of Bradshaw et al.’s research (2000) in Nicaragua summarize the impacts in terms of gender on reconstruction, in the four communities studied.

Figure 5
CHANGE OF ROLES – CHANGE OF RELATIONS (SIMPLE MODEL)



Source: Author's elaboration.

By breaking down the components of this model, it can be seen how the results fit with the analysis:

Table 7
VARIABLES AND RELATION IN THE PROCESS OF CHANGE

Variable	Relation
✓ General frustration and specific frustration caused by reconstruction projects. Three in every four homes sustained damage as a result of Mitch. One in every three women said that there were problems with the groups, and one in two indicated that resources were unequally distributed.	✓ Between the damage caused by Mitch and the perception of greater conflict within the couple (significant to 0.022) and of greater violence (significant to 0.041). ✓ Between the perception of problems with the groups and the perception of greater conflict within the couple (significant to 0.000). ✓ Between the perception of problems with the groups and the perception of greater violence (significant to 0.000).
✓ Women's participation in reconstruction projects compared to men. More than half of the women stated that they participated more in reconstruction projects.	? <input type="checkbox"/> In the community where women participated more for practical reasons, there is no relation between problems with the group and conflict within the couple owing to their participation.
✗ <input type="checkbox"/> "Strategic participation" promotes change more than "practical" participation.	? <input type="checkbox"/> In the community where organizations have a more "strategic" focus, there is no relation between problems with the groups and violence.
75% of the women participated for "practical" reasons.	

Table 7 (continuation)

<p>✓ Change in perceptions of contribution.</p> <p>Prior to Mitch, 6% of women identified themselves as the person who had contributed most to the household. Post Mitch, 11% of women identified themselves in that way.</p>	<p>✗ <input type="checkbox"/> There is no significant relation between participation and perception of contribution (nor conflict, nor violence).</p> <p>✗ <input type="checkbox"/> There is no significant relation between perception of contribution and conflict or violence.</p>
<p>✗ <input type="checkbox"/> Perceptions of conflict.</p> <p>30% of the women said that there was conflict within the couple as a result of their participation and use of reconstruction resources.</p>	<p>✗ <input type="checkbox"/> There is no significant relation between perception of conflict and violence.</p>
<p>✗ <input type="checkbox"/> Perceptions of violence</p> <p>31% of the women said that after Mitch there was greater violence towards women.</p>	

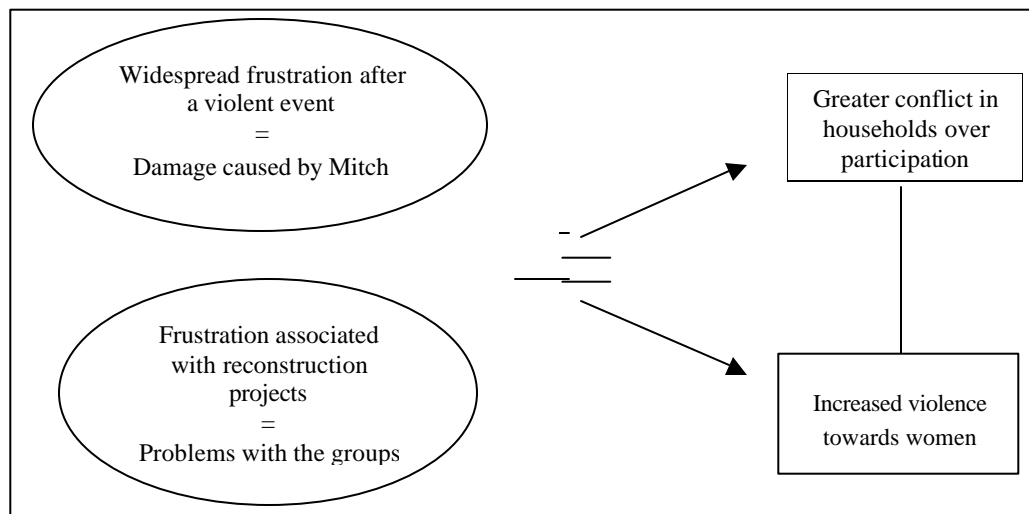
Source: Author's elaboration.

On the one hand, while women participated in projects, these had objectives that were based more on the women's "practical" needs than their strategic ones. However, changes in access to resources do not modify women's roles and responsibilities. By the same token, there is no change in men's and women's perceptions about the worth of their contribution.

On the other, the lack of a relationship between a heightened perception of contribution, conflict and violence, may also mean that the inverse process mentioned, that of an increase in violence, does not exist.

However, frustration stemming from the reconstruction process, which generated problems between the groups and with the community, together with generalized frustration as a result of the damage wreaked by Mitch, appears to lead to greater conflict in households and an upsurge of violence against women.

Figure 6
FRUSTRATION AND IMPACT ON CONFLICT AND VIOLENCE



Source: Author's elaboration.

This means that reconstruction did not lead to positive impacts for women. On the contrary, their impact was most likely negative, i.e., greater conflict within the couple and more violence towards women.

However, though the research in Nicaragua and eyewitness accounts in Honduras indicate that the reconstruction process proved to be a lost opportunity for transforming women's status, the situation in El Salvador is more promising.

The members of various organizations involved in the women's movement in El Salvador acknowledged the existence of general problems in the reconstruction process, but cited some specific achievements for women, both substantive and strategic.

The reasons for this difference are not easy to identify:

- Mitch caused less damage in El Salvador because it was localized in just one area. (The damage caused in Honduras and Nicaragua, in contrast, was such that planning for reconstruction took in the whole of the country; the prospects for success were slim, due to a lack of coordination between local civil society organizations and international agencies (thanks to the inactivity of national governments), so it was virtually impossible to ensure that a gender focus be applied in reconstruction efforts nationwide).
- The part of El Salvador affected by Mitch is an area populated by war veterans, with its own history and special features. The degree of community organization in El Salvador might, therefore, be greater than, for instance, in Honduras, which has not experienced revolution.
- The working methods of the women's groups operating in the communities of the affected area in El Salvador may be different, given this different history. As a general rule, the organizations "accompany" women's groups in their communities, and it may be useful to study and adopt this model.

The women's organizations in El Salvador identified the following as achievements after Mitch:

- Foregrounding of extreme poverty in the veterans' communities, which have traditionally been discriminated against.
- Public acknowledgement of the roles played by women in the emergency and reconstruction periods, resulting in a number of positive changes in households.
- Opportunity to address psychosocial problems, stemming not only from Mitch but also the war years, which prompted the women of the two warring sides to unite in a single self-help group.
- Drawing-up of proposals formulated by the women in their communities, as well as the presentation and management of projects and funds.
- Creation of organizations for dialogue among women.
- Alliances between town halls, NGOs, communities and women organized in their communities concerning joint plans and proposals.
- Physical space in the town hall, as a resource for women. One of the national feminist organizations set up there with a view to working on the gender policies of the municipal authorities, including staff training.
- A joint working plan between women's organizations, with violence and women's health as central themes.

IV. Summary and recommendations

This section is divided into two parts. The first part contains a summary of the situation, vulnerability and impacts of Hurricane Mitch. The second part sets out recommendations regarding future impact assessments, including some useful indicators.

A. Summary of the situation post hurricane Mitch

1. Most significant specific direct impacts

- Time. Women are required to devote more time to reproductive and community work, at the expense of productive work (financial cost for the family).
- Income. Sowing capacity declined in rural households with a female head, causing them to lose their regular source of income. Female spouses paid the cost in terms of their participation in productive activities, both agricultural and informal.
- Production. Costs in backyard production, an important source of income and subsistence for the family.

2. Impacts of reconstruction activities

- Women were involved in reconstruction projects, but not in decision-making processes.

- Women enjoyed the same access to material resources as men, but projects did not take into account the socio-economic situation in order to find out about the use of those resources.
- An opportunity was missed to overhaul the existing titling system.

3. Women's vulnerabilities after Mitch

- Physical. Lack of housing.
- Financial. Lack of a regular source of income (female heads of household) or own income (spouses).
- Psychological. Mental health problems. Feelings of insecurity and fear in the face of disasters.
- Social. Perceptions of widespread violence. Increase in the numbers of female heads and single mothers. Violence towards women.

B. Recommendations

1. Prior to a disaster: importance of mapping projects

It is vital that projects include the following mapping elements:

- Particular socio-economic vulnerability of each area, taking into consideration gender and age differences.
- Organizational capacity of each area, given its importance in preventing loss of life in emergencies.
- Productive base (and economic potential) of each area, differentiated by gender. Consideration of factors that have a bearing on this, and identification of markets for the sale of output and transport routes used.
- Groups with specific vulnerabilities and different needs for evacuation and contingency plans.

2. Concept of vulnerability: need for a common concept

- The study by Ordóñez et al. (1999) provides a solid foundation for describing the situation as regards vulnerability and identifying areas of risk in the region, to which can be added elements that give a better account of the situation of women.
- Enarson's study could, if adapted to the circumstances of the region, be used or complemented to put greater emphasis on people's resilience in the wake of a disaster.

3. Methodology: the importance of a range of participatory methods

In order to provide for women's inclusion in censuses and evaluations, it is necessary to:

- Design questionnaires that take into account difficulties in obtaining information about women's activities and the impact of emergencies on them.
- Include women as significant sources in information-gathering.
- Use different methods to collect information on general and specific needs on different groups of people and their priorities, particularly those that involve the people affected.

- Involve women in the information-gathering process as “researchers”. It has been proven that the inclusion of women provides for better quality information.
- Consider initiatives by civil society as examples of good practices (Survey on Gender of El Salvador, on the general situation; Social Audit of Nicaragua, on the impact of the disaster and reconstruction initiatives).
- Accept that reconstruction projects may have an impact as equally important as the disaster. Monitoring and evaluation of the reconstruction process must form an integral part of any reconstruction plan at the macro level.

4. Analytical framework

- Develop the analytical framework adapted from Moser’s study for disasters (see Table 4).
- Consider household models of operation.

C. On information relating to vulnerable groups

Before	Comments on changes after a disaster
Percentage of women heads of household	It is important to gather information on the reasons behind the formation of households with a female head, whether they deem it to be a permanent change, as well as on male migration.
Register of women in situations or at risk of violence	The changes as regards violence are ambiguous, but women who are in situations or are at risk of violence are more vulnerable in periods when shelters are being set up, and must be protected.
Percentage of teenage mothers	Young mothers constitute a vulnerable group, as do pregnant teenagers, whose numbers may increase in the wake of a disaster.
Location of specific populations, such as street children, prostitutes, AIDS sufferers, among others.	By locating these groups that are excluded from society, it is possible to incorporate them in evacuation planning and take into account their specific needs.
Levels of violence	Establishment of a baseline to measure changes.
Mental health situation	Establishment of a baseline to measure changes.
Political context	Key indicators
This is a key factor in disaster impact and type of reconstruction. Though it is difficult to measure, a number of suggestions are made from a gender-specific focus	Percentage abstaining in elections (by sex and age).
	Percentage of women in decision-making positions, both in government and political parties.
	Existence of an organization that promotes women’s rights.
	Existence of equal opportunities legislation that is taken into account when drafting other laws.
	Existence of mechanisms for reporting acts of physical, sexual and psychological violence.

Basic information to be included in a baseline data set			
Variable	Importance	Comments	Indicator
Secondary poverty	The unequal distribution of income in a household determines the situation of women and children as much as the income generated by the household.	Examine each person's contribution to the household instead of total income generated. In general, the contribution is greater in female-headed households.	(Estimated) percentage of income contributed by each person in the household (differentiated by male and female headship, and range of income) and examination of changes produced.
Reproductive work	Household tasks are key to the reproduction of the labour force. As no economic value is attached to them, there is no recognition of their worth.	More important than the market cost for reproductive work (paying someone to do it) is the opportunity cost in terms of foregone income and/or community work.	Hours worked based on the minimum wage and examination of changes produced.
Productive work	Many women's productive activities are overlooked due to the "nature" of their work: extension of their unpaid reproductive work or as unpaid family "assistance".	Women are concentrated in the informal sector. In agriculture, their productive activities are viewed as "assistance" to the men and as an extension of reproductive work, including garden or backyard production.	Activities performed by women to generate income (a new indicator is not necessary, rather designing surveys that include such activities).
Community work	There is no recognition of the value of daily activities that "reproduce" the community, so no economic value is attached to them.	More important than the market cost for community work (paying someone to do it) is the opportunity cost in terms of foregone income and/or reproductive work.	Hours worked based on the minimum wage, and examination of changes produced.
Resources with economic potential	Access to resources helps to deal with the crisis.		Proportion of women with title to house or land. Proportion of women who rent land.
Loans	Important for subsistence of households and women in the region.	Possibility of access to credit may have a twofold impact.	Breakdown of data according to person named and type of household.
Support networks	Households interact with other households and social units. Such exchanges are important during crises.	It is difficult to measure the importance of social support networks. However, some key aspects should be measured, as a baseline.	Remittances received in the household on behalf of women and by women. Women's participation in community groups.

Age and sex should be included as a line of analysis.

- General indicators of the impact of disasters from a gender perspective:

Specific impacts on women in their communities	
	Comments
Use of time	The time women devote to reproductive and community activities may increase after a disaster. There may also be a shift in the use of time between productive and non-productive work.
Sources of income	The loss of a woman's regular source of income may be one impact.
Losses in backyard production	These have impacts as regards generation of income and food security in the household. Importantly, they are also a bss of income under the women's control.
Loss of household goods	Household goods may be instrumental in the generation of income.
Violence	The increase in violence towards women has a very high social significance.
Mental health	The increase in psychosocial problems has a very high social significance.

D. On monitoring the impact of the disaster and subsequent interventions, from a gender perspective

Situation of women in their households	It is important to monitor
Financial resources	Type and proportion of material resources received by men and women in comparison with those obtained through productive work (before and after the disaster).
Informal support networks	Migration patterns: who, where, type of migration. Remittances: from whom to whom, from where. Exchanges of material resources and activities: from whom to whom, from where.
Formal support networks	Percentages of men and women that are organized. Type of organization and participation.
Social norms	Reconstruction projects that include an element of awareness-raising and training in gender. Assessment of the impact on men and women in the medium term.
Perceptions of contribution to the household	Changes due to participation in reconstruction projects, changes in patterns of productive and reproductive work (differentiated by sex and age).
Decision-making process	Changes due to participation in reconstruction projects, changes in patterns of productive and reproductive work (differentiated by sex and age).

Situation of women in their organizations	It is important to monitor
Impact on organizations and the women's movement (though difficult to measure, it is important to include some form of monitoring).	Proportion of funds allocated to mixed groups with respect to those allocated to women's groups.
	Meetings between women's organizations; diversity of participants and their involvement in decision-making processes.
	Participation by women's associations in coordinating bodies of civil society; diversity of groups represented, participation in decision-making processes, evidence of a gender focus and papers produced.

- More specifically, it is important to consider the following points when conducting sectoral assessments:

a) Food assistance

	Taking into account
Inclusion/ exclusion of different groups in distribution systems	Equitable methods for selecting beneficiaries, including those that are “invisible”: people who do not participate in community groups, women living alone, among others.
Methods of distribution and their impacts	Distribution points; access and safety of women and young people. Frequency of distribution in keeping with customs of households. Time of distribution and women’s available time. Method of distribution; ways of verifying that food reaches all people in a household. Forms of distribution via women, which take into account power relations in households.
Type of food assistance	Appropriate in view of culture and ethnic group. Sufficient quantity for members of the household, in accordance with sex and age. Impacts of food in terms of preparation, time, and demand for fuel. Specific needs of babies, the elderly, pregnant women, women with anaemia.
Access to and demand for fuel and its impacts	Cost of different types of fuel. Environmental impact. Power relations (for example, women and children may gather firewood, but men may handle the money and choose when they are available to buy fuel).
Suitable food assistance	Children and old people working in the programmes (instead of people with higher productive potential). Food parcels insufficient for the energy expended on work. People who cannot work on programmes are not taken into account for the parcels.

b) Infrastructure

Key points of monitoring and evaluation	
<i>Health centres</i> Access for women. Private access to reproductive health services. Services for female workers in health centres. Access for the disabled.	<i>Schools</i> Access for women and children. Safety of women and children on the way to school. Design for access for the disabled.
<i>Community centres</i> Central location in the community, close to other services used by women. Facilities in terms of needs of different community groups. Costs of services at the centre.	<i>Transport routes and services</i> Design of routes in accordance with women’s mobility and access to markets and networks. Consideration of the fact that women use different routes from men and that they use transport services at different hours.
<i>Police stations</i> Location and access for women and young people. Open and transparent design. Safe, private areas for women.	<i>Communities</i> Location in areas of less risk, but with access to services, markets, work (men and women), and support networks. Communal areas for children and young people. Dwellings that are laid out in a circle are better than those in a row in terms of safety and looking after children.
<i>Basic services</i> Provision of water supply for the community, sewerage services, in appropriate places. Type of service that takes real ability to pay into account.	

c) Social aspects that require specific resources

<i>Health needs of women, the elderly, young people and children</i>	<i>Violence towards women</i>
Addressing specific needs (pregnant women) and special considerations (effect of stress on menstrual cycle). Supply of contraceptives, services for dealing with sexually transmitted diseases (STDs).	Priority for abused women to be taken in to safe shelters in the medium term, and for their own housing and income-generating projects (the aim being that they not return to violent relationships). Special support services and funds, and specific programmes on other general aspects.
<i>Mental health needs (trauma)</i>	<i>Violence against young boys and girls</i>
Support services, bearing in mind the need to provide this type of service from the time the disaster commences until one year later; consideration given to the need to incorporate such services in long-term plans. Programmes on masculinity and men's self-confidence.	Day care services for children in shelters, in community projects and for people who work in emergency operations. Ensuring that parents have free time in order to reduce stress. Special support services for parents and children. Funds for these groups, and support programmes as part of general programmes.

d) Points to consider in terms of shelter/housing

<i>Access</i>	
Targeting of groups with specific and priority needs	Special needs; female-headed households, women threatened with violence, young women with children, elderly people living alone.
Procedure for selecting beneficiaries	Participation by men and women in the decision-making process and form of participation.
<i>Design</i>	
Cost/benefit analysis of the design	Size of the dwelling, in accordance with family needs; cost of larger dwellings. Design: use of space, e.g., locating the kitchen at the back of the house makes it more difficult to sell food from the home, child care, etc. Use of land on which dwelling is located: gardens and private areas. Opportunities for changing/improving the house in the future.
Procedure for selecting the design	Participation by men and women in the decision-making process and form of participation.
<i>Construction</i>	
Cost/use of time analysis broken down by sex and age	Time required for self-help construction; people who are going to build the houses; community or family work; impact of construction on people's time availability; priorities and needs in time use.
Opportunities for training	Skills: who has the necessary skills, time and cost of training, need to ensure observance of building standards.
<i>Title</i>	
Making the decision about who is named as owner of the house or land	The man (problems in the event that the couple separates). The woman (problems with sole responsibility for making payments). Both (problems with real power and in periods of separation).
<i>Costs</i>	
Direct and indirect costs and payment arrangements based on people's actual ability to pay	Responsibility for payment of loans. Indirect expenses of new services in neighbourhoods, monthly payments, tax payments. If indirect costs (transport services, due to location in lower-risk areas) are high, some people will have to sell the home and return to an "informal" neighbourhood.

e) Indicators on economic recovery projects

<i>Inclusion of key economic actors</i>	
In terms of targeting, it is important to consider:	Women as productive workers. Young people's work for family's subsistence. Cooperation and/or conflict in the household, due to power relations, by sex and age.
<i>Percentage of women in projects as direct beneficiaries</i>	
Inclusion of women who "are not working", through:	Conceptualization of work which includes that performed in the informal sector, work based on reproductive activities, "assistance" in agriculture, backyard production, the invisible unemployment of women. Inclusion of women's work for consumption.
Requirements in order to reactivate the "informal" economy of women include:	Information on what women were doing prior to the disaster to generate income, type of work, frequency, markets, and prospects for finding replacement jobs; lost markets, closed routes. Replacement of resources that have been lost, including household goods, animals and backyard plants. Credit arrangements that are based on women's real ability to pay.
<i>Proportion of women undergoing training to improve their work skills</i>	
In disaster situations, there is the possibility to introduce changes	House building provides an opportunity to train women in non- traditional work skills.
<i>Proportions of men and women undergoing training on gender</i>	
The lack of control of resources by women points to the need to:	Examine, with the men and women of the community, who will have title of lands or new dwellings, bearing in mind the benefits and disadvantages (title under the man's name: inaccessibility for women; the couple: problems in the event of separation, real access; the woman: payment/credit arrangements and the woman's responsibility). Remember that award of title to the land or dwelling and access or right to use the land are different matters. Remember that giving women material resources may create greater conflict and violence in the home. Understand that migration by men may result in women assuming responsibility for the land, but without decision-making power.

E. On women's participation in the planning, design and monitoring of emergency programmes and rehabilitation projects

All reconstruction projects should include as standard practice:

- An analysis of the vulnerabilities and capabilities of the community, differentiated by sex and age, as the basis for the planning process.
- Strengthening the organization of the community and existing coordinating bodies.
- A gender training component.
- A component addressing social problems (mental health and violence).
- An analysis of the environmental impact.

Any study conducted for the purposes of evaluation or monitoring must encompass indicators that identify women's real participation in the planning, design and monitoring of emergency programmes and rehabilitation projects. This involves the following requirements:

- In the national sphere: women's groups involved in formulating reconstruction plans and indicators to follow-up national reconstruction plans.
- In the local sphere: it is important that project monitoring and evaluation in terms of men's and women's participation consider:

- ↳ Proportion of women in decision-making bodies and project management structures.
- ↳ Women's perception as to whether their opinions are given consideration.
- ↳ Proportion of local proposals submitted by women's groups and proportion of projects managed by women.
- ↳ Ratio of material benefits to non-material benefits.
- As a basic requirement, it is important that donor agencies:
 - ↳ Have staff who have gender awareness.
 - ↳ Provide training to their counterparts so as to ensure inclusion of a gender perspective.
 - ↳ Include requirements concerning the percentage of men and women involved and the form that involvement takes.

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