

SNAPSHOT 13



CLIMATE CHANGE AND DISPLACEMENT IN THE NORTH OF CENTRAL AMERICA AND MEXICO





Photo: RC/Christian Jepsen, 2020

Introduction

There are figures on human displacements caused by sudden disasters of natural origin, mainly those whose destination, whether temporary or permanent, is within the same country, but it is less common to find figures for those displacements that cross one or more international borders. Information on displacement and migration caused by progressive and slow-onset disasters of natural origin, such as droughts or increased coastal erosion, is also scarce. However, the number of investigations and case studies on this problem has increased considerably, especially since 2008.¹

In this Bulletin, identifies the sectors and population profiles most vulnerable to the effects of climate change, as well as the responses that institutions are developing and the coordination of organizations to meet the humanitarian needs of the affected people. In addition, reference is made to how climate change affects the region.

Finally, the results of a Survey applied to the organizations that are part of the REDLAC Protection Group and other humanitarian organizations are presented, in order to understand the main challenges, they experience to face the existing links between climate change, migration and displacement.

Key messages

1

Despite being one of the regions that contributes the least to global warming, Northern Central America is one of the regions that is the most vulnerable to the effects of climate change.

2

The last 40 years have been characterized by a marked increase in the intensity of extreme weather events, with an average of 20 disasters a year since the 1980s.

3

Climate change is a factor that affects and is superimposed on other triggers for displacement in the countries of Northern Central America and Mexico, such as poverty and generalized violence, in a framework of more structural challenges of human rights guarantees.

4

Smallholder farmers, people dedicated to fishing, indigenous communities and women are population groups with profiles of greater vulnerability to the impacts of climate change.

5

Although there is progress at the level of environmental legislation, the implementation of policies to mitigate, prevent, protect, and assist the effects of climate change remains weak and underfunded.

6

On the other hand, the provision of regulatory frameworks for climate change adaptation and mitigation in most cases is not in accordance with the implementation of mechanisms that holistically analyze the links between climate change and displacement. As an advance, it is important to highlight that in Guatemala the issue of human mobility was integrated into the National Action Plan on Climate Change.

7

Humanitarian organizations are the main actors in the response to displacement due to climate change and contribute through resilience projects in rural areas to prevent them. However, assistance still does not sufficiently articulate the interconnection between the variables of generalized violence and climate change as push factors.

8

Climate change is an underrepresented factor in most of the records and monitoring of displacement in the countries of Northern Central America and Mexico. Coordinated efforts are needed in terms of language adaptation to measure its weight as a trigger for displacement cycles. As well as the recognition of this type of displacement in the regulatory frameworks to facilitate the measurement of the phenomenon and its approach.



Photo: RC/Christian Jepsen, 2020

An update on the protection crisis

Key data January to December 2020



El Salvador



In 2020, **1,322 homicides**, an average of four homicides per day. A reduction of 45% compared to 2019.²



In 2020, the Attorney General's Office registered **121 femicides** (44% less, compared to 2019). According to the Amoraes Collective, more than 40% of women in the country have suffered some type of sexist violence during confinement and, according to ECLAC, El Salvador was one of the countries with the highest rate of femicides: 3.3 per every 100,000 inhabitants.³



In 2020, **2,251 disappearances** were registered, surpassing, for the second consecutive year, the number of deaths from violent acts. On average, six people have disappeared every day.⁴ In 2019, 3,202 disappearances were registered, with an average of 9 disappearances per day.⁵



3307 people were evacuated to temporary accommodation after Tropical Storm Iota.⁶



Until the middle of November **1,152 complaints of extortion** were filed, a reduction of 39% compared to the same period of the previous year.⁷



Between January and December 2020, **10,609 Salvadorans were deported**, a reduction of 72% compared to the previous year.⁸

Honduras



In 2020, **3,482 homicides were registered**, (an average rate of 37 per 100,000 inhabitants), 600 fewer homicides compared to 2019. According to the Observatory of Violence of the National Autonomous University of Honduras, 60% of violent deaths in the country were linked to organized crime.⁹



According to the Women for Life Forum, in 2020 more than **320 femicides** were registered, although they consider that the figures could be higher as they are based on news from the media. In 2019, 400 femicides were registered.¹⁰



The United Nations system in Honduras expressed its concern about the reform project presented on January 11, 2021 before the plenary session of the National Congress, aimed at incorporating the **absolute prohibition of abortion and equal marriage** in article 67 of the Constitution. According to human rights organizations, 75% of maternal mortality in the country can be prevented with timely pregnancy termination practices.¹¹



Half of the population has been affected by the impact of tropical storms Eta and Iota (approximately 4.6 million). It is estimated that there are 303,000 people displaced in shelters and temporary accommodation; 4.3 million affected non-displaced people; 369,000 people were held incommunicado; 99 people died and 11 people disappeared.¹²



At dawn on January 14, approximately 4,500 Hondurans left in a new "caravan" heading north from different parts of the country, most of these people would be from the municipalities of the Sula Valley and would be affected by the pandemic, hurricanes, and violence.



The "caravan" crossed the border of Agua Caliente, finding the restrictions implemented by the Guatemalan government, which ordered riot police to prevent entry into the country, deployed military personnel at 11 registration points and has implemented strict identity checks and COVID measures as an entry persuasion strategy.¹³



Between January and November **33,374 Hondurans were deported**, a reduction of 69% compared to the same period in 2019.¹⁴

An update on the protection crisis

Key data January to December 2020

Guatemala



During 2020 a rate of **15 homicides per 100,000 inhabitants** (2,574 homicides from January to December) was reported, a decrease of 29% in relation to the same period of the previous year.¹⁵ The reduction in homicides can be explained due to the confinement measures by Covid-19 mainly in the second quarter of the year.¹⁶



During 2020, **1,205 complaints of domestic violence** were reported, an increase of 29% in relation to the same period of the previous year.¹⁷ Since the beginning of the pandemic and because of contagion prevention measures, such as confinements, an increase in complaints of domestic violence was visible. From January to August, 60% of the perpetrators were cohabitants and 20% the parent.¹⁸



During 2020, **1,491 Isabel-Claudina alerts of missing women**, a 30% decrease in cases compared to 2019.¹⁹ At the end of 2020, 669 women are still missing.²⁰



During 2020, **455 femicides and violent deaths of women were reported**, 54% less than the previous year, on average there are 2 femicides per day, according to the profile of the victims, 7 out of 10 are adult women, 1 in 10 are girls and adolescents and 2 out of 10 are unregistered.²¹



From January to December 2020, **45,924 people were deported to Guatemala**, a decrease of 57% compared to the same period in 2019 (46% came from the United States and 54% from Mexico). 4,511 unaccompanied children and adolescents were also deported from January to December 2020, a decrease of 10% compared to the previous year.²²



2020 was the year with the most **attacks on journalists**, the Association of Journalists of Guatemala registered about 149 events attributed to state forces, residents, and unidentified actors. **Three journalists were murdered**.²³



Natural phenomena **Iota and Eta** left the country with a balance of 2,423,120 affected people, 100 missing persons, 60 deceased persons, 12,008 people evacuated to official shelters and 267,436 in unofficial shelters (data from CONRED as of December 11).²⁴



During 2020, 25,292 cases of acute malnutrition were reported, an increase of 109% over the previous year.²⁵

An update on the protection crisis

Key data January to December 2020



Mexico



During 2020, a total of **44,173 homicides and femicides** took place (of which 940 corresponded to femicides).²⁶



As of November 2020, approximately **15,688 people** are still on the lists of metering at nine points along the US - Mexico border. The waiting time is between 5 and 11 months.²⁷



During the year 2020, **2,506 events where 3,612 migrants died or disappeared on the migration routes** were registered, concentrating particularly on the southern United States (68%) and northern Mexico (30%).²⁸



170,072 Mexicans were deported from the US as of November 2020.²⁹

Applicants for refugee status in Mexico by nationality (year 2020) ³⁰		Applications in 2019	Difference 2019-2020
Honduras	15,440	30,283	- 14,843
El Salvador	4,020	9,079	- 5,059
Guatemala	2,993	3,813	- 820
Total	22,453	43,175	- 20,722

Apprehensions at the US border (adults, family members, unaccompanied children)³¹

Nationality	Unaccompanied children	Traveling as a family	Single adults	Total
El Salvador	2,413	3,201	15,413	21,034
Guatemala	8,250	6,557	45,627	60,459
Honduras	5,405	7,805	39,340	52,562
Total	16,068	17,563	100,380	134,055

Massive flows through caravans 2020 - 2021

No.	Exit date	Exit place	Approximate population	Description
1	15 January, 2020	San Pedro Sula	4,000 ³²	The caravans were made up mainly of Hondurans. Poverty and violence aggravated by the Covid-19 pandemic and storms Iota and Eta were referred to as its main causes. The caravans were repressed by riot police with tear gas and excessive use of force, and the militarization of the borders of Honduras, Guatemala, and Mexico.
2	31 January, 2020	San Pedro Sula	250 ³³	
3	1 June, 2020	San Pedro Sula	3,500 a 4,000 ³⁴	
4	9 December 2020	San Pedro Sula	200	
5	15 January, 2021	San Pedro Sula	9,000 ³⁵	

Covid-19 in Northern Central America

El Salvador	There have been 50,157 accumulated confirmed cases, with a fatality rate of 3%, 9% correspond to active cases and 88% to recovered cases. Since the pandemic began, 16,878 people have entered the quarantine centers. ³⁶
Honduras	There have been 131,967 accumulated confirmed cases, with a 6% fatality rate, 50% corresponding to active cases and 44% to recovered cases. ³⁷
Guatemala	2020 closed with 137,702 accumulated cases of Covid-19, a rate of 817 cases per 100,000 inhabitants; 5,131 people died, mortality rate 31 cases per 100,000 inhabitants and 3.7% fatality. ³⁸

Impact of climate change on displacement: causes and consequences

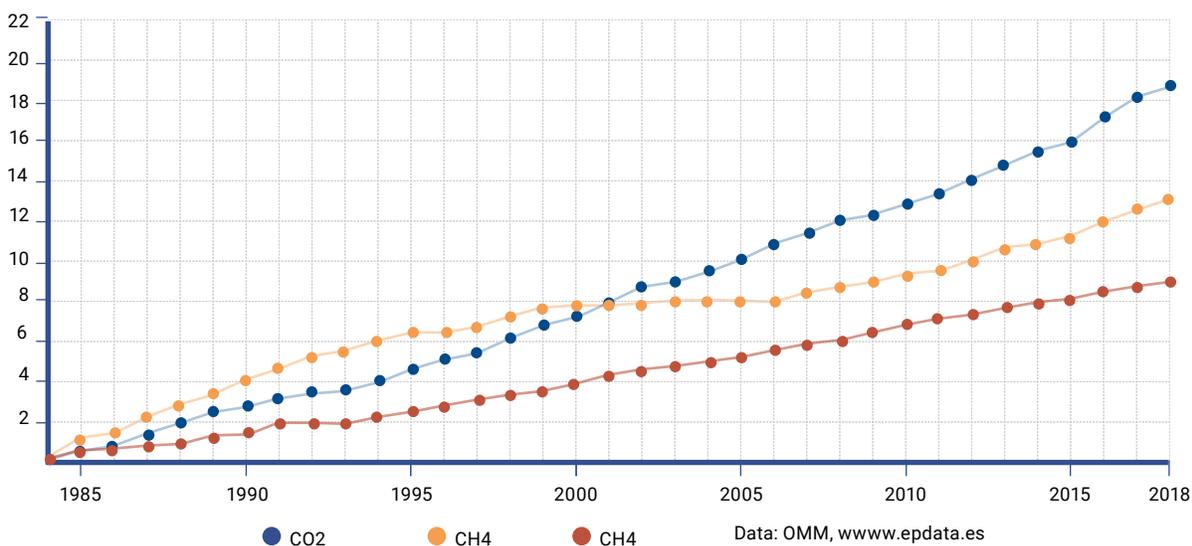
Regional context

The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change in climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and adds to the variability of the climate observed during comparable periods of time”.³⁹ In this sense, **although climate change is a natural phenomenon, human activities have accelerated it considerably, causing negative alterations that have contributed to global warming.**⁴⁰

The Intergovernmental Panel on Climate Change (IPCC)⁴¹ has identified four lines of evidence for climate change: 1) increase in atmospheric concentrations of greenhouse gases; 2) increase in the temperature of the earth’s surface and sea level; 3) decrease in snow cover, ice caps and glaciers; 4) increase in climatic variability and extreme climatic events.

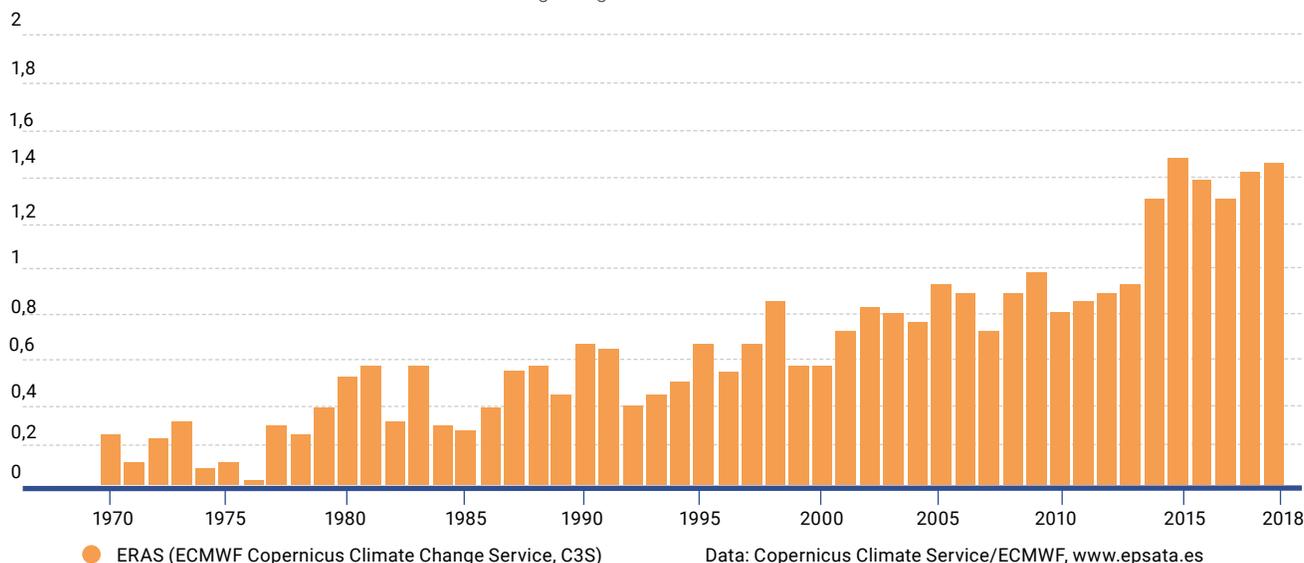
Change in greenhouse gas emissions compared to 1984

CO2 has increased by 18.4%, methane by 13% and nitrous oxide by 9%.

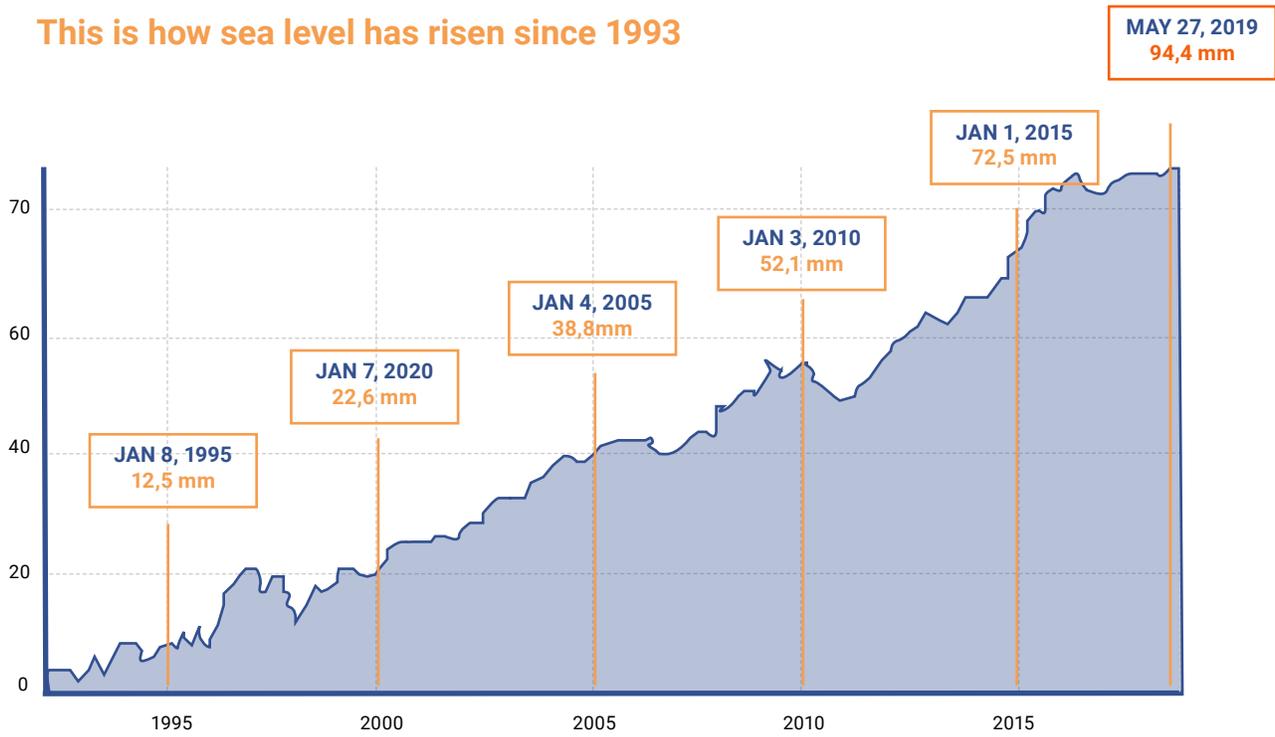


Increase in global temperature

Regarding the industrial era

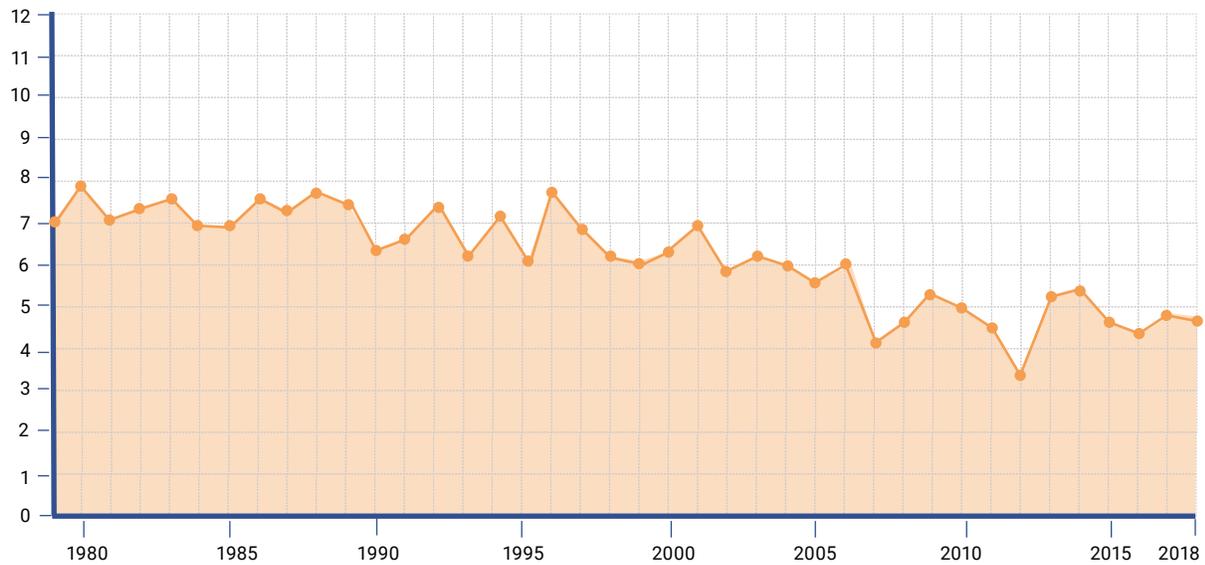


This is how sea level has risen since 1993



Arctic sea ice minimum evolution

Area in September each year



● Area

Fuente: NSIDC/NASA, www.epdata.es

According to the UN Office for Humanitarian Affairs, Latin America and the Caribbean is the second region most prone to natural disasters in the world. In this context, **from 2000 to 2019, 152 million people in this region have been affected by one of the 1,205 natural disasters that have occurred**, among which the following stand out: floods, hurricanes and storms, earthquakes, droughts, avalanches, fires, extreme temperatures, and volcanic events.⁴²

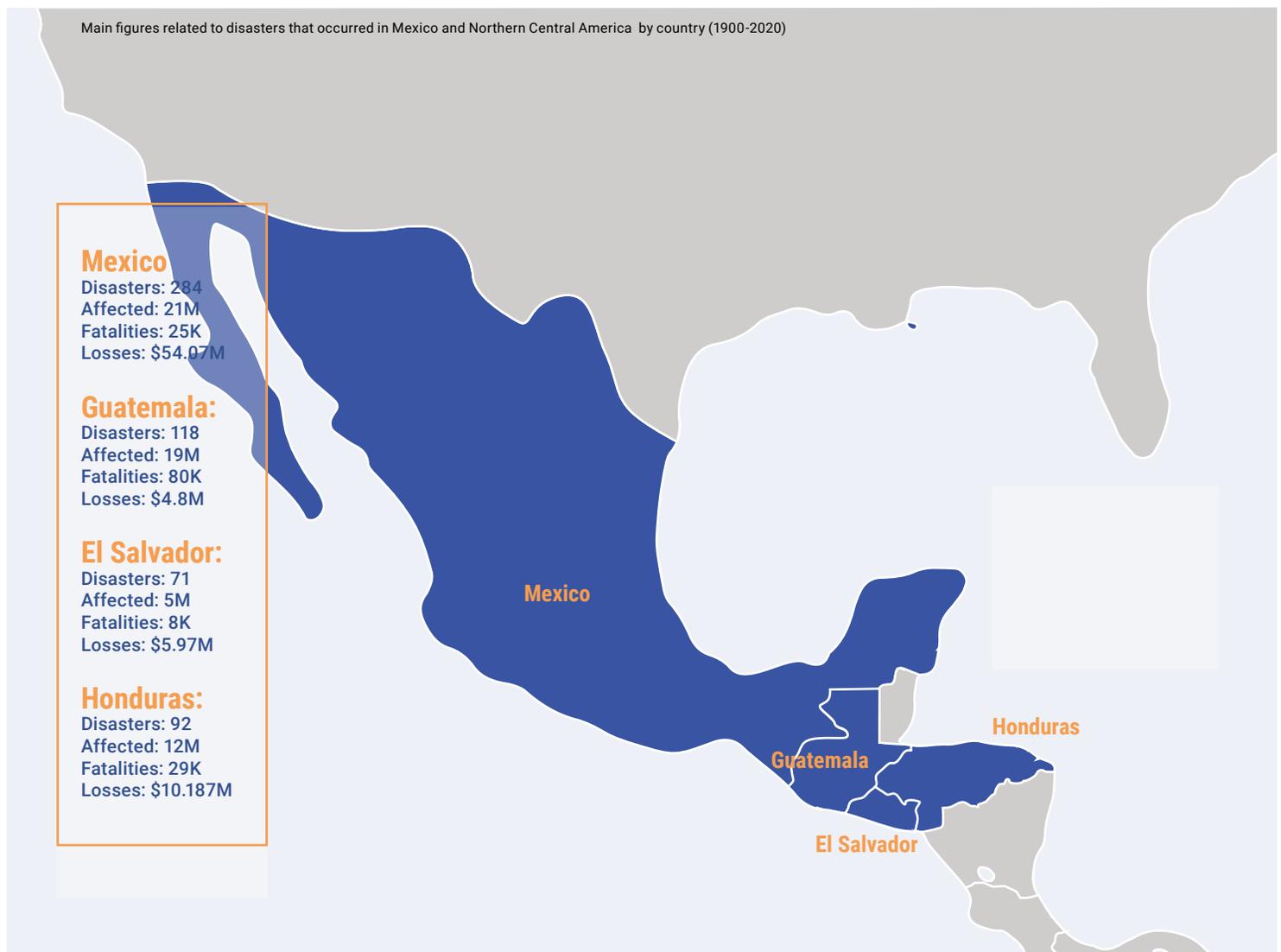
A **natural disaster** refers to the serious interruption of the functioning of a community and its implication in generalized human, material, economic or environmental losses and impacts, which exceed the capacity to confront it.⁴³ The **sudden/abrupt natural disasters** are environmental events that take place from one moment to another, for example, hydrometeorological events such as: hurricanes, cyclones, windstorms, and floods. And geophysical dangers such as: earthquakes, tidal waves, tsunamis, or volcanic

eruptions; and even forest fires. The **slow-onset or low-intensity natural disasters** are more related to the phenomena derived from environmental degradation such as salinization and acidification of seas and oceans, rising sea levels and global temperatures, melting of permafrost, droughts, and desertification.⁴⁴

In the Protection Agenda, **natural disasters** refer to disturbances caused or linked to hydrometeorological and climatological threats, including those related to anthropogenic global warming and geophysical threats.⁴⁵ In this sense, it is necessary to note that not all disasters of natural origin, including those that are sudden, are caused by climate change, for example, earthquakes and volcanic eruptions; and that establishing a clear and direct relationship between them continues to be one of the main challenges for specialists.⁴⁶

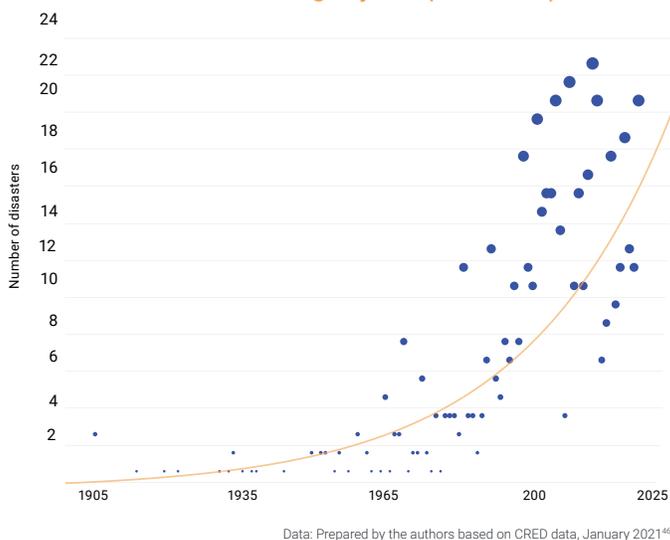
Natural Disasters in Mexico and Northern Central America

Since the last century, this region has suffered 565 natural disasters, an average of 7 natural disasters per year.



These disasters have increased since 1960, increasing considerably since the 1980s, reporting years with more than 20 emergencies..

Disasters that occurred in Mexico and Northern Central America according to years (1901-2020)



In order from highest to lowest occurrence, storms, floods, and quakes/earthquakes are the main climatic events that affect the region, that is, natural disasters of a meteorological, hydrological, and geophysical type.

It is important to note that this number of disasters is by country. So, if a disaster affected three countries, it is counted three times. This is a relevant point because it means a greater impact of disasters in recent years.

According to available data, between 1900 and 2020, approximately 57,020,487 people were affected due to these natural disasters, which represents an annual average of 1.1 million. The category "affected" includes a) those who suffered trauma, physical damage, or illness because of the disaster, b) those who required assistance during the disaster and, c) those who needed shelter because their homes were destroyed or severely damaged by the disaster.

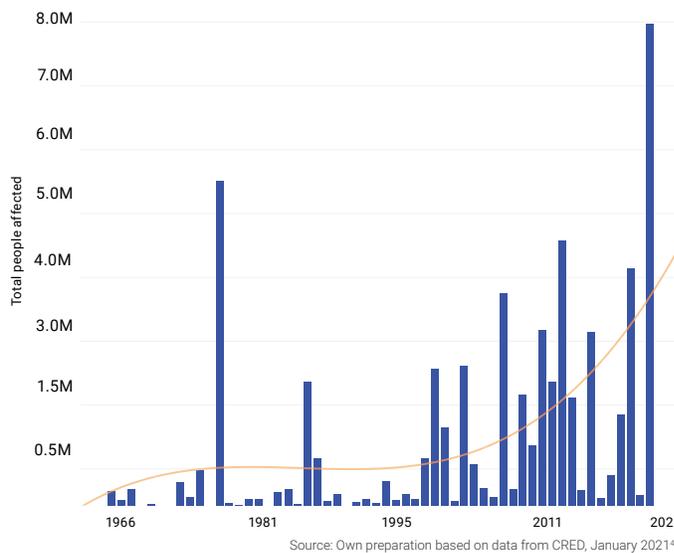
Natural disasters that occurred in Mexico and the NCA by type (1900-2020)			
Type of disaster	Disaster name	Events	Percentage
Biological	Epidemic	34	6%
	Drought	33	6%
Climatological	Fire	8	1%
	Quake/earthquake	72	13%
Geophysical	Mass movement of dry land	3	1%
	Volcanic Activity	25	4%
	Floods	162	29%
Hydrological	Landslide	27	5%
	Extreme temperatures	22	4%
Meteorological	Storms	179	32%

Source: Own preparation based on data from CRED, January 2021.⁴⁸

However, from 1965 there are years in which the numbers of people affected grow significantly. For example, in 1965, more than 245,000 people were affected for the first time, a figure that rose to just over 8 million in 2020.

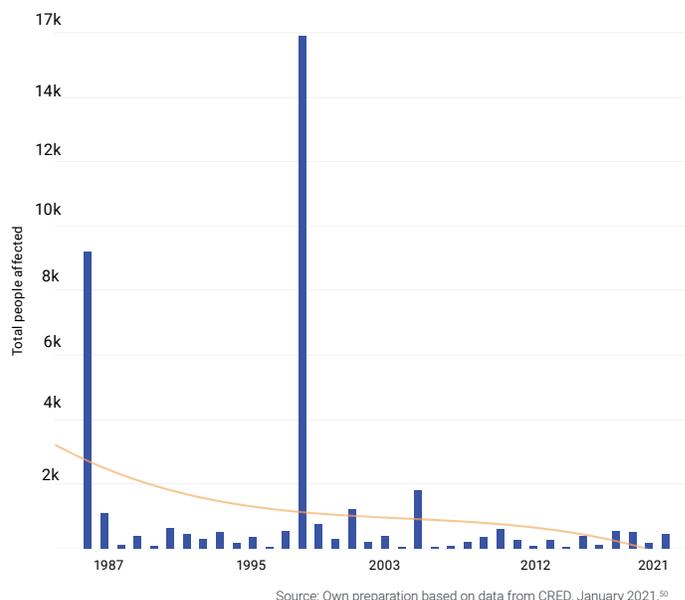
According to available data, approximately 141,947 people died or disappeared because of these disasters, an annual average of 1,800 people.

People affected by disasters that occurred in Mexico and Northern Central America by year (1965-2020)



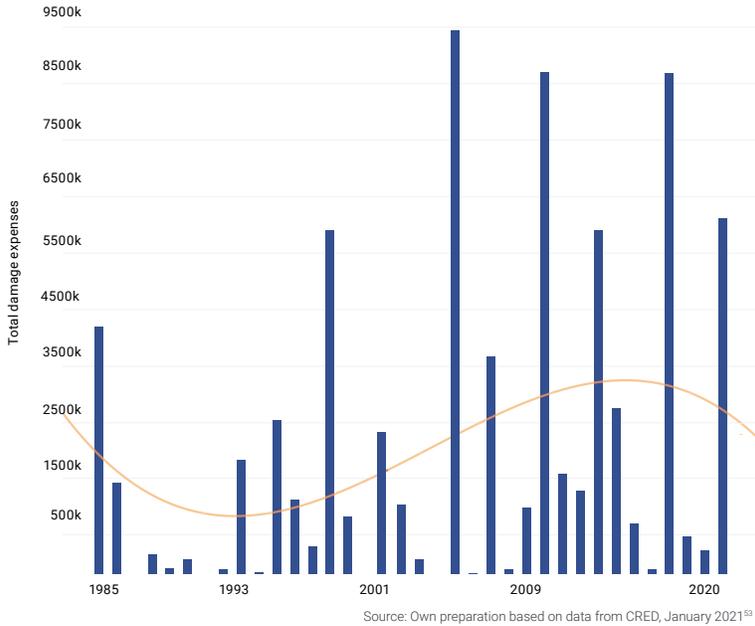
The 9,500 deaths or disappearances that occurred because of the earthquake that shook Mexico in 1985 stand out; 14,468 because of Hurricane Mitch in 1998 (mostly in Honduras); and the 1,624 due to Hurricane Stan in 2005 (mainly in Guatemala).

People killed and/or missing in disasters that occurred in Mexico and Northern Central America according to year (1985-2020)



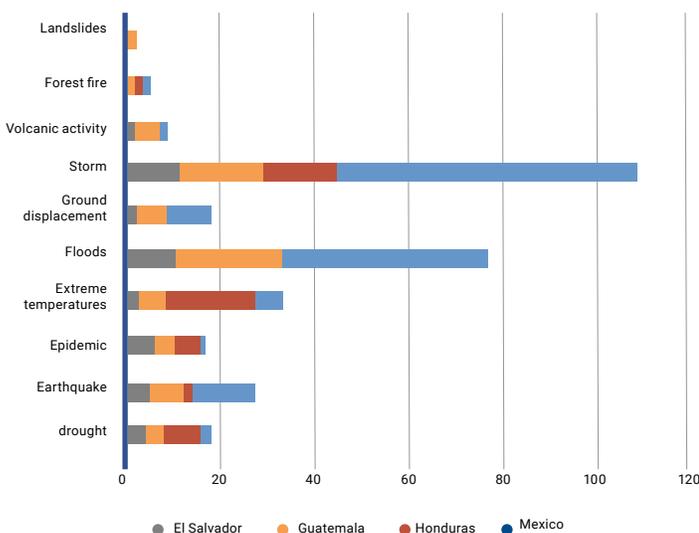
This type of disaster has an obvious economic impact: according to the information analyzed, the losses have been estimated at 76,107,236 million dollars. For example, according to data from the Economic Commission for Latin America and the Caribbean (ECLAC), storms Eta and Iota in 2020 caused damages of 780 million dollars for Guatemala⁵¹ and 1,879 million dollars for Honduras, which translated into a reduction of 0.8% in the growth of the gross domestic product (GDP) for the latter.⁵²

Expenses for damages due to disasters that occurred in Mexico and Northern Central America



Although climate change is evidenced by the increase in climate variability and the increasingly frequent recurrence of extreme disasters, not all disasters can be attributed to this phenomenon. However, the link between one and the other has become increasingly close and inevitable.⁵⁴ The fact is that due to its location and topography, Mexico and NCA, is one of the regions most exposed to climate change, despite being one of the regions that less contributes to this problem. According to ECLAC data, Central America and the Caribbean contribute around 0.8% of gross greenhouse gas emissions worldwide and less than 0.3% of greenhouse gas emissions, without considering land use change.⁵⁵

Disasters in Northern Central America and Mexico. 2010-2020



The report of the Global Climate Risk Index (GCRI), which analyzes the level of exposure and vulnerability of countries to extreme weather events, placed Guatemala in 16th place for the period 1999-2018, El Salvador in 25, Honduras in 42, and Mexico in 54 (measurement of 181 countries, the lower the position of the country, the higher its impact on deaths, economic losses, and human development). The same Index, in its 2018 report, ranked Mexico in 26th place, El Salvador in 30th, Honduras in 45th and Guatemala in 83rd.⁵⁶

The Report on the Results of the Survey within the scope of the 2015 Consultation with the Communities of Latin America and the Caribbean states that, in Honduras, El Salvador, Guatemala and Mexico, the respondents identified droughts as the main threats (20%), landslides (16%), earthquakes (15%), violence (14%) and floods (13%).⁵⁷

Storms and droughts in Northern Central America and Mexico

Source: Prepared by the authors based on data from EM-DAT, International Disaster Database, January 2021. Note: Examples of the main storms and droughts that have affected Mexico and northern Central America are presented; this is not an exhaustive compilation and there is information in the database that was not included.

- 1982 STORM PAUL**

Countries affected: Mexico
Affected: 50,000
Losses: 82,000 USD
Fatalities: 225
- 1998 HURRICANE MITCH**

Countries affected: Mexico, Guatemala, Honduras and El Salvador.
Damnificados: 23,017,000
Losses: 4,930,700
Deaths: 15,468
- 2009 DROUGHT**

Countries affected: Guatemala, Honduras and El Salvador
Affected people: 2,545,000
Losses: 27,000 USD
- 2010 HURRICANE AGATHA**

Countries affected: Guatemala, Honduras and El Salvador
Affected: 434,157
Losses: 760,000
Fatalities: 102
- 2011 DROUGHT**

Countries affected: Mexico
Affected people: 2,500,000
- 2012 DROUGHT**

Countries affected: Guatemala and Honduras
Affected: 2,500,000
- 2013 HURRICANE IGRID**

Countries affected: Mexico
Affected: 50,000
Losses: 1,500,000
Fatalities: 23
- 2014 DROUGHT**

Countries affected: Honduras, Guatemala and El Salvador
Affected people: 2,571,710
Losses: 200,000
- 2020 STORM EARL**

Countries affected: Mexico, Guatemala and Honduras
Affected: 11,206
Fatalities: 55



Thus, in the last ten years, the CRED has registered 48 storms and 12 droughts in Mexico and Northern Central America. In the Dry corridor of Central America (an area of dry tropical forest on the Pacific watershed of Central America that goes from the Pacific coast of Chiapas (Mexico) to the west of Costa Rica and the western provinces of Panama, but where the most vulnerable countries and those exposed to such events are Guatemala, El Salvador, Honduras and Nicaragua),⁵⁹ people interviewed have pointed out that the change in climate has caused changes in rainfall patterns and increased temperatures, droughts, floods, referring to the fact that ten years ago the periods of rain and drought were more predictable.⁵⁹

Situations also associated with the phenomenon of "El Niño, a phenomenon of natural origin related to the warming of the central and eastern equatorial Pacific that negatively and directly impacts agriculture and livestock in the region due to droughts and changes in rainfall patterns it causes".⁶⁰

Human mobility induced by climate change

As mentioned, the links between climate change and human mobility are more noticeable in sudden cases and to a lesser extent in slow-onset processes. However, there is great difficulty in establishing the intensity of these links and the implications of climate change as a cause of mobility. Most of the people interviewed agreed that climate change is only one of the many causes that lead people to move to other places, especially when their lives are in danger, but not necessarily the most important. In this sense, it can be established that economic, social, and political factors intersect in displacement due to climate change, in such a way that together they lead people to leave their homes.⁶¹

Displacement due to climate change and natural disasters are directly related events, for example, climate change fuels poverty, and poverty in turn fuels displacement.⁶² In addition, structural causes are also intertwined and drive displacement, situations such as access to land, inequality, access to means of production, as well as the preparation that countries may have due to extreme weather events, are some of them. For example, in the case of agricultural production based on monocultures, which is more likely to be affected by climate change issues.

In terms of figures that help measure the impact, it has been found that there is more data available on internal displacements (temporary or permanent) caused by sudden emergencies, than on those mobilities that cross one or more international borders, or on displacements that are the consequence of slow-onset climatic phenomena, where the figures are few and most of the research refers to qualitative case studies. However, research and case studies on the latter have increased considerably since the beginning of the 21st century.⁶³

The complexity of the study of climate change as a cause of human mobility can be seen in the diversity of concepts with which specialists, organizations, international organizations, and governments define it. Some of them are:

<p>Migration influenced by environmental change: that which can identify that environmental change is driving it and therefore is a factor in people's decision to migrate.⁶⁴</p> <p>Migrants for environmental reasons: people who, due to sudden or progressive environmental causes that negatively impact their lives, are forced, or decide to leave their places of residence, temporarily or permanently, with destinations either inside or outside their countries.⁶⁵</p> <p>Displaced for environmental reasons: people for whom the degradation, deterioration or destruction of the environment forces them to move within or outside their countries.⁶⁶</p>
<p>Migration for climatic reasons: refers to the movement of people due to a sudden or gradual change in the environment because of climate change, for which they are forced to leave their place of habitual residence, or decide to do so, temporarily, or permanently, within a country or across an international border.⁶⁷</p>
<p>Weather-induced planned relocation: long-term or permanent displacement of a community or a considerable part of it in which its cultural characteristics, social structures and legal and political systems are preserved and reproduced in the place of destination.⁶⁸</p>
<p>Displacement in the context of disaster refers to a situation in which people are forced to move spontaneously, independently or through an orderly evacuation, imposed by the authorities or an involuntary process of planned relocation, within or outside their country, to avoid the effects of a disaster caused by an environmental phenomenon.⁶⁹</p>
<p>Evacuation: spontaneous, recommended or forced displacement and of short duration (from hours to weeks) in which people move away from the threat or immediate impact of a disaster to a safer place or refuge to save lives and minimize the exposure to damage.⁷⁰</p>

As can be seen, there are parts of these definitions that are present in the others, which can confuse and make it difficult to define these processes. The points of conflict usually revolve around two axes: the forced or voluntary nature of mobility and the scale on which it takes place, which, in turn, implies naming the people who participate in it in different ways.

According to the Cancun Framework, human mobility in the context of disasters and climate change refers to three forms of population movement: **1) displacement**, the mainly forced movement of people, **2) migration**, the primarily voluntary movement of people, and **3) planned relocation**, the planned resettlement of people.⁷¹ In this sense, the following association is made:

Displacement	Mainly forced movement of people; ⁷² It is regularly associated with conflict, but it also applies to forced movements linked to both sudden and slow-onset disasters, evacuation is normally seen as a form of displacement even though it is short-term. ⁷³
Migration	Mainly voluntary movement of people; ⁷⁴ Ipeople can choose to change residence when affected or exposed to threats and environmental degradation. The movements of people in search of resilience and capacity to adapt to gradual threats and environmental change are known as adaptation migration. ⁷⁵
Planned relocation	Process of establishing people or communities in a new place. ⁷⁶ They can be understood as either a forced or voluntary movement, depending on the circumstances. ⁷⁷

Finally, protection will be defined as any positive action, based or not on legal obligations, undertaken by the States and aimed at people displaced by disasters of natural origin or at risk of being so, with the aim of guaranteeing full respect for their rights in accordance with the human rights law, international humanitarian law and refugee law.⁸⁶

Evidence of displacement due to climate change in NCA and Mexico

In Mexico and Northern Central America, internal and cross-border displacements due to natural disasters have been observed since the end of the last century. In this sense, displacements have been and are increasingly rising as a response strategy and search for protection, due to extreme meteorological phenomena and the climatic variability produced by climate change.⁸⁷

According to data from the Internal Displacement Monitoring Center (IDMC),⁸⁸ dFrom 2008 to 2019, there were approximately 2,952,137 new

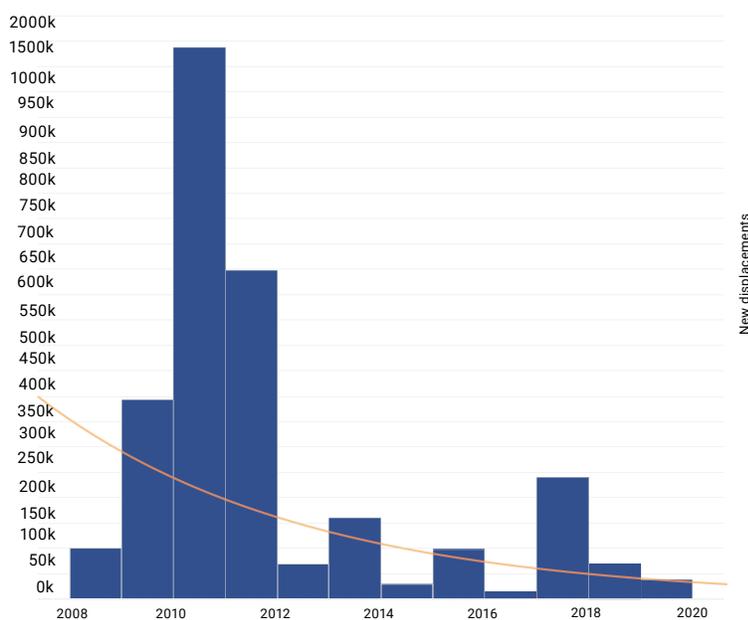
However, with respect to the scale on which such mobilities occur, there are a couple of important debates: The term **internally displaced** is used to refer to people forced to flee or abandon their places of habitual residence and to address others within their country as a consequence or to avoid the effects of armed conflicts, situations of generalized violence, human rights violations or natural disasters or man-made.⁷⁸ For their part, people who move to other countries for fear of persecution, conflict, generalized violence or other circumstances that have seriously disturbed public order are defined as **refugees**.⁷⁹ For this reason, it is common for the term climate or environmental refugees to be used for the situation of those who leave their places of habitual residence to go to others outside their countries forced by environmental issues.⁸⁰

However, although internally displaced persons due to climate change are recognized in normative frameworks and documents of intra-state applicability but agreed between several States,⁸¹ environmental factors are not considered as valid criteria to define refugee status in the 1951 Convention Relating to the Status of Refugees, so the term environmental refugee does not correspond to the legal system in force. Therefore, there are voices that argue that said classification does not respond to the current situation where economic, social, and environmental factors intersect, so these criteria could be updated.⁸² It is important to mention that through specific actions, some countries already provide support to people living in their territory whose countries have been affected by disasters of natural origin outside of the asylum legislation. For example, through Temporary Protected Status (TPS), the United States provided protection to people from El Salvador and Honduras affected by Hurricane Mitch, allowing them to live and work legally.⁸³

In this bulletin, reference will be made to **displacement due to natural disasters** to define those situations in which people are forced to flee or abandon their places of habitual residence due to these phenomena or to avoid the impact of an immediate and foreseeable natural danger to which they are exposed and without the ability to resist and recover from the impacts that they may cause.⁸⁴ When said displacement takes place within the country, there will be talk of internal **displacement due to natural disasters** and when the displacement involves the crossing of one or more international borders, the term of **cross-border displacement due to natural disasters** will be used, defined as situations in which people are forced to flee or abandon their places of habitual residence and go to other places located in other countries, due to sudden or slow-onset emergencies, or the effects of climate change.⁸⁵

New displacements due to disasters in Mexico and Northern Central America by year (2008-2019)

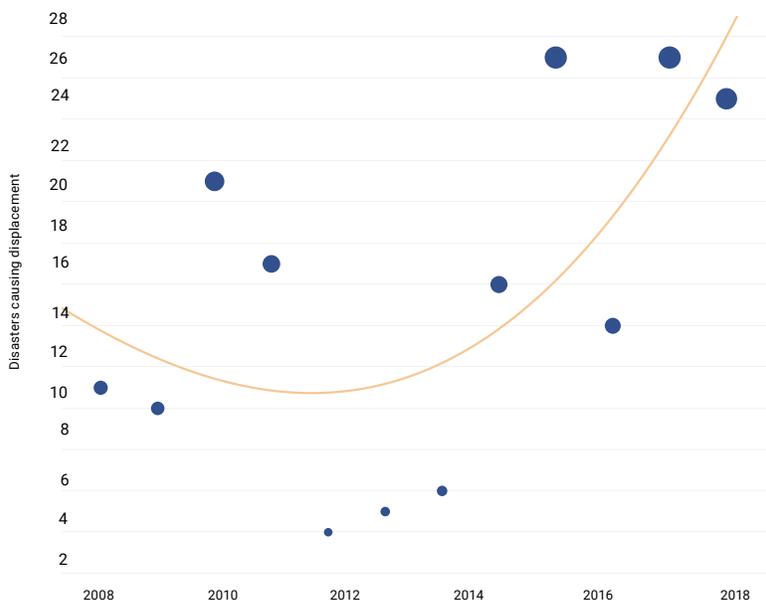
Source: Own preparation based on IDMC data, January 2021.⁸⁹



internal displacements in Mexico and Northern Central America, caused by one of the 182 natural disasters that occurred in that period that they have recorded, with an average of 15 events per year. The years 2010, 2011 and 2017 are those with the most displacements.

Disasters that occurred in Mexico and Northern Central America that caused displacement by year (2008-2019)

Source: Own preparation based on IDMC data, January 2021.⁹⁰



Some examples of displacement due to climate change

People move to rural areas that require labor (for example, for extensive crops such as coffee, sugar, banana, and melon growing areas) or to urban areas in search of sources of work (in factories or shops). These cases have an economic component, but also an environmental one, since the fact of not being able to sow and harvest in their localities is partly due to the fact that they are in areas affected by climate change.⁹² According to the research "Climate Migrations in the Central American Dry Corridor", in recent years there has been an increase in displacements associated with "Lack of work options in agriculture or uncertainty in harvest times due to rains or droughts, which are perceived as directly linked to climate change or worsening environmental conditions".⁹³

- **Temporary:** given that the communities no longer carry out two harvests a year as was customary due to irregular rain patterns and have been limited only to sowing in the second season, entire families in Honduras travel temporarily to Costa Rica for the harvest of coffee and to Guatemala and El Salvador for the cultivation of coffee and sugar cane.⁹⁴
- **Permanent:** as an example, the displacement of 200 families from 4 communities in the coastal area of the Department of Ahuachapán, El Salvador, near the border with Guatemala in 2015, where the population that lived in that region lost their homes as a result of a called Mar de Fondo that increased the sea waves up to 3 meters in height and caused the destruction of homes.⁹⁵ These families moved to the capital of Guatemala.

These studies allow us to see that displacements due to climate change also have a temporal and spatial component, if we consider that, generally, these events lead to displacements that take place, first, within the countries, later, towards neighboring countries and, finally, to more distant countries.⁹⁶

For example, recently, related to Tropical Storm Eta and Hurricane Iota in 2020, the temporary internal displacement of approximately 92 thousand people in Honduras was originated; and about 133 thousand people in Guatemala; population that has not yet been able to return to their homes in their entirety, due to the severity of the effects on their homes and livelihoods. At the same time, people from the region, mainly from Honduras, traveling in caravans, tried to go to Mexico and the United States in December 2020 and January 2021, some of which happened because of the impact of these events, in addition to violence and lack of economic opportunities.⁹⁷

These situations are not new, but as already mentioned, although the information available to measure the impact of these phenomena on the cross-border mobility of people is extraordinarily little; However, cases such as Hurricane Mitch in 1998 can be highlighted, where nearly 10,000 Salvadorans and 13,000 Hondurans fled to other countries, mainly Mexico and the United States.⁹⁸

Cross-border movements that are usually prevented by States through restrictive and repressive migration policy strategies with a national security approach that place people, including children, women and entire families, including those who move, in a situation of greater vulnerability due to climate change issues.⁹⁹ For example, the previously mentioned caravans were intercepted and detained by the governments of Guatemala and Mexico, arguing that the people represented a potential source of contagion for the Covid-19 virus.

During this period, there was a considerable increase in the number of events that have caused displacement in the region. The years 2016, 2018 and 2019 stand out as those with the highest number of cases, 27 in the

Internal displacement caused by disasters in Mexico and Northern Central America by type and name (2008-2019)

Type of disaster	Disaster name	Displacements	Percentage
Geophysical	Quake/earthquake	34	6%
	Mass movement of dry land	33	6%
	Volcanic Activity	72	13%
	Volcanic eruption	3	1%
Weather related	Fire	25	4%
	Floods	162	29%
	Wet landslide	22	4%
	Extreme temperatures	179	32%

Source: Own preparation based on IDMC data, January 2021.⁹¹

In this context, it is urgent to document at least two things: 1) record in greater detail cross-border displacements due to natural disasters, particularly those of slow-onset, for example, exploring in greater depth and detail the explanations that people offer about the causes of their displacements and 2) explore the consequences that disasters have on internal and international places of transit and destination through impact studies on these in order to foresee the necessary actions to reduce those that are negative. Although people flee to other places due to the threats of the impact of climate change, not all places have the same reception capacity, some are better prepared to receive displaced people and others less.¹⁰⁰

For example, after the passage of storms Iota and Eta, thousands of families were forced to flee to neighboring communities to take shelter, however, it has been identified that the shelters often present situations of vulnerability similar to those of the communities that they were displaced from.¹⁰¹ Furthermore, the situations of vulnerability in host communities can be exacerbated with the arrival of more people, because there are no integration strategies and support for internally displaced persons and host communities.¹⁰²

Climate change displacement in the future

It is crucial to remember that disasters are not only natural in origin, but they are also the result of human actions and decisions.¹⁰³ In this sense, according to a report by the World Economic Forum, if no action is taken to mitigate climate change, the risks to entire populations will increase alarmingly.¹⁰⁴

In a pessimistic scenario, it is projected that there will be more than 143 million internally displaced by climate issues by the year 2050 in three regions of the world: 86M in Sub-Saharan Africa, 40M in South Asia and 17M in Latin America.¹⁰⁵

The report is based on an analytical model that presents three possible scenarios: a) "Pessimistic", where there are high greenhouse gas emissions and uneven development trajectories; b) "Inclusive development", with high greenhouse gas emissions and improved development pathways, and c) "Climate-friendly", with low greenhouse gas emissions and uneven socio-economic development trajectories based on demographic and economic indicators. According to this model, these would be the projections for Mexico and Central America by 2050:¹⁰⁶

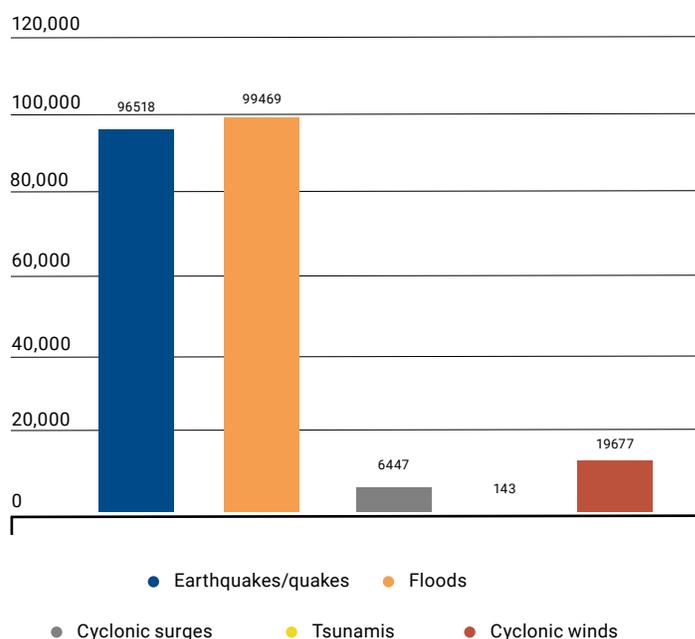
- For all scenarios, the numbers of climate migrants [term used in the Report] in the region would increase (between 1.4 to 2.1 million people on average, depending on the scenario). Although due to heterogeneity in subregional development levels, the range of estimates goes from 0.2 to 3.9 million.
- Climate migrants [term used in the Report] will go on to represent 13% of all internally displaced persons.
- On scenarios **with high emissions** there would be dramatic increases in climate migration [term used in the Report] due to the worsening in the availability of water and the productivity of the soils.
- People will leave the lower and warmer areas of Mexico and Guatemala to head towards mountainous areas, more climatically favorable, which will become hotspots of destination.

- Climate displacement hotspots will include low-lying coastal areas along the Gulf of Mexico and the Pacific coast of Guatemala.
- Cropping areas will decrease because of climate displacement, while grazing and pasture areas could increase.

For its part, according to the IDMC Disaster Displacement Risk Model,¹⁰⁷ In the coming years, Mexico and Northern Central America will continue to be the scenario of disasters of natural origin, which are expected to cause an average of 213,254 internal displacements annually, especially if the States do not take action on the matter.

Average expected annual internal displacement in Mexico and Northern Central America by type of disaster

Source: Own preparation based on IDMC data, January 2021.¹⁰⁸



Progress in the regional and international political agenda on the links between displacement, disasters of natural origin and climate change

In recent years, the need to include on the political agenda not only attention to climate change, prevention and adaptation to the risks it causes; but also to the links this has with displacement,¹⁰⁹ the challenges that this type of displacement has for the response and establishing its real dimension and impact for those who are affected.¹¹⁰ The table below gives an account of the global and regional agreements that serve as an illustration of the advances in the political agendas.

Human mobility on the climate change agenda	
INTERNATIONAL FRAMEWORK OF ACTION OF THE INTERNATIONAL DECADE FOR THE REDUCTION OF NATURAL DISASTERS (1989)	
YOKOHAMA STRATEGY FOR A SAFE WORLD: GUIDELINES FOR THE PREVENTION OF NATURAL DISASTERS, PREPAREDNESS FOR DISASTER AND THE MITIGATION OF ITS EFFECTS (1994)	
INTERNATIONAL STRATEGY FOR DISASTER REDUCTION	
HYOGO FRAMEWORK FOR ACTION 2005-2015: BUILDING THE RESILIENCE OF NATIONS AND COMMUNITIES TO DISASTERS	
COP14	
Poznan (2008)	An attempt was made to integrate human mobility into climate change policies.
COP16	
Cancún (2010)	Decision 1 “the adoption of measures to improve understanding, coordination and cooperation with regard to displacement, migration and planned relocation as a consequence of climate change, where appropriate, at the national or international level”
COP18	
Doha (2012)	Decision 3 “recognizes the work that needs to be done to increase understanding and technical competence regarding loss and damage, including, among other things, the following: [...] vi) How the effects of climate change are affecting the patterns of migration, displacement and human mobility”
NANSEN INITIATIVE	
(2012)	Has as purpose to identify effective practices and build consensus to respond to the protection and assistance needs of people displaced across borders in the context of disasters, including the adverse effects of climate change. ¹¹¹
COP19	
Varsovia (2013)	The Warsaw International Mechanism for Loss and Damage related to Climate Change Impacts is established as an institutional setting.
2030 AGENDA FOR SUSTAINABLE DEVELOPMENT	
(2015)	It warns that global humanitarian challenges threaten to reverse development gains made in recent years, including more frequent and intense natural disasters, and forced displacement. ¹¹²
COP21	
Paris (2015)	Paragraph 50 Paris Accords: “also requests the Executive Committee of the Warsaw International Mechanism, in accordance with its procedures and mandate, to establish a task force that is a complement to the existing bodies and groups of experts within the framework of the Convention, including the Adaptation Committee and the Group of Experts for the Least Developed Countries, as well as the organizations and other competent experts operating outside the Convention, take advantage of their work and seek their participation, as appropriate, in order to develop recommendations on integrated approaches to avoid, minimize and cope with displacement related to the adverse effects of climate change”
SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030	
Sendai (2015)	This Framework recognizes displacement by disasters and that climate change exacerbates the intensity and frequency of disasters. As a follow-up to this Framework, the United Nations published the Guide on Disaster Displacement: How to reduce risk, cope with its effects and strengthen resilience. ¹¹³
NANSEN AGENDA	
(2015)	It consolidates the results of a series of regional intergovernmental consultations and civil society meetings convened by the Nansen Initiative.
WORLD HUMANITARIAN SUMMIT	
(2016)	Identifies displacement in the context of disasters as a current humanitarian challenge.

NEW YORK DECLARATION FOR REFUGEES AND MIGRANTS	
(2016)	It recognizes the adverse effects of climate change or disasters, some linked to climate change or other environmental factors as drivers of migration. ¹¹⁴
UNITED NATIONS HUMAN RIGHTS COUNCIL	
Cancún (2010)	It recognizes the vulnerabilities of migrants in the face of extreme weather conditions and highlights the urgency and importance for States to combat the adverse consequences that the effects of climate change have on displaced persons.
COP24	
Katowice (2018)	The work is recognized, and the recommendations of the Task Force on Displacement are endorsed, on integrated approaches to avoid, minimize and address displacement related to the adverse effects of climate change.
WORLD PACT FOR SAFE, ORDERLY AND REGULAR MIGRATION	
(2018)	It includes references and commitments related to the relationship between migration, the environment and climate change and the necessary measures for this to take place in a safe, orderly, and regular manner. ¹¹⁵
COP25	
Madrid (2019)	Parties are asked to address the gap between science's recommendation to avoid the danger of climate change and the current state of their own emissions. It mentions that any climate policy must be permanently updated based on advances in science. It recognizes the importance of maintaining the balance of the ocean and the use of the land for the proper functioning of the climate system. It does not refer to the regulation of carbon markets, because the countries failed to seal a common commitment in this regard. ¹¹⁶

Source: IOM, March 2019.¹¹⁷

Responses of civil society and international organizations to displacement due to climate change in Mexico and Northern Central America

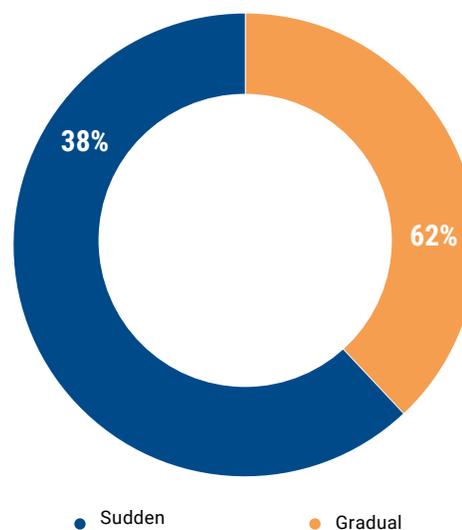
This section presents the links between climate change and displacement, the current responses and the existing challenges for their coping and research, identified by civil society organizations and international organizations. The information was collected through a brief online questionnaire, which was answered by 32 people with different profiles: Coordination (14), Direct attention (5), Advice (4), Direction (3), Research (3), Supervision (1), Liaison (1), Management (1); working in 26 organizations (12 international, 13 national and 1 regional), located in Honduras (8), Guatemala (7), Mexico (7), El Salvador (5), Panama (2), Costa Rica (2), Palau (1).

What do civil society organizations and international organizations know about the links between climate change and displacement?

Climate change as a cause of displacement. Almost 100% of the people referred to climate change as a cause of displacement, mainly internal, of people in the region. This is the clearest and most recurring link that people identify between climate change and displacement. It is important to note that, presumably due to the profile of the people surveyed, there were no references of this type of displacement in Mexico.

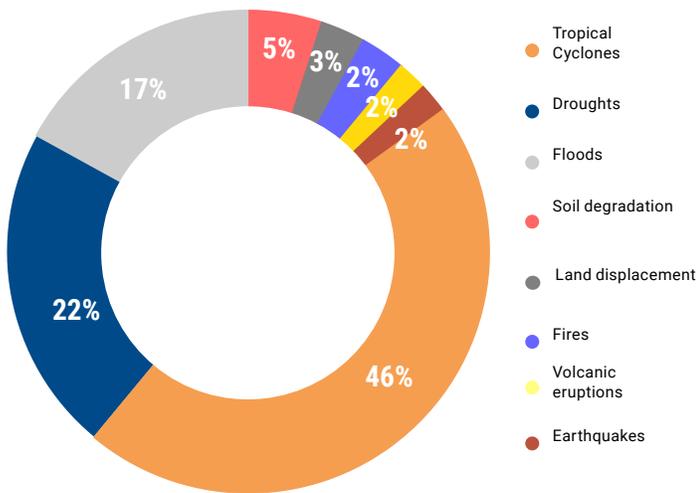
Climate change as a cause of disasters that force people to move. 100% of people associate disasters of natural origin as events caused by climate change that generate displacement. However, sudden disasters were the most frequently mentioned as causes of displacement (62%), which seems to indicate that gradual disasters are less visible.

Expected average annual internal displacements in Mexico and Northern Central America by type of disaster



Tropical cyclones, floods and droughts are the naturally occurring disasters caused by climate change identified as causes of displacement. Tropical cyclones were the type of disaster most referred to as a cause of displacement with 46% of mentions (mainly in their tropical storm and hurricane phases); followed by droughts with 22%, floods with 17%, soil degradation with 5%, landslides and forest fires with 3%, respectively; and volcanic eruptions and earthquakes with 2%, respectively. Finally, 6 people said they had not observed any type of natural disaster.

Observed disasters causing displacement



Regarding the previous points, it is important to mention the following two points:

- The significant identification of floods and tropical cyclones as a cause of displacement in the region (mainly of Iota and Eta, both in 56% of mentions, to a lesser extent of Mitch with 31%, and Stan and Amanda with 6%, respectively). On the contrary, the low identification of droughts as a cause of displacement stands out, similar to what happens, even more pronounced with other disasters. Which seems to indicate that sudden disasters are more easily identifiable and/or make a greater impression on people.
- Although it only happened on a couple of occasions, it is striking that people have identified earthquakes and volcanic eruptions as disasters caused by climate change. Since there is still no evidence to support such a relationship. In this sense, this situation may suggest a lack of clarity on the subject.

The above points were answered by most of the people with relative clarity. However, there were other aspects of the survey where responses were more superficial, or no response was obtained. It was practically those people who collaborate in organizations with more experience on the subject, either from direct assistance and/or research (less than 15% of those who responded to the survey), who were able to answer the following points.

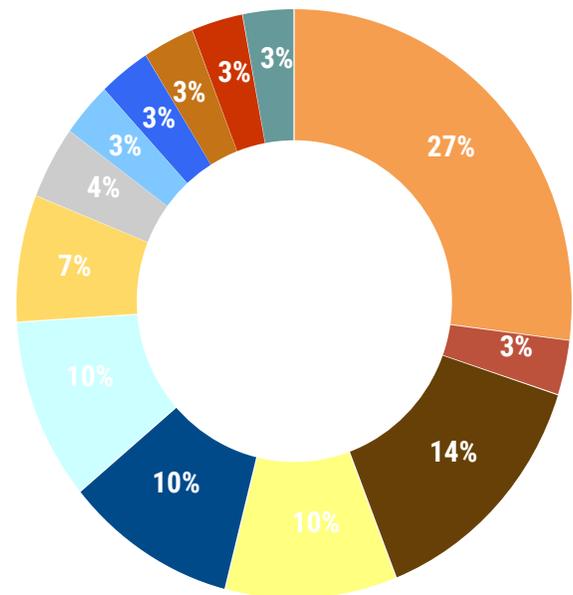
Climate change negatively impacts people, their livelihoods, and the ability to provide protection. Some people could refer that the main cha-

acteristic of climate change and disasters is that they do not allow people to have the minimum economic income they need to live. They recognize that the effects are differentiated and that they tend to put people's lives at risk (either due to direct causes of disasters, such as drowning, but also indirect causes, such as malnutrition), particularly those who live in areas of risk. Finally, it addresses that the impacts of climate change tend to complicate the humanitarian response provided by organizations, as well as the reception capacity of the communities themselves.

Climate change is neither the only nor the most important cause of displacement. Some of the people emphasized making it clear that, as a cause of displacement, climate change is always accompanied by other types of causal factors, for example, poverty, violence, including sexual violence, structural and systemic problems. Furthermore, compared to these other factors, climate change is not the reason that has the greatest weight in the decision to move. The complexity of relating, with evidence, to climate change as a cause of displacement was also mentioned.

Climate change remains invisible despite the increase in natural disasters. People mentioned that even though disasters occur year after year, climate change is still not adequately addressed. While the affected people do not identify it either, presumably for having normalized its effects. Finally, the serious and irreversible effects that climate change causes were mentioned, but also its double face, as cause and consequence.

Characteristics of impacts of climate change

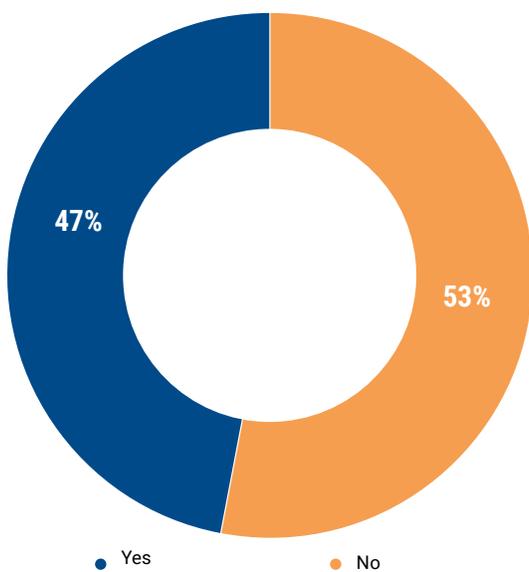


- Affects livelihood and income
- Destroys communities and decreases their carrying capacity
- Recurrent
- Differentiated effects
- It is invisibilized and normalized
- Complicates humanitarian response
- Causes serious and irreversible damage
- Result of excessive environmental exploitation
- Causes pollution
- Affects people living in at-risk areas
- It endangers people's lives
- Affects people living in at-risk areas
- Linked to other causes of displacement
- Complex and multifaceted

How are international organizations and agencies responding or could they respond to the effects of climate change and displacement?

Almost 50% of the people consulted said that their organization has dealt with cases of displacement caused by climate change and they reported that they had some type of strategy, project, or program specifically to address this problem. Which indicates that this issue is already on the agendas of various organizations in the region.

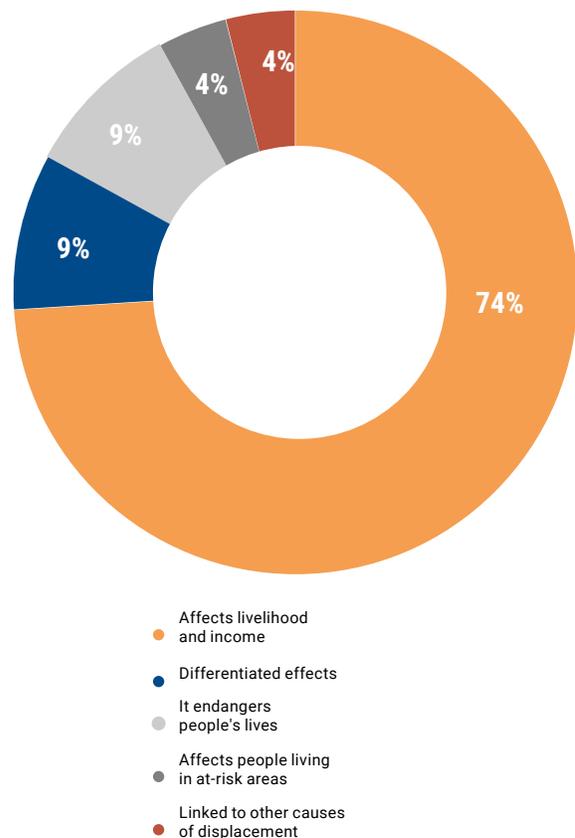
Assistance to cases of displacement due to climate change



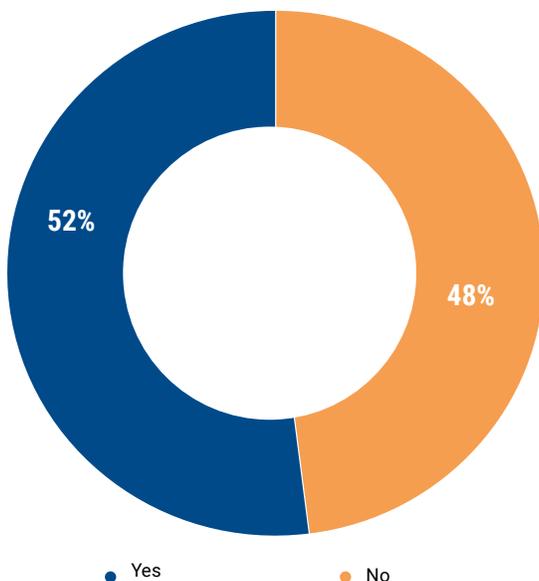
Direct assistance is the most recurrent type of action regarding activities related to displacement due to climate change. The humanitarian response stands out here with 53% of mentions, followed by legal assistance with 12% and referrals to international organizations for follow-up, resettlement within the framework of ETA, psychosocial care, medical care, integration, and job training, all of them with 6% mentions (1 mention), respectively.

Actions around advocacy, research, prevention, and support for organizations are the activities least referred to around the responses provided to the problem. These types of actions were referred only once or a couple of times each. Which, considering the findings of the previous points, seems to indicate, on the one hand, that the response to the problem is mainly reactive and not preventive and, on the other, that sufficient inputs are not being generated through the research that allow people to be trained in risk management and to make public policy recommendations, or to manage resources to support organizations to assist or improve their attention to the problem.

Line of action to address displacement due to climate change



Specific assistance to displacement due to climate change



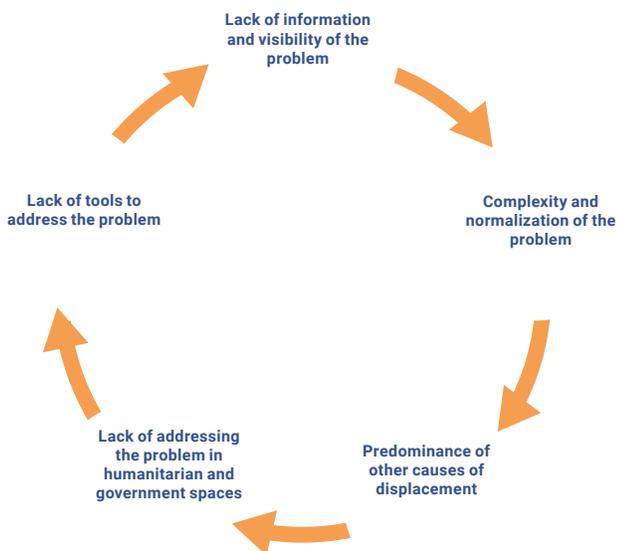
There is a lack of clarity on how to incorporate climate change displacement into the work agenda of humanitarian organizations that have not yet incorporated the issue. 99.4% of the people who said that their organizations did not assist cases of displacement due to climate change, agree that they could begin to do so considering the issue in the activities they currently carry out. While 1 person said that there was no way to do it due to legal and regulatory issues, where attention to this mobility profile, particularly of those who cross international borders, is not contemplated.

This point is crucial, since it seems to indicate that, although all the organizations identify the problem as something important to assist, most of them are not clear, except in general terms, how to do it. For example, only 2 of the 7 suggestions provided (29%) have a relatively specific level of depth:

- Educating for the care of the environment and risk management
- Addressing the issue of respect for human rights
- Influencing authorities
- Making the issue visible with a gender perspective
- Generating alliances with government authorities
- Training and providing technical assistance to government authorities.
- Generating reforestation projects

The lack of information on the problem, its complexity and normalization, as well as the intensity with which other factors cause displacement in the region causes the underrepresentation of climate change. Among the 13 people who considered that there is an underrepresentation of the problem as a cause of displacement, the lack of information about the problem and its complexity (29%), the predominance of other displacement factors (mainly economic and violence), the normalization of disasters and the lack of capacity to link the multiple factors that force people to leave their places of residence (41%) stood out. Which in turn causes the problem not to be sufficiently addressed in the spaces where the strategic lines of care and work are defined (12%), that governments do not have the will, or allocate a budget for their care (12%) and that organizations also do not have the legal tools to do so (6%)

Due to the lack of information and understanding of the problem and that there are other causes that are considered more important and urgent to address, this problem is not being sufficiently addressed by the humanitarian sector as well as by the states.



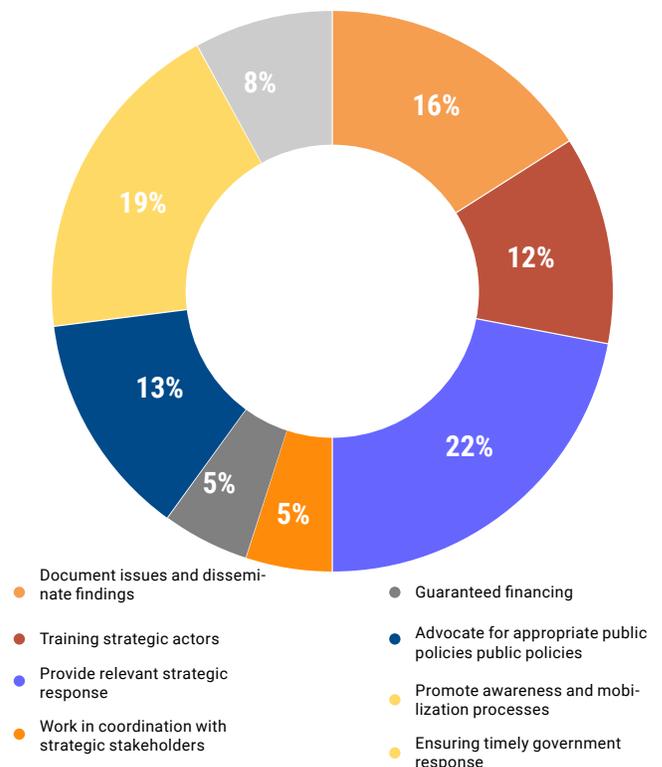
What are the main challenges that international organizations and agencies see in relation to addressing the issue of climate change and displacement?

Document the problem in order to provide appropriate answers. One of the most mentioned challenges was the need to document the problem, to generate appropriate responses, both from the humanitarian sector and from the states.

Raising awareness and mobilizing people is a crucial point to address climate change and the impacts it generates in communities. In addition to allowing the development of pertinent strategies to respond to the problem, the people stated that it is necessary to document and make the problem visible in order to raise awareness among people, both in the humanitarian sector, and in public officials and communities, particularly in the prevention of risks and responsible use for resources.

Networking and training of those who work to address the problem is crucial to face it in the way it is required. Achieving influencing on the improvement of public policies and training strategic actors are challenges that go hand in hand and are closely related to working in a network, guaranteeing the timely response of the states, and ensuring the required financing. One possible interpretation is that a better documentation of the problem, which allows raising awareness and mobilizing people, will also provide the elements to work in coordination with strategic actors.

Main challenges in responding to the impacts of climate change on displacement



Finally, although the people did not go into greater detail, nor was the research instrument intended to do so, the answers provided allow us to see in a general way the issues that the organizations consulted see as priorities to face the problem. This information being a possible route to deepen the knowledge about the points necessary to strengthen the response of organizations in the region.

Provide strategic and relevant responses	Advocate for the improvement of public policies	Document issues and disseminate findings	Promote awareness and mobilization processes
<p>Quick humanitarian assistance</p> <p>Legal assistance (management and guidance in procedures)</p> <p>Comprehensive care for re-settlement</p> <p>Mental and physical health care</p> <p>Support in risk and population management</p> <p>Adaptation to and mitigation of climate change</p> <p>Community response strategies</p> <p>Integration of displaced people</p> <p>Implementation of environmental improvement and sustainable development projects</p>	<p>Incorporation of a human rights and gender approach</p> <p>Prioritization of the defense of natural resources and their equitable distribution</p> <p>Imposition of penalties/ taxes for misuse of natural resources</p> <p>Generation of development plans that consider the problem.</p> <p>Reformulation of laws to provide international protection.</p> <p>Improvement of migration policies</p> <p>Distribution of supports to implement adaptation strategies.</p> <p>Go in depth into the subject in the framework of the MIRPS</p>	<p>Differentiated approach to gender issues.</p> <p>Differentiated approach to vulnerability profiles.</p> <p>Adequate dimension of the problem</p> <p>Projections of the problem by country</p>	<p>Generation of a risk prevention culture</p> <p>Generation of a culture of responsible use of natural resources</p> <p>Increased political will of governments</p>
		<p>Work in coordination with strategic actors</p>	<p>Ensure timely response from governments</p>
		<p>Improved coordination with governments</p>	<p>Improvement of the infrastructure</p> <p>Adequate conditions for the access of humanitarian teams where they are needed.</p> <p>Equitable distribution and access to land</p>
		<p>Train strategic actors</p>	
		<p>Humanitarian sector</p> <p>Government Institutions</p> <p>Communities</p>	<p>Guarantee required financing</p>

El Salvador

Context and vulnerabilities to climate change

According to the **Global Climate Risk Index 2020**, El Salvador stands **among the 50 countries at most risk**, particularly ranked 30th.¹¹⁸ Some of the characteristics that explain this position are the socio-environmental crisis that the country suffers, the high population density, the deterioration of its ecosystems and its geographical location of **high exposure to extreme hydrometeorological events**.¹¹⁹

According to ECLAC, from 1990 to 2008, an average of 1.5 disasters of natural origin were registered annually, which caused the death of approximately 7,000 people, damage to 2.9 million inhabitants and annual material losses of 470M USD.¹²⁰

By 2020, the consequences of the **tropical storms Amanda and Cristobal stand out and to a lesser extent Eta and Iota** as the most recent affectations, which took place in a scenario already complicated by the pandemic of **Covid-19**.¹²¹ In this context, the first two storms affected approximately 150 thousand people, of which 12,600 had to be sheltered in shelters, in addition, they damaged 2,800 hectares of crops and 392 schools.¹²² While the last two did not have severe impacts.

On the other hand, the country is part of the **Central American Dry Corridor (CSC)** along with Mexico, Guatemala, Honduras, Nicaragua, and Costa Rica. The eastern area is the most affected by this phenomenon, where there is an absence of rainfall for long periods, damaging the productivity of the land in rural sectors.¹²³ These adverse weather conditions cause food insecurity situations in the CSC. According to the World Food Program, in 2014 there was a **significant correlation** between the precipitation deficits as a consequence of El Niño and the **increase in irregular migration to the United States**.¹²⁴

Finally, the volcanic chain that runs through the country and its geological fault system make it especially vulnerable to suffering **seismic events**. In the 2001 earthquake, 1,159 people died and 8,122 more were injured, in addition to the damage to infrastructure.¹²⁵

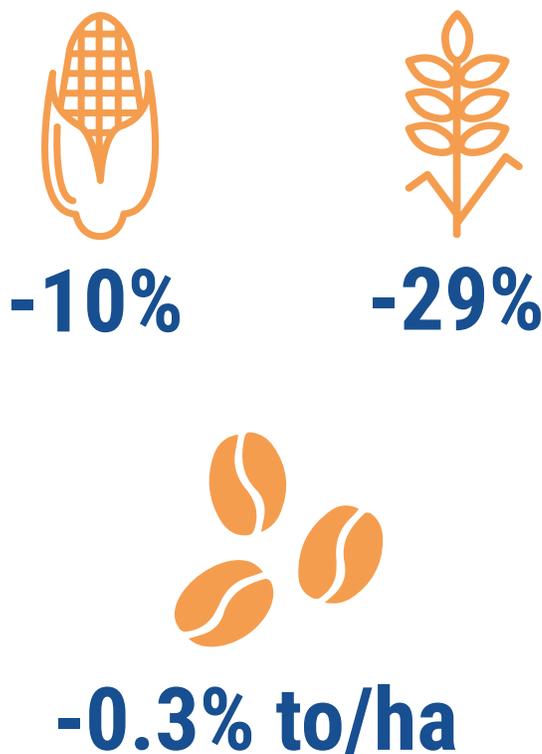
Main impacts of climate change and profiles in situations of vulnerability

It is complex to identify specific data on the populations most affected by the impact of climate change. However, according to the Ministry of Environment and Natural Resources, the **environmental vulnerability**, and the climate risks that the country experiences include **89% of territory and affect 95% of the population**. Therefore, environmental vulnerability is a shared trait among the Salvadoran population.¹²⁶ According to the Internal Displacement Monitoring Center, from 2008 to 2019 El Salvador presented 102,164 **new internal displacements due to disasters: 64% floods and 30% storms**.¹²⁷

Despite this common characteristic, the impact of climate change in certain sectors and profiles has been evidenced in a more systematic way. The smallholder farmers who reside mainly in the east of the country dedicated to the cultivation of corn, beans and coffee will suffer a decrease in their production due to increased warming, as well as a greater frequency and intensity of droughts and other extreme weather conditions.¹²⁸

the impact of climate change on smallholder farmers

Droughts, floods and prolonged rains damage small farmers' crops. Faced with this situation, one survival strategy is to abandon their land and start a migratory process to improve their living conditions. These are the estimates of the decrease in the production of corn, beans and coffee for the year 2070:



Own preparation infographic based on the information in Climate risk profile: El Salvador

This impact of climate change on agriculture is especially relevant if it is considered that **21% of the population is dedicated to this sector and contributes to 9% of the GDP**. These circumstances will particularly affect coffee producers, since the **up to 40% increase in temperatures by 2050** can make it exceedingly difficult to grow. It should be noted that only 5% of the hectares of cultivated land have an irrigation system. There are no colder highlands where the harvest can be moved, **limiting livelihoods** of these people.¹²⁹ In addition, the weakness of the country's food sovereignty could lead to food shortages. This context will entail a **loss of sources of employment** as dependence on the importance of food increases and **raise product prices**. Ultimately, these problems can have an impact on the **motivations** that the affected people take into consideration to **start a cycle of migration and displacement**.¹³⁰

On the other hand, **people dedicated to fishing and tourism in coastal areas** are negatively impacted by rising sea levels, rising sea surface temperatures, salinity, and increasingly reduced and variable rainfall. It is estimated that the country's coastal zone may lose between 10 and 28% of its territory by the end of the century. These circumstances could force the affected people to **look for other livelihoods and other places to reside**, either in another area of the country or abroad.¹³¹ In addition, a 13% decrease in the flow of the country's main river, the Lempa, is projected. These patterns can lead to most of the population experiencing water stress, suffering from a shortage of water for domestic and agricultural use, directly affecting access to food. Landslides and floods have increased in frequency in recent years, causing severe damage to infrastructure such as roads, schools, and health centers. Finally, energy security can be seriously undermined by ongoing droughts: 36% of power generation comes from hydroelectric sources.¹³²

An example of populations where permanent migration is linked to the dryness of the soil and the inability to produce crops, combined with high poverty rates, is in the Salvadoran communities of Agua Fria and Alto Nuevo, where men and women migrate for these reasons, and, although their inhabitants have been given new land to live on, they cannot sustain themselves there; therefore, they plant their crops elsewhere or look for ways to move from one place to another. In these places the land is not fertile and adaptation to climate change has been mired in poverty.

Similarly, in some communities, migration is caused by extreme weather events exacerbated by climate change. For example, in 2015, at the end of the dry season, there was a climatic event called a swell, which increased the size of the waves; waves up to 3 meters high covered around 300 meters of beach and destroyed the homes of more than 200 families in 4 communities in the coastal zone of the municipality of San Francisco Menéndez (Department of Ahuachapán). Because it is located near the border with Guatemala, one of the shelters for affected families was installed there, resulting in migration to Guatemala. The Environmental Observatory of the Ministry of Environment and Natural Resources (MARN) suggests that the increase of increasingly faster waves is due to climate change and the El Niño phenomenon, which causes the sea level to rise.

State responses to the impact of climate change

First, it should be noted that the country does not have a National Policy for Risk Prevention and Disaster Mitigation.¹³³ However, there is an institutional framework that structures the different efforts aimed at tackling the impact of climate change:

The **National Climate Change Plan** adopted in 2015 established the country's priorities in adaptation and mitigation to climate change. Its main objective is "to build a society and an economy resilient to climate change and low in carbon". This Plan identifies, guides, and articulates the fundamental actions to respond to the challenges of gradual development, especially regarding agriculture and food security. Additionally, it recognizes that, both **extreme events**, Like the **slow-onset events**, can lead to **forced displacement of communities**.¹³⁴

It consists of 8 components, where **Component # 3 stands out: "Program for the management of biodiversity and ecosystems for adaptation and mitigation to climate change"**. This axis is oriented to the *transformation of agricultural practices and diversification of production with climate-resilient alternatives and sustainable development of fishing activity; development of research, technologies and capacities in climate-resilient crops and agricultural production*, affecting some of the most important vulnerabilities experienced by certain sectors of the Salvadoran population.¹³⁵

Honduras and El Salvador have plans to face climate change. It is a positive development because it puts climate change on the institutional agenda. However, the institutional framework of the countries does not usually incorporate climate change into their mechanisms for various reasons: they consider it an additional effort and it represents a different way of working. Centralizing the approach to climate change does not generate results in the territories. It needs to be concretized in programs and plans to combat climate change so that they are effective in addressing the conditions of inequality and violence in which communities live.

Humanitarian organization in El Salvador

On the other hand, the country presented its **Determined National Contributions** (CND) in November 2015, signed the **Paris Accord** in April 2016, and ratified this agreement in March 2017. Among the goals established in its CND, the following stand out: the 46% reduction in greenhouse gases by 2025, prioritizing the following topics: strengthening of the institutional and legal framework for the formulation and sustained implementation of national contributions; Climate Change Law, Territorial Planning and Development Law; infrastructure; water resources; agriculture, livestock and forestry; ecosystem restoration, energy; health, environmental sanitation, work and social prevention and transport. However, meeting these goals was conditioned by the absence of extreme weather events linked to climate change. Therefore, its degree of implementation cannot be assessed.¹³⁶

At a specific level of migration policy, it is worth highlighting the **Special Law on Migration and Foreigners**. In its article 85, it grants the power to the General Directorate of Migration and Immigration **to facilitate the entry or stay of foreigners whose countries of origin have been affected by disasters**. It also allows the extension of tourist visas to people "in cases of anthropogenic disasters, epidemics, natural phenomena, humanitarian issues [...]".¹³⁷

However, the institutions **do not have official data** that allow sizing the relative weight of **climate change as a driving force**. Neither do **specialized research** exist to analyze the **link between migration and climate change**. For example, in the figures compiled regarding the push factors that cause displacement prepared by the General Directorate of Migration and Foreigners (DGME) and the Ministry of Foreign Affairs, no specific questions are included in this regard.¹³⁸

Honduras

Context and vulnerabilities to climate change

The analysis of the structural conditions of the country reveals how **climate change** represents an **additional obstacle** that the Honduran government must face to **overcome development challenges**.¹³⁹

The territory suffers a **high exposure to** climate-related risks, such as **hurricanes, tropical storms, floods, droughts, and landslides**. These events especially impact agriculture and infrastructure.¹⁴⁰ The Global Climate Risk Index indicates that it was the second country most impacted by hurricanes in the last decade.¹⁴¹

Period	2000 - 2019	2019
Global Climate Risk Index	44	79
Climate Risk Score	57.00	73.33
Fatalities (range)	68	90
Fatalities per 100,000 inhabitants (range)	57	93
Losses in millions of dollars (range)	78	72
Losses per unit of GDP in percentage (range)	41	46

Source: Germanwatch, January 2021.¹⁴²

Exposure to climatic events is a recurring theme. In 1998, it was estimated that Hurricane Mitch destroyed approximately 70% of the country's crops and infrastructure, causing more than 10,000 deaths and material losses of about three billion dollars.¹⁴³

The **access to water** is one of the most obvious impacts. Water scarcity and the availability of its supply represent a short-term risk. **Rising temperatures and reduced rainfall exacerbate droughts, especially in the Dry Corridor**. In addition, rapid urbanization has brought with it a deterioration in the delivery of drinking water service; For its part, the rise in sea level, together with little territorial planning and weak governance, has endangered the aquifers located along the coast.¹⁴⁴

Main impacts of climate change and profiles in situations of vulnerability

"Displacement as such associated with climate change is invisible in the country because it occurs gradually."

Humanitarian Organization based in Honduras

Climate change affects in a multidimensional way certain sectors and profiles of Honduran society.

From the energy sector, the country set the goal of increasing the use of renewable energy by 60% by 2022. However, reduced rainfall, prolonged droughts, and increased evaporation reduce the flow to hydroelectric systems, as in the case of the Lempa River, one of the main sources of electricity production where the entrances to the main reservoirs that are part of the Lempa river watershed have been reduced by 20%.¹⁴⁵

On the other hand, the increase in runoff, soil erosion and sedimentation of the Lempa river reservoirs **makes access to water difficult for communities located in the highlands of the interior of the country and urban coastal towns**.¹⁴⁶

Likewise, as is the case in El Salvador, **smallholder farmers** are one of the profiles most affected by the impact of climate change. The stability of the climatic conditions is essential for the cultivation of the main products: **corn, beans, rice, and sorghum**. According to the testimony of a humanitarian organization, the **poor families in rural areas** and the **smallholder producers** are in the most vulnerable situation as they lack the necessary resources to adapt. It is estimated that by the year 2050, **high temperatures and decreased rainfall** will reduce production by 12% for corn and 32% for beans compared to 2000. It should be remembered that two consecutive droughts from 2014 resulted in a loss of 96% of corn yields and 87% of beans in the Dry Corridor. This impact triggered high levels of food insecurity, malnutrition, and a mass migration flow to urban areas.¹⁴⁷

People dedicated to **coastal fishing** may see their livelihoods threatened due to **changes in temperatures and rainfall**. The **ocean acidification and sea level rise** also endanger the **marine fishing** which is already in a pressure position.¹⁴⁸

According to the Internal Displacement Monitoring Center, during 2019 it registered 390 new displacements due to disasters.¹⁴⁹

Among the profiles with the greatest vulnerability, **People with disabilities** stand out, those who suffer from invisibility and lack access to humanitarian aid. There is no specific information on people with disabilities who live alone and how many of them have some social support. The old people also suffer from difficulties in accessing emergency shelters. The help available has not been tailored to their needs.¹⁵⁰

CLIMATE PROJECTIONS AND KEY CLIMATE IMPACTS

Own preparation infographic based on information from Climate risk profile: Honduras



Increased frequency of extreme rainfall and floods



Decreased rainfall with more intense and prolonged droughts



Loss of life and livelihoods



Loss of production and rising food prices



Loss of fisheries and associated livelihoods



Water quality decline and scarcity

Finally, at the geographical level, in the **northern** part of **Honduras**, in the area of **Santa Barbara**, difficult to access; **the indigenous and Afro-descendant communities** do not receive humanitarian aid or whatever they get does not cover all the demand. The **language** also represents a barrier, since there are few people who speak indigenous languages, as well as **infrastructure barriers** as bridges, which aggravate the vulnerability of the populations in these areas, because they are isolated in times of emergency. The context places them in a position of vulnerability, regardless of the profile they represent.¹⁵¹

State responses to the impact of climate change

“There is no consistency or coherence between the government discourse and the programs and projects they implement for the adaptation and mitigation of climate change”

Humanitarian Organization based in Honduras

The country has adopted a series of mechanisms and policies to reduce the impact of climate change on its territory and its population.

On the one hand, in the context of **Nationally Determined Contributions** (NDC), it is committed to **15% reduction in greenhouse gases by 2030**. The process for the formulation of the **CND** was a positive experience, since it considered the participation of various sectors, including civil society, academia, and the State.¹⁵²

The country has a **Climate Change Law** since 2013, which establishes *principles and regulations necessary to plan, prevent and respond in an adequate, coordinated, and sustained way to the impacts of climate change*.¹⁵³

Likewise, in May 2018, the Presidential Office of Climate Change and the Secretariat of Natural Resources and Environment of the Republic of Honduras, approved the **country’s action plan to meet its commitments to the Paris Accord**. This constitutes a **Roadmap** that identified **five priority**

areas established by the government for the implementation of its NDC: “review the NDC; prioritize a list of current and established mitigation and adaptation efforts; develop roadmaps for priority actions and sign memorandums of understanding with key partners; establish a monitoring, reporting and evaluation system; and strengthen inter-institutional coordination for climate action”.¹⁵⁴

In the case of Honduras, after Mitch 22 years ago we believed we were better prepared, but this has not been the case: natural resources have been unprotected and no importance has been given to them, for example, to land use planning. The preparation and management of risks, as well as a more sustainable management of natural resources is essential to reduce the impact of climate change as a factor of displacement.

Humanitarian organization based in Honduras

At the immigration policy level, it is worth highlighting the **National Climate Change Strategy**. This document refers to the **migratory dimension of climate change**, specifically because of **its negative impacts**: “The adverse effects of climate change already observed and projected include extensive relocation and migration processes at the national, regional and international levels”. Precisely one of its objectives is to “establish and **strengthen a legal and institutional framework to address** the special conditions of **climatic migrations**, based on the doctrine of human rights and within the framework of adaptation strategies to climate change”. At present there is no evidence of the development or implementation of this approach, however, it constitutes an **innovative process** for its approach to climate migration.¹⁵⁵

It is important to note that, although since 2016 a bill has been promoted to address internal displacement in the country, which has not yet been approved, it does not include displacement induced by climate change.

Responses of humanitarian organizations to the impact of climate change

As a result of the survey applied with humanitarian actors in the region, the following results were identified.

In general, the **Honduran-based organizations that responded to the survey have managed cases of displacement of people induced by climate change**, but **do not have a specific strategy or program** about it. This response is activated in the context of an emergency, but it is not developed in a cross-cutting manner. Furthermore, they agree that the Climate change is an underrepresented factor in analyzes and reports on displacement due to the difficulty of sizing it and the greater interest that the factors of generalized violence arouse as triggers of the cycle of displacement.

On the other hand, **Care International** has programs and projects focused on **improving food security** focusing on supporting implementation by affected families through **adaptation measures to reduce their vulnerability to climate change** using adapted seeds or implementing new irrigation infrastructure systems.¹⁵⁶

People always say "I lost my harvest; I lost my coffee ... I prefer to lose my harvest because it is more expensive for me to take it out and sell it ... I fell into a crisis, I got into debt ... Year after year I lose my crop. At this level, there is no discourse on climate change as a factor causing displacement.

Humanitarian Organization based in Honduras

For its part, **COPECO**, along with **WFP** and **OCHA**, made some **analysis from telephone surveys** to evaluate what **adaptation strategies** the **populations affected by tropical storms Eta and Iota** were activating.¹⁵⁷

Furthermore, the **International Federation of the Red Cross and Red Crescent** is developing a map to verify whether areas that were affected by droughts have now been affected by floods. They have identified a particularly important **impact in livelihoods**: entire families have lost all their crops in rural areas, leaving them without job opportunities.¹⁵⁸

Finally, the **World Food Program**, through its **Resilience Program**, provided **food assistance to 3,080 households distributed in 16 municipalities** corresponding to the provinces of Choluteca, El Paraíso, Francisco Morazán, and La Paz. It also contributes to **adopt good agricultural practices, to guarantee the management and conservation of land and water**, the construction of aquatic crops, irrigation systems, training, and the establishment of agroforestry nurseries.¹⁵⁹

This same organization has indicated that the country experiences a **high vulnerability to extreme weather events**, which affects **food insecurity**. In the southern and western regions, **four years of continuous drought** have undermined people's ability to ensure their food sovereignty. The **affected people** have resorted to **migration or sale of their assets** as a response mechanism.¹⁶⁰



Photo: RC/Christian Jepsen, 2020

Guatemala

Context and vulnerabilities to climate change

Vulnerability to climate change is assessed using various global and regional indices, and in most of them, Guatemala is considered very vulnerable. To mention a few, The Economy of Climate Change report in Guatemala stated that *“The Global Adaptation Index of the University of Notre Dame, which measures the vulnerability and preparedness of countries in the face of climate change, classified Guatemala with an extremely high vulnerability and an extremely low preparedness in 2014, ranking it 116th out of 180 countries”*.¹⁶¹

On the other hand, the Germanwatch Global Climate Risk Index (CRI) reported that in 2019 Guatemala was ranked 62nd in risk of extreme weather events (meteorological events such as tropical storms, winter storms, severe weather, hail, tornadoes, local storms; hydrological events such as storm surge, river flooding, flash flooding, landslides; weather events such as frost, forest fires, droughts).¹⁶²

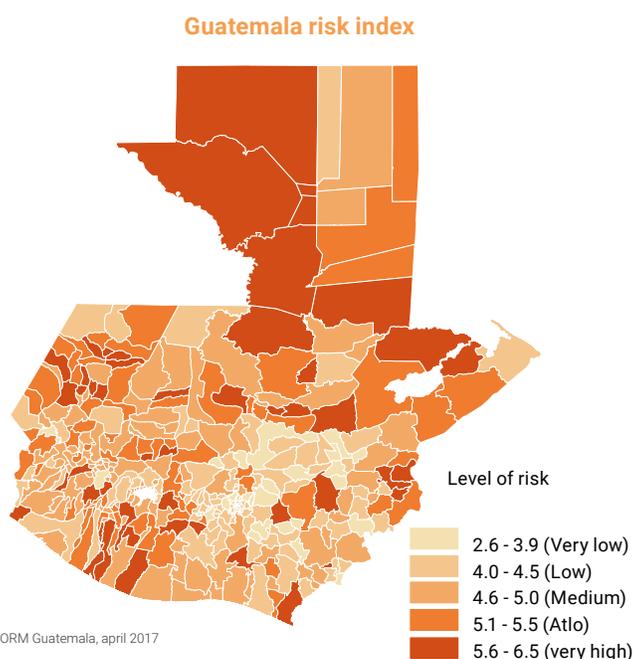
And finally the Risk Management Index for Latin America and the Caribbean INFORM LAC that measures the risk of disasters and humanitarian crisis in the region on a scale of 0 to 10, where 10 represents a higher level of risk, found that Guatemala presented a risk level of 8.3; and in the three dimensions of the index it was found that: the level of danger and exposure was 8.5; vulnerability 8.3 and lack of capacity 8.1.¹⁶⁴ At the municipal level, of the 340 municipalities in the country, 15% are at very high risk, 11% high, 24% medium, 28% low and 22% very low.¹⁶⁵

Considering that the average precipitation has increased, in the last decades there have been extreme events related to this phenomenon in the years 1997, 1998, 2010 and 2011; in the same way, the average temperature has increased by 1.5° C from 1961 to 2015.

Extreme events have also increased. Between 1998 and 2011 there was a high cyclonic activity; In 2012, 2014, 2015 and 2018 there were severe and prolonged heat waves, as well as a delay in the onset of the rains and the strongest heat waves took place in the years 2015, 2016 and 2017.¹⁶⁶

Period	2000 - 2019	2019
Global Climate Risk Index	44	79
Climate Risk Score	57.00	73.33
Fatalities (range)	68	90
Fatalities per 100,000 inhabitants (range)	57	93
Losses in millions of dollars (range)	78	72
Losses per unit of GDP in percent (range)	41	46

Source: Germanwatch, January 2021.¹⁶³



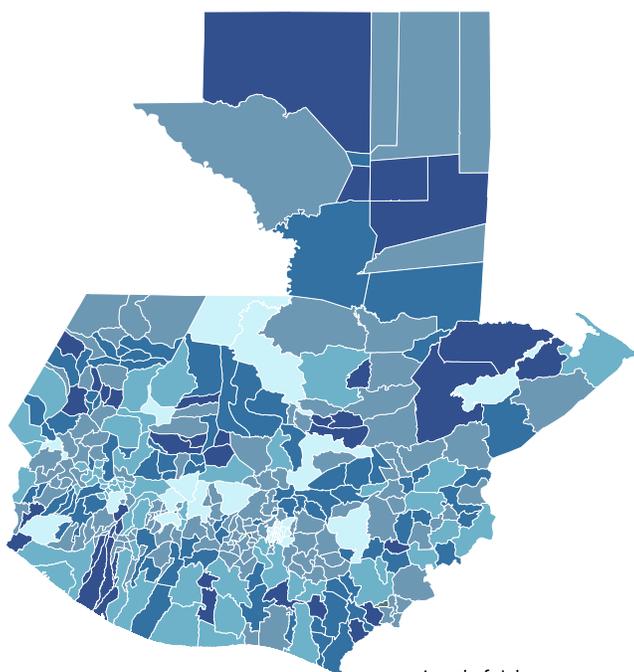
According to the report on Climate of Guatemala: Observed trends in climate change indices based on studies that evaluate indicators on climate change trends, conclude that: “1) the amount of annual rainfall is increasing; 2) there were days with more intense rains (greater than 22 mm.). However, the maximum annual rainfall does not show changes; 3) consecutive wet days and consecutive dry days do not present a defined trend, it can be associated with climatic variability; 4) cold nights and days are decreasing and warm days and nights are increasing; 5) the minimum and maximum temperatures are increasing; 6) the duration of cold periods is decreasing and warm periods increasing; 7) the average monthly temperature has increased in the last 25 years ”.¹⁶⁷

Main impacts of climate change and profiles in situations of vulnerability

Vulnerability to climate change depends to a large extent on the ability of communities or individuals to cope with the impacts of climate variation. In this sense, the Institute for Research and Projection on Science and Technology based on the analysis of the 2018 Census studied six variables (sociodemographic, education, employment, housing, basic services, and equipment) and determined that 50% of the country's municipalities have a high and extremely high social vulnerability and 30% medium vulnerability. The most vulnerable municipalities according to this scale are Alta Verapaz, Quiché, Totonicapán, Huehuetenango, Sololá, and Petén.¹⁶⁸

On the other hand, **limited response capacity to extreme weather events is another factor of vulnerability to climate change.** In the country, 85% of the municipalities are at risk due to the lack of capacity to respond to disasters.¹⁶⁹ Another piece of information that shows the low response capacity are economic losses, numbers of people killed and affected by extreme weather events, which have also increased significantly in recent decades.¹⁷⁰

Lack of responsiveness index



Source: INFORM Guatemala, april 2017

Level of risk

- 1.3 - 3.8 (Very low)
- 3.9 - 4.9 (Low)
- 5.0 - 5.7 (Medium)
- 5.8 - 6.5 (Atlo)
- 6.6 - 8.5 (Very high)

The EM-DAT from 1980 to 2020 registered 108 disasters caused by hazards of natural origin and 44% were in the decade from 2010 to 2020, presenting an increase of 269% in relation to the decade from 1980 to 1999.

Since 2000, Guatemala has been primarily exposed to floods and storms; However, storms are the ones that have presented the highest number of deaths and economic losses, on the other hand, droughts have left the highest number of people affected in the country, as shown in the following table.

Disasters in Guatemala (EM-DAT), 2000-2020				
	Number of disasters	Fatalities	Victims	Losses USD
Drought	5	41	5,680,081	158,669
Earthquake	6	55	1,421,250	212,050
Epidemic	4	26	25,494	SD
Extreme temperature	4	6	12,634	SD
Floods	24	150	1,054,730	61,913
Landslide	10	627	55,083	505,000
Cave-ins	1	36	3,028	SD
Storms	17	1,901	3,792,502	2,024,500
Volcanic Activity	5	461	1,727,014	SD
Forest fire	1	SD	SD	SD
Total	77	3,303	13771816	2962132

Source: Source: Own preparation based on EM-DAT data, International Disaster Database, January 2021.

Finally, exposure to extreme climatic events is another factor of vulnerability, in 2009 the Institute for Research and Projection on Natural Environment and Society (IARNA) presented a study that analyzed four variables (droughts, floods, frosts and landslides) related to climate change and exposure at the territorial level, concluding that 73% of the country's towns (12,947 towns) and 75% of the inhabitants (8.5 million people) were exposed to one of the four variables evaluated.¹⁷¹

According to the report Agroecological drivers of rural migration to the Maya Biosphere Reserve, Guatemala:

"Survey data from areas of high migration to the agricultural frontier in northern Guatemala suggest that land scarcity and degradation in communities of origin are related to migratory movements. Data on the reasons why people migrated included lack of land, lack of secure land tenure, and land degradation. Climate-related factors were also a factor mentioned, with flooding and pests reported as common problems. Thus, land degradation is a factor in migrants' decisions to leave their places of origin. For example, according to estimates by the Guatemalan Institute of Statistics (INE), between 2008 and 2012 Petén grew 22%, well above the growth of any other Guatemalan department. This growth remains particularly concentrated in the top handful of municipalities with active agricultural frontiers".

Therefore, it is clear that climate change affects people's lives, the ecosystem on which they depend and the full enjoyment of human rights.¹⁷² Among the most visible impacts in the country, it was identified that **food security of the Guatemalan population is at risk** as many households depend on agriculture for their food,¹⁷³ According to data from the Food and Agriculture Organization of the United Nations (FAO), in February 2020 it identified that 3.2 million Guatemalans were food insecure.¹⁷⁴

It should be noted that, with the passage of storms Eta and Iota and the loss of crops, there is a high probability that, in the communities most affected by the storms, most of the families are going hungry.¹⁷⁵ On the other hand, the number of children with malnutrition showed an increase of 109% from August 2019 (11,941 cases) to November 2020 (26,113 cases), and 22 children died due to malnutrition in 2020.¹⁷⁶

These data show how climate change and disasters are factors that affect the population's food insecurity and to face this situation, people are forced to implement emergency strategies, such as the sale of vehicles and household assets, working only for food and reduction of expenses in productive inputs and others adopt crisis strategies such as taking risky jobs, selling their houses or land, asking for money on the street, searching for food in the garbage, selling the last animals and consuming seed reserves.¹⁷⁷

Also, water resources in the country are highly exposed to the effects of climate change, a reduction in water availability between 12 and 30% of current values is projected for the end of the 21st century. In addition, the degradation of the environment is added, with the constant contamination of water sources that receive more than 10 billion cubic meters of wastewater without any type of treatment.¹⁷⁸

Farmers, peasants, and rural communities: In the country, agriculture is one of the sectors most exposed to climate change and extreme events. 62% of the people in extreme poverty and 42% in moderate poverty, work in the agricultural sector. In addition, 90% of agricultural producers are small producers of basic grains, therefore, the capacity to face extreme events and changes in the climate is limited, since in very dry years they can lose up to 55% of their crops of basic grains (beans and corn) and in very humid years up to 75% of corn production.¹⁷⁹

One of the adaptation strategies to climate change that women in the dry corridor of Guatemala have implemented is the recovery of creole or native seeds that are more resistant to climate change, and they also exchange seeds with other communities to test which ones best adapt in their communities.¹⁸² Other projects such as the breeding of Creole chickens have been implemented in Ch'orti 'Mayan communities by women who report that this species of hen is more resistant to the effects of climate change in the country's dry corridor.¹⁸³

Displacement and migration because of climate change impacts men and women differently. It mainly mentions unequal access to resources and decision-making power, for women the possibilities of reacting to climate change are more limited, when disasters caused by natural hazards occur, the risk of death for women is 14 times greater, compared to that of men, due to the role of children caregivers, and being caregivers for the elderly and the sick, therefore many women mainly try to protect their families.¹⁸⁰ In the dry corridor, 87% of women migrate or move within the country, in part due to limited access to resources and reproductive roles and family care. In addition, as food insecurity increases, so does the migration of women, that is, women begin to leave their homes when food insecurity is moderate, and it is one of the last strategies to cope with hunger.¹⁸¹

Children and adolescents are the most vulnerable population to the effects of climate change. Since the environment is a determining factor for their growth, development, and well-being, it is identified that the main causes of infant mortality are extremely sensitive to climate variation, as well as respiratory and intestinal infections. 70.2% of children under five years of age in the poorest households suffer from malnutrition, so the loss of crops or the increase in food prices have serious consequences for food security; Faced with disasters caused by threats of natural origin, the school year is interrupted, for example, in 2005 after the passage of Storm Stan there were 9.3 million dollars in losses due to damages in the education sector, in addition, when schools are used for shelters, children and adolescents interrupt the educational process and may lose the social support networks provided by the school, such as school feeding programs.

In the months of October to March, there is temporary and seasonal migration in sowing seasons, due to the loss of crops, the risk that children and adolescents will be forced to move in search of economic income to support the family increases.¹⁸⁴

Other profiles in contexts of vulnerability are the people who are in areas classified as high risk and dangerous due to floods, landslides or in marginal urban areas such as ravines or settlements.¹⁸⁵

According to the United Nations, "people with disabilities are disproportionately affected in disaster, emergency, and conflict situations because evacuation, response (including shelters, camps and food distribution) and recovery measures are inaccessible to them".¹⁸⁶

In Guatemala, the inclusion of people with disabilities is limited, although it is true that there is a National Disability Policy, it does not have enough budget to implement it. In 2019, 0.68% of the General budget of the Nation was assigned to the issue of disability.¹⁸⁷ It is important to highlight that in surveys or censuses of people affected by disasters, people with disabilities are not made visible, this to some extent makes differentiated assistance needs invisible.¹⁸⁸

Climate change-induced displacement

Migration and displacement due to climate change and disasters is increasingly constant in Guatemala, in 2017 the rainy season displaced 40,000 people, the Fuego volcano eruption displaced 13,000 people and in 2019 there were 21,000 new displacements due to disasters.¹⁸⁹

On the other hand, displacement and migration in the dry corridor of Guatemala have increased due to climate change and the limited response capacity due to socioeconomic vulnerabilities in the most affected regions.¹⁹⁰ In addition, the Climate Change and Land report states that dependence on agriculture makes the country present a high degree of sensitivity to climate change, especially the communities that depend on corn and bean crops for subsistence, therefore, migration has been identified as fluctuating in response to climate variability in Mexico and Central America.¹⁹¹

In Guatemala, migration and displacement are closely related to rain, since they depend on it for planting, and given its scarcity, men, who are in charge of working in the fields, are forced to travel for up to six months, in search for work in coffee farms or sugar mills, either within the country or outside the country, and others choose to move to the United States where the stay is longer or permanent.¹⁹²

According to the survey of humanitarian actors for this bulletin, the organizations based in Guatemala stated that climate change is one of the causes of human mobility and that there are factors that determine such movements, therefore, climatic variables add to the multiple reasons for migration and displacement. On the other hand, climate change has amplified risks and vulnerabilities in a country with pre-existing structural challenges in terms of guaranteeing human rights (land, water, health).

State responses to the impact of climate change

The fact that internal displacement is not recognized in the country does not allow climate change to be made visible as a cause

Humanitarian Organization based in Guatemala

Guatemala is attached to the United Nations Framework Convention on Climate Change (UNFCCC). To respond to the commitments made in this convention, the Framework Law on Climate Change, the National Action Plan on Climate Change, two national communications on climate change, and the National Information System on Climate Change were created. to strengthen the institutional framework through the National Council on Climate Change.¹⁹³ In the second edition of the National Climate Change Action Plan, the draft of a chapter on human mobility and climate change was developed, representing a great step in addressing this issue.¹⁹⁴

Responses of humanitarian organizations to the impact of climate change

The Guatemalan-based organizations that responded to the survey for this bulletin that indicated they have a program or strategy to address displacement due to climate change, do so from emergency management, direct care, and research.

From civil society, the Guatemalan System of Climate Change Sciences was created.¹⁹⁵ *It was created in 2014 to review, generate and provide scientific information related to the climate component to the country's political decision makers on issues related to climate, vulnerability, adaptation and mitigation to the effects of climate change. The SGCCC is made up of more than 20 governmental and non-governmental institutions, including academic institutions, research centers and government entities, and seeks to support inter-institutional coordination and integration of scientific aspects within the operational framework of the National Climate Change Council (CNCC).*¹⁹⁶

It can be mentioned that the World Food Program, through its resilience program, from January to October 2020 provided humanitarian assistance through "cash transfers" to 62,975 people, mainly in Chiquimula, Huehuetenango, and San Marcos. In addition to providing seed packages for farmers affected by the measures taken against Covid-19 in Sololá and Jalapa mainly, among other actions that contribute as coping strategies against climate change.¹⁹⁷



Photo: RC/Christian Jepsen, 2020

Mexico

Context and vulnerabilities to climate change

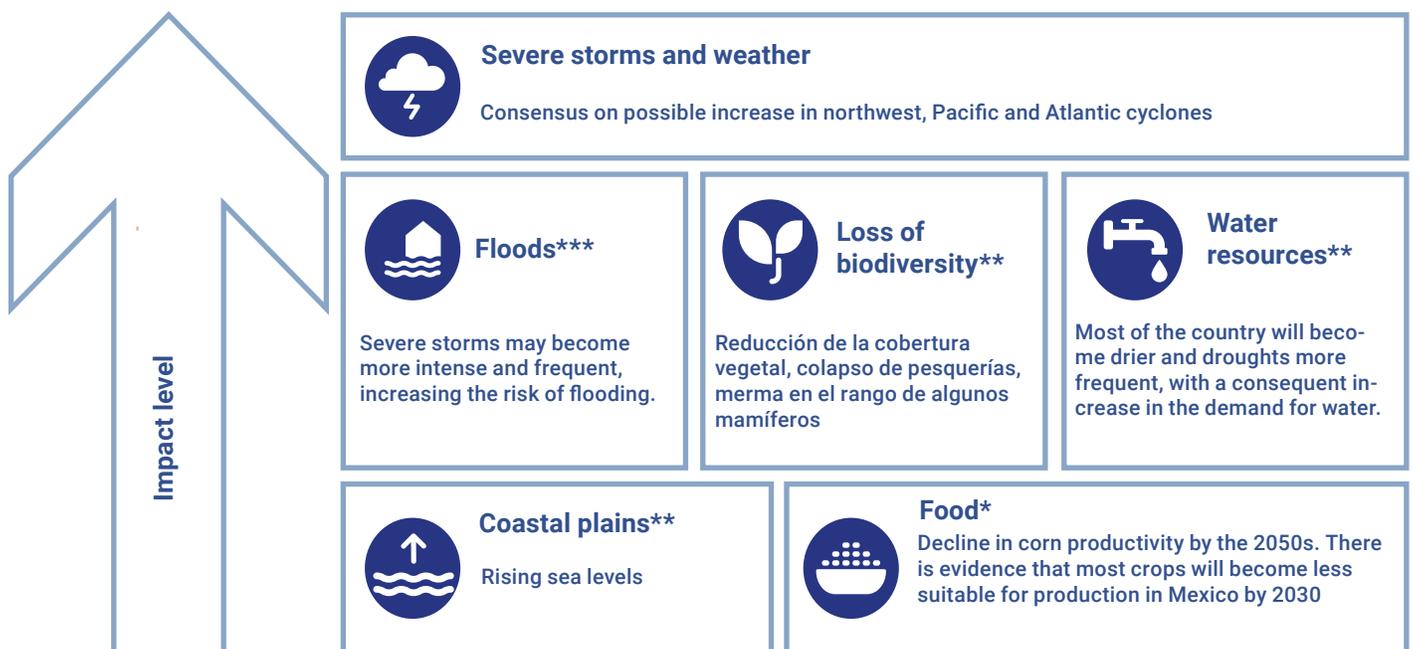
Mexico is a country classified as highly vulnerable to climate change, due to its geographical characteristics and location between two oceans. As an example of this, it has been possible to monitor that, since 1999, there has been an increase in phenomena such as tropical cyclones, torrential rains, floods, droughts, heat waves and extreme temperatures. And these events as a whole have represented high human and economic costs.¹⁹⁸

Some of the negative consequences of climate variability are increasingly visible and everything seems to indicate that they will continue to worsen in the coming years. Given the characteristics of the country, different types of climate, distribution of its natural resources, the installed infrastructure it has, the demographic concentration and the economic development of its settlements, it has been projected that the impacts of climate change will be distributed and affect heterogeneous.

Period	Global Climate Risk Index	Climate Risk Score	Fatalities (range)	Fatalities per 100,000 inhabitants (range)	Losses in millions of dollars (range)	Losses per unit of GDP in percentage (range)
1999-2018	54	61.83	25	95	10	73
2018	26	37.67	10	44	14	57

Fuente: Germanwatch, diciembre 2019.¹⁹⁹

Impacts and projected events due to climate change in Mexico



Source: Institute of Ecology and Climate Change, 2019.²⁰⁰

Main impacts of climate change and profiles in situations of vulnerability

The impacts of climate change in Mexico have increased people’s vulnerability and exposure to climate variability. Vulnerability can be defined as the degree to which people and systems can be adversely affected by climate change. Which implies the capacity or inability they have to face these impacts. Therefore, vulnerability does not depend solely on climate change and the events it causes, but also on the ability to anticipate, confront, resist, and recover from them. In this context, there are five, at least, risks that will significantly affect the country and which should pay attention to, as has already been suggested for a decade by researchers and academics.²⁰¹

Regarding floods, those entities located on the coast of the Pacific Ocean stand out, in addition, the State of Mexico and Mexico City, were classified with an extremely high vulnerability rank.

Regarding landslides, with the exception of Zacatecas, Campeche, Yucatán and Quintana Roo, the rest of the states were classified with high or extremely high vulnerability ranges. In relation to forage production and livestock production due to water stress, practically all the entities of the country are located in medium and extremely high ranges of vulnerability.

Finally, regarding the increase in the potential distribution of dengue, all the states of the Atlantic Ocean are in a high or extremely high range of vulnerability, as well as Sonora, Sinaloa, Colima, and Guerrero on the coast of the Pacific Ocean.²⁰²

The people most vulnerable to the effects of climate change are those who are in a situation of poverty, who belong to indigenous or Afro-descendant groups, who live in irregular and risky areas, who lack access to public services and who have an educational gap that does not lets them know what to do to prevent or adapt in the event of a disaster. There are also girls, boys and adolescents and the elderly, who have difficulties responding to disasters of natural origin, due to limitations inherent to their physical development. While in terms of gender, it is women who are at a considerable disadvantage.²⁰³

For example, of the 4.2 million ejidatarios and comuneras (rights holder of communal lands), almost 20% are women, who, due to not being landowners, cannot access credits, financing, programs, or other support for equipment to improve their standard of living.

In recent years, various studies foresee that a considerable percentage of

people vulnerable to the impacts of climate change living in Mexico will have to migrate or will be forced to move to other places within or outside the country in order to cope with them.²⁰⁴ In particular, three segments that are particularly vulnerable stand out once again: women, indigenous peoples, and people with limited economic resources.²⁰⁵

For example, in the case of the relationship between climate impacts and migration between rural and urban areas in Mexico, multilevel models reveal that each additional month of drought increases the probability of rural-urban migration by 3.6%. The results were obtained by combining individual records from the 2000 and 2010 Mexican censuses with high-resolution climate data. For the case of climate impacts, they were taken as a monthly deviation from a 30-year long-term climate normal (1961-1990) and exposed significant nonlinearities using quadratic and cubic specifications..

In this context, Mexico is the country in the region for which, according to IDMC data, the highest number of people internally displaced by disasters can be expected, with 51% of the displacements expected annually in the coming years in the region.

For its part, the World Bank projects the following situations for the year 2050:²⁰⁷ The scale of internal climate displacement is projected to increase in all projected scenarios for 2050. As a country that has already undergone a demographic transition and has an upper-middle income and a diversified economy, it could anticipate and cope with population redistribution induced by climate change.

The number of climate IDPs may reach 3.1M by 2050 in the pessimistic reference scenario. The numbers are lower in the other two scenarios. This suggests that development pathways that target both lower global emissions trajectories, as well as reducing poverty and inequality, will help reduce the scale of displacement. The gains from sustained development and a stronger economy mean greater adaptive capacity and financial resources to serve the most vulnerable areas and groups.

The proportion of climate internally displaced persons in total internally displaced persons increases in all scenarios. Climate displaced persons may constitute around 11% of all internally displaced persons. Which suggests that climate change may become an increasingly important driver of displacement, in a country that already has high mobility.

The central plateau, where Mexico City and other major cities meet, will be a destination point; the arid north, as well as farmland and low-lying coastal areas in the south, will be critical exit points.

The central plateau may offer more favorable conditions for livelihoods and settlements than the arid north and southern coastal states, which will be affected by rising sea levels. A pattern that aligns with its advanced levels of urbanization, the declining importance of exclusively agricultural livelihoods, and the depopulation of rural areas.

Average expected internal displacement per year						
	Earthquakes - quakes	loods	Storm surge	Tsunamis	Cyclonic wind	Total
Mexico	24822	68314	6018	121	10049	109324
Guatemala	30125	12578	50	8	2	42763
El Salvador	9951	2094	2	13		12060
Honduras	31620	16483	377	1	626	49107
Total	96518	99469	6447	143	10677	213254

Source: Own preparation with information from IDMC, October 2017.²⁰⁶

On the other hand, other projection models also draw attention to thousands of people who are expected to be trapped and exposed to the impacts of climate change, due to the impossibility of moving to other places, mainly because of lack of resources, social networks, and the knowledge necessary to adapt to and/or prevent risk situations.²⁰⁸

However, Mexico is also a country of transit and destination for thousands of displaced people from other countries. Migrants and displaced persons also run risks associated with climate change while traveling to their places of destination, which continue once their settlement process is complete.

For example, migrants face high temperatures, presumably caused by climate change,²⁰⁹ while they travel through the deserts of northern Mexico to try to reach their destination. This situation is compounded by the low perception of risk that migrants assign to climate issues, due to their little or no experience or knowledge of those that prevail in regions other than those from which they come.²¹⁰

Reason for which the urgency of assisting migrants who suffer some type of impact by disasters, while they are in the country, has been raised, in addition to including them in strategies and programs for their prevention; This requires the active participation of the national and state structures that are already in charge of dealing with these situations, including the Beta Groups, part of the National Migration Institute, in charge of providing help and guidance to migrants in Mexico.²¹²

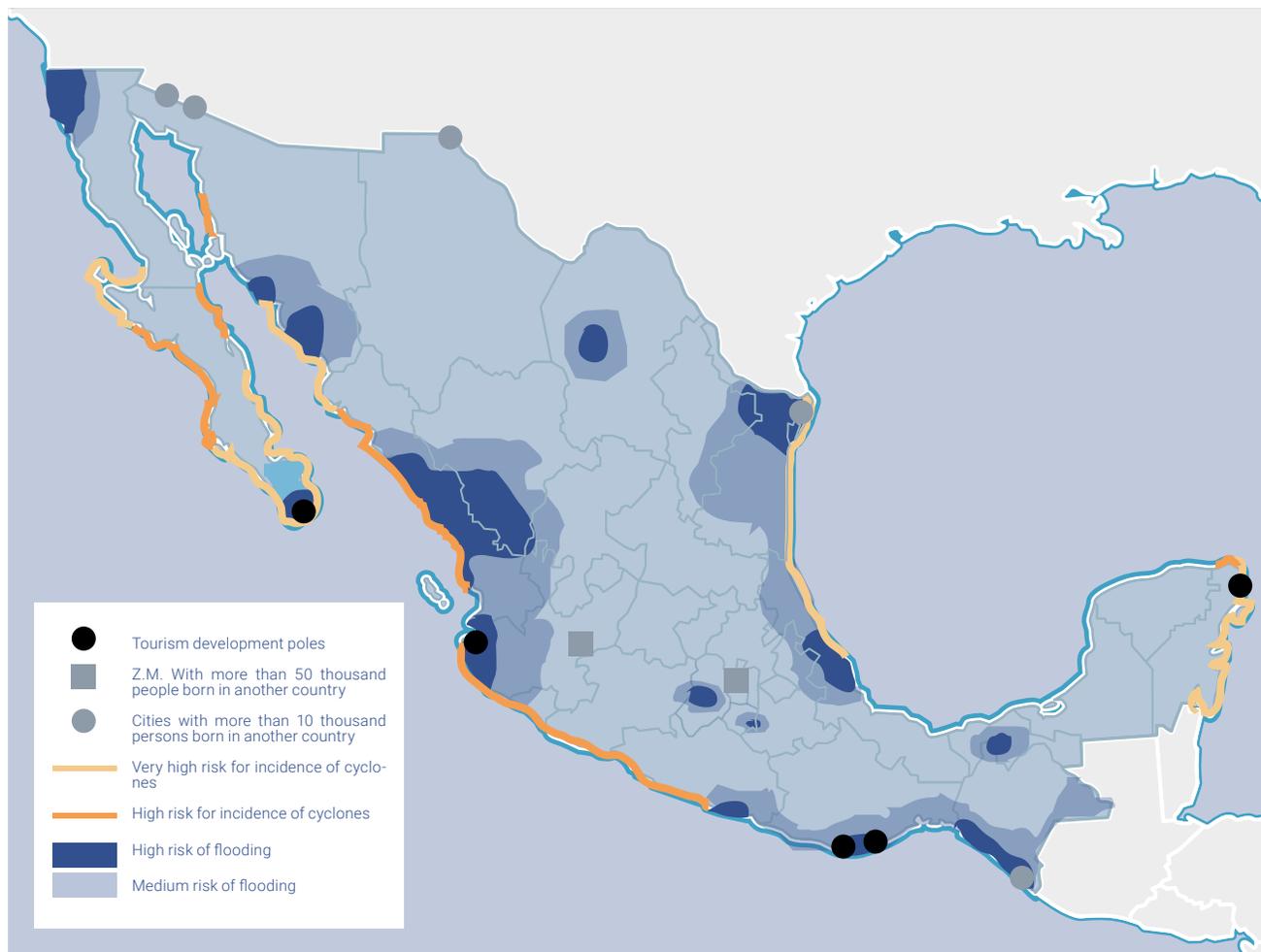
The dissemination of information on risks due to climate change that migrants may experience, through and with the participation of civil society organizations, particularly from migrant shelters and houses (which are also exposed to multiple risks) can also be considered; as well as in those places of concentration, such as bus terminals and train tracks.²¹³

In this sense, different researchers have called for a holistic and comprehensive understanding of the multiple relationships between migration and displacement with climate change, in order to make the findings visible and for governments to develop strategies that allow them to address the issues of greater urgency.²¹⁴

State responses to the impact of climate change

Faced with the problem of climate change, the Mexican State has opted for a two-pronged approach: mitigation and adaptation (preventive and reactive, private, and public, and autonomous and planned). The latter defined as initiatives and measures whose objective is to reduce the vulnerability of territories and people to the real or projected impacts of climate change.²¹⁵

Coasts at high and very high risk of hurricane impact, medium and high risk of flooding, and main destinations for foreigners in Mexico



Source: IOM, 2016.²¹¹

Also recognizing that this problem must be addressed in an interdisciplinary, multidimensional way, also recognizing the territorial dynamics, local knowledge and the participation of people and civil society organizations, as well as constant monitoring and evaluation.²¹⁶

In this context, in 2015, after the Paris Accord, the Mexican State committed to addressing climate change by reducing carbon emissions in 51%, greenhouse gas emissions in 22% by 2030; the increase in the adaptive capacity of the population; the reduction of the high vulnerability to the effects of this in 160 of its municipalities; the reduction of deforestation to a zero rate and the generation of an early warning system for extreme weather events.²¹⁷

To achieve this, it has issued and reformed multiple legal, regulatory, and public policy instruments, as well as made modifications in the conformation of its institutions to address the problem of climate change. Actions that go hand in hand with some of the 2030 Sustainable Development Goals and targets.²¹⁸ The most important ones are shown below:

For its part, the National Policy on Climate Change (PNCC) of the Mexican State addresses the attention of climate change through cross-cutting actions based mainly on its Political Constitution (CP), General Law of Climate Change (LGCC) and General Law of Ecological Balance and Environmental Protection (LGEEPA), documents that specify the attributions of its different orders of government and the meeting points of climate policy with others of their agendas.

Also noteworthy is the work of the National Center for Disaster Prevention (CENAPRED), whose mission is to safeguard people's lives, assets, and infrastructure through the management of public policies for the prevention and reduction of disaster risks, through educational training and the dissemination of civil protection culture to become more resilient and of research and monitoring of phenomena of natural origin, for example, through the National Risk Atlas.²³

In this sense, Mexico is one of the countries in the region that has a broad legal and regulatory framework to address climate change, 24 laws, 25 regulations and 51 official standards.²⁴ which together address issues of agriculture and livestock, energy, health, water resources, waste, transportation, and human settlements.

Document or action	Importance for addressing climate change
Political Constitution of Mexico ²¹⁹	Article 4, Every person has the right to an adequate environment for his or her development and well-being. The state will guarantee the respect for this right.
General Law of Ecological Equilibrium and Environmental Protection (1988)	Its objective is to promote sustainable development and establish the foundations to guarantee the right to live in a healthy environment. In Article 5, it establishes that the Federation is empowered to formulate and execute actions to mitigate and adapt to climate change.
Law for the Promotion and Development of Bioenergy (2008)	Its objective is the promotion and development of bioenergetics to contribute to energy diversification and sustainable development as conditions that allow guaranteeing support to the Mexican countryside and establishes the bases for, among other actions, seek the reduction of polluting emissions to the atmosphere and greenhouse gases.
General Law on Climate Change (2012)	Its objective is 1) to guarantee the right to a healthy environment, through the creation of public policies to face the adverse effects of climate change and mitigate greenhouse gas emissions; 2) determine the scope of the national exchange policy and define the obligations of the State authorities and the powers of the three levels of government; and 3) establish the necessary institutional mechanisms to deal with climate change.
Energy Reform (2013) ²²⁰	Constitutional reform that aims to lay the foundations for a market for the generation of renewable energy sources and clean technologies.
Law of Energy Transition (2015)	Its objective is to regulate the sustainable use of energy, the obligations regarding clean energy and the reduction of polluting emissions from the electricity industry.
Reform of the General Law on Climate Change (2018) ²²¹	Reform of the law that aims to lay the foundations to comply with the commitments acquired in the framework of the Paris Accord. It adopts the Nationally Determined Contribution (NDC) as to establish the national objectives and goals in mitigation and adaptation to climate change. It mandates the preparation of a National Adaptation Program and the development of an early warning system to reduce social vulnerability to extreme weather events. It orders the progressive and gradual establishment of an emissions trading system (carbon market) to promote the reduction of emissions at the lowest possible cost, in a measurable, reportable, and verifiable way, and without harming the competitiveness of the participating sectors. It includes the scheme for reducing and offsetting greenhouse gas emissions for civil aviation. It recognizes the importance of considering the Assessment Reports of the Intergovernmental Panel of Experts on Climate Change (IPCC) for the modification, addition, or reorientation of the national climate change policy. It adopts the approach of developing a transparency framework on action on climate change to inform and learn about national progress towards compliance with the NDC.

Source: Own elaboration based on information from SINACC, January 2021.²²²

For its part, the National Policy on Climate Change (PNCC) of the Mexican State addresses the attention of climate change through cross-cutting actions based mainly on its Political Constitution (CP), General Law of Climate Change (LGCC) and General Law of Ecological Balance and Environmental Protection (LGEEPA), documents that specify the attributions of its different orders of government and the meeting points of climate policy with others of their agendas.

Also noteworthy is the work of the National Center for Disaster Prevention (CENAPRED), whose mission is to safeguard people's lives, assets, and infrastructure through the management of public policies for the prevention and reduction of disaster risks, through educational training and the dissemination of civil protection culture to become more resilient and of research and monitoring of phenomena of natural origin, for example, through the National Risk Atlas²²³

In this sense, Mexico is one of the countries in the region that has a broad legal and regulatory framework to address climate change, 24 laws, 25 regulations and 51 official standards²²⁴ which together address issues of agriculture and livestock, energy, health, water resources, waste, transportation, and human settlements.

The State facing displacement induced by climate change

Although the previously mentioned issues are intricately linked to the fact that people have to leave their usual places of residence due to issues related to climate change, it is in the human settlements policy that the Mexican State contemplates managing people who live in their territories and the actions that must be implemented to address the effects of climate change in the localities where they live.²²⁵

Article 28: "The Federation, the Federative Entities and the Municipalities [...] must execute actions for adaptation in the preparation of policies, the National Strategy, the Special Climate Change Program (PECC), the National Adaptation Policy and the programs in the following areas: [...] vii) Ecological land use planning, internal displacement of persons caused by phenomena related to climate change, human settlements and urban development [...]"

Article 30: "The dependencies and entities of the centralized and parastatal Federal Public Administration, the Federative Entities and the Municipalities will implement actions for adaptation according to the information contained in the risk atlases for the preparation of urban development plans, regulations of construction and land use planning; and to prevent and address the possible internal displacement of people caused by climate change.

As well as in the following articles of the General Law Project to Prevent, Assist and Comprehensively Repair Forced Internal Displacement (LGPA-RIDFI) that is still under discussion in Congress:²²⁷

Article 4-VIII, which defines internal forced displacement as: "the situation in which people or groups of people have been forced or obliged, expressly or tacitly, to escape or flee from their home or place of habitual residence in particular as a result of or to avoid the effects of [...] natural or man-made disasters, and who have not crossed an internationally recognized state border (page 3)" and to persons in a situation of internal forced displacement whom have been victims of this situation (page 5).

Article 5-VI, which defines among the causes that generate internal forced displacement disasters associated with natural phenomena, caused by humans or by climate change.

Document where the obligations of the authorities of its three orders of government are also specified; the National Program to Prevent, Assist and Generate Durable Solutions for Forced Internal Displacement; the National Mechanism to Prevent, Attend and Generate Durable Solutions for Forced Internal Displacement; and the attributions of the Mexican Commission for Aid to Refugees and Internal Displacement, an institution responsible, among other matters, for implementing public policy to prevent, assist, protect and generate durable solutions.

However, there is no mention whatsoever on how to deal with cross-border displacement caused by disasters of natural origin that reach their territory neither in the Migration Law,²²⁸ nor in the Law on Refugees, Complementary Protection and Political Asylum,²²⁹ nor in the New Migration Policy of the Government of Mexico (2018-2024),²³⁰ even though this last document consults material that talks about displacement due to climate change.

While at the state level there are three laws on internal displacement in the states of Chiapas,²³¹ Guerrero²³² y Sinaloa,²³³ in which the government of Chiapas recognizes its vulnerability to natural phenomena such as earthquakes, hurricanes, volcanic eruptions and landslides; and that of Guerrero defines internally displaced persons as people who have been forced to leave their places of habitual residence due to natural or man-made disasters; and that of Sinaloa only recognizes issues of violence as a cause of displacement.

Although the Mexican State has made significant progress in addressing climate change, there are still aspects that need to be paid attention to, especially at the state and municipal level,²³⁴ for example, in developing and implementing a preventive approach in places where there is already evidence of high risks due to this phenomenon, which allows guaranteeing the advance protection of the people who live in them.²³⁵ However, with respect to the legal framework and current public policies focused on the displacement due to climate change of foreigners who enter its territory, there is no element to assist and protect them. In this sense, it is urgent and necessary to make the multiple reforms necessary to be able to do so.

Finally, according to the Climate Change Performance Index for 2020, Mexico had a low performance level, ranking 32nd out of 61 countries evaluated in the following categories: 1) greenhouse gas emissions, 2) renewable energy, 3) energy use and 4) climate policy. Regarding the first category, Mexico obtained an average ranking (23rd place); in relation to the second, a very low ranking (56th place); in the third a high ranking (6th place); and, finally, with respect to the fourth a low ranking (41st place).²³⁶ However, Mexico's performance not so much in the previously mentioned categories, as well as in adaptation issues,²³⁷ is at serious risk due to the indicated lack of interest in environmental issues, including climate change, of the current administration of Mexico's president, Andrés Manuel López Obrador, which of the 100 commitments made when taking office, only three referred to such issues.²³⁸

This situation is also reflected in the budget cuts to the institutions of the Mexican State in charge of addressing these issues, which range from 3% to 11%, as well as in the allocation of .018% for the protection of their protected areas, which make up 22% of its territory. On the other hand, although he pointed out that he would not resort to extraction methods such as fracking, his government contemplated the budget allocation that amounted to almost 7 billion pesos for two exploration projects that use this technique and the intentions to allocate 14 billion by 2022 in similar projects. While, for fossil fuel projects, such as refineries, it contemplated just over 45 billion pesos. Finally, López Obrador's management has also been noted for his construction projects for the Trans-isthmian Corridor and the Mayan Train, projects that, according to various researchers and organizations, will cause negative and serious impacts on the ecosystem.²³⁹

All of these situations may cause displacements due to environmental issues, including climate change, in the coming years.

Final considerations

- Climate change is superimposed on and influences other structural factors such as poverty, unemployment, informal employment, inequality, and generalized violence, aggravating the conditions of vulnerability of the people of Northern Central America and Mexico and may suppose the beginning of a cycle of human mobility. Climate change impacts the recognition and fulfillment of the exercise of human rights, especially the right to life, decent housing, adequate food, and education.
- The incidence of climate change affects each country differently and, at the national level, within each territory. However, several profiles common to the countries analyzed that are in a situation of greater vulnerability are identified: women, children and adolescents, smallholder farmers, people dedicated to fishing, indigenous communities and Afro-descendant communities, and people with disabilities. It is essential to take this context into account to implement programs and projects that are truly effective and sustainable.
- The responses of the states are still partial and require more depth. Progress has been made in the recognition of climate change as a factor linked to displacement. But it is necessary to deepen inter-institutional strategies to address the complexity and intersectionality of this phenomenon and prevent short, medium, and long-term impacts. Systemic risk management and land use planning are essential in the design of public policies aimed at this purpose.
- Humanitarian organizations are responding, fundamentally from an emergency approach to the impacts and consequences that climate change generates on displacement, as well as approaches focused on adaptation to the gradual processes of climate change. For example, there are significant efforts such as those of the World Food Program focused on resilience and prevention strategies to the effects of climate change. However, coordinated actions and programs are needed to connect and strengthen the existing capacities and approaches of each organization.
- There is a consensus on the underrepresentation of climate change as a trigger for displacement. It is essential to develop instruments and tools that allow a deeper understanding of the interconnection between climate change, food insecurity, generalized violence, insecurity, migration, and displacement. Critical analysis is necessary to adapt existing surveys and monitoring so that organizations and beneficiaries speak a common language.

People and organizations consulted

This report was made possible by the following organizations and institutions, among others:

Care International - Honduras; Oxfam International - Regional Office; UNDRR - Regional Office; Honduran Red Cross; IOM - Office for Central America and Mexico; International Federation of Red Cross and Red Crescent Societies - Office for Central America and Mexico; Office of the United Nations High Commissioner for Human Rights Guatemala.

Led by



NORWEGIAN
REFUGEE COUNCIL

With the support of



- 1 Organización Internacional para las Migraciones, [Migración por motivos ambientales](#), octubre 2020.
- 2 El Salvador.com, [Fiscalía registra más de 1.200 muertes violentas este año](#), diciembre 2020
- 3 Agencia Efe, El Salvador registra 121 feminicidios en lo que va de 2020, noviembre 2020.
- 4 El Salvador.com, [Fiscalía registra 2.251 personas desaparecidas en 2020](#), enero 2021.
- 5 La Vanguardia, [La cifra de desaparecidos en El Salvador baja un 43.7 %, según el Gobierno](#), agosto 2020.
- 6 OCHA, [El Salvador: Emergencia Huracán Iota. Informe de Situación No. 01 Al 20 de noviembre de 2020](#), noviembre 2020.
- 7 Diario Digital Contrapunto, [Policía salvadoreña dice que ha disminuido la extorsión en casi 39%](#), noviembre 2020.
- 8 Iniciativa de gestión de información de movilidad humana en el Triángulo Norte-NTMI, [El Salvador enero-octubre 2020](#).
- 9 DW, [Honduras registró menos homicidios en 2020, según la Policía](#), enero 2021.
- 10 Criterio, [Honduras cierra el 2020 con asesinatos con saña contra mujeres](#), diciembre 2020.
- 11 Naciones Unidas Honduras, [ONU manifiesta su preocupación ante el proyecto de reforma constitucional para la prohibición absoluta del aborto](#), enero 2021.
- 12 Misiones de Evaluación UNDAC, [Tormentas Eta e Iota en Honduras](#), diciembre 2020.
- 13 Radio Progreso, [Inicia primera caravana de migrantes con la esperanza de llegar a Estados Unidos](#), enero 2021.
- 14 <https://mic.iom.int/webntmi/honduras/>
- 15 Secretaría Técnica del Consejo Nacional de Seguridad, [Reporte estadístico](#), diciembre 2020.
- 16 Forbes, [Tasa de homicidios en Guatemala se redujo en un 28% en 2020 por pandemia](#), diciembre 2020.
- 17 Secretaría Técnica del Consejo Nacional de Seguridad, [Reporte estadístico](#), diciembre 2020.
- 18 Diálogos, [Violencia en tiempos de pandemia](#), octubre 2020.
- 19 Observatorio de las Mujeres del Ministerio Público, [Alerta Isabel-Claudina](#), diciembre 2020
- 20 Made for minds, [Guatemala: cientos marchan tras desaparición de Sharon Santa Cruz](#), diciembre 2020.
- 21 Observatorio de la Mujer/ Ministerio Público, [Portal estadístico](#), enero 2021.
- 22 OIM, [Retornos Guatemala](#), noviembre 2020.
- 23 La Hora, [APG: 2020, el año con más ataques contra la prensa](#), enero 2021.
- 24 Prensa Libre, [Resumen 2020: El impacto climático que no se olvidará en el norte y oriente](#), diciembre 2020.
- 25 Prensa Libre, [Salud reporta 109% de aumento en casos de desnutrición aguda](#), noviembre 2020.
- 26 Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública, [Incidencia Delictiva del Fuero Común](#), enero 2021.
- 27 The University of Texas at Austin, Strauss Center, Center for U.S.-Mexican Studies, [Metering Update](#), noviembre 2020.
- 28 Missing Migrant Project, [Muertes y desapariciones en Las Américas](#), enero 2021.
- 29 Gobierno de México, [Estadísticas Migratorias](#), enero-noviembre 2020
- 30 Comisión Mexicana de Ayuda a Refugiados, [Estadísticas de solicitantes de la Condición de Refugiado en México](#), 2020.
- 31 U.S. Customs and Border Protection, [U.S. Border Patrol Southwest Border Apprehensions by Sector Fiscal Year 2020](#), enero 2021.
- 32 NRC, [Nuevas caravanas de familias centroamericanas huyen desesperadas de la violencia y la pobreza](#), enero 2020.
- 33 Prensa Comunitaria, [La historia se repite y una nueva caravana migrante sale mañana desde San Pedro Sula](#), enero 2020.
- 34 OCHA, [Guatemala: Flujo masivo de personas migrantes y refugiados en Centroamérica. Flash Update No. 01](#), octubre 2020.
- 35 El Periódico, [Caravana rumbo a EE.UU. suma más de 9 mil migrantes en Guatemala](#), enero 2021.
- 36 Gobierno de El Salvador, [Situación nacional COVID-19](#), enero 2021.
- 37 Despacho de Comunicaciones y Estrategia Presidencial, [Coronavirus COVID-19 en Honduras](#), enero 2021.
- 38 Ministerio de Salud Pública y Asistencia Social, [Situación de Covid-19 en Guatemala](#), enero 2021.
- 39 Naciones Unidas, [Convención Marco de las Naciones Unidas sobre el Cambio Climático](#), mayo 1992.
- 40 Sistema Guatemalteco de Ciencias del Cambio Climático, [Primer reporte de evaluación del conocimiento sobre cambio climático en Guatemala: resumen para tomadores de decisión](#), 2019.
- 41 Grupo Intergubernamental de Expertos sobre el Cambio Climático, [Climate Change 2014. Synthesis Report](#), 2014.
- 42 Noticias ONU, [América Latina y el Caribe: la segunda región más propensa a los desastres](#), enero 2020.
- 43 United Nations Office for Disaster Risk Reduction, [UNISDR Terminology and Disaster Risk Reduction](#), 2009.
- 44 Platform on Disaster Displacement, [Key Definitions](#), enero 2021.
- 45 Platform on Disaster Displacement, [Key Definitions](#), enero 2021.
- 46 European Parliament, [Climate Change and Natural Disasters: Scientific evidence of a possible relation between recent natural disasters and climate change](#), 2005.
- 47 Centre for Research on the Epidemiology of Disasters, [The International Disaster Database](#), enero 2021.
- 48 Centre for Research on the Epidemiology of Disasters, [The International Disaster Database](#), enero 2021.
- 49 Centre for Research on the Epidemiology of Disasters, [The International Disaster Database](#), enero 2021.
- 50 Centre for Research on the Epidemiology of Disasters, [The International Disaster Database](#), enero 2021.
- 51 Ibid., [Guatemala: Eta e Iota dejaron pérdidas por \\$780 millones](#), enero 2021.
- 52 Deutsche Welle, [CEPAL: Honduras tiene \\$1.879 millones en daños tras tormentas](#), diciembre 2020.
- 53 Centre for Research on the Epidemiology of Disasters, [The International Disaster Database](#), enero 2021.
- 54 Entrevista Organización humanitaria, diciembre 2020.
- 55 SEPREDENAC, UNISDR, [Informe Regional del Estado de la Vulnerabilidad y Riesgos de Desastres](#), 2014.
- 56 Germanwatch, [Global Climate Risk Index 2020](#), diciembre 2019.
- 57 OIM, World Vision, [Informe de los Resultados de la Encuesta en el ámbito de la Consulta con las Comunidades de América Latina y el Caribe](#), marzo 2015.
- 58 Organización de las Naciones Unidas para la Alimentación y la Agricultura, [Cronología del Corredor Seco: El acelerador de la resiliencia en Centroamérica](#), junio 2017.
- 59 InspirAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 60 Instituto Interamericano de Cooperación para la Agricultura, [El fenómeno de "El Niño" en la agricultura de las Américas](#), 2016.
- 61 ACNUR, [ACNUR y Cambio Climático. Desastres y Desplazamientos](#), 2017.
- 62 Entrevista Organización humanitaria, diciembre 2020.
- 63 German Environment Agency, [Migration, environment and climate change: Literatura review First report in the "Migration, environment and climate change" series](#), marzo 2020.
- 64 Foresight, [Migration and Global Environmental Change: Future Challenges and Opportunities](#), 2011.
- 65 International Organization for Migrations, [Migration, Environment and Climate Change: Evidence for Policy \(MECLEP\) Glossary](#), 2014.
- 66 Ibid.

- 67 Organización Internacional para las Migraciones, [Términos fundamentales sobre migración](#), 2020.
- 68 International Organization for Migrations, [IOM Outlook on Migration, Environment and Climate Change](#), 2014; John Campbell, [Climate-Induced Community Relocation in the Pacific: The Meaning and Importance of Land](#), septiembre 2010.
- 69 The Nansen Initiative, [Cross-Border Displacement in the Context of Disasters and Climate Change: A Protection Agenda](#), abril 2015.
- 70 International Organization for Migrations, [Migration, Environment and Climate Change: Evidence for Policy \(MECLEP\) Glossary](#), 2014.
- 71 Platform on Disaster Displacement, [Key Definitions](#), enero 2021; UNISDR, [Desplazamiento por desastres: cómo reducir el riesgo hacer frente a sus efectos y fortalecer la resiliencia](#), 2018.
- 72 ACNUR, [Conceptos claves sobre el desplazamiento por cambio climático y desastres](#), SF.
- 73 UNISDR, [Desplazamiento por desastres: cómo reducir el riesgo hacer frente a sus efectos y fortalecer la resiliencia](#), 2018.
- 74 ACNUR, [Conceptos claves sobre el desplazamiento por cambio climático y desastres](#), SF.
- 75 UNISDR, [Desplazamiento por desastres: cómo reducir el riesgo hacer frente a sus efectos y fortalecer la resiliencia](#), 2018.
- 76 ACNUR, [Conceptos claves sobre el desplazamiento por cambio climático y desastres](#), SF.
- 77 UNISDR, [Desplazamiento por desastres: cómo reducir el riesgo hacer frente a sus efectos y fortalecer la resiliencia](#), 2018.
- 78 Platform on Disaster Displacement, [Key Definitions](#), enero 2021; Grupo Regional sobre Riesgos, Emergencias y Desastres para América Latina y el Caribe, [Soluciones duraderas: Integración y reintegración en el Norte de Centroamérica y México](#), septiembre 2020; Office of the High Commissioner, United Nations Human Rights, [Guiding Principles on Internal Displacement](#), febrero 1998.
- 79 Alto Comisionado de las Naciones Unidas para los Refugiados, [Refugiados y migrantes UM](#), enero 2021; [Convención sobre el Estatuto de los Refugiados](#), 1951; [Declaración de Cartagena sobre los Refugiados](#), 1984.
- 80 Giovanni Scialluga, [International Law and the Protection of "Climate Refugees"](#), 2020; Simon Behrman, [Climate Refugees. Beyond the Legal Impasse?](#), 2018.
- 81 Displacement Solutions, [The Peninsula Principles on Climate Displacement within States](#), 2013.
- 82 Amnistía Internacional, [UN landmark case for people displaced by climate change](#), enero 2020.
- 83 U.S. Citizenship and Immigration Services, [Temporary Protected Status](#), enero 2021.
- 84 Platform on Disaster Displacement, [Key Definitions](#), enero 2021.
- 85 Platform on Disaster Displacement, [Key Definitions](#), enero 2021.
- 86 Platform on Disaster Displacement, [Key Definitions](#), enero 2021; The Nansen Initiative, [Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change, Volume 1](#), diciembre 2015.
- 87 Iniciativa Nansen, [Agenda para la protección de personas desplazadas a través de fronteras en el contexto de desastres y cambio climático](#), diciembre 2015.
- 88 Internal Displacement Monitoring Centre, [Global Internal Displacement Database](#), enero 2021.
- 89 Internal Displacement Monitoring Centre, [Global Internal Displacement Database](#), enero 2021.
- 90 Internal Displacement Monitoring Centre, [Global Internal Displacement Database](#), enero 2021.
- 91 Internal Displacement Monitoring Centre, [Global Internal Displacement Database](#), enero 2021.
- 92 Entrevista Organización humanitaria, diciembre 2020.
- 93 InspirAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 94 InspirAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 95 InspirAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 96 InspirAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 97 OCHA, [Impacto de Eta & Iota suma a crisis existente](#), diciembre 2020.
- 98 SEPREDENAC, UNISDR, [Informe Regional del Estado de la Vulnerabilidad y Riesgos de Desastres](#), 2014.
- 99 Rose Huber (Princeton University), [Tighter border policies leave migrants vulnerable to effects of climate change](#), octubre 2020).
- 100 OIM, [Migración y cambio](#), 2008.
- 101 Prensa Comunitaria, [Izabal: 91 familias siguen viviendo entre champas y sin apoyo después de Eta e Iota](#), diciembre 2020.
- 102 OIM, [Migración y cambio](#), 2008.
- 103 Banco Mundial, [Los desastres no son naturales](#), julio 2020; Oficina de Naciones Unidas para la Reducción del Riesgo de Desastres, [El poder de las palabras: los desastres no son naturales](#), septiembre 2020; Banco Mundial, [Sobre incertidumbres y cisnes negros ¿Cómo lidiar con riesgo en América Latina y el Caribe?](#), octubre 2018; Andrew Maskrey, [Los Desastres No son Naturales](#), 1993.
- 104 World Economic Forum, [The Global Risk Report 2020](#), enero 2020.
- 105 World Bank, [Groundswell: Preparing for Internal Climate Migration](#), marzo 2018; Excelsior, [¿El Armagedón climático? América Latina tendría los días contados](#), julio 2019.
- 106 Bryan Jones, [Modeling Climate Change-Induced Migration in Central America & Mexico Methodological Report](#), julio 2020; Abraham Lustgarten (The New York Times), [The Great Climate Migration](#), julio 2020.
- 107 Internal Displacement Monitoring Centre, [Global Disaster Displacement Risk. A baseline for future work](#), octubre 2017.
- 108 Internal Displacement Monitoring Centre, [Global Displacement Risk Model](#), enero 2021.
- 109 OIM, [La movilidad humana en la agenda climática de las Américas: necesidades y oportunidades](#), marzo 2019.
- 110 Iniciativa Nansen, [Agenda para la protección de personas desplazadas a través de fronteras en el contexto de desastres y cambio climático](#), diciembre 2015.
- 111 Iniciativa Nansen, [Agenda para la protección de personas desplazadas a través de fronteras en el contexto de desastres y cambio climático](#), diciembre 2015.
- 112 Organización de las Naciones Unidas, [Objetivos de Desarrollo Sostenible](#), enero 2021.
- 113 OIM, [La movilidad humana en la agenda climática de las Américas: necesidades y oportunidades](#), marzo 2019.
- 114 Erika Pires (RESAMA), [La migración ambiental en el Pacto Mundial para una Migración Segura, Ordenada y Regular: desafíos y aportes para América Latina y el Caribe](#), marzo 2018.
- 115 Organización de las Naciones Unidas, [Global Compact for Safe, Orderly and Regular Migration](#), enero 2019.
- 116 BBC News, [COP25: 3 claves del polémico nuevo acuerdo por el clima \(y por qué dicen que fracasó\)](#), septiembre 2019.
- 117 OIM, [La movilidad humana en la agenda climática de las Américas: necesidades y oportunidades](#), marzo 2019.
- 118 Germanwatch, [Global Climate Risk Index 2020](#), diciembre 2019; World Food Program, [El Salvador. Country brief](#), September 2020.
- 119 La Prensa Gráfica, [Vulnerables ante el cambio climático como resultado de la marginalidad](#), noviembre 2020.
- 120 Gobierno de El Salvador, Ministerio de Ambiente y Recursos Naturales (MARN), [Contribución prevista y determinada a nivel nacional de El Salvador](#), noviembre 2015.
- 121 YSUCA, [El Salvador sigue sin contar con una Política Nacional de Prevención de Riesgos y Mitigación de Desastres](#), enero 2021.
- 122 Oficina de la ONU para la Coordinación de Asuntos Humanitarios, [El Salvador: Panorama de impacto: tormenta Tropical Amanda y Tormenta Tropical Cristobal](#), junio 2020.
- 123 Universidad de El Salvador, Facultad de Jurisprudencia y Ciencias Sociales, Escuela de Relaciones Internacionales, [Desafíos y avances en el derecho internacional para el diseño de un régimen jurídico de protección internacional especial para los desplazados a causa de la incidencia del cambio climático y desastres naturales. Caso de migraciones ambientales en el Triángulo Norte de Centroamérica, período 2015-2018](#), diciembre 2019.
- 124 Programa Mundial de Alimentos, [Seguridad alimentaria y emigración. Por qué la gente huye y el impacto que esto tiene en las familias que permanecen en El Salvador, Guatemala y Honduras. Reporte de Investigación](#), septiembre 2017.
- 125 Universidad de El Salvador, Facultad de Jurisprudencia y Ciencias Sociales, Escuela de Relaciones Internacionales, [Desafíos y avances en el derecho internacional para el diseño de un régimen jurídico de protección internacional especial para los desplazados a causa de la incidencia del cambio climático y desastres naturales. Caso de migraciones ambientales en el Triángulo Norte de Centroamérica, período 2015-2018](#), diciembre 2019.
- 126 YSUCA, [El Salvador sigue sin contar con una Política Nacional de Prevención de Riesgos y](#)

- [Mitigación de Desastres](#), enero 2021.
- 127IDMC, [Global Report on Internal Displacement](#), April 2020.
- 128 USAID, [Perfil de riesgo climático: El Salvador](#), abril 2017.
- 129 USAID, [Perfil de riesgo climático: El Salvador](#), abril 2017.
- 130 LA Network, [Migraciones Climáticas en Latinoamérica y El Salvador: una realidad latente](#), mayo 2019.
- 131 LA Network, [Migraciones Climáticas en Latinoamérica y El Salvador: una realidad latente](#), mayo 2019.
- 132 LA Network, [Migraciones Climáticas en Latinoamérica y El Salvador: una realidad latente](#), mayo 2019.
- 133 YSUCA, [El Salvador sigue sin contar con una Política Nacional de Prevención de Riesgos y Mitigación de Desastres](#), enero 2021.
- 134 FAO, [El Salvador: Plan Nacional de Cambio Climático](#), junio 2015.
- 135 FAO, [El Salvador: Plan Nacional de Cambio Climático](#), junio 2015.
- 136 Contribuciones Nacionalmente Determinadas en América Latina y El Caribe, [El Salvador. Etapas del proceso de implementación de las NDC](#).
- 137 Migraciones climáticas, [La gestión de las migraciones climáticas en América Latina: entre la transversalización y el enfoque específico](#), junio 2020.
- 138 Universidad Tecnológica de El Salvador, [Migración y Cambio climático](#), septiembre 2018.
- 139 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 140 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 141 Cambio 16, [Honduras es uno de los países más vulnerables al cambio climático](#), febrero 2020.
- 142 Germanwatch, [Global Climate Risk Index 2021](#), enero 2021.
- 143 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 144 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 145 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 146 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 147 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 148 USAID, [Perfil de riesgo climático: Honduras](#), marzo 2017.
- 149 IDMC, [Country Information Honduras](#), 2019.
- 150 Testimonio de una organización humanitaria basada en Honduras.
- 151 Testimonio de una organización humanitaria basada en Honduras.
- 152 Contribuciones Nacionalmente Determinadas en América Latina y el Caribe, [Honduras](#).
- 153 Contribuciones Nacionalmente Determinadas en América Latina y el Caribe, [Honduras](#).
- 154 Contribuciones Nacionalmente Determinadas en América Latina y el Caribe, [Honduras](#).
- 155 Migraciones climáticas, [La gestión de las migraciones climáticas en América Latina: entre la transversalización y el enfoque específico](#), junio 2020.
- 156 Organización humanitaria basada en Honduras.
- 157 Organización humanitaria basada en Honduras.
- 158 Organización humanitaria basada en Honduras.
- 159 WFP, [Honduras. Country brief](#), July 2020.
- 160 WFP, [Countries, Honduras](#).
- 161 CCEPAL, NDF,BID, MARN, [La economía del cambio climático en Guatemala Documento técnico 2018](#), julio 2018.
- 162 Germanwatch, [Global Climate Risk Index 2021](#), enero 2021.
- 163 Germanwatch, [Global Climate Risk Index 2021](#), enero 2021.
- 164 Grupo de Trabajo sobre Riesgo, Alerta Temprana y Preparación del Comité Permanente entre Organismos IASC y la Comisión Europea, [INFORM: perfiles países](#), 2018.
- 165 UNICEF, OCHA, PNUD, CONRED, [Índice para la valoración / evaluación de riesgo INFORM](#), abril 2017.
- 166 Sistema Guatemalteco de Ciencias del Cambio Climático, [Clima de Guatemala: tendencias observadas e índices de cambio climático](#), 2019.
- 167 Sistema Guatemalteco de Ciencias del Cambio Climático, [Clima de Guatemala: tendencias observadas e índices de cambio climático](#), 2019.
- 168 Prensa Libre, [Estudio confirma que el 80% de los municipios del país tiene alta vulnerabilidad ante desastres](#), diciembre 2020.
- 169 UNICEF, OCHA, PNUD, CONRED, [Índice para la valoración / evaluación de riesgo INFORM](#), abril 2017.
- 170 Sistema Guatemalteco de Ciencias del Cambio Climático, [¿Qué tan vulnerables somos? elementos para entender la vulnerabilidad en Guatemala](#), 2019.
- 171 Sistema Guatemalteco de Ciencias del Cambio Climático, [¿Qué tan vulnerables somos? elementos para entender la vulnerabilidad en Guatemala](#), 2019.
- 172 Comisión Económica para América Latina y el Caribe/Alto Comisionado de las Naciones Unidas para los Derechos Humanos (CEPAL/ACNUDH), [Cambio climático y derechos humanos: contribuciones](#), 2019.
- 173 Sistema Guatemalteco de Ciencias del Cambio Climático, [¿Qué tan vulnerables somos? elementos para entender la vulnerabilidad en Guatemala](#), 2019.
- 174 OCHA, [Covid-19: Necesidades y prioridades humanitarias en el Norte de Centroamérica](#), noviembre 2020.
- 175 OCHA, [Guatemala: DT-TT Eta-lota, informe de situación No. 4](#), diciembre 2020.
- 176 Prensa Libre, [Salud reporta 109% de aumento en casos de desnutrición aguda](#), noviembre 2020.
- 177 OCHA, [Panorama de las necesidades humanitarias \(El Salvador, Guatemala y Honduras\): Ciclo de programa humanitario 2020](#), marzo 2020.
- 178 Sistema Guatemalteco de Ciencias del Cambio Climático, [¿Qué tan vulnerables somos? elementos para entender la vulnerabilidad en Guatemala](#), 2019.
- 179 Sistema Guatemalteco de Ciencias del Cambio Climático, [¿Qué tan vulnerables somos? elementos para entender la vulnerabilidad en Guatemala](#), 2019.
- 180 InspiAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 184 OXFAM, [Informe 'mojados por la sequía: Hambre y migración en el Corredor Seco de Guatemala](#), abril 2019
- 185 UNICEF, [Cambio climático en Guatemala Efectos y consecuencias en la niñez y la adolescencia](#), noviembre 2012.
- 186 Instituto de Investigación y Proyección sobre dinámicas globales y territoriales, [Desplazamiento forzado interno en Guatemala](#), mayo 2018.
- 187 Naciones Unidas, [Discapacidad, desastres naturales y situaciones de emergencia](#), SF.
- 188 Prensa Libre, [Guatemala invierte poco en población con discapacidad](#), enero 2019.
- 189 Entrevista Organización Humanitaria, diciembre 2020.
- 190 IDMC, [Guatemala: drivers of displacement](#), enero 2021.
- 191 OXFAM, [Informe 'mojados por la sequía: Hambre y migración en el Corredor Seco de Guatemala](#), abril 2019
- 192 IPCC, [Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land](#), 2019.
- 193 InspiAction, Christian Aid, [Migraciones climáticas en el Corredor Seco Centroamericano: Integrando la visión de género](#), junio 2019.
- 194 Sistema Guatemalteco de Ciencias del Cambio Climático, [Antecedentes y contexto del cambio climático en Guatemala](#), 2019.
- 195 OIM, [La movilidad humana en la agenda climática de las Américas: necesidades y oportunidades](#), marzo 2019.
- 196 Sistema Guatemalteco de Ciencias del Cambio Climático, [Antecedentes y contexto del cambio climático en Guatemala](#), 2019.
- 197 Revista Mesoamericana de Biodiversidad y Cambio Climático, [Cambio climático: ¿cómo nos afecta y qué estamos haciendo en Guatemala?](#), septiembre 2019.
- 198 Instituto Nacional de Ecología y Cambio Climático, [Atlas Nacional de Vulnerabilidad al Cambio](#)

- Climático, 2019.
- 199 Germanwatch, [Global Climate Risk Index 2020](#), diciembre 2019.
- 200 Instituto Nacional de Ecología y Cambio Climático, [Atlas Nacional de Vulnerabilidad al Cambio Climático](#), 2019.
- 201 Ana Cecilia Conde, [Variabilidad y Cambio Climático. Impactos, Vulnerabilidad y Adaptación al Cambio Climático en América Latina y el Caribe](#), 2016; Gian Carlo Delgado (Coordinador), [México frente al cambio climático: Retos y oportunidades](#), 2010.
- 202 Instituto Nacional de Ecología y Cambio Climático, [Atlas Nacional de Vulnerabilidad al Cambio Climático](#), 2019.
- 203 Saúl Arellano (México Social), [Los pobres son los más vulnerables al cambio climático](#), junio 2020.
- 204 Climate Research, [Climate migration: México and its invisible migrantes](#), enero 2021; Ana Rojas (BBC Mundo en México), [Cambio climático: la razón por la que migrarán millones de Centroamérica y México](#), septiembre 2019; Alejandro González (Milenio), [Alta migración, un efecto visible del cambio climático](#), julio 2019; El Universal, [Cambio climático aumentará migración en Centroamérica y México](#), septiembre 2019; AFP, [Cambio climático aumentará migración de centroamericanos a EEUU, advierten expertos](#), octubre 2018; Julio Berdegué (Inter Press Service), [¿Por qué migra la población del Triángulo Norte Centroamericano?](#), octubre 2018; El Economista, [Director de PMA en Latinoamérica: "Cada vez hay más gente que migra por hambre"](#), octubre 2018.
- 205 Instituto Nacional de Ecología y Cambio Climático, [Presentan resultados del estudio Migrantes climáticos internos en México](#), febrero 2020.
- 206 Internal Displacement Monitoring Centre, [Global Disaster Displacement Risk. A baseline for future work](#), octubre 2017.
- 207 World Bank, [Groundswell: Preparing for Internal Climate Migration](#), marzo 2018.
- 208 Bryan Jones, [Modeling Climate Change-Induced Migration in Central America & Mexico Methodological Report](#), julio 2020.
- 209 Anita Snow (Associated Press), [Arizona: Muertes de migrantes, las más altas en una década](#), enero 2021.
- 210 Rolando Díaz, (El Colef), [Percepción del riesgo a las altas temperaturas de los migrantes que transitan por Sonora](#), 2017.
- 211 Organización Internacional para las Migraciones, [Migrantes en México: Vulnerabilidad y riesgos. Un estudio teórico para el Programa de Fortalecimiento Institucional "Reducir la vulnerabilidad de migrantes en emergencia"](#), 2016
- 212 Organización Internacional para las Migraciones, [Migrantes en México: Vulnerabilidad y riesgos. Un estudio teórico para el Programa de Fortalecimiento Institucional "Reducir la vulnerabilidad de migrantes en emergencia"](#), 2016.
- 213 Saraí Cruz (El Colef), [Diagnóstico para la incorporación de los albergues de atención a migrantes en los sistemas de prevención, preparación y respuesta en situaciones de emergencia en México](#), 2018.
- 214 Instituto Nacional de Ecología y Cambio Climático, [Presentan resultados del estudio Migrantes climáticos internos en México](#), febrero 2020; Ibero Puebla, [Urge Ibero Puebla atender fenómeno cambio climático-migración](#), octubre 2018.
- 215 Instituto Nacional de Ecología y Cambio Climático, [Atlas Nacional de Vulnerabilidad al Cambio Climático](#), 2019.
- 216 Cámara de Diputados de México, [Cuidado del medio ambiente tema prioritario en la agenda legislativa](#), octubre 2018.
- 217 Gobierno de México, [Los compromisos ante el Cambio Climático](#), diciembre 2015.
- 218 Organización de las Naciones Unidas, [Objetivos de desarrollo sostenible](#), enero 2021.
- 219 Gobierno de México, [Constitución Política de los Estados Unidos Mexicanos](#), enero 2021.
- 220 Gobierno de México, [Reforma Energética \(Resumen ejecutivo\)](#), 2013.
- 221 Secretaría de Medio Ambiente y Recursos Naturales, [Principales cambios en la Ley General de Cambio Climático](#), abril 2018.
- 222 Sistema Nacional de Cambio Climático, [Marco Normativo](#), enero 2021.
- 223 Centro Nacional de Prevención de Desastres, [¿Qué hacemos?](#), febrero 2021; Ibid., [Atlas Nacional de Riesgos](#), enero 2021.
- 224 Instituto Nacional de Ecología y Cambio Climático, [Análisis de la vinculación de instrumentos normativos, de planeación y programáticos de temas estratégicos con la política climática](#), mayo 2020.
- 225 Instituto Nacional de Ecología y Cambio Climático, [Análisis de la incorporación de la política climática en instrumentos de planeación estatales](#), mayo 2020.
- 226 Gobierno de México, [Ley General de Cambio Climático](#), junio 2012 (reformada en noviembre 2020).
- 227 Cámara de Diputados de México, Minuta de Proyecto de Decreto [Ley General para Prevenir, Atender y Reparar Integralmente el Desplazamiento Forzado Interno](#), septiembre 2020.
- 228 Cámara de Diputados de México, [Ley de Migración](#), mayo 2011.
- 229 Cámara de Diputados de México, [Ley sobre Refugiados, Protección Complementaria y Asilo Político](#), enero 2011.
- 230 Unidad de Política Migratoria, Registro e Identidad de Personas, [Nueva Política Migratoria del Gobierno de México \(2018-2024\)](#), 2019.
- 231 Gobierno del Estado de Chiapas, [Ley para la Prevención y Atención del Desplazamiento Interno en el Estado de Chiapas](#), 2012.
- 232 Gobierno del Estado de Guerrero, [Ley Número 487 para prevenir y atender el desplazamiento interno en el Estado de Guerrero](#), 2014.
- 233 Gobierno del Estado de Sinaloa, [Ley para Prevenir, atender y reparar integralmente el desplazamiento forzado interno en el Estado de Sinaloa](#), 2020.
- 234 Instituto Nacional de Ecología y Cambio Climático, [Evaluación estratégica del avance subnacional de la Política Nacional de Cambio Climático](#), 2018.
- 235 Portal Ambiental, [Migración por cambio climático podría aumentar en México](#), febrero 2020; Instituto Nacional de Ecología y Cambio Climático, [Presentan resultados del estudio Migrantes climáticos internos en México](#), febrero 2020.
- 236 Germanwatch, [Climate Change Performance Index \(2021\)](#), December 2020.
- 237 United Nations Environment Programme, [Adaptation Gap Report 2020](#), enero 2021.
- 238 Gonzálo Ortuño (Cuartoscuro), [Recortes y promesas incumplidas: el medio ambiente no es prioridad en el gobierno de AMLO](#), octubre 2020.
- 239 Gonzálo Ortuño (Cuartoscuro), [Recortes y promesas incumplidas: el medio ambiente no es prioridad en el gobierno de AMLO](#), octubre 2020.