

POVERTY AND DISASTERS

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Natural disasters are becoming an increasing concern globally. Though better known for the immediate suffering disasters cause, such as deaths, injuries and population displacements, natural disasters also cause major economic losses. The world's poorest are becoming more exposed to the risk of disaster, aggravated by climate change and globalization. Each year 211 million people are affected by natural disasters, setting back development by decades. Two-thirds of victims are from countries of low human development. If these trends continue, international development targets of 2015 will not be met.

[slide 2] The myth that disasters are the greatest equalizer, striking everyone equally, has long been dispelled. There is a strong interrelation between natural disasters and poverty. This paper will look at poverty within the context of disasters; explore the factors that may cause discrepancies in the effects of natural disasters and a look towards building the future. The social, economic and political impacts of natural disasters will be explored in order to better understand the developmental impacts of disasters. Natural disasters not only unduly impact the poor, but natural disasters increase poverty generally by adversely impacting development, a well documented impact at a national level.

Who are affected by Disasters? [slide3]

First of all, people in developing countries are, very generally speaking, more likely to be severely affected by disasters than those in developed countries. "The presence of many poor people in a given region can constitute a clear factor of vulnerability, as the poor are more vulnerable than other income groups because of the more hazardous location of their dwelling the poor quality of their housing, their different perception or lack of knowledge about risks and difficulty to recover from disasters" (IDB, 2000, p. 63). According to the World Bank (2001), the likelihood of death in a disaster is four times greater for those people than those living in high-income countries (p. 171).

People who live in developing countries are not a homogeneous group. We must distinguish between different income situations, urban or rural settlements, race and ethnicity, class, gender, age, household composition, (such as single-headed household and number of dependents), and so on, to come to specific conclusions about the effects of disaster. We know, for instance, that children, especially very young ones who live in households with few livestock, are most severely affected by droughts. Less is known about the impact of disasters on the physical and psychological development of children.

More research is carried out on the socio-cultural dimensions of poverty, especially the gender aspects. However, the knowledge gained about this key dimension of social difference is only slowly being incorporated into professional practice. Disasters have a different impact on the poverty situation of men and women. This is because of the distinct roles of the two sexes in political, economic, and social life, and also in their different reactions to disaster.

During the recovery and reconstruction phase, women are more likely to suffer long-term consequences on their wellbeing than men (IDB, 2000, p. 28). In the case of Hurricane Mitch, the percentage of women, especially female headed households, still living in shelters some weeks later was significantly higher than that of men (IDB, 2000, p. 28). Similarly, **32%** of Nicaraguan farming households headed by females did not plant the following year, compared to the **23%** of male-headed farming households that completely lost their planting capacity (Bradshaw, 2004, p. 26).

Do Disasters Discriminate? [slide 4]

Most of us assume that natural disasters are similar to rain or sunshine—forces of nature that affect rich and poor alike. Let's look at some figures (Thompson, 1982). **[slide 5]** Between 1947 and 1981, approximately 92.8 percent of the deaths from natural disasters, excluding droughts, occurred in the developing countries of Asia, Africa and Latin America. Between 1991 and 2000, 98 percent of those killed or injured by disasters were in nations of low or medium human development.

According to the International Federation of Red Cross and Red Crescent Societies (2001), "if we compare the totals reported killed with the total number of disasters, the effect of development on disasters becomes severe. On average, **22.5** people die per reported disaster in highly developed nations, **145** die per disaster in nations of medium human development, while each disaster in low development countries claims an average of **1,052** people (chap. 8, p. 2).

Stop for a moment and consider: Why are there high numbers of fatalities in low human development countries, as opposed to the fatalities in countries with medium or high human development?

[slide 6] *Could it be a question of severity?* You might guess that the type of severity of natural disasters is greater in developing countries. This table (Table 2) compares the 1971 earthquake in Managua, Nicaragua, with the 1972 earthquake in the San Fernando Valley, California (Seaman, 1984).

According to the Richter scale reading for the two earthquakes, the San Fernando Valley earthquake was 10 times more powerful and the area of destruction much greater, yet the number of dead and injured was much higher in Managua. So, what else might account for the tremendous discrepancy in numbers of fatalities in developing and developed countries?

[slide 7] *Could it be a question of frequency?* You might think that disasters occur more often in developing countries. Remember, however, the average number of disasters per year has not increased, with one possible exception: North Atlantic hurricanes and monsoons.

This activity was very high from 1995 to 2000 compared with the generally low activity from 1971 to 1994 (Goldenberg, Landsea, Mestas-Nunez, & Gray, 2001); in addition, the number of monsoons has been increasing over the past 400 years (Black, 2002). The number of hydrometeorological events has also increased, but it is highly unlikely that the frequency could be different enough in parts of the world to account for the **92.8** percent discrepancy.

Could it be a question of geographic vulnerability? You might guess that, in countries with lower human development, more people may live in areas prone to natural disaster. This is partially true now, and it will certainly be truer in the future, as populations grow. Nevertheless, it is not a good explanation, as we saw in the Managua-San Fernando Valley comparison. In this example, there is a much greater population in the San Fernando Valley, and San Fernando Valley is as geographically vulnerable as Managua.

Factors Affecting Discrepancies in the Effects of Natural Disasters [slide 8]

Some researchers (Oliver-Smith, 1986; Reice, 2001) suggest numerous factors that contribute to the severity of the disasters' effects on human populations. As we review the list of factors, note that countries with low human development are likely to experience more of these risk factors than countries with medium or high human development. Think also about your own community. Are there some areas, perhaps as small as neighborhoods that seem to be hit more frequently with flooding or fires, or suffer more devastating effects from hurricanes or tornadoes? What are the distinguishing characteristics of those areas?

Researchers have suggested the following factors as explanations for natural disasters' apparent discrimination against certain people.

- *Inadequate housing quality*, such as poor construction, increases the chances of death or injury during and after disasters and increases the number of people who will be left homeless and at risk of disease, exposure, and so on. People who are poor often live on land that is unattractive to people who are richer. Consequently, poor people will erect shanties, poorly constructed houses or tents on floodplains, mountainsides and landfills.
- *A population's pre-existing poor health and nutritional status* make it vulnerable to stress and disease caused by the disaster. Compromised physical and mental health are risk factors for increased negative effects of trauma.
- *Marginalized populations* in countries that have a great disparity between rich and poor may live in vulnerable areas without basic amenities or a well-developed infrastructure. In low development areas, for example, populations may have little or no sanitation or sewage disposal or have little access to shelters, hospitals, or medicine after a disaster. Clean water may not be available. In times of drought in parts of Africa, people may have to walk several kilometers for their water and then stand and wait for hours to fill a single bucket (Georgieva). After Hurricane Mitch—one of the strongest hurricanes ever recorded in the Atlantic Basin, with sustained winds of 180 miles (**290 kilometers**) per hour—hit Honduras on October 28, 1998, helpers were

unable to reach entire villages in Nicaragua and Honduras because the few roads that had existed were destroyed.

- *Political instability* may also interfere with distribution of aid and relief efforts after a disaster. During the winter of 2001-2002, aid workers in Afghanistan had to wait for hostilities to stop before they could bring supplies and medicine to noncombatants who were without any food and who were coping with the harsh winter weather. According to reports, one combatant group or another robbed aid caravans before they could reach the starving civilians for whom they were intended.
- *Increasing urbanization and unplanned development*, especially in geographically vulnerable areas, combined with poor housing construction, can contribute greatly to the human cost of disaster. In many countries there has been a major population shift towards the coastlines. In the USA, Florida's population in 2001, for example, was five times the number of residents in 1950, and **80 percent** of Floridians live within 21 miles of the coast.
- *An inadequate social welfare infrastructure* means inadequate resources to provide basic human services and health care, increasing the likelihood of disease outbreaks after a disaster. Programs and coping mechanisms fail. Food shortages continue to grow. People who are starving are prey to many opportunistic diseases.
- *Population size and population growth* affect virtually all other explanations for natural disasters' apparent discrimination. Populations of the medium and low human development countries are increasing at a faster rate than the populations of high development countries; therefore, a greater percentage of the world's inhabitants are living in inadequate housing in locations of greater risk for natural disasters.
- *Pressures on the natural environment* result when populations increase and countries struggle to modernize, for example, "reclaiming" wetlands or engaging in agricultural or industrial practices that reduce the amount of land on which people can live increase the chances of certain types of natural disasters.

In the 1976 earthquake in Guatemala, **1,200** people were killed and **90,000** were left homeless. The majority of these were from poorer neighborhoods (Glass & Urrutia, 1977). Some researchers have come so far as to call this event a "classquake" (Oliver-Smith, 1986). It is reasonable to predict that as the world's population grows so will the impact of natural disasters. Today, 1.1 billion people fall into the category of the world's "poorest poor"—living on less than **\$700** annually per person. By 2050 there will be 1.5 billion, and by 2150, there will be 2 billion of these "poorest poor" (Quammen, 1998).

Disasters can set back poverty reduction efforts through broad direct and indirect impacts. The next section of this paper will further address the social, economic and political implications of disasters that hinder or set back poverty reduction efforts.

Social Implications of Disaster [slide 9]

On a long-term average, **184** deaths per day are recorded worldwide due to natural hazards. Most of these occur in countries that rank low on the Human Development Index (UNDP, 2004, p. 10). But the number of deaths reveals only the tip of the iceberg in terms of social loss and human suffering. For

every person killed, around 3,000 more are affected by the natural hazards (UNDP, 2004, p. 14) and become severely impoverished through the destruction of personal assets, damage to health and education infrastructure and loss of drinking water and sanitation. If the disaster is compounded by casualties from HIV/AIDS or armed conflict, social and economic structures can be completely destabilized. Population displacement is often a result of natural hazards and has far-reaching social consequences.

In the 1990s, the term “environmental refugee” came to use, referring to people forced to leave their homes due to natural disasters or environmental reasons. Actually, this term is not entirely accurate, as environmental problems never appear in isolation and only their interconnection with other emergencies results in great number of refugees. The United Nations Environment Program (UNEP) estimates that there are 22 to 24 million environmental refugees (Biermann, 2001, p. 24). Most of these migrants move between developing countries. For example, between 1968 and 1973 more than 1 million people left Burkino Faso due to an enormous drought and settled in neighboring countries. Each year, thousands of inhabitants of Bangladesh leave their country due to heavy flooding and go to India (Biermann, 2001, p. 25). Such migrants often must start a new life from scratch in surroundings that are completely unprepared to accommodate them or are inappropriate for settlement.

The social and economic challenges facing the host countries in coping with these refugees are often unmanageable. Extreme poverty in all its dimensions can result from disaster-related migration, because the refugees lack every kind of social service, including health care, schools and access to safe drinking water. Traditional family structures, once an important form of support during crisis, have been destroyed. Groups of citizens that previously were not considered poor can fall into poverty due to forced migration.

Economic Implications of Natural Disasters

Over the last 50 years, there has been a 14-fold increase in the global cost of natural disasters, with weather-related and natural disasters accounting for two-thirds of all losses. Annual economic losses due to natural disasters in the last decade reached an estimated \$55 billion, with a high percentage of losses in infrastructure (BMZ, 2001, p. 15). “While absolute levels of economic loss are greater in developed countries due to the far higher density and cost of infrastructure and production levels, less-developed countries suffer higher levels of relative loss when seen as the proportion of Gross Domestic Product (GDP)” (UNDP, 2004, p. 20).

For example, the 1995 earthquake in Kobe, Japan, caused damages totaling **\$100 billion**, or approximately **2%** of the country’s GDP. However, the damage incurred by the 2001 earthquake in El Salvador amounted to just **\$1.2 billion**, but this equaled 10% of the national GDP (GTZ, 2002, p. 11). And there is another major difference. Much of the economic loss in developed countries is covered by insurance, which is not the case in developing countries.

Developing countries are not only facing the potential of more frequent weather-related events. Rapid urbanization, the increased concentration of assets, environmental degradation, and other factors are also increasing the vulnerability of poor communities to disaster impacts. The urban population will reach 8.5 billion, with a large percentage of these people located in urban areas with high exposure to natural hazards. Especially vulnerable to natural disasters are megacities like Jakarta, Istanbul, Buenos Aires, Athens, São Paulo and Mexico City.

Understanding the Economic Implications of Disaster

Economic implications of disasters are conventionally categorized as *direct*, *indirect* and *secondary losses*.

- Direct losses include loss of physical assets and loss of life, damage to infrastructure and loss of inventory and agricultural produce.
- Indirect losses include those that are caused by the disruption of the flow of goods and services, such as the reduced opportunities for generating income. Examples of indirect costs include loss of earnings, unemployment, loss of productivity due to death, illness and injuries, and increased public finance expenditure.
- The final category of secondary effects includes impact on macro-economic variables such as economic growth, state budget levels, national indebtedness and inflation. However, serious consideration of the secondary effects of disasters is important, because these can have significant impact on long-term human economic development (Climate Change and Poverty: Socioeconomic Costs of Natural Disasters, 2005).

All these impacts have significant adverse effects on the social and economic development of developing countries. For example, Honduras's Poverty Reduction Strategy Paper, prepared by the government, details the effects of Hurricane Mitch, which hit Central American in 1998, stating that it caused an increase of an estimated **165,000** poor people nationwide. The strategy paper cites unemployment, housing, factors of production and income as areas affected by the disaster (Republic of Honduras, 2001).

Another threat to long-term development is the reallocation of expenditure that occurs following a disaster. Following the 1985 earthquake in Mexico, it is estimated that as much as **30** percent of funds earmarked for water sector projects were diverted to deal with emergency needs. Unplanned reassignments of funds became frequent, if not routine, in disaster-prone countries, and even if funds are used well for disaster reconstruction, a sudden, unplanned allocation can destabilize or sacrifice longer-term development objectives.

Responding to disasters also undermines budgetary planning and investment confidence and interrupts ongoing projects and reduces the abilities of communities and governments to pursue long-term development goals. International organizations and local financing institutions also reallocate funding

from ongoing projects to provide urgently needed support in emergency situations, which detracts from development goals set out by those activities (Climate Change and Poverty, 2005).

Rich or Poor, Who Loses More?

Although in absolute terms, wealthier people's economic loss due to disaster can be greater than that of the poorer people in the affected region, the poor suffer more. Their poverty situation makes them more vulnerable to the direct economic loss and also to the indirect losses and the secondary effects. Just one of the reasons for this is that poor families typically have a higher ratio of dependents to wage earners. The loss of even one family member's job due to a disaster (indirect loss) therefore affects a disproportionate number of people as compared to the loss of a job in a wealthier family.

"This is not to say that higher-income groups are immune to disasters. Past examples of disasters do not necessarily show that higher-income groups with access to information are less vulnerable and therefore less likely to suffer. In the 1985 Mexico City earthquake, the lower middle-class was the most affected group as their high-rise housing was more vulnerable to the earthquake's ground motion than the low adobe and brick-built houses in low-income neighborhoods" (Main & Williams, 2004, p. 38). Middle-class families can be severely affected by disasters and run the risk of slipping into poverty.

Political Implications of Disaster

Disasters can evoke severe governance problems. The mechanisms and processes through which citizens articulate their interests and exercise their legal – an important aspect of the political dimension of poverty – can deteriorate to an even worse condition than is typical of developing countries. Inquiry into the economic aspect of governance reveals that financial decisions made during disaster and the reconstruction period have major implications for poverty and quality of life. Under time and financial pressures, politicians are likely to abandon carefully developed budget plans and overturn long-term development programs in order to create a bigger emergency aid budget. All too often, this money is used for the recovery of one group at the expense of others. Economically poor groups with little access to decision-making are likely to be left out. Gender and other fundamental social issues are often disregarded. The result can be a reduction in social equity (UNDP, 2004, p. 21).

Political aspects of governance can also be challenged during a disaster. Disasters give politicians the opportunity to abandon the difficult daily political decision-making, and provide them a platform for populist maneuvering. Even democratic institutions can be undermined by disasters, because citizens often desire a strong leader, who must appear able to cope with the emergency and its aftermath.

Finally, the administrative aspect of governance is threatened. Efficient functioning of democratic organizations, due to the exceptional situation, runs the risk of breaking down. Lawlessness could result, and existing corruption problems might worsen.

Disasters Can Provide Poverty Reduction Opportunities [slide 10]

It might seem paradoxical, but disasters can have positive effects and beneficiaries. It is important to take a look at them from the two possible and very different viewpoints. One is to ask what politicians, communities and individuals can learn from disaster that helps to reduce vulnerability and foster development. The other view could fall under the cynical title of a book on drought programs in India entitled, "Everybody Loves a Good Drought" (Sainath, 1996). Here the question is who benefits, and how, from the distress of others.

Disasters can provide development opportunities. Central America provides an example. The government in this region learned a lesson from Hurricane Mitch in 1998. The disaster made apparent that environmental degradation had led to high levels of vulnerability that finally culminated in the humanitarian disaster triggered by a tropical cyclone. Under the motto "Reconstruction with Transformation," Central American governments, non-governmental organizations (NGOs) and donors agreed to consider pre-disaster development priorities, and agreed to include vulnerability issues in rural development policies. What might prove, in the end to be just rhetoric is nevertheless the first step.

Taking this further, the Honduran government took a long look at its political style and moved towards more participation. As a result NGOs, some of which represent the poorer section of society, were given more responsibility and were accepted as partners in reconstruction. This paved the way for more NGO participation in political decision-making. This was particularly evident in the formulation of the Poverty Reduction Strategy Paper, where they used their considerable influence to shape the strategy more in favor of the needs of the poor.

It is not only individuals, decision-makers, and NGOs at the local and national levels who learn from disasters. The international community has also learned to use reconstruction and related efforts to promote prevention and foster disaster risk management capacities in order to achieve more sustainable poverty reduction.

Crisis situations also seem to provide an opportunity for ameliorating gender inequality. According to Bradshaw (2004), in a report from the Economic Commission for Latin America and the Caribbean (ECLAC), women's organizations in El Salvador identified several achievements regarding improved power balance after Hurricane Mitch.

These included:

- Public acknowledgement of the roles played by women in the emergency and reconstruction periods, resulting in a number of positive changes in the household.
- Women formulating, drafting and presenting community project proposals, and then managing the projects and funds as well.

- Alliances being forged amongst town halls, NGOs, communities, and organized women's groups in the communities concerning joint plans and proposals (Bradshaw, 2004, p. 43).

On the other hand, violence against women was reported to have increased in the aftermath of Hurricane Mitch. So, whether disasters really provide a development opportunity with regard to a change in roles is hard to judge, and also depends on the specific country situation.

Moving Forward with Lessons Learned

Poverty in its multiple dimensions has a strong influence on people's vulnerability to disaster, and vice versa. It is important not only to consider the economic aspect of poverty, which is perhaps the most apparent, but also the socio-political dimensions. The complexity of social life in the changing circumstances during and after a disaster event should be studied further in order to develop adequate disaster risk management. A main lesson to be learned is that disaster risk management must be socially inclusive. This means issues of gender, poverty, age, class and so on must be integrated politically and practically into programs, projects and measures that aim at reducing disaster risk. This is not an easy task. In the next section of this paper, the conditions needed for successful integration of disaster risk management and poverty reduction efforts will be addressed.

Building a Better Future: The Yokohama Strategy [slide 11]

Global commitment to reducing disaster-related death and disability was formalized by the "Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation", adopted by the United Nations at the World Conference on Natural Disaster Prevention, in Yokohama, Japan in 1994. This is known as the "**Yokohama Strategy**" (United Nations World Conference on Natural Disaster Reduction, 1994). It was affirmed that those most affected by natural and other disasters are the poor and socially disadvantaged.

The Yokohama Strategy was 10-year plan with the following key elements:

- Include disaster risk reduction to community development;
- Enhance resilience to individuals and communities to prevent and deal with disasters;
- And actively engage individuals and communities in disaster risk reduction.

International Strategy for Disaster Reduction (ISDR) [slide 12]

Out of a widely felt need for a common international framework for responding to the challenge presented to the international community by the increasing incidence and scale of disasters, in December 1999 the United Nations General Assembly established the International Strategy for Disaster Reduction (ISDR) with the following objectives:

- to enable communities to become resilient to the effects of natural, technological and environmental hazards, thus reducing the compound risk posed to social and economic vulnerabilities within modern societies; and
- to proceed from protection against hazards to the management of risk, by integrating risk prevention strategies into sustainable development activities (UN International Strategy for Disaster Reduction, 2008).

The establishment of the ISDR reflected a major conceptual shift from the traditional emphasis on disaster response towards holistic disaster reduction. It recognized that natural hazards in themselves do not inevitably lead to disasters, but that disasters result from the impact of natural hazards on vulnerable social systems. In other words, disasters can be prevented through conscious human action designed to reduce vulnerability.

Hyogo Framework for Action 2005-2015 [slide 13]

As planned, ten years after the Yokohomo Strategy was formulated, the results were reviewed at the World Conference on Disaster Reduction in Kobe, Hyogo, Japan in January 2005. The outcome of that conference was the adoption of the “**Hyogo Framework for Action**”. This Conference provided a unique opportunity to promote a strategic and systematic approach to reducing vulnerabilities and risks to hazards. It underscored the need for, and identified ways of, building the resilience of nations and communities to disasters. It was acknowledged that initiatives for development and poverty reduction must include efforts to reduce disaster risk.

The expected outcome by 2015 is a substantial reduction of disaster losses, in lives, and in the social, economic and environmental assets of communities and countries.

The goals are:

- To integrate disaster risk reduction into sustainable development policies and planning;
- To strengthen capacities to build resilience and;
- To incorporate risk reduction into implementation of emergency preparedness, response and recovery.

The priorities for action are: **[slide 14]**

- To make disaster risk reduction a national and local priority;
- To identify, assess and monitor disaster risks and enhance early warning;
- Use knowledge, innovation and education to build a culture of safety and resilience to all levels;
- Reduce underlying risk factors and;
- Strengthen disaster preparedness for effective response at all levels (United Nations International Strategy for Disaster Reduction, 2005).

The **Hyogo Framework for Action** endorsed by 168 countries in 2005, serves as the overall framework for implementing disaster risk reduction world-wide.

Global Platform for Disaster Risk Reduction [slide 15]

In 2006, the UN launched a consultative process to consider practical ways to strengthen the ISDR system and better support Governments to meet their commitment to implement the Hyogo Framework for Action.

In setting up the Global Platform, it is aimed to become the main global forum for all parties involved in disaster risk reduction, namely Governments, United Nations agencies, international financial institutions, regional bodies, civil society, the private sector, and the scientific and academic communities to:

- Raise awareness on reducing disaster risk
- Share experience
- Guide the ISDR system (UN International Strategy for Disaster Reduction, 2008)

This year (hot off the press), the Global Platform produced a publication that captures good practices and lessons learned in linking disaster risk reduction and poverty reduction from Asia, Africa, and Latin America. It demonstrates how non-governmental organizations are able to undertake projects and programs that tackle both disaster risk reduction and poverty reduction at the same time.

The cases presented show that communities' disaster risk reduction efforts in mitigation, preparedness, networking, local level insurance, shelter protection and water provision help contribute to poverty reduction (UN International Strategy for Disaster Reduction, 2008, p. v).

Global Assessment Report on Disaster Risk Reduction [slide 16]

The International Strategy for Disaster Reduction is presently coordinating efforts of governmental, international and civil society partners to produce a Global Assessment Report on Disaster Risk Reduction (GAR/DRR). It is expected that the report will be launched by the UN Secretary General at the second session of the Global Platform on Disaster Risk Reduction which will be held in Geneva in 2009.

The primary objectives of the 2009 Global Assessment Report will be to:

1. Establish a credible and widely accepted reference point for information on global disaster risk patterns and trends.
2. Increase understanding and awareness of the mutually supportive relationship between development and disaster risk reduction by specifically focusing on links between disaster risk and poverty trends. (This is a radical realignment of priorities in addressing the Hyogo Framework for Action.)
3. Strengthen the ISDR system's capacity for planning and joint programming at all levels by providing a global level review of national, regional and thematic reporting on implementation of the Hyogo Framework for Action (UN International Strategy for Disaster Reduction, 2008).

Conclusion [slide 17]

In every case, it is the poor that are disproportionately affected by disaster. Low-income families typically live in the informal sector, on marginal lands, and have few, if any, resources to mitigate and respond to disasters. When information is available on risk identification, people with resources can take measures to avoid the risk, while the poor are forced to accept a higher level of risk. Although the poor live in more vulnerable areas, the daily struggle to survive takes priority over investment in mitigating the impacts of potential disaster events.

Poverty is therefore a major factor increasing disaster risk, by increasing vulnerability to disasters and reducing existing coping capacities. It is only by addressing these two issues together that we can make a difference between a community trapped in a grinding poverty cycle, and one with secure lives and livelihoods.

Muito obrigado

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