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**Loss and Damage
in a Latin American
Context:**

**SUMMARY OF
DATA IN NDCs**

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A Latin American Context

Climate change poses an enormous threat to the exercise and enjoyment of human rights in Latin America. Climate impacts spell out a serious list of structural threats that cause harm to people's lives and rights.

Climate change is rooted in inequality, colonialism, and the improper use of natural resources. The economic model imposed on our societies has generated cross-border environmental damage through climate impacts. The large emitters in the North have put our most vulnerable communities at the forefront of climate change impacts. These communities are being forced to suffer loss and damage disproportionately. The socioeconomic and environmental context of the Global South has been shaped by colonialism and extractive capitalism, which historically has diminished people's welfare. While communities in the Global North still enjoy the benefits of their carbon-intensive economies, in the Global South, the bill for loss and damage is quietly rising at the expense of those living in vulnerable conditions.

In Latin America, the issue of loss and damage is imperative as there have been manifestations of climate change for years. How to approach the issue, however, still presents a challenge for the region. Latin American countries lack the tools or do not address the urgency of documenting, analyzing, and reporting the seriousness of the loss and damage experienced in the region. Despite the threatening context for sustainable development and social welfare, the Nationally Determined Contributions (NDCs) for Latin America include little information on loss and damage. This lack of monitoring, analysis, and reporting presents the greatest challenge to a fair, appropriate, and human rights-based response to loss and damage. This analysis contrasts the information available on climate impacts in the region with NDC data from several Latin American countries and establishes some key recommendations to improve the approach.

Inequality in Latin America and its Relationship to Climate Change

Latin America is characterized as a region with high levels of inequality, a situation that was exacerbated by the onset of the COVID-19 pandemic in 2020. In addition to the economic aspect, inequality is manifested through differentiated access to sources of income and resources, individual and structural discrimination, political participation, the exercise of human rights, and the availability of public services for social welfare.¹ People who face greater discrimination based on status (i.e., gender, ethnicity, sexual

orientation, age, disability, etc.) often have less access to the resources they need to ensure their welfare. Inequality is also a determining factor in vulnerability to climate change. Due to inequality, individuals and communities have limited access to the resources they need to cope with climate change. Moreover, inequality aggravates the sensitivity of individuals or communities to climate threats, resulting in a lack of protection and the weakening of many populations in the face of climate change.

¹OAS, Inequality and Social Inclusion in the Americas: 14 Essays, p. 27

Inequality impacts resource availability, which is apparent in terms of poverty. By 2020, there was an increase in poverty and extreme poverty, with 30% of the population living in poverty and 13.1% in extreme poverty.² These data represent a setback in terms of regional achievements in poverty alleviation. Regarding poverty distribution, the following trends are observed³:

- There are more women between the ages of 25 and 59 living in poverty than their male counterparts.
- Age is a determining factor in the distribution of poverty: young people under the age of 15 are more likely to live in poverty than people aged 15 to 39.
- Indigenous and/or Afro-descendant peoples are more likely to live under conditions of poverty.

As a result of the 2020 pandemic, there were negative changes in unemployment rates and the availability of new jobs, as well as a reduction in working hours and wages.⁴ The informal sector was also heavily affected by the economic instability caused by the pandemic.⁵ All of this affected people's purchasing power and resulted in a decline in the GDP of several Latin American countries.

Poverty is also related to the prevalence of food and nutrition insecurity.⁶ Hunger and food insecurity in Latin America is on the rise and has been aggravated in part by the pandemic. The region's hunger level is the highest reported in 15 years.⁷ In addition to hunger, in 2020 higher rates of moderate and severe food insecurity were also reported, accounting for 41% of the total population of Latin America.⁸ Compared to

the previous year, food insecurity rose by 9% in 2020, the highest increase as compared to other regions in the world.⁹ The prevalence of food insecurity was more pronounced in South America (up by 20.5%) than in Mesoamerica (up by 7.5%).¹⁰ Moreover, food insecurity affects women more than men.¹¹

These data are not insignificant and much less so in the context of climate change. Poverty hinders access to the resources needed to implement adaptive actions, such as reinforcing a home before a storm or rebuilding after an event. Without social protection, these impacts are further aggravated. Climate conditions mainly affect food availability and access, which is even more disadvantageous in contexts of food insecurity. As a result, climate instability and variability resulting from climate change affect people's ability to access the food they need. Women, young people, immigrants, small and medium-sized enterprises, and people with unskilled jobs were affected the most by the pandemic in terms of economy.¹² Moreover, these groups tend to be more dependent on natural resources, whether for housework, water collection for human consumption, subsistence farming, or cultural reasons, another reason why these groups are among the most impacted by climate change.

² (ECLAC), "Social Panorama of Latin America," p. 69

³ (ECLAC).

⁴ (ECLAC), p. 46

⁵ (ECLAC), p. 19

⁶ Food insecurity refers to limited access to food for individuals and households. It varies in severity from moderate (access to food is uncertain and perhaps quantity and quality is sacrificed) to severe (no access to food, and people suffer from hunger).

⁷ FAO et al., "Latin America and the Caribbean - Regional Overview of Food Security and Nutrition 2021: Statistics and Trends," p. 2

⁸ FAO et al. p. 1

⁹ FAO et al. p. 1

¹⁰ FAO et al. p. 1

¹¹ FAO et al. p. 14

¹² Maurizio, "Employment and Informality in Latin America and the Caribbean: An Insufficient and Unequal Recovery," p. 1

Subregional Climate Impacts

As stated previously, Latin America as a region is not only vulnerable to climate change, but also highly exposed, due in part to its morphology and in part to its geographic extension. Its vulnerability to climate change is amplified by widespread inequality, the proliferation of poverty, drastic demographic changes, changes in land use, and the degradation of natural resources due to poor land use management.¹⁴ In broad terms, the most recent report of the Intergovernmental Panel on Climate Change (IPCC) points out that events attributable to climate change are already taking place in the region.

It should be noted that climate behavior varies within the region, but to date, the following effects have been observed widely:

- Increased temperatures
- Atmospheric dryness
- Sea level rise (mainly on the Atlantic coast)
- Coastal erosion
- Ocean acidification
- Coral bleaching
- Increased frequency and intensity of droughts in some subregions
- Decreased availability of water for consumption.¹⁵

2020 was an unprecedented year as it was one of the warmest years across the region.¹⁶ Additionally, more than 30 storms were reported in the Atlantic, eight of which directly affected countries in the region.¹⁷

The latest IPCC report projects that the changes already being observed will continue due to climate change. Some of the most important projections are:

- Regional temperature rise, likely at a faster rate than the global average;
- Increased precipitation rates in the northwest and southeast South American subregions and decreased rates in other subregions;
- Sea level rise on South America's Caribbean and North Atlantic coast.¹⁸

These climate changes directly impact the region's development. Climate change is known to be an aggravating factor that deepens poverty cycles and makes it difficult to overcome them, both in rural and urban areas.¹⁹ Likewise, "climate change reduces the capacity for adaptive responses and limits options and opportunities that lead to sustainable development."²⁰ There is strong evidence to suggest that if greenhouse gas emissions continue and no robust adaptation structures are put in place, the people most affected by climate change-related loss and damage would be those with the least capacity and resources to cope with them.²¹ In fact, studies analyzing impact distribution by economic stratum found that the poorest people accumulate up to 70% more loss and damage than people with average incomes.²²

¹³ IPCC, "Fact Sheet-Central and South America: Climate Change Impacts and Risks."

¹⁴ Castellanos et al., "Central and South America," p. 3

¹⁵ IPCC, "Fact Sheet-Central and South America: Climate Change Impacts and Risks."

¹⁶ World Meteorological Organization, "The State of the Climate in Latin America and the Caribbean 2020," p. 2

¹⁷ World Meteorological Organization, p. 15

¹⁸ IPCC, "Regional Fact Sheet - Central and South America"; IPCC, "Fact Sheet-Central and South America: Climate Change Impacts and Risks."

¹⁹ Castellanos et al., "Central and South America," p. 102

²⁰ Birkmann et al., "Poverty, Livelihoods and Sustainable Development," p. 3

²¹ Birkmann et al. Pag. 3

²² Birkmann et al. Pag. 10

One of the groups most economically affected by the impacts of climate change are those who depend on agriculture for their livelihood.²³ This phenomenon is very significant for Latin America given drought projections for much of the region. If conditions in areas that traditionally depend on agricultural activities, such as Central America and the Andes, fail to meet the food demand, it would also affect the food and nutrition security of many more people, in addition to the local economies.²⁴

While the impacts of climate change vary by place and context, broadly speaking, some of the primary effects in Latin America are the following:

- Impacts to and destruction of many ecosystems sensitive to change, such as coral reefs, coastal zones, mangrove forests, and the Amazon rainforest.
- Impacts to endemic biodiversity, including the destruction of natural habitats, changes in territorial distribution, and extinction.
- Damages to urban infrastructure, both public and private, including roads, bridges, buildings, sewerage systems, utility poles, etc.
- Interruptions in public services, such as water distribution, sewage and solid waste disposal, medical care, etc.
- Decrease in water availability, for both human consumption and other purposes.
- Destruction of commercial and subsistence crops.
- Temporary and permanent human mobility, including forced displacement, which can be both internal or cross-border in nature, depending on the triggering event and social context.
- Emergence of new diseases and changes in the distribution of disease-transmitting vectors.²⁵

The above list outlines the main climate change-related impacts that have been studied for the region. However, in systematizing the scientific data, a gap exists in information regarding related aspects, including indirect and secondary climate impacts and intangible or unquantifiable variables, such as the impact on mental health, early childhood development, cultural value of natural resources, sense of belonging and community, loss of languages, and gender-based violence, among others. It should be noted that while a wealth of information exists on the above aspects, it is mostly testimonial and anecdotal in nature, and most has not been systematized or analyzed.

Furthermore, adaptation is the backbone of climate action as it seeks to minimize the conditions of vulnerability that prevent people from coping with climate change. Adaptation is the process of adjusting to climate change, whether through actions taken to reduce the risk of negative repercussions on communities and individuals or through actions to enhance opportunities.²⁶ Its implementation in Latin America is relatively new, however, and while there has been an increase in adaptive actions and policies at a regional level, much remains to be done. Access to economic resources poses a significant challenge to effective adaptation, particularly in countries with high poverty rates. Still, adaptation has its limits, and when exceeded, loss and damage occur.

Loss and damage represent the negative consequences arising from climate impacts, whether material or immaterial, economic or non-economic.²⁷ In this context, the term "loss" refers to any irreversible negative consequence that cannot be repaired or restored, while the term "damage" refers to any reversible negative consequence that can be repaired or restored.²⁸ The latest IPCC report affirms what many

²³ Birkmann et al. Pag. 9

²⁴ Castellanos et al., "Central and South America." Pag. 110

²⁵ IPCC, "Fact Sheet-Central and South America: Climate Change Impacts and Risks."

²⁶ Möller et al., "Glossary."

²⁷ Möller et al.

²⁸ Martínez Blanco, Adrian "Loss and Damage: An Introduction to Paragraph 51 and Compensation. www.LaRutadelClima.Org Climate Justice in Latin America Series No. 3"

affected communities have been claiming for years: it is the most vulnerable people and communities that are affected the most by the impacts of climate change.²⁹ This discussion about loss and damage highlights the interrelationship between inequality and climate change, since inequality aggravates the impacts of climate change and, in turn, these impacts further deepen the conditions of inequality.

Gender-based Violence and the Implications of Climate Change

Inequality in Latin America causes people to perceive the impact of climate change differently. Gender-based violence is a clear example of how one group can be specifically affected by climate change; however, little data is available on how these factors interact in Latin America.

Gender-based violence is defined as “any type of harm that is perpetrated against a person’s will by reason of gender” and includes different manifestations of violence beyond merely the physical or sexual.³⁰ Gender-based violence is caused and aggravated by structural inequality and is used as a tool of control of not only of the female or gender nonconforming body, but also to restrict economic, social, and political mobility, including limiting access to and control over natural resources and rights. While climate change can act as a stressor or aggravator of gender-based violence, it occurs for several reasons, including child, early, and forced marriage and union (CEFMU), sexual violence, and physical and emotional violence.

Child, early, and forced marriage and union (CEFMU): During times of resource scarcity, many families resort to adaptive strategies to reduce the household burden. CEFMU has been documented as one of these strategies.³¹

“[In Latin America,] girls and adolescents often marry or cohabit as a strategy to escape poverty [...] Child marriage and early unions are five times more likely to occur in poor households in rural populations and is linked to ethnic-racial belonging.”³²

There are no studies in Latin America analyzing this causality, nor do official data exist on the number of CEFMU due specifically to climate change,³³ but it is to be expected that when the impacts of climate change limit access to resources—such as in times of drought—CEFMU rates will be affected. Moreover, girls who are subject to marriage or union at a young age see an increase in their condition of vulnerability to climate change by having less mobility and freedom and less access to resources and information.

²⁹ Pörtner et al., “Summary for Policymakers.”

³⁰ Global Witness, “Last Line of Defence: The Industries Causing the Climate Crisis and Attacks against Land and Environmental Defenders.” Pag. 2

³¹ Castañeda Carney et al., Gender-Based Violence and Environment Linkages: The Violence of Inequality. Pag. 140

³² Grupo de trabajo del Programa Conjunto Interinstitucional para Poner Fin al Matrimonio Infantil y a las Uniones Tempranas en América Latina y el Caribe, “Los Matrimonios y Uniones Infantiles Tempranas y Forzados: Prácticas Nocivas Profundizadoras de La Desigualdad de Género En América Latina y El Caribe.” Pag. 20

³³ Castañeda Carney et al., Gender-Based Violence and Environment Linkages: The Violence of Inequality. Pag. 141

Sexual Violence: Women in Latin America face constant insecurity. According to the Pan American Health Organization (PAHO), 30% of women in the Americas have reported sexual or physical violence by their partner at some point in their lives, and 11% of women have reported sexual violence by a person other than their partner. These data are often underreported, given the difficulty of the reporting process and the associated stigma.

Sexual violence interacts with the effects of climate change in different ways, for example:

- Climate change has been associated with situations that foment sexual violence against women. For example, during climate-related displacement, if women must move outside the confines of the shelter in search of food or water, their risk of being sexually violated increases.³⁵
- There are documented cases of women being subjected to violence in shelters or along migratory routes during emergencies. Migration is closely linked to climate change and in many cases is a form of survival in the face of an adverse situation. Data on sexual violence in Central American migration is alarming. One study by Doctors Without Borders found that 31% of patients treated experienced sexual violence.³⁶ This information dates back to 2010, however, and there are no more recent studies to update it. Contraceptive use is already common practice for women crossing the border into Mexico or the United States as a preventive measure in case they are raped.³⁷ These figures will undoubtedly increase as migration rates rise due to climate change.
- Finally, the scarcity of natural resources, such as water or food, can lead to an increase in “transactional” sex as a survival practice for women to gain access to the resources they need.³⁸

Physical and Emotional Violence:

Physical aggression is also a risk for many women who do not hold equal power in their homes, a situation that increased significantly during the COVID-19 pandemic.³⁹ Stressful situations, such as post-disaster scenarios, loss of livelihoods, the destruction of housing, even a decline in the availability of basic needs, such as food or drinking water, have been linked to an increase in domestic conflicts and violent or aggressive behavior in men. In these situations, women are at greater risk of being physically or emotionally assaulted.⁴⁰

Information on the context of vulnerability and the expected effects of climate change is ample. There is also an abundance of journalistic writing on how our communities are suffering extreme events and on the slow, yet intense situation experienced by ecological and social systems due to slow onset events. Moreover, it is not uncommon to hear regional politicians and experts mention the dangerous situation that climate change represents for Latin America. Yet, despite this context and discourse, the region's NDCs do not contain up-to-date, uniform, and comparable information on loss and damage. In fact, the region's NDCs seem to reflect the uncoordinated, irresponsible response of the United Nations Framework Convention on Climate Change (UNFCCC) to the issue of loss and damage.

³⁴ PAHO, "Violence Against Women - PAHO/WHO | Pan American Health Organization."

³⁵ Castañeda Carney et al., Gender-Based Violence and Environment Linkages: The Violence of Inequality, p. 146

³⁶ Doctors Without Borders, "Central American Migration in Depth | MSF"

³⁷ General Secretariat of the Central American Integration System, "Risk Factors and Care Needs for Migrant Women in Central America," p. 70

³⁸ IUCN, "Information Note on Gender-Based Violence and Environment Linkages During Covid-19," p. 4

³⁹ IUCN, Pag. 2

⁴⁰ Castañeda Carney et al., Gender-Based Violence and Environment Linkages: The Violence of Inequality, p. 139

Measuring Loss and Damage in Latin America

There is limited data available on loss and damage in Latin America and the UNFCCC lacks a formal process for collecting it. This is one of the major challenges to climate justice, especially considering that the most vulnerable communities not only face these adverse effects disproportionately, but also do not have basic information that shows how their well-being is being impacted and their human rights violated as a result of climate change.

This research considers the Intended Nationally Determined Contributions (INDCs), the Nationally Determined Contributions (NDCs), and updates for each Latin American country that is party to the Paris Agreement, namely: Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

While economic and descriptive data regarding loss and damage were included in the first NDCs and INDCs, this information was mentioned less in the updated NDCs or second versions. It is important to note that the INDCs were drafted prior to signing the Paris Agreement. In addition, no data on loss and damage were found in any of the INDCs or NDCs reviewed. This is not to imply that relevant data does not exist in other official sources, but those fall outside the scope of this research.

Argentina

Argentina's two NDCs and their respective updates⁴¹ provide limited information on loss and damage. For example, the first NDC dated 2016 reports that an increase in rainfall produced floods with significant socioeconomic impact; however, no specific cost is mentioned.

The second NDC lists "multiple identified and/or expected vulnerabilities and adverse impacts associated with the climate" for several regions, but it is unclear which regions they are referring to. Some factors that could be considered loss and damage include: internal migration; desertification of ecosystems and species extinction; damage to road and water infrastructure; retreat of glaciers and the consequent loss of resources; impact to people's health due to floods; impact on the availability of drinking water and subsistence fishing; loss of biodiversity; socioeconomic impacts and forced displacement of indigenous peoples; crop loss (soybean, sunflower, cotton, corn, wheat, and rice); loss of soil fertility due to erosion; animal mortality due to droughts affecting livestock production; fires affecting native forests, fauna, and flora; impacts to hydroelectric power generation capacity; and impact on the health of vulnerable populations due to heat waves.

Bolivia

Over the last 50 years, Bolivia has lost approximately 50% of its glaciers and has experienced rising temperatures and stronger rainfall during the rainy season. This has produced extended dry seasons and an increase in the frequency and magnitude of floods, as well as flash floods, hailstorms, fluvial flooding, landslides, and frost. These changes have impacted health, housing, education, the economy, infrastructure, and the provision of services. Consequently, the livelihoods of the most vulnerable populations have been impacted. Climate events between 1982 and 2014 have directly affected four million people, entailing an economic impact of between 1% and 2% of the GDP.⁴²

⁴¹ (Republic of Argentina 2016; Office of the President of Argentina 2021; Ministry of Environment and Sustainable Development 2020)

⁴² (National Government of Bolivia 2016)

Chile

Neither Chile's first nor updated NDC⁴³ explicitly mention data related to loss and damage suffered by the country due to climate change. However, in its updated NDC, Chile reported to the UNFCCC that for 2025, it will work to estimate the costs associated with historical loss and damage.

Colombia

In 2018, Colombia reported to the UNFCCC in its INDC that the loss and damage suffered by the country was estimated at USD 6 billion. This loss and damage were the result of the La Niña phenomenon (2010-2011), which affected 3,2 million people, flooded 3,5 million hectares, and closed 845 primary and secondary roads, causing socioeconomic effects. In its INDC, it also mentioned that 90% of the country's emergencies between 1998 to 2012 were related to weather phenomena.

Moreover, in the 2020 update to its NDC, it recorded 11,000 displacements as a result of disasters that same year, mostly due to flooding.⁴⁴

Costa Rica

In 2016, Costa Rica reported in its first NDC⁴⁵ that the impacts of extreme weather events (EWEs) were on the rise. It estimated direct losses at USD 1.13 billion from 2005 to 2011. Of this amount, 78.2% were related to public works, and the sectors that were most affected were electricity infrastructure, agriculture, and housing. Costa Rica estimated that "in 2030 losses will amount to more than USD 7 billion, accounted since 2006, and could reach by 2050 almost USD 30 billion."

Moreover, in its 2020 update⁴⁶, Costa Rica reported that extreme weather events between 1980 and 2017 took the lives of 546 people and affected 1.3 million more. This document mentions that the agriculture sector is the most disadvantaged, having registered 5,994 issues, 98.8% of which were caused by weather events. It also provided an estimate of the reparation and reconstruction costs of infrastructure affected by EWEs, which rose from 8.903 billion colons in 1988 to 202.681 billion colons in 2010 (1% of the GDP). The future cost of weather events was projected to reach between 1.64% and 2.5% of the GDP in the worst-case scenario.

Cuba

In 2016, Cuba submitted its first NDC to the UNFCCC, in which it mentioned the impacts suffered as a result of the country's climate vulnerability and variability. It is important to note that the term "climate variability" could refer to anthropogenic processes depending on its acceptance.

In this regard, the NDC mentions that Cuba suffered losses of 20,564 billion dollars between 1998 and 2008 as a result of 16 hurricanes. These losses exclude the economic impact caused by drought. It expressly mentions that it is of particular interest to countries such as Cuba to have "access to financing and technologies under preferential conditions to tackle the enormous challenge of adapting to climate change, as well as to cover loss and damage." This is underscored as a "high-priority" issue that must be addressed as part of the execution of commitments by developed countries and the means of implementation of the UNFCCC.⁴⁷

⁴³ (National Government of Bolivia 2016)

⁴⁴ (Government of Colombia 2015; 2020A; 2020b)

⁴⁵ (Government of Costa Rica 2015)

⁴⁶ (Government of the Republic of Costa Rica 2020)

⁴⁷ (Republic of Cuba 2020; 2015)

Dominican Republic

In its INDC, the Dominican Republic⁴⁸ mentions that it is a Small Island Developing State constantly threatened by weather events such as Hurricane Georges (1998), which caused loss and damage in the amount of USD 2.624 billion (14% of the GDP), and tropical storms Olga and Noel (2007), whose cost in terms of loss and damage totaled USD 437 million. Extreme events have affected sectors such as agriculture, roadways, energy, housing, education, industry and trade, sanitation, drainage, health, and the environment, causing economic losses of USD 9.47 billion. The document clarifies that there is other loss and damage that has not been quantified as a result of deficiencies in the historical record. However, it estimates that the cost generated by small and medium events is equal to half the loss and damage of major events.

Its 2020 updated NDC⁴⁹ estimates that the damage associated with “climate shocks” between 1961 and 2014 and the impact generated by natural disasters is equal to 0.69% of the GDP. In addition, Hurricane Jeanne (2004) caused damages of USD 417 million (1.3% of the GDP), Hurricanes Irma and Maria (2017) caused an estimated damage of USD 182.4 million, and the rains of November 2016 and April 2017 generated estimated direct losses of USD 862 million. Lastly, it is important to note the creation of the Dominican Republic Damage Collection and Assessment System (SIREN-RD).

Ecuador

Ecuador's first NDC⁵⁰ drafted in 2019 mentions impacts that could be related to climate change to the country's natural and water resources, food sovereignty, human settlements, productive and strategic sectors, and health. Since Ecuador has not yet submitted its

second NDC, it is possible that these potential impacts could be quantified, evaluated, and reported as events that have occurred, allowing a measure of the country's loss and damage. The first NDC highlights that habitat changes caused by climate change force species into extinction or to modify their behavior acquired through evolutionary processes over thousands or millions of years.

El Salvador

El Salvador's first NDC⁵¹ mentions that between 1980 and 2008, the country experienced an average of 1.5 disasters per year, causing the death of 7,000 people, affecting 2.9 million more, and having an estimated annual cost of USD 470 million (4.2% of the GDP). Furthermore, the country estimates that economic damages due to climate phenomena totaled over USD 1.3 billion (6% of the GDP) between 2009 and 2011.

In 2022, its updated NDC⁵² referenced a series of extreme events that generated significant economic loss: tropical storm Ida (2009), with losses estimated at USD 315 million (1.44% of the GDP); storm Agatha (2010), with estimated loss and damage totaling USD 112.1 million (5% of the GDP); tropical depression 12-E (2011), with loss and damage estimated at USD 1.3 billion (6% of the GDP); and tropical storms Amanda and Cristobal (2020), which generated economic losses of USD 8 million, infrastructure losses of USD 22.1 million, and an undetermined amount of damage to the agriculture sector. In addition, it mentions the destruction of 227,601.88 blocks (approximately 159,321 hectares) of basic grains and economic losses of up to USD 208.7 million due to droughts in 2012, 2014, 2015, and 2018.

⁴⁸ (Government of Dominican Republic 2015)

⁴⁹ (Government of Dominican Republic 2020)

⁵⁰ (Ministry of Environment of Ecuador 2019)

⁵¹ (Government of El Salvador 2015b)

⁵² (Government of El Salvador 2021)

Guatemala

Guatemala submitted its NDC in 2017⁵³, in which it highlighted the impacts of eight extreme weather events linked to climate change from 1998 to 2014. These events generated cumulative loss and damage of over USD 3.5 billion, affecting the infrastructure, agriculture, and health sectors. Between 1998 and 2010, it mentions that “climate variability caused economic losses in the agriculture sector of USD 1.85 billion.”

Honduras

In the case of Honduras, its first NDC⁵⁴ emphasized the devastating impact of extreme weather events such as Hurricane and tropical storm Mitch that occurred in 1998. This event caused the loss of “14,000 lives, affected over half a million people, 20 years of investments in road and hydraulic infrastructure, USD 3.8 billion (equal to 70% of that year’s GDP), and the collapse of the country’s productive apparatus.” Hurricane Mitch and Hurricane Fifi in 1974 are important events in terms of severe climate impacts. The NDC makes it clear, however, that attention must also be given to the recurrent, high incidence impacts of weather phenomena that cause the loss of life, housing, infrastructure, and means of production every year. The reoccurrence of these events generates negative economic “investment and reconstruction” cycles.

In 2021, Honduras submitted an updated NDC⁵⁵ in which it again records falling victim to the impacts of extreme weather events. Tropical storms Eta and Iota (2020) affected approximately 3.9 million Hondurans and took the lives of 95. These events caused economic losses of over USD 2.17 billion. Damage was reported

to “92,646 houses, 174 landslides, 534 schools, 130 bridges, 921 roads, 79 cut-off communities, 96,649 people in shelters, and the total loss of 300 dwellings.”

México

In 2016, Mexico indicated in its INDC⁵⁶ that over the past 50 years, it had experienced changes in average temperature and rainfall. In addition, it had also experienced an increase in extreme weather events, such as hurricanes, floods, and droughts, causing the loss of life and a high socioeconomic cost. Between 1980 and 1990, weather events generated annual losses of approximately USD 48 million, climbing to USD 1.4 billion between 2000 and 2012.

Its updated NDC⁵⁷ indicates that the increase in weather events and the current socioeconomic context have led to forced displacement, increasing the vulnerability of displaced individuals

Nicaragua

In 2018, the Nicaraguan Government submitted its first NDC⁵⁸ in which it mentioned its efforts to recover “the annual losses generated by events related to climate variability and change.” The NDC mentions that reducing poverty in a context where climate change generates loss and damage is a major challenge for Nicaragua. The 2020 updated NDC⁵⁹ reports two hurricanes that impacted the country as evidence of its vulnerability to climate change. Hurricane Eta (Category 4) and Hurricane Iota (Category 5) impacted the country over a ten-day period, affecting three million people in 2020. These EWEs caused loss and damage of up to USD 737 million, equal to 6.2% of Nicaragua’s GDP.

⁵³ (Republic of Guatemala 2017)

⁵⁴ (Government of the Republic of Honduras 2015)

⁵⁵ (Government of the Republic of Honduras 2021)

⁵⁶ (Government of the Republic of Mexico 2015)

⁵⁷ (Government of Mexico 2020)

⁵⁸ (Government of Nicaragua 2018)

⁵⁹ (Republic of Nicaragua 2020)

Panamá

Panamá's updated NDC includes a commitment to strengthen capacities for transparency in determining loss and damage. Additionally, it identified instating an agenda of loss and damage directly associated with climate vulnerability as one of the priority areas for climate action. There is no detailed record in Panamá's NDC of the loss and damage the country has suffered.⁶⁰

Paraguay

Paraguay's updated NDC does not mention data related to loss and damage. However, mention is made of the need to improve adaptation in the next NDC. To this end, the country will seek to strengthen coordination processes regarding loss and damage. In addition, Paraguay recognizes the need to promote its participation in the negotiations of the Warsaw International Mechanism for Loss and Damage under the UNFCCC.⁶¹

Perú

In 2016, Peru projected in its INDC the impact of climate change on its economy: by 2030, the country's GDP growth would be curtailed by between 5.7% and 6.8%. This adverse effect would continue to rise and by 2050, it is estimated that the actual GDP would be between 20.2% and 23.4% lower. The country also reported the severe impact of events that have worsened at the hand of climate change, such as frost, drought, and floods. Regarding loss and damage, the INDC emphasized the impact of the El Niño adverse, cyclical climate effects on agriculture and fisheries and on natural, economic, and social infrastructure. Between 1997 and 1998, losses were reported to be over USD 3.5 billion. Peru's updated NDC does not provide new economic data or information on loss and damage.⁶²

Uruguay

Uruguay's NDC does not include specific data on loss and damage; however, it is noted that it has considered the "design and implementation of a mechanism for the economic assessment of loss and damage due to climate events, which will give rise to an annual national report with information by affected sector, population, and territory".⁶³

Venezuela

In 2018, Venezuela submitted its INDC⁶⁴ in which it stated the need to calculate "the costs derived from loss and damage resulting from extreme climate events, including insurance and reinsurance for specific sensitive sectors (such as agriculture), which should be added to the ecological debt of the industrialized countries." It also mentioned that a series of actions are underway with national financing to repair the loss and damage. However, no economic data or figures were provided to quantify the loss and damage suffered.

The 2021 updated NDC⁶⁵ indicated that in response to the extreme rainfall that affected hundreds of thousands of inhabitants in Venezuela's impoverished areas, the "Great Housing Mission" was initiated in 2010. This project built 800,000 homes by November of 2015, with the goal to build a total of three million by 2019. The project is identified as a response to the loss and damage suffered by 150,000 people and a vulnerability reduction in benefit of 12 million people.

⁶⁰ (Republic of Panama 2020; Government of the Republic of Panama 2016)

⁶¹ (Government of Paraguay 2016; Ministry of Environment and Sustainable Development 2021)

⁶² (Government of Peru 2015; 2020)

⁶³ (Eastern Republic of Uruguay 2017)

⁶⁴ (Bolivarian Republic of Venezuela 2017)

⁶⁵ (Bolivarian Republic of Venezuela 2021)

Pilars for Political Action

An essential component of climate activism is understanding the political and social context in which the climate crisis occurs. Latin America is immersed in special circumstances where inequity, colonialism, racism, and economic barriers weigh heavily on our community's vulnerability. Moreover, the climate crisis poses a series of cyclical, exponential threats that put at risk the well-being and viability of our territories to provide minimum dignified living conditions. In this context, information on the loss and damage experienced at the hand of climate change is extremely limited. This information gap represents a challenge to activism and human rights claims, but also a risk that current circumstances become the new status quo, putting the region's future in jeopardy.

Our review of the NDCs and their respective updates regarding loss and damage led to the following conclusions:

- Most Latin American countries reported economic and non-economic data related to loss and damage in their NDCs.
- The information related to loss and damage reported in the NDCs and their subsequent updates or second versions is not correlated. The data are not updated from one NDC version to the other, nor is there a format or continuity of the information reported for comparison.
- The data reported on loss and damage in the updated NDCs or second versions do not follow a uniform format and do not contain elements that are able to be compared. There is no uniformity in how the reported phenomena are defined or how the data are considered. There does not appear to be criteria for clearing defining how economic loss and damage are assessed.
- The Paris Agreement rulebook and NDC updating process do not seem to have generated uniformity in the way information on loss and damage occurring in Latin America is reported. It avoids suggesting mechanisms to

standardize the collection and presentation of data, which directly affects the decision-making capacity to address loss and damage.

- The region's NDCs and updates mostly recognize the importance of or at least mention the principle of Common but Differentiated Responsibilities and Respective Capabilities. The only exceptions are Costa Rica and Colombia. Moreover, of the countries analyzed, only Brazil did not make mention of loss and damage in its NDC. Almost all countries explicitly mentioned human rights in their NDCs, except for Paraguay, Nicaragua, and Ecuador. This is not to imply that they do not have human rights language within these documents; however, it is key for countries to start demanding action at an international level to gain access to funds.
- There is a huge gap in terms of how inequality and the impacts of climate change interact in Latin America, especially from different approaches, such as gender. This gap is reflected in the availability of data that can be used to inform the NDCs.
- There is also a gap in terms of indirect and secondary climate impacts, as well as material and/or immaterial impacts.
- It should be noted that these gaps in climate impacts and loss and damage in no way imply that climate impacts or loss and damage are not occurring; on the contrary, a vast number of individuals and communities are already experiencing them. There is a wealth of evidence and testimony in this regard, but it has not been systematized.
- Gender inequality affects the vulnerability conditions of women and people identifying as gender-nonbinary, directly affecting the way they experience climate change. These inequalities present a major challenge to addressing the issue of differentiated climate impacts inclusively and comprehensively.

Recommendations:

- Develop standards and mechanisms for monitoring, analyzing, and reporting on economic and non-economic loss and damage caused by climate change.
- Develop methodologies with a community-based approach to the assessment of loss and damage.
- Correlate and standardize loss and damage-related data reported in NDCs to allow for comparative and incremental analyses.
- Promote a regional or international definition of loss and damage to enable a formal, standardized approach.
- Support regional analysis initiatives regarding loss and damage that integrate data reported in the NDCs to develop a Latin American perspective.
- Address loss and damage from a human rights approach and the principle of Common but Differentiated Responsibilities and Respective Capabilities.
- Expand data collection on other aspects of climate impacts and loss and damage, such as immaterial and intangible manifestations, to better understand their impact on diverse populations and communities.
- There is an urgent need for more data on the differentiated impacts of climate change and for more comprehensive studies analyzing these phenomena in order to reflect these realities in public policies and climate action in Latin America.
- Anecdotal information, such as personal testimonies and field observations, is a primary source that must be leveraged as it reflects how the context affects the way in which climate change impacts people.

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