Briefing Book

The Challenge of Climate Change in Latin America

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Key Judgments

The problems that Latin America faces as a result of climate change are constantly evolving on local and national levels.

- The economic, environmental, and societal impacts of climate change in Latin America are expected to intensify, especially as extreme weather events become more unpredictable. Without government intervention, the region will increasingly face disasters on local, national, and regional levels.

- The region lacks a unified strategy and consensus on climate change policy, despite the transnational nature of the challenges. Cooperation efforts are distributed among various regional organizations and NGOs, each with varying degrees of focus on climate change and sustainable development. Knowledge-sharing is limited, and mobilization efforts have stalled.

- Latin America is particularly vulnerable to climate change as it holds over **50 percent** of the world's biodiversity and **30 percent** of the world's water resources. There has been a **30 percent** loss in biodiversity since 1970, which has widespread implications for human health, livelihoods, and food security.

- **Sixty-seven of the 77** largest urban areas in the region are located in coastal areas and are at extremely high risk due to rising sea levels, hurricanes, and flooding. Many urban areas already face challenges due to overpopulation, inadequate infrastructure, and lack of public funds. The increase in the number and intensity of climate-related disasters is presenting a significant challenge as countries struggle to rebuild and recover from disasters. Vulnerable communities will be most affected, experiencing disproportionate impacts.

- The economic cost of climate change in Latin America is estimated to be between **$81 billion** and **$270 billion annually**. An estimated **$176 billion** in annual investments are needed until 2030 to implement the Nationally Determined Contributions (NDCs) regionally. In 2018 only **$31 billion** were contributed, falling far below funding requirements.

Lack of political will to implement climate policies is a significant obstacle to address climate change.

- Policy-makers are influenced by industrial and other elite interest groups whose profit incentives are not aligned with climate mitigation policies. Without the support of these elites, political decision-makers will struggle to remain in power while supporting meaningful climate policy.

- Political will to address climate change is greater in areas where the impact is already being felt, such as in the Caribbean. In other areas of Latin America where the effect is less direct, climate policy is less of a priority. Many policies or initiatives are created as a reaction to environmental realities, instead of as proactive measures, missing the opportunity to take preventative action at a lower economic and human cost.

Corruption and exclusion have marginalized populations and hampered climate change mitigation efforts.

- Due to historic and systematic exclusion, the voices of vulnerable communities are largely ignored. Countries have failed to address how climate change will effect these groups, especially poor communities who are mostly reliant on ecosystem services for their survival.

- A lack of government transparency and representation has also resulted in an unequal allocation of resources for vulnerable communities. In many cases, funds have been misappropriated, failing to take into account the urgent needs these communities are facing.

- Corruption and weak governance also increases the risk for investors, raising costs and making foreign direct investment and multilateral aid harder to attract.

The region has made some progress, however.

- Economic growth and environmental protections are often seen as mutually exclusive in a region where over **30 percent** of the population lives in poverty. However, multilateral banks are trying to persuade local stakeholders to understand that today's development needs must be met without compromising future sustainability.

- Some public and private initiatives in agriculture and livestock production are expanding sustainable farming techniques across the region. Feeding humanity and protecting biodiversity are complementary goals recognized by many farmers but few governments.

- Countries are making progress in electrical diversification and regulatory reform. Between 2010 and 2015, total investment in renewable power generation in the region reached nearly **$120 billion**, placing several countries in Latin America among the top **10 largest** renewable energy markets globally.

China's growing influence in the region has come with little or no consideration for the environment. Costly development projects have placed financial burdens on many countries, giving China financial leverage.

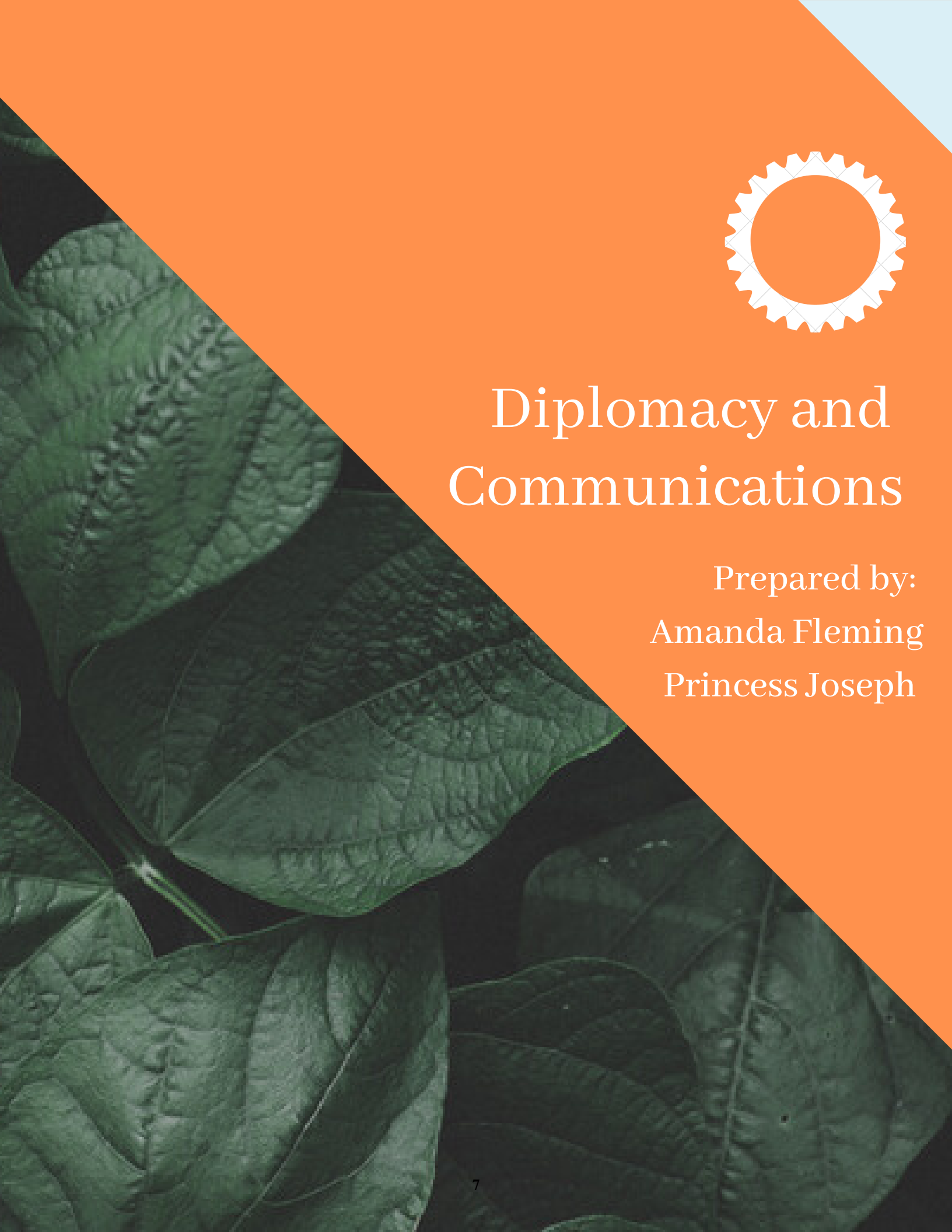
- Since 2005, China has provided **$141 billion** in loans to Latin America, more than the total amount loaned by the World Bank, the Inter-American Development Bank and the CAF Development Bank of Latin America combined.

- The United States' reduced footprint has enabled China to have a comparative advantage in the region, increasing investments and control over natural resources.

COVID-19 will have severe public health, social, political, and economic effects throughout Latin America, but the pandemic could also help build public awareness and pressure governments to deal with looming threats.

- In at least the short term, addressing climate change will remain a low priority for regional governments as they manage the economic fallout of the crisis. Public funding for climate change projects will likely be less available for **at least a year or two**.

At the same time, efforts to diminish the spread of the virus have drastically reduced carbon emissions and may encourage climate action going forward. Even before COVID-19, many Latin American countries expressed their ongoing commitment to climate action at the COP25 and signaled that they will strengthen their NDCs in 2020.



Diplomacy and Communications

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Enhanced Engagement with Regional Organizations in Latin America

Strengthen regional diplomacy to address climate change

Challenges and Opportunities

Latin America lacks a unified diplomatic strategy for coordination of regional climate change adaptation and mitigation. As a result, countries are not sharing their good ideas and solutions, and efforts are not progressing quickly enough to respond to current and future climate challenges. Many regional organizations lack the institutional capacity and organization to effectively address and prepare for the challenges associated with climate change. Furthermore, Latin America has a tendency for "diplomatic hyperactivity," or creating new groups to deal with challenges rather than building the capacity of existing groups.

Despite these challenges, regional and sub-regional diplomacy in Latin America represents a key opportunity to coordinate efforts to address climate change. Some existing organizations in Latin America are making good progress on climate change issues, on a case-by-case basis, that can be strengthened and supported. In sub-regions where climate diplomacy has been less successful, and in the region at large, a unified climate change strategy would make a significant impact on the effectiveness of projects addressing climate change.

- Even with serious resource and organizational restraints, sub-regional organizations in Latin America have been more effective at addressing climate change issues than larger regional organizations, such as the Organization of American States (OAS) and the Community of Latin American and Caribbean States (CELAC), which have more responsibilities and competing interests.
- One of the roadblocks for regional diplomacy in Latin America is the lack of regional integration, especially economic or trade integration. Intraregional trade is an important driver of progressive structural change and economically, socially, and environmentally sustainable development. The Southern Common Market (MERCOSUR), one of the major regional trade organizations, currently lacks sufficient accountability mechanisms to enforce environmentally sustainable trade practices.
- The Central American Integration System (SICA) is an example of a sub-regional organization that has made significant progress in the coordination and regionalization of climate change and comprehensive risk management projects while simultaneously addressing social and economic integration.

Recommendations

The U.S. Government should support regional and sub-regional diplomatic institutions in Latin America in their climate change adaptation and mitigation efforts. Overall, regional diplomatic institutions need to be strengthened and empowered so that they can enhance their coordination and cooperation efforts. Specifically, recommendations include:

1. That the U.S. Government use its influence in OAS to promote regional coordination on climate change by building capacity and redirecting funds toward climate change priorities.

2. That the U.S. Government engage with and support the environmental and climate goals of regional and sub-regional organizations in Latin America, including those in which the United States is not a member, such as CELAC, SICA, and the Amazon Cooperation Treaty Organization (ACTO).

- U.S. foreign policy should also support regional efforts to promote broader trade integration, such as the initiative to merge MERCOSUR and the Pacific Alliance, in order to remove barriers to strategic coordination on climate change.

Comments

This proposal would require a reallocation of U.S. Government funds to initiatives that specifically support the climate change goals of these organizations. The United States should simultaneously encourage OAS member countries to meet their own funding commitments as well.

- While every country in the region will likely be challenged by tight budgets, especially following the COVID-19 pandemic, this proposal does not require significant additional funding. A reallocation of funds towards the climate change goals of regional organizations can suffice until additional funds are available.

Additionally, the U.S. Department of State should send more diplomats to Latin America to engage with regional and sub-regional organizations working on climate change issues. The Department of State should also invest in environmental and risk management training for U.S. diplomats in the region.

Even if the United States has not supported the climate change goals of regional organizations in which it is not a member of, the transnational importance of these issues makes broad engagement especially important.

- Where direct engagement is difficult, U.S. public diplomacy should still support climate change adaptation and mitigation efforts. Diplomats should consider Latin American officials and community leaders who work on climate change issues for participation in U.S. exchange programs, such as the International Visitor Leadership Program, and U.S. Embassies should seek to build relationships with environmental leaders.

Outcomes

Implementation of these recommendations would signal the urgency of the climate change crisis and the importance that the United States places on ensuring the environmental stability of Latin America. Small shifts in U.S. Government priorities in the region towards addressing climate change by broadly supporting regional diplomacy will have life-saving impacts. However, delayed progress toward effective regional diplomacy will have a severe human cost, especially as the region continues to experience severe weather events such as hurricanes, floods, droughts, famines, and fires.

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Informing and Empowering Public Discourse on Climate Change

Build local community and NGO capacity to address the challenges of climate change.

Challenges and Opportunities

An absence of a concise message on climate change poses a significant barrier to the dissemination of climate change strategies in Latin America and the Caribbean. While over 67% of the region accepts climate change as a fact, and that it will have negative implications if it is not adequately addressed, the region lacks a reliable mechanism for sharing reports, data, and best practices. Journalists within some of these developing nations face constraints in terms of logistics and lack of empirical data about climate change. Additionally, many nations have low capacities for community mobilization and regional accessibility to data.

Significant barriers to the dissemination of knowledge on climate change surround the ongoing issue of censorship and self-censorship. In countries such as Venezuela, Brazil, and Mexico, censorship or self-censorship are often deployed as a precautionary measure against what the government deems as defamation. However, regarding coverage of climate change issues, these loosely defined terms of censorship have proven to be problematic as news censoring has become a tool for political elites.

- In Brazil in 2013, the government prohibited coverage of their social protests via social media and government-owned news outlets, while detaining protesters in the process.
- Private and political interests have also led to instances of censorship, such as with the enactment of "Law 351" in Bolivia. Since 2013, NGOs, like the Danish group IBIS, have been removed from the country based on non-compliancy. The government has also labeled organizations as "illegitimate" in order to silence efforts they disapprove of.

While organizations have not successfully mobilized against climate change in general, there have been some scored successes in the region, such as the Patagonia Dam Project *HidroAysén* in Chile. After years of strategic communications planning and advocacy, a unified coalition of more than 70 local and international organizations were able to place significant pressures through media outlets on the Chilean government. Their efforts prompting officials to ultimately overturn the dam construction and tighten environmental regulations.

Recommendations

1. That the U.S. Department of State utilizes the Media Hub of the Americas, as well as the Global Engagement Center, to collaborate with U.S. organizations and local NGOs in the region to develop a unified communications toolkit.

- The toolkit that will aim to address the issues of disinformation, awareness and combating censorship. Long term success would encompass an adaptative communications toolkit, that will aim to address ongoing stressors, such as weather-related disasters, in a timely matter, while simultaneously providing a unified voice that will serve as an accountability mechanism for political decision-makers.

- In collaboration with U.S.-based NGOs that actively work within the region, such as the Natural Resources Defense Council and UN Development Programme, the U.S. Department of State should promote the communications toolkit to encourage local voices and uphold the fundamental right to freedom of speech.
- The toolkit will focus on the distribution of knowledge through media outlets and will serve as a central hub that provides concise information on climate change, comprehensive data, best practices, and policies.

2. That the U.S. Department of State implement training programs that will enhance the impact of the toolkit and should be incorporated into efforts aimed to educate journalists, public figures, and other key societal stakeholders.

Comments

Opportunities for further implementation of successful campaigns will be contingent upon the cooperation of NGOs, local communities, and their capacity to profit from the momentum behind the various climate summits, such as the Latin America and Caribbean Climate Week. Studies show that a spike in the overall media coverage of climate change during these summits are a direct result of an increased interest in the subject matter. In Latin America and the Caribbean, increased reporting during these two events indicate the influence the summits have on attempting to raise awareness about climate change. In terms of the main challenges of this proposal, nations resorting to media censorship during periods of unrest may push back against the use of the toolkit, halting any kind of progress that could be made.

Outcomes

If these recommendations are effectively implemented, the region will be able to successfully build local and NGO capacities for higher engagement, awareness, and mobilization on climate change policies and issues. The overall adaptative goal is to uplift the voices of local communities and empower their engagement with environmental concerns and policies. However, ongoing issues throughout the region may stall the promotion of the toolkit and result in a scenario of a continued state of misinformation and lack of awareness throughout the region.

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Vulnerable Communities

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Increasing Inclusion Through Education and Representation

Promote inclusivity for vulnerable communities to help them survive and gain a voice on climate change policies

Challenges and Opportunities

Throughout Latin America, vulnerable communities such as women and children, the elderly, indigenous groups, farmers, and Afro-Latinx populations are experiencing increased risk from the impact of climate change. This is due to their exclusion from social, economic, political, and environmental resources. There is little to no funding for policies and programs focused on their health, disaster preparedness, and livelihood. The UN Economic Commission for Latin America and the Caribbean (ECLAC) found that many state governments and statistical offices fail to conduct a proper census that account for vulnerable populations, further limiting their access to social services.

The current effects of climate change on vulnerable communities in Latin America are:

- According to the International Labour Organization (ILO), for each hour worked, women's earnings in Latin America are on average 17 percent less than those of men of the same age, rural status, and type of work. Women have taken up jobs in open fields with high temperatures, harming their physical health and psychological well-being. Environmental changes aggravate poor sanitation and reduce food supply, contributing to children's illness. This imposes an additional burden on women as caregivers.
- The elderly are becoming more prone to heatstroke due to increasing heatwaves of climate change. Additionally, due to unintended growth of the population in cities, they face higher rates of pollution and physical accidents.
- Indigenous groups, perennially marginalized by federal and state institutions, are losing access to markets and resources they need to survive. They are experiencing larger amounts of loss of land, human rights violations, deforestation, and loss of wildlife.
- Farmers are faced with destruction of crops by floods and droughts due to climate change. The majority do not have the money to purchase insurance coverage for the crops, to mitigate these risks.
- Afro-Latinx populations, which traditionally have experienced racial discrimination and stereotyping, live in areas more prone to damage by climate change. For example, the majority of Afro-Latinx in Ecuador reside in urban areas, primarily in coastal regions, which are highly vulnerable to natural hazards and climate change due to overpopulation and infrastructure density.

According to numerous studies, education is a valuable tool of empowerment. In an emergency situation, educated individuals are more capable of responding, and they have an increased capacity to plan for the future. Education contributes to poverty reduction and political representation by creating adaptation skills, employment opportunities, and making the communities aware of resources that will enable them to tackle climate change.

Recommendations

1. That the U.S. Government and Embassies encourage national government officials at all levels to work with organizations like The Food and Agriculture Organization of the UN (FAO), UN Economic Commission for Latin America and the Caribbean (ECLAC), and the Inter-American Foundation (IAF), as well as local NGOs, research centers, scientists and universities in Latin America and the Caribbean, to hold bi-monthly meetings with local representatives of each vulnerable community. This will create higher recognition and awareness among government officials of the issues that are affecting these communities due to climate change.
2. That the U.S. Government support national governments to expand educational programs in rural and urban areas in Latin America and the Caribbean that are at high-risk for climate change. The programs would include the Education for Sustainable Development (ESD) curriculum from the UN Educational, Scientific and Cultural Organization (UNESCO). Such efforts would help people, regardless of gender, age, or ethnic background, to access greater knowledge on climate change initiatives, inclusion in decision-making, and new employment opportunities.
3. That the U.S. Government and regional NGOs support new and accurate census studies so that governments are able to identify the needs and location of vulnerable communities and better distribute assistance to them for healthcare, schools, and other public services.

Comments

Due to constant corruption existing in Latin America, economic and political elites who have traditionally kept vulnerable groups outside of decision-making will be reluctant to include them. The U.S. Government and receiving countries of programs therefore must enforce high transparency and monitoring and evaluation of program funds and outcomes.

Outcomes

These inclusive actions will empower vulnerable communities to receive an education and gain economic and social opportunities that will give them greater access to decision-making on policies that, while intended to address climate change, have direct consequences for their own lives. Increased knowledge on climate change, disaster preparedness, adaptation skills, job opportunities, stable income, and resources will help empower current and future generations in these communities. As education improves, more individuals from vulnerable communities will learn about civic engagement and political participation. This will lead to more members of these communities learning how to vote and pursing political positions at the state or local level.

According to the Development Bank of Latin America (CAF), over 50 percent of the population in Latin America are currently residing in countries with ‘high’ or ‘extreme’ climate vulnerability risks. As future growth is expected to take place in urban areas, the need to build economic diversity and adaptation for vulnerable communities is urgent. Failure to implement these or similar recommendations would delay national efforts to stem the impact of climate change and leave these communities even more vulnerable to climate-related disasters.

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Expansion of Internally Displaced Person Protections

Protect victims of climate change through existing mechanisms

Challenges and Opportunities

The forced displacement of people, particularly members of vulnerable communities, caused by climate change related stressors, is going to continue to impact more people throughout the region. Areas in Central America and the Caribbean have already experienced some of these stressors firsthand and have seen increases in movement of their populations. Regional inaction regarding specific protections for those Internally Displaces Persons (IDPs) leave victims in an increasingly precarious state.

- World Bank studies suggest that 17 million people in Latin American alone will be impacted by climate change by 2050. The International Displacement Monitoring Centre (IDMC) reports that in 2018 alone, 107,500 people were displaced by environmental disasters in four countries identified as having priority needs in the region: Colombia, Guatemala, Haiti, and El Salvador.
- Some major states like Brazil, Colombia, Uruguay, and Chile have already placed greater emphasis on incorporating human mobility as an adaptation strategy to climate change and have been open to increasing regional cooperation to address migrant flows in national legal frameworks.
- The International Organization for Migration (IOM) and other organizations have called attention to the urgent need for states to develop strategies and policies that address this increase in movement and vulnerability of people head on.

The region has an opportunity to pursue successful adaptation measures that focus on protecting people's livelihoods as they confront the ongoing challenges of climate change. This policy gap is an opportunity for the United States to advocate for the expansion and improvement of legal protections that are geared towards the wider range of dangers that vulnerable populations face.

Though displacement caused by disasters is already included in the UN Guiding Principles on Internal Displacement, they do not include specific guidance on addressing other climate change related pressures that vulnerable populations may face. Focusing efforts on using existing mechanisms that are flexible enough to extend significant protection rather than attempting to work multilaterally to create a new protected legal category is an avenue of action that can be used by states in the region to achieve significant progress.

- Past discussions regarding the creation of an expanded refugee category to accommodate persons fleeing the effects of climate change have been met with hesitancy and a lack of action from the international community due to the political and practical challenges of establishing and implementing a brand new legal framework.

Recommendations

That the U.S. Government support stricter compliance of IDP protections throughout the region and advocate for policies that incorporate assistance for those affected by climate variability and change into National Adaptation Plans (NAPs) and other national laws.

- Use diplomatic forums to advocate for state compliance of existing IDP protections and show public support for governments who further incorporate assistance and protection into their domestic policies.
- Work closely with governments who excel in making policy changes and strengthening their protection mechanisms to help frame efforts as collective and multilateral. Having these strong relationships with compliant actors will facilitate the process of collectively addressing states who are not abiding by the IDP guidelines directly.
- Actively work with UN High Commissioner for Refugees (UNHCR), along with other international organizations, to mobilize and support in-region responses to displacement, with an emphasis on monitoring and evaluation of IDP assistance.

Comments

One of the major challenges facing the expansion IDP protections is the ability to monitor and ensure that members of vulnerable communities, who have been systematically marginalized and excluded in state efforts, are receiving proper assistance. Tracking and adequately documenting those who are displaced, and the subsequent assistance they receive, will require strong data collection, monitoring, and evaluation efforts to ensure states are following through with their responsibilities.

Framing any efforts taken as collaborative and with a goal of ensuring safety and stability in the hemisphere will negate the perception that these efforts conflict with current discourses around immigration and migrant legal protections. The emphasis on regional stability and the monitored movement of people is key, as these two factors are valuable U.S. security interests.

Outcomes

There will be a severe human cost to the region if states fail to make any changes. Failure to pursue these efforts will look like the status quo today - no concerted effort to address these challenges and an observed continued exclusion of vulnerable communities from programs and policies that have been put in place. Additional strains on governments to respond to large numbers of IDP flows without an established plan of action could result in serious security risks, like widespread social unrest, public health risks, and overwhelmed labor markets.

On the other hand, the long-term commitment to protection reforms will allow efforts to focus on providing assistance and support to vulnerable communities. Larger numbers of members of these communities will be able to apply for and receive long-overdue legal protection, effectively bringing them in from the margins.

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Building Resiliency for Vulnerable Communities in Latin America

Use development strategies to build resiliency and reduce the impact of climate change on vulnerable communities in Latin America

Challenges and Opportunities

The effects of climate change are asymmetric and have already begun to impact vulnerable communities disproportionately. The effects will intensify as changes in precipitation patterns cause flooding and droughts, disrupting agriculture yields, threatening the jobs the industry provides to many of the region's most vulnerable, and increasing the regional push forces of urban migration. Urban areas already face challenges due to overpopulation that have reduced and endangered water supplies, stretched public budgets, and depleted public resources. Eighty-five percent of urban areas are at increased threat of storms and sea level rise because they are located in coastal areas, putting the vulnerable communities that inhabit or migrate to them at increased risk. Additionally, the heterogeneity of the population makes the response more challenging, necessitating a variety of tailored responses that meet the needs of each context.

Regional efforts to address climate change are stymied by a lack of political cohesion and will as leaders address pressing challenges and support domestic interests. Brazil's Bolsonaro exemplifies global defiance, preferring to benefit the business community. Other governments are in crisis, facing large-scale protests, such as Chile's Piñera, or are fighting for the survival of their regime, such as Venezuela's Maduro. Still others address accusations of corruption while many leaders are preoccupied with addressing large-scale violence and narcotrafficking.

Latin America is an economically vulnerable region with 40 percent of the population living on an income of between $5 and $10 USD per day and an additional 10 percent living on less than $2.50 a day. Throughout the region, 20 percent to 30 percent of the population work in the agricultural sector, an industry that comprises 10 percent of the regional gross GDP. Natural disasters in the region have tripled in the region since 1970, according to Open Democracy, an online publication. Global warming will continue this trend, putting the most vulnerable in the region at increased risk and promising to reverse years of successful poverty reduction, pushing the emerging middle class back into poverty and those in poverty into precarious conditions.

The Covid-19 pandemic illustrates the region's unpreparedness to react to major crises. Governments have been unable to help vast segments of the population, especially vulnerable communities, during this shock. The pandemic will be the focus of attention until it is complete and the economic damage will be a focus for several years, slowing responses to climate change, and confirming regional vulnerability to economic shocks caused by nature.

The reality of the diminishing environment and inability of the region to collectively address the challenge leaves a leadership void that will be filled by others if action is not taken. The U.S. Department of State has the opportunity to act now and shape the response needed to mitigate the effects of climate change for vulnerable communities.

Recommendations

1. That the U.S. Department of State increase funding for sustainable development and resiliency building initiatives that better prepare vulnerable communities for climate change. Initiatives should focus on economic development, resource preservation and farming practices that are compatible with a changing climate.
2. That the U.S. Department of State utilize an adaptive management approach in development projects to ensure that programming continuously meets local needs. This approach uses a continuous process to learn and adapt to ensure results are achieved and vulnerable communities are reached in a multitude of contexts.

Comments

The U.S. Government reduced USAID spending in the region from $63.4M to $32.2M USD between 2018 and 2019, a 49 percent reduction. To address the challenges faced by vulnerable communities and maintain a leadership role in the region, a budget increase is necessary.

Outcomes

Successful adoption of these recommendations will raise the living standards across Latin America and build communities that are better prepared for the challenges that climate change will bring. Communities will experience better food and water security, less disruptions in income and more economic stability. Fewer vulnerable communities will lose their income or shelter and be forced to leave their communities as climate migrants.

If the United States does not act soon and lead the initiative, other organizations and countries such as China may fill the void, deepening their allegiances within the region. The challenges vulnerable communities face will not be fully addressed, causing worse outcomes for the communities including the destruction of livelihoods that necessitate migration and dissolvement of the communities.

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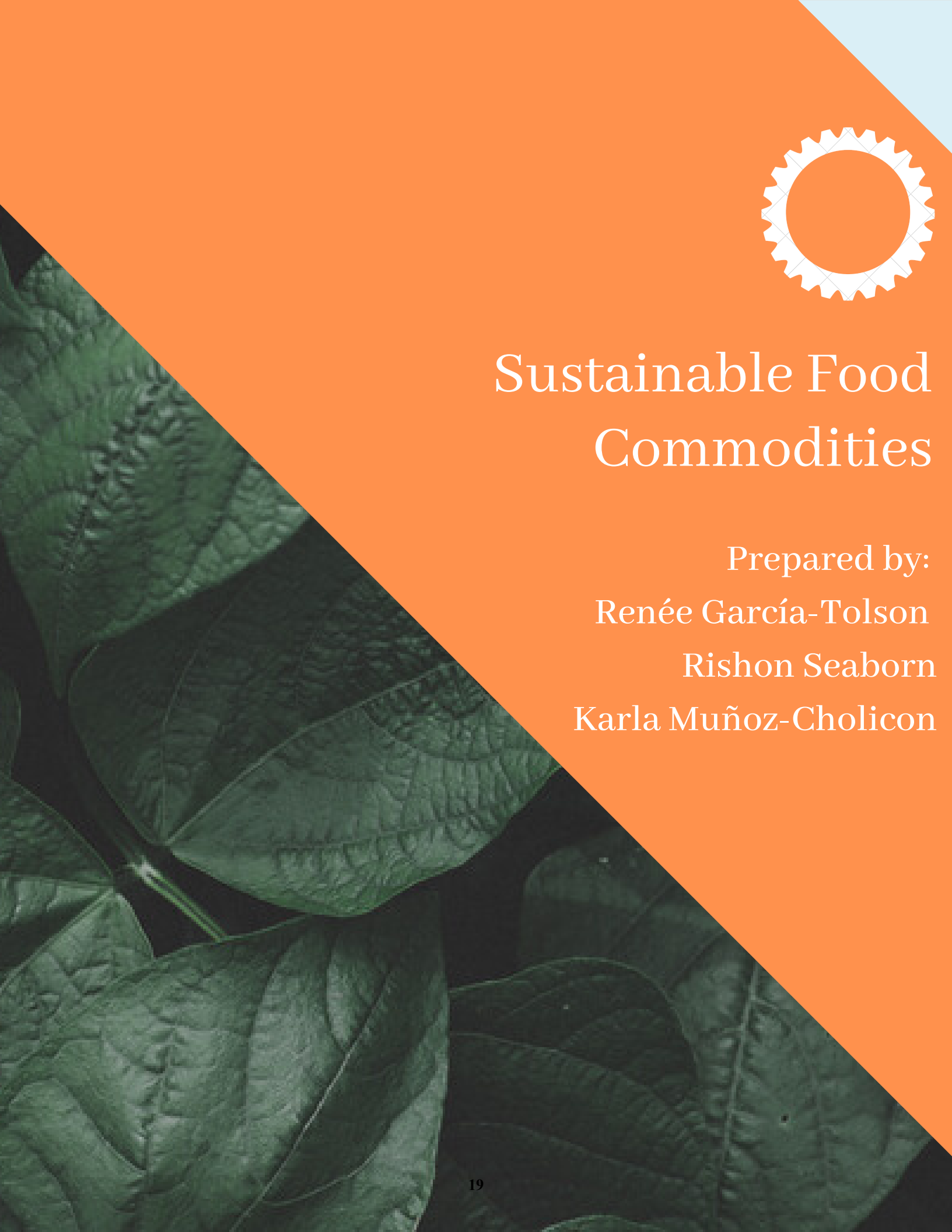

Sustainable Food Commodities

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Climate-Resilient Crops Through Diversification

Expand agroecology to strengthen livelihoods, safeguard food security, and recover ecosystems[1]

Challenges and Opportunities

Agriculture is extremely vulnerable to unpredictable weather and climate patterns. Decades of unsustainable farming in Latin America are accelerating the collapse of ecosystems that lay the foundation for crop production. Ecological impacts are occurring on multiple fronts, including a 40 percent decline in insect and bird populations that pollinate 35 percent of the world's crops. Climate change will continue to magnify challenges facing the agriculture sector, including threatened livelihoods, food insecurity, and degraded ecosystems. Agroecology methods have the greatest potential to build climate resiliency and meet global food requirements.

- Adverse climate-related impacts to industrial farming in the region are very severe, threatening the livelihood of over 91 million farmers and farmworkers.
- Nutritional value in staple crops will decline 20 percent by 2050 due to rising levels of CO2. Nutritional deficiencies present major global health and food security risks.
- Intense utilization of pesticides and synthetic fertilizers in large-scale monocultures is one of the main drivers of the region's 30 percent decline in biodiversity since 1970.
- Research on environmental changes underlines the growing evidence linking industrial agricultural expansion to emerging infectious diseases, like SARS and COVID-19.[2]

The impacts of climate change on the agriculture sector are largely recognized in the region but lack political action, policy intervention, and adequate funding. International markets dominated by agribusiness corporations have historically marginalized farmers and farmworkers. Thus, agroecology in Latin America is also recognized as a social movement that challenges the top-down paradigm of the corporate food system. Grassroots organizations and cooperatives, such as *La Via Campesina*, play a critical role in advancing land and seed rights of millions of peasants, indigenous farmers, and other small-scale food producers. Non-governmental development organizations are at the forefront of strengthening the climate resiliency of farmers, including the Latin American Consortium on Agroecology and Development (CLADES), Latin American Scientific Society for Agroecology (SOCLA), and Latin American Center for Agroecological Research (CELIA).

Recommendations

1. That U.S. foreign policy on food security, rural development, agriculture training, and land management incorporate agroecology and agroforestry frameworks.
2. That the U.S. Department of State leverage its influence among international financial institutions, such as the World Bank, to ensure agriculture funding supports climate-resilient agroecological pathways.

[1]There is a wide spectrum of applications and understandings of agroecology around the world. Broadly speaking, agroecology seeks to optimize sustainable interactions between plants, animals, humans, and the environment while considering the social and economic aspects that need to be addressed for a sustainable and fair food system.
[2] See Appendix 1for more information on livelihoods, nutrition, biodiversity, and emerging infectious diseases.

3. That the U.S. government promote a cost-effective and tiered transition plan from industrial agriculture to agroecology/agroforestry on the local, national, and regional levels:
    - **Local:** 1) Increase farmer and youth access to agroecology/agroforestry education and training programs; 2) Support farmer-to-farmer networks for complementary exchanges; 3) Establish community seed banks with local monitoring and evaluation.
    - **National:** 1) Expand and strengthen payment for ecosystem services (PES) and assistance for transitioning farms; 2) Strengthen local capacity for the conservation of crop wild relatives and native plants; 3) Increase the amount of community-supported markets that support small-scale locally grown food.
    - **Regional:** 1) Create an accessible participatory guarantee system (PGS) for certifying agroecological farms and products; 2) Establish partnerships with research centers and institutions of higher education to address the gap in agroecology research.

Comments

In some cases, agroecology can be compatible with biotechnology. Some genetically modified and/or engineered seeds (GMOs) show potential to increase crop yields and sequester atmospheric carbon dioxide. However, smallholder farmers remain skeptical due to high costs, dependency on external inputs, intellectual property rights, and unknown long-term agrobiodiversity impacts. Government and farmer opposition to GMOs is expected to grow in the region. Thus, the socioeconomic, health, and legal concerns regarding GMOs should be appropriately addressed. "Smart farming" and agritech tools are gaining momentum but additional funding is required to improve access for smallholder farmers. Targeted efforts should focus on the available resources and needs of subsistence and smallholder farmers, with special consideration for food waste, labor conditions, and gender equality. Farmers who want to adopt agroecological approaches or agritech tools need technical and financial assistance to successfully make the transition. Agroecological transition times will vary by location, crop, farmer, and environmental factors.

Outcomes

Long-term implementation of these recommendations will strengthen climate-resiliency and reduce carbon emissions of the agriculture sector. Agroecological farming that mimics natural ecosystems—including cycles of energy, water, and nutrients—decreases dependency on fossil-fuels and external inputs. Multi-stakeholder collaborations that are farmer-driven will significantly improve the success of these goals. Top-down approaches to climate-resiliency do not produce beneficial outcomes for the majority of farmers. As landscapes begin to restore soil and ecosystem health, crop loss due to pest infestation and disease outbreaks can be reduced by up to a 35 percent. The region will increase household food security and economic livelihood due to shorter and more inclusive sustainable food chains. In the absence of adaptive strategies, the sector will continue to experience intense climate-related agricultural disasters and biodiversity loss. Continuous degradation of natural resources, crop pest and disease outbreaks, and widespread nutritional deficiencies is highly likely to increase.

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Adopting Sustainable Livestock Techniques

Implement modern livestock production techniques that increase environmental sustainability and job security for farmers

Challenges and Opportunities

As result of the expansion of the livestock industry, Latin America has become the largest exporter of beef and poultry in the world. The livestock sector in Latin America makes up 45 percent of the agricultural gross domestic product (GDP) in the region. The demand for livestock (which includes beef, poultry, and pork) is increasing the drain of natural resources and is creating a greater threat to the environment.

- Cattle production is the leading cause of a significant portion of forest coverage loss. Cattle grazing degrades about 70 percent of the pastures throughout Latin America and the Caribbean.
- The dangers of beef production are directly related to the production of greenhouse gas emissions and land degradation. Livestock contributes to 40 percent of the greenhouse gas emissions (GHG) within the agriculture sector worldwide. Latin America makes up 18 percent of those GHGs.
- If these issues continue to remain unaddressed, the rate of land degradation will limit the land available for livestock production.
- Livestock expansion can create opportunities for wealth in the region but has a high risk of marginalizing small farmers.

Currently, the UN Food and Agricultural Organization (FAO) promotes alternative methods such as crop sowing, but Latin America lacks sustainable farming policies on a macro-level. While crop sowing is useful it does not directly address the carbon emissions. The FAO needs to encourage governments to impose stricter farming policies that can be upheld in the future.

New research proposes a realistic approach to managing greenhouse gas and carbon emissions. Adaptive multi-paddock (AMP) techniques focus on how livestock production can offset the released emissions.

- AMP grazing would mitigate the negative environmental factors of livestock. AMP strategically rotates livestock throughout various stages to restore pasture's soil. This process releases no net emissions due to the carbon soil sequestration.
- Innovative techniques like AMP can be adopted globally, but it is especially needed in Latin America. This is due to the region's significant contribution to greenhouse gas emissions as the world's largest beef and poultry exporter.

Recommendations

1. That the U.S. Government aggressively support research on sustainable agricultural techniques in Latin America and the Caribbean.

2. That the U.S. Department of State encourage political leaders and presidents of Latin America and the Caribbean to implement stricter eco-friendly farming regulations.
    - New legislation should discourage farmers from using antiquated livestock techniques. These frameworks should include incentivized programs for farmers and countries who implement sustainable practices. Additionally, international taxes can be imposed on countries in order to develop consequences for antiquated farming methods. This can be supported by implementing stricter carbon taxes on major contributing stakeholders and countries within the region.

Comments

Modern sustainable livestock techniques take up to several years to achieve results. This can result in skepticism and impatience from political leaders, investors, and stakeholders. Michigan University and the Union of Concerned Scientists conducted a 5-year study that argues that livestock production, specifically cattle, can be carbon neutral in the future. The long-term phases of this research include implementing strategic grazing methods throughout the life cycle of livestock. This technique includes adopting the new methods throughout the birthing, growing, and "finishing" phases.

The U.S. Government should collaborate with the international community in order to financially support research on livestock production sustainability. However, these modern techniques will be ineffective without the proper legal and political framework to ensure that they are practiced properly. The United States should encourage collaboration by openly communicating with political leaders, farmers, and researchers to promote understanding of the issue and the approach to the solution. By creating a unified awareness and sense of urgency of the matter, there is a greater chance that international assistance will be easier to receive.

Outcomes

If these recommendations are effectively adopted, they would provide Latin America with sustainable livestock expansion for the future. By strengthening one of the largest livestock exporters this will allow sustainable livestock techniques to be implemented for years down the line. If these recommendations are not implemented, the increase of livestock production will continue to destroy land, forests, and animals. Without a sustainable approach there will not be enough healthy pastures to efficiently farm on in the near future. The demand for meat is predicted to steadily increase over the next 15 years. As Latin America and the Caribbean are already experiencing 70 percent of land degradation, the time to act is now before the environmental effects are irreversible.

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Sustainable Fishery and Aquaculture Practices and Governance

Strengthen governments' willingness and ability to enforce existing regulations protecting fisheries and aquaculture[1] and establish new ones to mitigate the impact of climate change

Challenges and Opportunities

Latin America's seafood industry faces significant challenges due to the effects of climate change. These impacts are directly harming marine ecosystems, biodiversity, and seafood production. Some of the main ways climate change is impacting the region's seafood industry include: fish stock depletion (abundance); change in water temperature; sea level rising, intensity of natural disasters; frequency of natural disasters; rainfall patterns; change in ocean currents; El Niño and La Niña events; damage to ecosystems and biodiversity; disease emergence among marine species; species composition; reduced production and yield; increased yield variability; asset loss and damage; and risk to the health and lives of those that rely on fisheries and aquaculture. Illegal fishing, pollution, and overfishing are also intensifying the damage caused by climate change.

Several countries in the region, including Mexico, Peru, and Chile, have established sustainable fishery management policies, but their legal framework is vague and lacks oversight and compliance measures to increase private sector accountability. If changes are not made, the region will continue to experience economic hardship in the fishing industry, loss of a crucial source of protein, and reduced income for small-scale fishermen.

- A 2019 UN Food and Agriculture Organization (FAO) report classified Peru as being among the top eight countries with fisheries that are the most vulnerable to the impacts of climate change. Amazonian fishing waters in Peru are also suffering the environmental consequences of climate change, deforestation, and chemical contamination. As a consequence, fish captures have decreased in almost 50 percent in the Peruvian Amazon.
- The FAO also identified Chile's fisheries and aquaculture as being some of the most vulnerable in the world due to the impacts of climate change.
- If action is not taken, scientists predict climate change will negatively impact 70 percent of Mexico's species that make up their production. Some of the greatest catch declines resulting from warming waters in Mexico came from key species such as red snapper, mahi-mahi, pacific sardine, and abalone.

According to the FAO, Latin America and the Caribbean account for 3 percent of global aquaculture production. Research indicates that as of 2014, 58 percent of the fish stocks in the Caribbean have been overfished or collapsed, and 60 percent of the fish stocks in the Gulf of Mexico been overfished or collapsed. The consumption of fish is in Latin America and the Caribbean is expected to grow by 22 percent between 2015 and 2025, further straining fish stocks. The FAO also projects that urbanization, pollution, tourism, mining, and oil exert a stronger effect on the marine fisheries and aquaculture of the region than declines expected from

[1] Fisheries focus on the catching, processing, and selling of fish and shellfish. Aquaculture is the farming of crustaceans, mollusks, aquatic plants, algae, fish, and other organisms in a controlled marine environment. The main difference between the two is that aquaculture focuses more on the science surrounding all aspects of marine life.

climate change. For this reason, there needs to be a multifaceted approach to the challenges posed by this problem.

Recommendation

In order to adapt to the impacts of climate change, replenish marine ecosystems, and bolster fishery and aquaculture governance to maintain healthy levels of production, we recommend:

- That the U.S. Department of State encourage and support national-level policies in affected countries that establish sustainable management systems focusing on strengthening and protecting marine ecosystems and fish stocks. This should include having governments hold industrial fisheries accountable for not complying with sustainable management policies, illegal fishing, and pollution.

Comments

Latin American countries can achieve this objective through third-party monitoring and evaluation, implementing fines, providing incentives through subsidies, and conducting bi-annual reports.

Sustainable adaptation mechanisms include: reducing, mitigating or eliminating stressors and main pollution sources; temporary fishery closure; implementing co-monitoring and community-based data collection programs in order to foster data acquisition for scientists, fishers and citizen science groups; determining tipping points and early warning signs in order to forecast changes in the state of the ecosystem for fisheries that are increasingly threatened; and incorporating flexible fishery control rules to allow for coping with species range shifts and ecosystem changes.

In order to improve the outcomes of these recommendations, it is important to include stakeholders from all aspects of society when pursuing more sustainable fishery and aquaculture systems in each country. This includes civil society organizations, artisanal fishermen, scientists, research entities, industrial fisheries, and government officials from all levels.

Outcomes

If sustainable management measures are effectively implemented and adopted by both industrial and small-scale fisheries, we can expect marine ecosystems to be slowly restored and production to reach healthier levels. Madagascar and Mauritius offer small-scale examples of sustainable management success stories. Both countries have seen an increase in octopus and fish catch and slowed the plunder of fish stocks through strategic methods such as temporary fishery closure. If these recommendations are not followed, fish stocks will continue to rapidly diminish, and ecosystems will potentially face irreparable harm.

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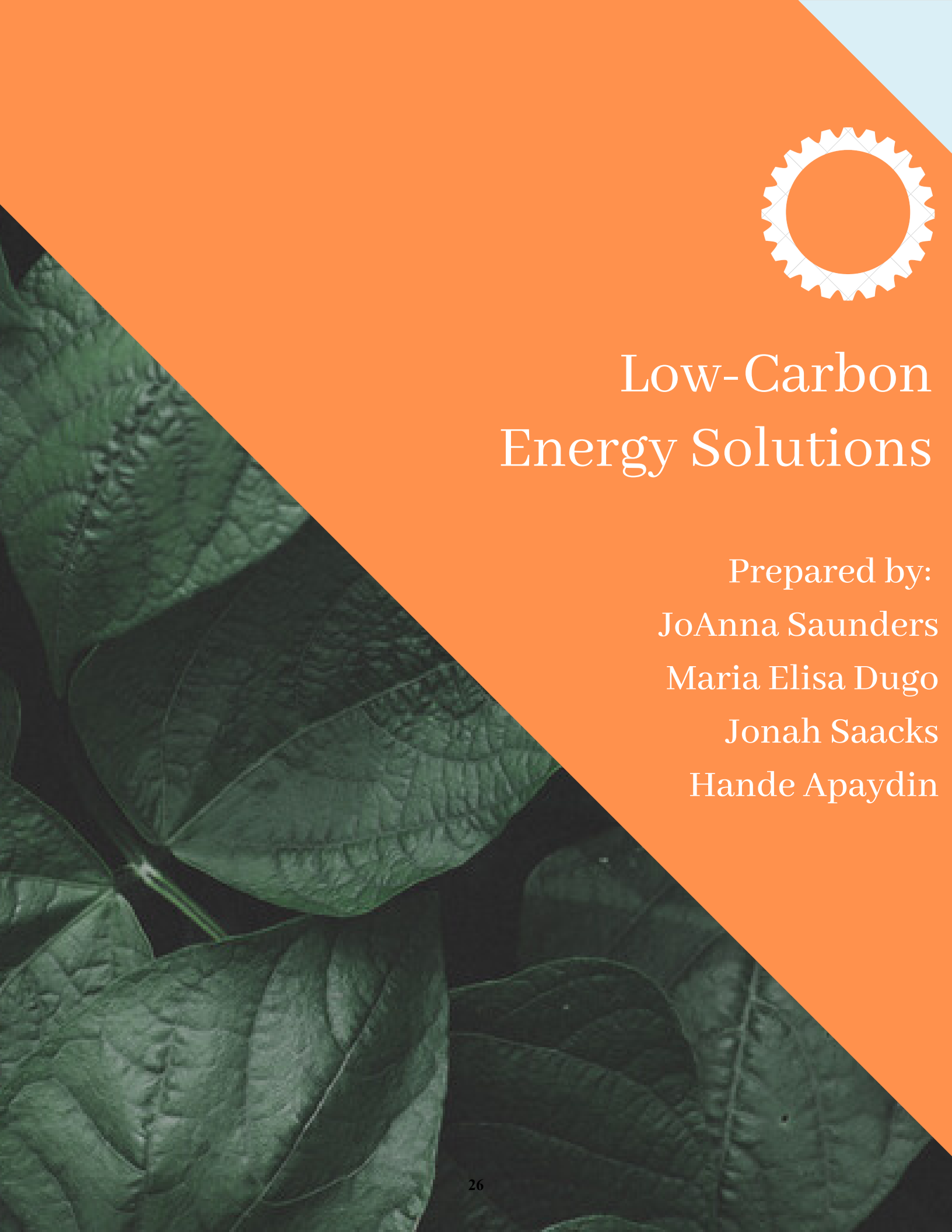

Low-Carbon Energy Solutions

Prepared by:
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Pathways to Carbon Neutrality: 100% Renewable Electricity by 2032

Invest heavily in renewable electricity sources and storage capacity while simultaneously strengthening the regional grid to support new sources coming online

Challenges and Opportunities

The portion of renewable energy in Latin America currently sits at around 60 percent, but for the region to meet the necessary carbon neutral goals by 2050, 100 percent renewable energy for electricity demand is paramount. Such a transition requires a significant increase in the use of clean energy sources, like wind and solar. Unfortunately, new sources of energy are expensive and require significant investment due to the upfront infrastructure costs. Additionally, the current grid structure in Latin America is unable to support a large influx of variable renewable energy sources due to their intermittent nature.

- Large hydropower currently provides the majority of renewable energy in Latin America. This existing infrastructure provides important baseload power for electricity demand and will be key as more intermittent renewables are deployed. However, large hydropower is not a long-term sustainable source of electricity due to its harmful environmental and social impacts.
- Only 18 percent of end use energy consumption in Latin America is from electricity. This indicates that even a transition to 100 percent renewable electricity sources will not relieve regional dependence on fossil fuels such as oil and gas. This is amplified by the fact that existing oil and gas resources are readily available, relatively inexpensive, and have been increasing in production over the last few decades.
- Few renewable energy alternatives exist for energy supplied by oil and gas, meaning the region will need to completely electrify in order to meet energy demand through renewable energy sources – a scenario that is likely decades away and requires aggressive planning and infrastructure investment.

Recommendations

1. That the U.S. Government build a greater strategic economic partnership with Latin America to encourage private investments in renewable energy deployment, especially in research and development (R&D). Public financing in the region is not expected to increase above current levels, meaning private investment is imperative for initial investment in renewable energy infrastructure and R&D for energy storage technologies. In addition to financing, greater information sharing and exchange of best practices between the regions will also be crucial to success, modeled after existing networks of cities such as C40.

2. That the region promote demand-side management policies, including price stability for consumers as new technologies come online that are potentially more expensive than fossil fuel alternatives. The region must leverage existing hydropower infrastructure to balance variability of wind/solar sources and increase flexibility of the regional grid. The region can also achieve this by pursuing energy efficiency policies that flatten the energy demand curve and ensure demand can be met with renewable energy sources and technologies.

Comments

Energy efficiency policies are just as imperative as renewable energy policies, and need to happen concurrently, in order to flatten the energy demand curve and ensure demand can be met by clean energy sources. Without flattening this curve, fossil fuel sources may need to be kept online to meet high peaks in demand that cannot be met by more variable renewable sources.

National subsidies for clean energy sources are crucial to ensure they are cost competitive with existing fossil fuel electricity sources. Investments are needed in non-hydro renewable sources, such as wind and solar, to support the eventual transition away from large hydro.

Some analyses show that 100 percent renewable electricity is possible, and even more cost effective than current energy production, by leveraging existing renewable energy technologies. As the price of renewables continues to drop and more infrastructure comes online, they will become more cost competitive. This makes the transition to renewables even more lucrative and attractive for governments and private firms looking for energy investment opportunities, likely driving the adoption of renewable technologies in the next decade.

Outcomes

Success would mean a greater installed capacity of renewable energy and fewer fossil fuel plants in operation, which would significantly reduce greenhouse gas emissions and would help the region meet the goals of the Paris Climate Agreement. However, even with 100 percent of electricity coming from renewable sources, the majority of energy use demand would still be met by fossil fuels due to low levels of electrification. Therefore, long-term success would require complete electrification and the eventual transition away from large hydropower in the region. Failure, on the other hand, would be business as usual, where the adoption of renewable energy technologies is slow, and oil and gas continue to be major sources of energy.

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Sustainable Transportation: Electromobility in Latin America

Establish energy efficiency and low carbon measures for the transportation sector through electric metrobus lines

Challenges and Opportunities

According to the Inter-American Development Bank (IDB), the transport sector in Latin America and the Caribbean is responsible for 35 percent of the worldwide total greenhouse gas emissions from burning fossil fuels. Compared to the rest of the world, whose average emissions in this sector are only 23 percent, reducing emissions in the Latin American transport sector is vital in order to avoid a climate crisis and is a key requirement for countries who wish to meet their climate commitments.

A study conducted by the UN Environmental and International Automobile Federation (FIA Region IV), and supported by the Spanish Agency for International Development Cooperation (AECID) and the EU, found that replacing the current fleet of buses and taxis in 22 Latin American cities with electric vehicles would save the region almost $64 billion USD in fuel by 2030, avoid the emission of 300 million tons of carbon dioxide equivalent, and save 36,500 people from premature death.

Though people in Latin America travel shorter distances than people in other developed countries, commute times in the region are longer than in those countries. Surveys show high dissatisfaction with the quality of public transport, not only with commute times, but also in terms of comfort, cleanliness, and cost. Most notably, the effect of CO2 emissions and air pollution severely compromises ecological sustainability and public health. Moreover, women are particularly affected by these factors, as they rely more heavily on public transport than men.

Electromobility is still far from being a reality – primarily because the financial sustainability of urban public transport is at stake. Most service providers do not cover their operational costs and the productivity of public transportation has stagnated, and even decreased, over time. This financial difficulty represents a challenging scenario for improving transport services in the region, especially in terms of quality.

Currently, almost 80 percent of Latin Americans, more than 525 million people, live in cities. This figure is projected to continue increasing in the coming years. At the same time, while the share of public transportation is decreasing, motorization rates in the region are growing. Therefore, it is necessary to improve public transport to make it more attractive and accessible in terms of sustainability and convenience.

Recommendation

That the U.S. Government encourage the construction of new electric metrobus (bus rapid transit systems) lines and encourage the replacement of existing lines with electric buses through active participation and voting in multilateral financial institutions, such as the World Bank and the IDB.

Comments

This proposal faces the principal challenges of creating regulatory frameworks, tax incentives, and the adequate expansion of charging and operating infrastructure throughout Latin America. Additionally, with weak institutional systems, opponents may argue that economic crises or other current major events preclude action to advance this proposal.

- Latin American countries will need technical and financial assistance from multilateral institutions to develop useful and robust transport public policies. Though these institutions may provide funding, national governments must develop strategies for funding through their own agencies.
- The Global Bus Rapid Transit Data Organization shows that 1,835 km of bus rapid transit lines were constructed in Latin America with more than 20 million daily passengers. The metrobus lines have reduced the cost of construction and design time by using existing infrastructure, resulting in more efficient transportation. In addition, by decreasing the braking and acceleration rate of buses, these lanes reduce fuel consumption and greenhouse gas emissions.
- The Hybrid and Electric Bus Test Program, an initiative designed and implemented by the C40 Cities Climate Leadership Group, in partnership with the Clinton Climate Initiative and with financial support from the IDB, demonstrates that hybrid and electric technologies can perform as well, or better than, comparable diesel-powered buses.

Outcomes

The probability of success of this initiative is very high, but is time intensive, as public policy changes in transportation have shown to be slow to enact.

Initial success would produce at least one major city with a complete transition to electromobility within a four-year period, which would serve as an example of the future benefits of making this transition. Some cities, such as Buenos Aires, have already demonstrated what success could look like. The Buenos Aires metrobus, decreased the travel time along one of the city's main avenues, *9 de julio,* by 40 to 50 percent in 2014. Studies suggest that Buenos Aires could achieve total electrification of their bus fleet by 2035, which would eliminate 2.2 million tons of CO2 per year on a tank-to-wheel basis.

On the other hand, a possible failure would be approving a loan for a project that cannot be completed. This is very unlikely if the loan institution follows the correct policies and best practices already in place for these types of projects. An overall failure of the initiative would mean a significant step backwards, and a loss of opportunity, to mitigate climate change in a sector with massive emissions.

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Building Energy Resilience and Security in the Caribbean

Develop a regional institution, focused on financial support and energy management, to expedite current resiliency plans with regional scalability

Challenges and Opportunities

Climate change increases the frequency and intensity of storms in the Caribbean, resulting in powerful hurricanes causing billions of dollars in damages and shutting down power systems to critical infrastructure for extended periods of time. The Caribbean has seen a significant political movement to adopt more resilient practices because of how acutely affected they are by these impacts. Though the Caribbean Community (CARICOM), a regional organization of governments, has tasked the Caribbean Community Climate Change Centre with integrating vital climate adaptation and energy resilience measures into the region's energy strategies, these measures have fallen short of their goals after implementation efforts stalled. The main challenges preventing a comprehensive transition to a resilient infrastructure in the Caribbean are funding, complications with infrastructure, and economic composition.

Funding to fully capitalize on the region's political momentum is not currently available, leaving a gap between commitments and implementation. Attracting investors for infrastructure and resiliency projects is more difficult than most investment options due to resiliency projects requiring extensive funding without guaranteed returns on private investment, only increased security (public and private) against potential risk.

- Updating current power systems with more modern technology, decentralizing grids (microgrids), increasing efficiency for transmission, and distribution networks are all methods to increase the resiliency of power systems, but they all require substantial levels of investment capital.
- Castalia Advisors, a global consulting group focused on infrastructure and resource policy, estimates that it will cost approximately 30 percent more than the average infrastructure development to establish successful resiliency measures in the Caribbean.
- The cost of not investing in resiliency is significant. The damage created by Hurricanes Maria and Irma in 2017 (estimated nearly $50 billion USD) outweighed the entire gross domestic product (GDP) of many smaller Caribbean countries.

The region's most influential industry, tourism, controls the largest part of the economy. According to the World Travel and Tourism Council, the Caribbean is the most tourism dependent region in the world, which effectively limits many local governments' economic mobilization for public projects. Yet, the tourism industry is equally vulnerable to the effects of increasing climate disasters because without a reliable local grid and lack of regulated standards for grid operation, many hotels and resorts must individually rely on inefficient and semi-unreliable backup diesel generators. This shared motivation could be leveraged to persuade the participation of the tourism industry to stem profit losses during climate disasters.

Recommendation

That the United States should partner with CARICOM to establish a new branch of the organization focused solely on the development of an energy resilience strategy in the Caribbean. The initiative would strive to include local tourism institutions in investment opportunities, expedite current resiliency commitments, and create new models for implementation and investment. Partnering with the largest and most politically active CARICOM countries first (Jamaica, Bahamas, Trinidad and Tobago) will help with the initial implementation and eventual region-wide expansion. The U.S. Government will assist in the establishment of this new organization by providing preliminary funding and technical expertise to jumpstart the initial transition. The U.S. will also assist in establishing measures of monitoring and oversight for this project, without direct involvement in the oversight committee. Lastly, an effective monitoring system will reduce the risk of corruption, while also providing helpful feedback for evaluation. The main responsibilities of the new energy resiliency organization are:

- **Public-Private Partnership:** Pursue agreements with local tourism institutions, and other local industries, to better utilize their financial capacity and community influence for new investing pathways. Build on shared interests, as many private operations like tourism, are affected by the increasing frequency of climate disasters and power outages.
- **Technology Standards:** Set regional standards for updated grid technology and energy systems, encouraging safer energy infrastructure investments with expert guidance and guaranteed returns.
- **Best Practices:** Utilize existing communication avenues to share best practices, increasing the regional scalability of the program.

Comments

The COVID-19 pandemic is impacting the tourism industry more than any other industry in the world. This pandemic will severely affect the tourism industry's future investment capacity and motivations for participating in community development. According to a panel of regional Inter-American Development Bank delegates, the Caribbean region is looking for new ways to extract more local value-added from the industry during this pandemic, as foreign investment pulls back.

Outcomes

If these recommendations are followed, the Caribbean region will have locally financed wide scale microgrids and hardened power systems capable of maintaining power through all forms of climate disasters. The cost of inaction can be clearly seen in the physical damage caused by hurricanes and the months of power outages seen in some of the least developed island states. The region must address this threat immediately to protect its most critical infrastructure.

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Initiatives to Increase Funds for Actions that Address Climate Change

Scale up private and public climate funds and fiscal policies for a low carbon economy in Latin America

Challenges and Opportunities

The International Finance Corporation (IFC) estimates that the Latin America region will need to invest more than $176 billion per year until 2030 for the implementation of the region's Nationally Determined Contributions (NDCs). Available public and private climate funds in 2017 and 2018 have been $26 billion and $31 billion respectively, only 15 to 18 percent of the total needs for climate mitigation, adaptation, and resilience.

Mitigation projects have relatively high potential to attract private capital since they provide a return on investment. The IFC estimates a $1 trillion low carbon investment opportunity in Latin America between 2015 and 2040. Another study estimates the average internal rate of return (IRR) in the region to be 17 percent, a healthy margin in emerging markets.

The main obstacles for scaling up private climate investments in Latin America are the lack of political stability, legal security, and high levels of corruption. Capital is more likely to flow when backed by a securing underwriter or an International Financial Institution (IFI).

- "Green bonds" are emerging as an effective way of generating climate funds. Green bond issuance in Latin America is currently small, compromising only 1.4 percent of the global market, but 2019 has been a record year, with a $3.6 billion issuance primarily due to two sovereign bonds issued by Chile. This brought the total Latin America green bond issuance to date up to $12.6 billion.
- The "Green Bond Transparency Platform" launched by the Inter-American Development Bank (IDB) during COP 25 in 2019 reflects the need for greater transparency efforts in the region.

Fiscal policies for generating public climate finance and reducing emissions are in startup phase. Mexico has a relatively small carbon tax in place on the sale and import of fossil fuels since 2014. Chile introduced a tax targeting high-energy installations in 2018. A group of leading companies in Brazil has been participating in a voluntary Emissions Trading Scheme (ETS) simulation since 2013. Economists also generally agree that implementation of an ETS system is the most cost-effective climate change mitigation strategy.

Recommendations

1. That the U.S. Government increase foreign assistance on anti-corruption programs in Latin America to enhance the rule-of-law and the oversight of civil society for increased accountability. Efforts will improve the investment climate for low carbon economy projects.

2. That the U.S. Government encourage Latin America to scale up issuance of green bonds as an effective private-public capital financing tool.

- Encourage U.S. financial institutions, who are global leaders in green bond issuances, to support and strengthen the capacity of their local counterparts and potential local sovereign, municipal, and private issuers.

3. That the U.S. Government advocate for the region to use dialogue and build upon existing best practices to scale up on carbon tax programs to address fossil-fuel use behavior.
   - In tandem to the carbon tax, encourage the region to develop a regional emissions trading scheme (LA ETS) to address reductions of greenhouse gas (GHG) emission from energy intensive and high emitting industries.
   - Use diplomatic coalitions, such as the Organization of American States (OAS), to promote regional coordination on both carbon tax and regional ETS implementation.
   - Understand the benefit of using some of the carbon tax revenues as carbon dividends to address societal inequalities and to enhance the political acceptability of such taxes.

Comments

Due to COVID-19 causing disturbances of human resources, production capabilities, and global supply chains disruptions, climate projects are likely to be paused for the fiscal year 2020. Public funds for climate change are likely to shift to COVID-19 response actions, and private funds will decrease due to the general global recession. Therefore, the recommendations outlined in this paper are for the period starting with 2021.

Outcomes

If implemented, anti-corruption programs will enhance the business climate through better governance and increase the flow of private capital for climate change mitigation projects. Latin American governments, cities, central banks, regional development banks, and corporations have potential to raise $40-50 billion annually with green bonds by 2030 for mitigation, adaptation and resilience projects. A carbon tax consistent with the Paris Agreement goals has the potential to generate more than $100 billion in annual revenue in Latin America. LA ETS has the potential to reduce GHG emissions by 1 to 3 percent annually.

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Appendix

Appendix 1: Sustainable Food Commodities

Livelihoods

Changing precipitation and temperature patterns can vastly reduce productivity of the agricultural sector and directly affect the livelihoods communities living in rural zones. A 2018 impact assessment in Latin America by the UN Food and Agriculture Organization (FAO) shows that 95 percent of family farmers reported negative impacts to their crop yield due to climate change. For many countries in Central America, including Guatemala, Nicaragua, El Salvador, and Honduras, staple crops are a fundamental part of subsistence and livelihood activities. In 2018, a major drought in Honduras resulted in 75 percent of corn and bean loss in the southern provinces of El Valle and Choluteca. U.S. Customs and Border Protection noted that the 2019 record migration from Guatemala to the United States was linked to a climate-induced crop shortage that impacted thousands of farmers and farmworkers. The effects of climate change on the agriculture sector are not distributed equally across racial, socioeconomic, or gender dimensions. However, greater impacts to livelihoods are likely to take place among populations that are already in a situation of vulnerability.

Nutrition

Harvard University's Center for Climate, Health, and the Global Environment established that rising levels of atmospheric carbon dioxide will significantly reduce the availability of protein, iron, and zinc in staple crops like wheat, rice, soy, and corn. This could slow the progress on improvements in global nutrition made over the last 30 years, according to the International Food Policy Research Institute. Improvements in biofortification are projected to increase nutrient availability by 2050. However, these gains are substantially diminished by rising concentrations of CO2. The impact on individual crops is expected to have disproportionate effects on diet and health across Latin America. For instance, nutrient losses in maize, which accounts for a large portion of diets throughout Latin America, would have widespread food insecurity implications.

Biodiversity

The UN Environment Programme (UNEP) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) have estimated that Latin America contains over 50 percent of the world's biodiversity. Feeding humanity and protecting biodiversity are complementary and interdependent goals widely recognized in the fields of sustainable agriculture and conservation. Animal pollination from bees, butterflies, birds, beetles, and bats is an invaluable ecosystem service that safeguards global food security. Healthy and nutritious diets depend on ecosystem services, including the myriad of organisms that maintain soil health, pollinate plants, purify water and air, and mitigate crop pests and diseases.

Emerging Infectious Diseases

Landscape changes, including deforestation and agricultural expansion, are creating more intensive interactions between humans, livestock, and wildlife. The interaction of humans and livestock with wildlife increases the risk of spillover of potential pathogens, according to the National Academy of Sciences. These changes have been implicated as drivers of recent emerging diseases, including SARS and COVID-19. Sustainable agricultural food systems that meet global food requirements and conserve biodiversity have the greatest potential to prevent future outbreaks of infectious diseases.

Appendix 2. Low Carbon Energy Solutions

Figure 1: IDB Supported Electromobility Activities in Latin America and the Caribbean