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Disasters and Displacement: Drivers of Climate Migration and Potential Solutions Amid Global Destruction

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# DISASTERS AND DISPLACEMENT:

## Drivers of Climate Migration and Potential Solutions Amid Global Destruction

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### Abstract

Everyone will suffer from the effects of climate change and environmental degradation, but it is having the greatest impact on people and communities who are already socially and economically disadvantaged. Historical, political, and economic inequalities have created systemic injustices that have always been present, but are now rampaging society at an ever more menacing pace. In the face of climate change, these inequities are not only a detriment to society, but also a threat to human life, disproportionately assailing the most marginalized communities. The present study explores the environmental injustices that are actively forcing countless people and entire communities out of their homes. Through interviews with experts in the field, as well as people directly affected by the issue, this research aims to raise awareness of the problems and human rights abuses that are arising as a result of climate changes. In addition, it explores possible solutions to these problems threatening the environment and human society.

## Introduction

Environmental injustice is a very widespread issue that takes many different forms. The environmental injustices that arise from communities located near point sources of pollution are more widely known and researched. However, the connection between fossil fuel emissions on one side of the world and migration on another is not as widely researched, which is a gap that this research aims to fill.

This study explores climate displacement and investigates the research question: What is the current climate migration situation, what are the main drivers of climate displacement, what are the obstacles and injustices migrants are facing, and what must be done in the future to address these issues?

Climate migration is currently on an unprecedented upward trajectory, driven by a rise in food and water insecurity. Starved and forced out of their homes, climate migrants face continued injustice both in their migration journeys and once they've arrived at their destination sites. Gaps in the legal system exclude climate refugees, who aren't even considered refugees under the law. As a result, there are no safe and accessible pathways for climate migrants. The global rise of xenophobia and intolerance furthers this suffering, and political divisions and corruption prevent the development of new policies and solutions. However, there is still hope, as countless people are working towards deconstructing the injustices that are deeply rooted into the foundations of our society. If communities worldwide unite and strive for these ideals, we can and will overcome these global challenges.

## Methodology

This research paper presents a qualitative study that aims to investigate the disproportionate impacts of climate change, and the injustices and displacement it is causing. I collected an extensive set of data through interviewing a wide range of people, from experts in the field to people directly affected by the crisis. I hope to expand upon this growing field of research and help develop real solutions. Through interviewing people directly affected by the crisis, I aim to raise awareness of the widespread food and water insecurity, rise in extreme weather events, floods, and other disasters that are happening now and are already forcing people out of their homes. These interviews with people who are disproportionately affected by climate change provide first-hand accounts of the situation, spreading the stories of people around the world, and amplifying voices that too often are overlooked. This data can serve as an educational tool, because many of the people who are contributing the most to the climate crisis still don't understand the direct connection between their fossil fuel emissions, the rise in extreme weather events, and migration. This study makes that connection clear and encourages people to think deeply about the complex issues facing the world today. After collecting a wide range of data, I sorted it into different categories to present the state of the crisis, the primary drivers of climate migration, obstacles, and solutions. Through my research, I hope people can hear the stories of people they otherwise never would have gotten the chance to speak to. I hope

that hearing these stories will inspire people to help solve the described injustices, take action on the proposed solutions, and help build a better society.

## Results

### Drivers of Climate Migration:

Systemic injustices cause the effects of climate change to be disproportionate, creating widespread environmental injustice and forcing historically marginalized communities to leave their homes

- "Folks who are most likely to be affected by climate displacement, are often communities that are already marginalized. They've had histories of oppression and persecution. They're living in vulnerable places because it's land that no one else wants to live in" (Erica Bower).
- "It's really important to remember these historical and political and social and economic legacies, and how it affects vulnerability" (Erica Bower).
- "I think we also see racism at play a lot of times. Folks who are in New Orleans who are most dramatically affected by Hurricane Katrina were most often people of color. It's not a coincidence that they were living in the places where the levee broke. I think it's really important that we think about climate change from this justice perspective" (Erica Bower).
- "A lot of environmental impacts specific to climate change disproportionately affect the most disadvantaged communities" (Marissa Sisk).
- "The poorest communities are the ones that are most affected" (Marissa Sisk).
- "It's disproportionate, there's an equity factor, a historical factor. There's so many elements to this issue, and it just seems to be getting worse" (Marissa Sisk).
- "Climate change is rarely the sole reason why someone would leave their home, it's the straw that breaks the camel's back. Maybe a community has been experiencing the impacts of settler colonialism and economic inequality for decades and decades and decades. They're really struggling to sustain the amount of income that they need to survive, and then there's a drought, and that drought exacerbates all of those pre-existing inequalities that makes it such that they can't stay in their homes anymore" (Erica Bower)

### Injustices faced by indigenous communities

- "So when I think about people that are the most affected by climate change, I think about all the people in these hotspots where there is the most solar irradiance, where the sun is the most piercing...Most solar irradiance is within tribal country and tribal nations, and that's important because not only will the sun get hotter at those locations that are already somewhat barren and kind of deserty terrain, but there's no mechanism to number one harness that energy, and number two, to do something with it...They're having higher frequency of natural disasters, more health complications because of it" (Marissa Sisk).
- "Indigenous groups in the United States have been forced because of the trail of tears to move off of the mainland and onto remote islands, and those islands are now most susceptible to sea level rise, storm surges, and other coastal hazards that we know are growing in intensity and frequency because of climate change" (Erica Bower).

## Water Shortage

- "Han tenido muchos problemas la gente en el agua porque lo tienen que comprar, tienen que ir a otros lados, porque los pozos están secando" (Noel Aragon Jirón).
- "En las fincas, están retrocediendo mucho las orillas de los ríos. El río se está secando. Antes ese río era hondo. Ahora no, ahora está seco. Ahora puedes pasar de chancleta. Hay partes donde queda así nada más. Es algo que es muy preocupante" (Noel Aragon Jirón).
- "Mucha gente ha venido de afuera de las partes más áridas buscando más campo, más agua" (Noel Aragon Jirón).
- "Cocles toda una vida ha tenido problemas de agua, desde que yo estoy aquí desde el dos mil seis. Todo el tiempo limitan el agua" (Noel Aragon Jirón).
- "Cuando yo salí de allá (Nicaragua) hace varios años, había un río que tenía muchos peces y todo, nosotros íbamos a jugar y bañamos en ese río. Ahora cuando yo regresé, hace diez años después que yo anduve, el río estaba más seco. En el 2019 volví al río, y me pase en chancletas sin mojarme los pies. Eso nunca ha sucedido, nunca sucedía eso, lo normal era 50 centímetros en la parte más seca" (Noel Aragon Jirón).
- "Cuando hace mucha sequía aquí, cambia el acceso al agua. Las plantas también se empiezan a resentir por la sequía, y los ríos también, que se van secando" (Joni Garcia)
- "La mayoría lo que hacen, como no tienen agua potable, lo que hacen es que hacen un pozo, hacen pozos o agarran de nacientes de agua de la montaña y las traen hasta las casas, eso es un medio que se usa mucho aquí" (Joni Garcia).
- "Sufre mucho la comunidad, no tenemos un medio para sostener el suministro de agua" (Joni Garcia).
- "Se tiene que buscar formas de recoger agua de lluvia, buscar varios medios para poder sostenerlo porque sin no...(Joni Garcia).
- "En la zona en donde vivo, el problema del cambio de la lluvia es que cuando no llueve, se empiezan a secar los pozos, las plantas" (Joni Garcia).

## Food Insecurity

- "I think agriculture plays a huge role in influencing climate migration, because a lot of times the climate change impact affects people's livelihoods, it affects their ability to grow crops. It affects their ability to bring those crops to the market and earn an income that could help them stay at home. So, oftentimes the climate change impact is affecting migration decision making, indirectly by affecting agriculture and economic livelihoods, as like a mediating factor between a climate impact and migration decision" (Erica Bower).
- "La cosecha también se pierde mucho por la sequía, cuando poco agua se les caiga ya se empiezan a quemar las plantas porque hay demasiado sol" (Joni Garcia).
- "Los que viven aquí en Puerto Viejo viven de la pesca en el mar" (Joni Garcia).
- "Si no hubiera peces, estaríamos en problemas porque no habría suministro para comer, porque de eso dependen. Si no hay peces, tendríamos que buscar otro medio para sobrevivir" (Joni Garcia).
- "Sin la agricultura, el plátano, el banano, el cacao, sería un caos, todo se iría abajo, todo se perdería" (Joni Garcia).
- "Si hace falta el agua, no tenemos más agricultura. Dependemos del agua" (Noel Aragon Jirón).
- "The right to cultivate your own land and to do it in a way that you can actually harvest something, is so important to traditional native lifestyle, and it's hard to do because climate change has depleted a lot of this land" (Marissa Sisk).

## Deforestation

- “Tropical deforestation in Latin America remains high, which has negative effects on the people that live there, such as reducing water quality, causing flooding, reducing biodiversity, sometimes reducing agricultural productivity, and that can interact with climate change to increase the number of refugees” (Karen Holl).
- “En la finca, hay otro vecino allí que tumbó como 20 hectáreas, las peló solo para darle pasto, y listo. Pues claro, me imagino que tuvo propósito, pero en el caso mío, yo no lo hubiera hecho” (Noel Aragon Jirón).
- “Nicaragua es mucho más desordenada en la parte de la naturaleza. Donde yo viví, donde nació, allí no se encuentran árboles de muchos años, todos son jóvenes, palitos de veinte años, arbolitos de veinte, diez años. Allí son más destructores. Allí llegan y cualquier palo lo tumban sin sacarle una aprovechado, sin que estén corriendo riesgo nada, lo tumban” (Noel Aragon Jirón).
- “Ese país está un poco más difícil en lo que cuiden la naturaleza...La mayor parte de Nicaragua, lo están tirando todo. La deforestación es el problema más grande que está pasando en el mundo. Y entre más seguimos deforestando, más problemas vamos a tener. Tal vez yo no lo viva, pero ya, la gente que viene creciendo y naciendo, si van a tener más problemas. Vamos a tener muchos problemas en esa parte” (Noel Aragon Jirón).
- “Para mí proteger la naturaleza es porque en primer lugar sería bueno porque ahora hay gente que no va a conocer los animales, que es la parte que se va perdiendo, va ir bastante. Niños que en vuelta de 50 años tal vez ya no vamos a ver los animales, o los árboles. Y entre más tumbamos los árboles, más problemas tenemos con el clima. Antes había un sistema de los climas que era casi parejo. Tiempo que era verano era verano, y tiempo que era invierno era invierno. Aquí en esta zona de parte de Costa Rica y parte de Nicaragua. Ahora no. Lluve cualquier día, o en tiempos de invierno no hay lluvia. Las agriculturas caen, la ganadería cae, por la misma razón. Y por que, por el mismo descontrol que nosotros mismos hemos hecho con la naturaleza, ir tumbando y tumbando árboles” (Noel Aragon Jirón).

## Obstacles that must be overcome in order to create safe and just migration pathways for climate refugees:

### Injustices climate migrants face

- “There is ample evidence from the world bank, from the internal displacement monitoring center, and from academic studies that more people will be on the move in the year 2050 because of climate change than they are today, and that trend is likely to increase into the future” (Erica Bower).
- “We live in an era of xenophobia and intolerance. In destination sites, when people have migrated to a new place, there aren't always contexts for open reception, where people migrating, regardless of whether or not climate change has played a role, in welcoming those people into the community and making them feel like it's home” (Erica Bower).
- “Mucha gente cuando migra, lo tratan mal cuando llega a otro país. Y eso, yo no estoy a favor de eso, yo estoy en contra de eso. Porque para mi, sea quien sea, sea del país que sea, sea del color que sea, somos iguales todos. Con diferentes pensamientos pero iguales. Si nosotros pensábamos todos lo mismo, sería un mundo bonito, y no estuviera pasando lo que está pasando. Sería otro tipo de día. Para mi todos somos iguales. Con dinero, sin dinero, todos somos iguales” (Noel Aragon Jirón).

- “Cuando la persona migra, muchos son maltratados, y muy feo. A mi no me gusta que maltraten a un trabajador, y que lo dan feo. Yo, si me toca renunciar porque maltrataron a otro, yo lo hago, sin problema, por no ver eso” (Noel Aragon Jirón).

## Lack of Unity

- “El problema es que nosotros como seres humanos, si fuéramos unidos las cosas funcionarían pero es que no va a funcionar jamás en la vida porque uno jala por un lado, y el otro por otro. Entonces, no podemos. La comunidad, si no se organiza, si no hay una comunicación de todos, que todos tengan una misma idea, va ir pasando lo mismo” (Noel Aragon Jirón).
- ¿Hay una solución? “No, no. Si fuéramos unidos, y pensáramos iguales, si, a todo lo solucionamos. Si fuéramos un equipo todas las personas. Pero, no, jamás va a pasar eso. Entre más tiempo, más egoísmo, más pleitos, países peleando contra otros países, que es algo que yo no lo veo correcto” (Noel Aragon Jirón).
- “People aren't talking to each other. That's all that is. Federal, state, county, whatever, there always seems to be a disconnect between them and tribal governments” (Marissa Sisk).

## Public Health Issues

- “Climate change will, for instance, increase the likelihood of certain vector borne diseases like malaria, and that might be a driver of migration. Maybe increased malaria in a certain part of Panama, for example, may make people more wary of remaining in that place, and choose to move to an area that has lower rates of malaria” (Erica Bower).
- “Public health is also a really important set of considerations for folks who are on the move, in their migration journeys. Do people have access to healthcare. Do they have access to bandages if they have a wound. Do they have access to support systems if they get more seriously ill, while they're in transit, especially if people are in countries where they don't necessarily have citizenship. And then destination sites. Once people have already moved, whether it's internally or across national borders, there are really important public health considerations, do people have access to the support that they need” (Erica Bower).

The unregulated, globalized economic system is exploiting vulnerable communities, destroying traditional ways of life, and driving forced migration.

- “Cuando yo vine aquí, eran muy pocas casas, mucha selva, muy pocos vehículos. Ahora hay más vehículos, muchas más casas. La economía es la economía, y vivimos del trabajo y todo eso, pero, mucho se hace incorrecto” (Noel Aragon Jirón).
- “La economía, pues el lugar ha ido creciendo un montón. La verdad es que cuando yo vine aquí eran muy pocos hoteles y todo eso, ahora hay un montón de hoteles, más casas, esa parte si va creciendo. O sea, el lugar crece, pero igual, por la parte del clima, es que estamos mal, porque ha habido demasiado sol. Antes llovía mucho. Ahora no” (Noel Aragon Jirón).
- ¿Qué esperanzas tienes para el futuro, para prevenir el cambio climático? “Pues en eso yo no tengo ninguna esperanza de nada. Yo quisiera, si yo tuviera una buena finca pudiera protegerlo toda la vida, y lo haría. Pero eso no es el caso. Para mi el futuro prácticamente no existe. Yo llegara a un tiempo en que me voy a ir, pasar a una nueva tierra. Así como vamos,

destruyendo, en vuelta de 30 años ya no vamos a tener árboles, no vamos a tener nada, vamos a tener problemas” (Noel Aragon Jirón).

- “La economía de Nicaragua es muy baja, los salarios hechos muy bajos, tengo entendido, porque mis hermanillas dicen que ganan 300 pesos y una saca de arroz te cuesta 400 pesos. O sea no puedes comprar ni 25 de arroz con un día de trabajo. Entonces por eso es que en Nicaragua la gente ha emigrado mucho” (Noel Aragon Jirón).

- “Cuando yo vivía allí, era diferente, las cosas estaban más bajo. Otra cosa es que nosotros nos criamos, todo reproducido en la misma finca, no ocupábamos dinero. Todo en la misma finca, todos los productos, la verdura, todo, todo, todo, el huevo, la gallina, el pollo, todo era de allí mismo. Nosotros no ocupábamos, nosotros no sabíamos para qué... Si se usaba el dinero pero digamos que nosotros, no necesitábamos preocuparnos por plata, no necesitábamos, porque todo era en un, todo quedaba allí mismo. Mi papá vendía, a veces una vaca o un cerdo para comprar lo que es ropa, zapatos, no más. No necesitábamos más nada. Para nosotros la plata no existía. Nosotros cuando nos criamos para nosotros no existía. Pues cuando me voy creciendo, claro, ya uno agarra caminos, y va a buscar “futuro”, y allí sí, y ahora pues, ahora todos dependemos del dinero. Ya no podemos tener esa dicha, y esa tranquilidad, que no hace falta el dinero, yo no sentí eso. No sentí eso, que el dinero era una necesidad para nosotros cuando nos criamos. Ahora sí. Ahora todo es plata” (Noel Aragon Jirón).
- “Y eso pasa con el migrante, el migrante va sufrir al recibir malos tratos, a veces hasta prácticamente están esclavizados. La mayoría de los empleos que hay en San Jose pagan menos que un salario base. Y eso es aprovecharse del migrante. La mayoría son nicaragüenses, venezolanos, y cosas así. Esos son los países de donde creo que han emigrado más la gente, Venezuela, Nicaragua, y Haití. Entonces cuando ellos llegan a otro país, lo que hacen es aprovecharse de ellos. Y eso no, para mí, yo no estoy de acuerdo con eso. Yo no trato de aprovecharme de nadie, ni me gusta que se aprovechen de mí” (Noel Aragon Jirón).

### Political Corruption

- “El gobierno. Ha. Está muy difícil. Los gobiernos, yo lo tomo así: nada más vienen, hacen su trabajo y se llenan sus bolsillos, a ellos no les interesamos nada. Con todo respeto, pero yo sé que es así. Y en todos los países del mundo, no solo aquí. Eso es lo que pasa con los gobiernos. A ellos no les importa cuánta gente vaya haciendo daño al medio ambiente, no les importa. Ellos nada más lo que quieren es llenar sus bolsillos y vámonos. Como todos los países del mundo” (Noel Aragon Jirón).

### Solutions:

#### Policy Solutions



- “The people who are experiencing the brunt of climate change impacts and may decide to flee their homes, are not the ones who’ve contributed most of the problem. They’re the ones who are bearing the consequences, and others need to be held accountable” (Erica Bower).
- “It will mean we will need to build institutions, it’ll mean that we need to have laws in place. It’ll mean that we need to have funding mechanisms like this new loss and damage fund that just came from cop 27, that really focus on making sure people can stay at home as long as they want to, but when they want to move, that they are able to move in a way that's safe, in a way that meets their own needs, in a way that's on their own terms. Those types of institutional, political and funding changes don't happen overnight” (Erica Bower).
- “Individual action involves electing government officials who care about climate mobility issues, and who can prioritize this in local, state and national government. So getting out to vote, and ensuring that our politicians have human rights perspectives to climate mobility front and center, is a really important action” (Erica Bower).
- “For planned relocations of entire communities, we need national policies that protect people's rights in these contexts, and make sure that relocation decisions happen on people's own terms. For internal displacement, we need national policies on IDP protections. So what this could look like is, for example, Vanuatu is a country that has a National IDP policy that recognizes how climate change, and disasters broadly drive people's displacement, within a country's borders” (Erica Bower).
- “When it comes to cross border displacement, there is a whole range of potential policy solutions that different parts of the world have implemented to different extents. The Nanson initiative protection agenda, which was endorsed in 2015 by 109 governments outlines a whole range of possible protection policies for people who've crossed international borders. In some contexts this could be a humanitarian visa, a special visa category that's applicable after disaster. In other cases, it's temporary protection status, so people who are already in the country won't be deported, they're able to remain” (Erica Bower).
- “Refugee law may be applicable. There are certain regional conventions where there's a broader definition of who is a refugee. In the Cartagena declaration, and in the OAU convention, there is a clause about events seriously disturbing the public order, and someone fleeing across a border because of climate change may or may not meet that definition. But in general, the 1951 refugee convention defines someone as a refugee when they're fleeing persecution across an international border because of their race, their religion, their membership of a particular social group, or political opinion. And climate change is rarely aligned with one of those criteria, so usually the refugee convention is not a solution, and these other migration categories or complementary pathways are a more appropriate legal solution” (Erica Bower).
- “People in law should consider that our natural resources are not only sacred, but it's almost an entitlement that we have to the land so that we can protect the people” (Marissa Sisk).
- “There should be some things that are inherently a basic human right. My research is in energy. Giving everyone basic quality with electricity automatically gives running water, access to education and employment, lighting, cooking so many things that we just take for granted” (Marissa Sisk).
- “Planned relocations of entire communities is really unique from a funding perspective, and in research that I’ve led over the last few years, we've identified over 400 communities around the world that are already undertaking these types of moves. And they need money. They need funding to be able to develop a new site and build a new home out of harm's way” (Erica Bower).

- “So I think a major challenge here is finance, and also how do we get human rights respecting policies that make sure these types of community-wide planned relocations are undertaken in a way that respects people’s rights and doesn’t actually undermine protection for the very people they’re trying to protect” (Erica Bower).
- “It’s really helpful to study this in a systematic way across different planned relocation cases, to get a better picture of what we can recommend to policymakers” (Erica Bower).
- “To fail to plan is to plan to fail. Knowing that these trends are in sight for the future, we need to start planning at a societal and at an individual level today” (Erica Bower).

## Community-Based Solutions

- “Thinking about livelihood outcomes, what is the role of community engagement and participation. When these relocations are initiated from communities themselves rather than government actors, do better outcomes ensue. We also need to know about the safety of these destination sites. When a relocating community has moved to a new place, is that destination site actually going to be less exposed to sea level rise in 10 years, in 20 years, in 50 years, in 100 years” (Erica Bower).
- “We also need to understand the role that that justice and equity play in determining decision making around planned relocation and climate migration more broadly” (Erica Bower).
- “When a community has initiated one of these planned relocations, as opposed to a government actor, or an external NGO, better outcomes ensue for peoples livelihoods. When community members have been involved in the decision making process about whether to move, about where to move, about how to develop the new site with homes, resources, and community centers that align with their needs, they’re more satisfied with the relocation outcomes. Community autonomy, and a right to self determination is really critical” (Erica Bower).
- “It’s a multi faceted solution. So, the first step is to hear community voices...It’s a really unique issue that requires the intersection of policy, community engagement, really championed tribal leaders who want to get stuff done” (Marissa Sisk).
- “Para el futuro, la esperanza mía es seguir trabajando, seguir luchando para adelante, a pesar de cualquier obstáculo, hay que seguir adelante” (Joni Garcia).

## Protecting and Restoring Forests

- “Restoring tropical forests has a lot of potential benefits; it can help to provide livelihoods to people, it can sequester carbon, and it can conserve biodiversity, but it takes careful planning to get all those benefits. Planting trees is part of the solution, but the first thing we have to do is we have to be reducing the amount of greenhouse gas emissions. We also need to protect the amount of intact forest. There’s still a lot of deforestation, and it’s much easier to protect the existing forest than it is to go back in and try to put it back together again, which can take decades or centuries” (Karen Holl).
- “The first thing we need to be doing is very rapidly reducing our greenhouse gas emissions. Second, we need to be protecting intact forests. It’s much harder to put forests back together again afterwards, and there’s huge amounts of forests that are still being cleared that we should protect. If we are going to plant trees, which can be part of the solution, then we really need to grow those trees. And what that means is really careful planning, it means engaging with local stakeholders to make sure that they’re getting benefits, it means having a plan for how you’re going to maintain those trees over the long

term, because it takes 10, 20, 50 years for us to really sequester the carbon that we want, and to provide the habitat for biodiversity" (Karen Holl).

## Discussion

Climate change disproportionately assails the most disadvantaged communities, exposing the deeply rooted injustices of our society. Systemic inequalities have led to widespread environmental injustice and forced already marginalized communities to leave their homes. Historical, political, social, and economic legacies come together to augment vulnerability to climate change and susceptibility to forced migration. "Folks who are most likely to be affected by climate displacement are often communities that are already marginalized. They've had histories of oppression and persecution. They're living in vulnerable places because it's land that no one else wants to live in" (Erica Bower). The interaction of underlying injustices with climate change drives forced migration. Therefore, who is forced to migrate is an indicator of who has historically and presently been the most mistreated and neglected by society. "Maybe a community has been experiencing the impacts of settler colonialism and economic inequality for decades and decades and decades. They're really struggling to sustain the amount of income that they need to survive, and then there's a drought, and that drought exacerbates all of those pre-existing inequalities that makes it such that they can't stay in their homes anymore" (Erica Bower). Histories of forced displacement, for example, significantly influence who is being displaced today. Indigenous communities historically suffering from violent removals are now seeing a second wave of forced displacement. Marissa Sisk described how her tribe was forcefully removed from their original homeland in the Florida area and pushed into Oklahoma. Having cultivated their original lands for generations, her tribe had gained a deep understanding of the local ecosystem, how to maintain a harmonious relationship with the natural world, and give and take in a unique balance with the environment. However, they are no longer on those lands as they were forcibly removed to Oklahoma, where they are now facing higher frequencies of natural disasters, tornadoes, blizzards, and extreme weather events that are getting progressively worse in the face of climate change. "That's why they put people there, because it's not great farming land, it's really hard to become harmonious with the environment...you just can't find necessary harmony that you've known from your ancestors. There's just no traditional ecological knowledge from a place that you're new to" She also talked about how many indigenous communities were forced into hotspots of solar irradiance where the sun is the most piercing. "They're having a higher frequency of natural disasters and more health complications because of it" (Marissa Sisk). Erica Bower had similar findings. She talked about how many indigenous groups in the United States were forced "off of the mainland and onto remote islands, and those islands are now most susceptible to sea level rise, storm surges, and other coastal hazards that we know are growing in intensity and frequency because of climate change" (Erica Bower). These disproportionate exposures to climate hazards are not a coincidence, but rather an outcome of the historical marginalization of indigenous peoples. "It's not a coincidence that these people are living in the least desirable,

most marginalized pieces of land, it's because of histories of government neglect and lack of support" (Erica Bower). If we don't immediately start addressing these social, historical, and systemic factors that are disproportionately assailing certain groups of people, the crisis will only worsen.

We are living amid a new form of genocide, one that is killing the most vulnerable populations by gradually starving people to death. Large corporations deliberately perpetuate these crimes against humanity as they continue to extract fossil fuels, despite the indisputable evidence that their actions are wreaking havoc on people and the environment worldwide. Those suffering the most from this environmental destruction are not the ones who have contributed the most to the problem; they are the ones who are bearing the consequences. Latin American countries located in the drought-prone area along the equator are among those most affected. The destruction of the environment is the destruction of human life, something that is very evident in the stories of those directly affected by the crisis, including Joni Garcia, a resident of Costa Rica, and Noel Aragon Jirón, a resident of Costa Rica who grew up in Nicaragua. Many Latin American communities depend on local water sources, which are rapidly being lost in the face of climate change. "Most people don't have running water. They either dig a well or collect water from springs in the mountains and bring it to their homes" (Joni Garcia). When you depend on wells and water sources in the mountains for drinking water, your very life is on the line when these sources start to dry up or get even further from your home. "When there is a lot of drought here, water access is jeopardized. The plants start wilting, and the rivers begin to dry up" (Joni Garcia). These threats are not some far-off projection, but rather a crisis that is happening this very minute. "The river banks are receding significantly. The river is drying up. Before it was deep. Now it's not, now it's dry. It's extremely concerning" (Noel Aragon Jirón).

This water shortage is happening because anthropogenic forces have thrown off nature's natural cycles. This is extremely problematic because when nature's systems are thrown off, so are human systems, especially the world's food system. "In Nicaragua and Costa Rica, we used to have regular seasons and consistent weather patterns. When it was summer, it was summer, and when it was winter, it was winter. Not anymore. Now it will rain on a random day, or in winter time when we would usually get rain we don't get rain. Agriculture is collapsing because as humans, we've thrown off nature's natural cycles" (Noel Aragon Jirón). Water shortage has compounding effects that ripple through the economy and every aspect of people's lives. Drought, desertification, and other climate change impacts affect agriculture and jeopardize people's ability to sustain their livelihoods and feed their families. "Without water we no longer have agriculture. We depend on water" (Noel Aragon Jirón). Farmers living in remote areas suffer greatly when all of a sudden precipitation and temperature change dramatically. It becomes impossible to grow food and crops the way their families have been for decades. Joni

Garcia described how the harvest has already diminished significantly, and expressed his concerns regarding what would happen if agriculture continues to decline. "Without

agriculture, we would enter a chaos, everything would collapse, we would lose everything” (Joni Garcia).

When you can no longer feed your family, you're forced to do the unimaginable and leave your home. An inability to grow food plays a huge role in influencing climate migration decisions not only because it jeopardizes people's ability to feed themselves but also their ability to bring those crops to the market and earn an income that could help them stay at home. When they no longer have the income or resources to stay at home, they are forced to leave. “A lot of people have come from other places, they've emigrated from the most arid places looking for more natural spaces, more water” (Noel Aragon Jirón).

When people are forced to migrate because of climate change, they lose not only their homes, but also their cultures and traditions. The destruction of traditional food pathways is not only starving people, but also erasing entire cultures and eradicating longstanding ways of life. Marissa Sisk talked about how, for indigenous communities, food sovereignty is very intertwined with one's ability to cultivate their own land, a right that has been violently seized from most Native communities and is now being jeopardized once again because of climate change. “The right to cultivate your own land and to do it in a way that you can actually harvest something, is so important to traditional native lifestyle, and it's hard to do because climate change has depleted a lot of this land” (Marissa Sisk). Indigenous people worldwide are facing these same injustices. “When I lived in Nicaragua, things were different. We produced everything we needed right there on our little plot of land. We didn't need money. We produced everything, vegetables, eggs, chicken, everything was just right there. We didn't need to worry about money, we didn't need it, because we had everything we needed right there. My dad would sometimes sell a cow or a pig to buy basic necessities like clothes and shoes, but nothing more. We didn't need anything more. For us money essentially didn't exist. When we were growing up, in our minds, money didn't even exist. But then we grew up, we hit the road in search of a “better future”. And now, well, now we all depend on money. We can no longer find that bliss, that tranquility we had when we weren't constantly worrying about money. When I was growing up I didn't feel that money was a necessity. Now I'm forced to. Now everything is about money” (Noel Aragon Jirón).

These injustices are perpetuated because we live in a global economic system that puts a price tag on human life. The unregulated, globalized economic system exploits vulnerable communities, destroys traditional lifestyles, and drives forced migration. “In terms of the economy, the place has grown a lot. When I came here there were very few hotels and that kind of thing. Now there are a ton of hotels and more houses. That part has been growing. In other words, the place grows economically, but in terms of the climate, things are getting worse. We're in a really bad place because recently there has been too much sun. It used to rain a lot. Now it doesn't” (Noel Aragon Jirón). These trends very clearly show the fundamental flaws in the globalized economy. We aimlessly follow an economic model focused on growth and development without thinking about the consequences this has on the environment and human life. The reality is, economic growth is not actually an indicator of human wellbeing, and

economic “development” does not actually equal progress. Constant growth is quite literally impossible in a world of finite resources. The few resources we do have left are unevenly distributed to an extreme degree, exacerbating poverty and widening the gaps in society. This unjust political and economic system is upheld by corrupt politicians who have one foot in the government and the other in the pockets of large corporations. “The government. Ha. It’s a difficult situation. It seems to me that governments, all they do is come, do their job, fill their pockets. They don’t care about us at all. I don’t mean to disrespect anyone, but I just know that that’s how it is. In every country in the world, not just here. That’s what happens with governments. They don’t care how many people are destroying the environment; they simply don’t care. All they care about is filling their pockets, and then they’re out. In every country of the world” (Noel Aragon Jirón). This corporate domination of politics has influenced every aspect of society and enabled the takeover of exploitative oligopolies.

The vast majority of fertile Native lands have either been seized or detrimentally affected by climate change. Without any land to cultivate, the only option left is the “colonizer’s 7-Eleven, the only one on the reservation, and that’s all you can rely on” (Marissa Sisk). When the world is dominated by a small number of large corporations, power lies in the hands of the privileged few, and that power is used to exploit and oppress the many. “Migrants suffer and are egregiously mistreated. Sometimes they are essentially enslaved. When migrants get to a new country, they’re taken advantage of. I’m very much opposed to that. I would never take advantage of anyone, and I don’t like when people try to take advantage of me” (Noel Aragon Jirón).

The exploitation of migrant workers is just one of countless injustices migrants endure. Being forced out of your home is one of the most difficult things a person can go through. And the horrendous reality is that their hardship doesn’t end there. Climate migrants face continued injustice both in their migration journeys and once they’ve arrived at their destination. “We live in an era of xenophobia and intolerance. In destination sites, when people have migrated to a new place, there aren’t always contexts for open reception” (Erica Bower). Communities worldwide need to start not only accepting climate migrants, but also welcoming them into the community and making them feel like it’s home. We need to build better contexts for reception so that when people are forced to move to a new community, they feel welcomed there. “When people migrate, they get mistreated in the country they move to. I’m very opposed to that. For me, regardless of who someone is, the country they are from, or the color of their skin, we are all equals as humans. I believe we’re all equals. With money, without money, we’re all equals” (Noel Aragon Jirón).

Guaranteeing equality and justice for all will require systemic change. We must immediately start deconstructing the oppressive systems that dominate and destroy life on earth. This will require building new institutions, enacting laws, and creating funding mechanisms to compensate for loss and damage and help people move when their homes are destroyed. Policy solutions need to ensure that climate refugees have the resources to move in a way that is safe and on their own terms. To do this, we must start prioritizing climate mobility issues in

local, state, and national government. Human rights must be at the forefront of every single policy we enact. For communities to be able to relocate, we need national policies that protect people's rights in these contexts, and make sure that relocation decisions happen on people's own terms. Climate migration is already happening, and the tragic reality is that it is practically inevitable at this point. Knowing this, we need to immediately enact policies that ensure that those who are forced to move have pathways that are safe, accessible, and human rights respecting. Currently, these pathways do not exist because as it stands now, refugee law excludes climate refugees almost entirely. The 1951 Refugee Convention defines someone as a refugee when they're fleeing persecution across an international border because of their race, religion, political opinion, or membership of a particular social group. Climate change is rarely aligned with one of those criteria, so usually the refugee convention is not a viable solution, which is why we must start developing new migration categories and legal pathways. Additionally, we need systems in place to ensure migrants have their basic needs met in their new place of residence. Everything from gaining access to healthcare, a job, and education, to building a community and feeling like a place is home is critical to developing effective and long-lasting solutions. These institutional, political, and funding changes that need to happen don't happen overnight, which is why we must get started now.

Policy solutions are only effective if they are developed in collaboration with communities. Establishing effective solutions is a long and ongoing process that requires extensive community engagement and participation. When relocations are initiated by communities themselves rather than outside forces, better outcomes ensue. "When community members have been involved in the decision making process about whether to move, about where to move, about how to develop the new site with homes, resources, and community centers that align with their needs, they're more satisfied with the relocation outcomes. Community autonomy and a right to self-determination are really critical" (Erica Bower). Justice and equity must be taken into account when it comes to decision-making regarding climate migration and relocation. "It's a multi faceted solution. The first step is to hear community voices. It's a really unique issue that requires the intersection of policy and community engagement" (Marissa Sisk).

It is very clear that systemic change will require policy changes and governmental action. The problem is, the divided political climate is not conducive to change and progress. "If we were united as humans, things would be a lot better. As it stands now, we'll never reach a solution because one side pulls one way, and the other pulls the opposite way. Because of this, nothing gets done. Communities must unite, organize themselves, communicate with each other, and develop solutions together. If this doesn't happen, we'll keep seeing the same problems" (Noel Aragon Jirón). "People aren't talking to each other" (Marissa Sisk). Divisions between people have impeded the communication and collaboration that is necessary to develop real solutions. The politics of the moment are extremely problematic because we have allowed human rights issues to become political issues. Large corporations and corrupt politicians have started

questioning science, and are using their platforms to influence and control the very thoughts of the general public, influencing societal mindsets and perpetuating prejudice.

Despite all these obstacles, it is important to maintain hope. When our governments aren't serving us, it is important to take action at the individual and community level because these actions, combined with civic engagement and activism, will ultimately influence governments to change their ways. Addressing global issues starts at the community level. "In the future, I hope to keep working, and keep striving for progress. Despite all the obstacles, we must keep moving forward" (Joni Garcia). The tragic reality is that at this point, climate migration is inevitable. Communities facing an unprecedented rise in food and water insecurity due to climate change have no option but to move. Therefore, the next step is to create new legal pathways that make this possible. In addition to these policy changes and governmental actions, we will also need changes at the community level, as we will need to create open and accepting contexts of reception. If we unite and all work together to deconstruct the injustices that are deeply rooted into the foundations of our society, we can and will overcome these complex issues the global community is facing.

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