



USAID
FROM THE AMERICAN PEOPLE

FRAGILITY AND CLIMATE RISKS IN COLOMBIA

SEPTEMBER 2018

This publication was produced for review by the United States Agency for International Development. It was prepared by Ashley Moran, Clionadh Raleigh, Joshua W. Busby, Charles Wight, and Management Systems International, A Tetra Tech Company.

FRAGILITY AND CLIMATE RISKS IN COLOMBIA

Contracted under IQC No. AID-OAA-I-13-00042; Task Order No. AID-OAA-TO-14-00022

Fragility and Conflict Technical and Research Services (FACTRS)

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

TABLE OF CONTENTS

Acronyms.....iv

Executive Summary 1

Introduction..... 3

Climate Risks..... 3

Fragility Risks..... 7

 Key Areas of Concern..... 8

 Key Areas of Improvement..... 8

 Key Sources of Fragility..... 9

Compound Fragility-Climate Risks 10

Conclusion..... 11

Resources Available from This Study..... 13

References..... 14

List of Tables

Table 1: Indicators Used to Assess Climate Exposure..... 5

Table 2: Indicators Used to Assess State Fragility 7

Table 3: State Effectiveness Deficits in Colombia..... 8

Table 4: State Legitimacy Deficits in Colombia 9

List of Figures

Figure 1: Sources of Climate Exposure 6

ACRONYMS

ACLED	Armed Conflict Location and Event Data
AGC	Autodefensas Gaitanistas de Colombia (Gaitanista Self-Defenses of Colombia)
CCAPS	Climate Change and African Political Stability
CEPSA	Complex Emergencies and Political Stability in Asia
CERAC	Centro de Recursos para el Análisis de Conflictos
CRED	Centre for Research on the Epidemiology of Disasters
ELN	Ejército de Liberación Nacional (National Liberation Army)
EM-DAT	Emergency Events Database
FACTRS	Fragility and Conflict Technical and Research Services
FARC	Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia)
GDP	Gross Domestic Product
ICG	International Crisis Group
OECD	Organisation for Economic Co-operation and Development
OFDA	Office of U.S. Foreign Disaster Assistance
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

For states that face substantial fragility and high exposure to multiple climate hazards simultaneously, the challenges inherent in these risks are compounded. Colombia experiences *very high* climate exposure concentrated in small portions of the country and *high* fragility that stems largely from persistent insecurity related to both longstanding and new sources of violence. Colombia's effective political institutions, well-developed social service delivery systems, and strong regulatory foundation for economic policy position the state to continue to make important progress. However, the historically high level of violence and accompanying population displacements continue to create risks for Colombians, including in areas that also face high climate risks.

In order to provide a holistic view of how these phenomena interact, and to identify opportunities to generate co-benefits for development, this brief looks at each risk separately and then combined. First, the brief identifies the locations and populations across Colombia that face the greatest climate exposure risks and outlines the specific climate risks they face. Second, it discusses current fragility dynamics, spheres where the state has the greatest capacity to respond to public needs, and aspects of fragility that present the greatest potential sources of instability. Importantly, it understands fragility as being rooted in poor state capacity and poor state-society relationships, both of which can contribute to instability. Lastly, this brief describes how the state's compound fragility-climate risks heighten insecurity in Colombia.

Today Colombia has nearly 2 million people living in *high* climate exposure areas. More than 1 million of these people live in not just *high* but *very high* climate exposure areas concentrated in less than 1 percent of the country's territory along the coast. Colombia's high exposure areas include low-lying coastal zones, particularly around the cities of Barranquilla and Cartagena where populations face storm surges, flash floods, and chronic aridity; coastal and inland areas of Chocó, Antioquia, and Córdoba departments, which are susceptible to decreased rainfall, riverine flooding, and coastal inundation stretching far inland along river deltas; and pockets of high exposure in Putumayo department in the south, which experiences riverine flooding and decreased rainfall.

Colombia experiences *high* overall fragility compared to other countries globally, and in recent years it has experienced the greatest fragility of all countries in South America, though that ranking may change as the peace process continues in Colombia and stability deteriorates in Venezuela. Unlike most other countries with high compound fragility-climate risks, Colombia's fragility stems primarily from poor state effectiveness, particularly in the security and economic spheres. However, Colombia does benefit from strong political and social institutions. Colombia has also made important gains in *economic legitimacy*—with improvements to the rule of law, private property rights, and channels for entering the formal economy that have brought Colombia to the best rating globally for *economic legitimacy*—and gains in *social legitimacy* that stem from improved representation of women in government positions and a high average life expectancy rate. Consistently poor *security effectiveness* and *security legitimacy*, however, continue to drive the overall *high* level of fragility in Colombia.

The peace process has already had a marked impact on armed conflict in the country. De-escalation between government forces and the Fuerzas Armadas Revolucionarias de Colombia/Revolutionary Armed Forces of Colombia (FARC) starting in 2015 reduced the number of civilian and combatant deaths to their lowest levels in more than 50 years. While the peace agreement has paved the way for landmark reductions in armed conflict and former combatants' participation in the political process, political violence has nonetheless risen in the intervening years as illegal armed groups—such as the Ejército de Liberación Nacional/National Liberation Army (ELN), Autodefensas Gaitanistas de Colombia/Gaitanista Self-Defenses of Colombia (AGC), and drug cartels—vie for influence over land and resources formerly controlled by the FARC. Increased state presence in rural, conflict-affected

areas can help counter this issue, and many social leaders and activists have targeted work in these areas to promote licit economies and coca-substitution. Yet the persistence of political violence remains a central challenge to stability, even as Colombia's peace process moves forward.

The April 2017 flood in the southern city of Mocoa provides a key example of how compound fragility-climate risks can pose critical challenges in Colombia. Mocoa's drought and flooding risks¹ are exacerbated by the city's expansion into floodplains as its population has grown in recent years, particularly due to the arrival of people displaced by conflict.² The population's vulnerability to climate risks in this region has also been made worse by a lack of government regulation around both settlement and deforestation.³ The convergence of climate risks and government mismanagement of those risks, as well as state deficiencies in addressing the conflict and displacement that put more people in harm's way, combined to make the April 2017 flood in Mocoa one of Colombia's worst disasters on record.

A similar confluence of fragility and climate risks is seen in the routine flash flooding that besets the country's largest coastal city, Barranquilla. It faces substantial flooding risks from storm surges and riverine flooding, which is made worse by limited government planning and responses to address these risks. This combination of climate-exposure risks and state mismanagement of these risks has led, in some cases, to loss of life, infrastructure damage, and decreased productivity.

Together, Colombia's experiences in Mocoa and Barranquilla underscore how compound fragility-climate risks can heighten the insecurity of populations by increasing their vulnerability to humanitarian emergencies. At the same time, Colombia can draw on its political institutional capacity to adopt—and its social service capacity to implement—policies aimed at preventing climate hazards from becoming disasters in the future, but this requires addressing aspects of both its fragility and climate challenges. On the climate side, preventing future disasters requires adoption and implementation of planning, zoning, and environmental policies to address the specific climate risks of each region, as the pockets of climate exposure across Colombia stem from different climate hazards and different regulatory failures. On the fragility side, preventing future disasters requires a reduction in the violence that strains state capacity and drives population displacements that put more people in insecure situations in high-exposure areas.

¹ See Figure 1 in the Climate Risks section of this brief.

² Associated Press 2017.

³ Tobella 2017.

INTRODUCTION

States with high exposure to climate hazards face multi-faceted challenges, including physical and livelihood risks for the population that may force states to redirect scarce resources to adaptation or humanitarian response efforts and strain the capacity of states that, in many cases, are still solidifying democratic institutions and mechanisms for meeting public needs. Similarly, fragility can affect many aspects of a state's capacity and legitimacy across its political, economic, social, and security spheres. When states face fragility and climate risks simultaneously, the risks and challenges are compounded.

This study examines states with compound fragility-climate risks—those that have both substantial fragility challenges and high exposure to multiple climate hazards. The reason for this is straightforward: responding to high exposure to even a single hazard requires substantial resources, infrastructure, and mobilization, yet a country that has high exposure to multiple hazards requires such resources, infrastructure, and mobilization many times over to address each of these diverse hazards.

For a fragile state like Colombia that experiences both slow-onset hazards like droughts and rapid-onset hazards like storm surges, riverine flooding, and wildfires in pockets across the country, these diverse threats and the required responses can exceed state capacity and social capital. Colombia is an upper middle-income country with more resources and capacity than many states to address these challenges, yet these resources and capacity are unevenly distributed across the state. Income inequality in Colombia remains very high by international standards,⁴ and it varies greatly across Colombia, with the coastal departments of Chocó, Cauca, La Guajira, and Córdoba facing among the highest levels of inequality and the Cundinamarca department (surrounding Bogotá) and Atlántico department (hosting Barranquilla) facing relatively lower levels of inequality.⁵ Variations in subnational government capacity, economic development patterns, and conflict impacts have contributed to large disparities seen across regions in the country.⁶

Colombia experiences *very high* climate exposure concentrated in small portions of the country and *high* fragility that stems largely from ongoing political violence related to both longstanding and new sources of conflict. Colombia's effective political institutions, well-developed social service delivery systems, and strong regulatory foundation for economic policy position the state to make important progress for its populace in each of these areas. However, the historically high level of violence and accompanying population displacements continue to create risks for Colombians, including in areas that also face high climate risks.

This brief first identifies the locations and populations across Colombia that face the greatest climate exposure risks and the specific climate risks they face. Second, it discusses current fragility dynamics, spheres where the state has the greatest capacity to respond to public needs and aspects of fragility that present the greatest potential sources of instability. Lastly, it describes how the state's compound fragility-climate risks serve to heighten insecurity in Colombia.

CLIMATE RISKS

Colombia's climate varies widely, from arid deserts to tropical rainforests and mountain climates. Colombia's most densely populated areas face diverse climate stressors, with water shortages and land

⁴ World Bank 2018.

⁵ OECD 2015, 8-9.

⁶ Ibid.

degradation in the mountainous Andes and routine storm surge and flooding in the coastal areas. Colombia's cyclical exposure to droughts and floods is closely tied to El Niño and La Niña.⁷

According to the EM-DAT International Disasters Database, Colombia experienced 56 climate-related disasters between 2000 and 2016. The climatological events that have killed or affected the largest numbers of people have been floods, with a 2010 flood killing more than 400 and affecting nearly 2.8 million people.⁸ That flooding, which began in April 2010 and continued for much of the year, affected large parts of the country. The 400-year old Dique Canal, which connects Cartagena Bay with the Magdalena River in the north of the country, was of particular concern after levees failed in November 2010 during an especially strong La Niña year.⁹ More recently, in April 2017, flash floods and mudslides inundated the southern city of Mocoa, Colombia, killing at least 279 people. This constituted one of the country's worst disasters, with the situation worsened by the deforestation that made the town susceptible to flash floods.¹⁰

USAID has identified a range of sectoral risks in Colombia associated with climate change, including risks to infrastructure, water resources, agriculture, ecosystems, and human health. In terms of infrastructure, climate stressors threaten to damage human settlements and transportation networks, with a particular threat to coastal infrastructure. In terms of water resources, the impact of climate stressors vary by region, posing a range of risks to agricultural livelihoods, hydropower potential, and water quality. In terms of agriculture and ecosystems, climate stressors pose risks to crop yields, fish stocks, food security, and biodiversity. In terms of human health, climate stressors could contribute to increased incidence of heat stress, water-borne diseases, vector-borne diseases, and disaster-related deaths.¹¹

This study's climate exposure measure seeks to identify places that are vulnerable to a combination of climate hazards.¹² It assesses climate exposure using historical data on six key hazards—rainfall anomalies, chronic aridity, wildfires, floods, cyclones, and low-elevation coastal zones—and combines them into a single composite measure to assess overall risk.¹³ Colombia faces a confluence of climate hazards that contribute to its high overall climate exposure, as Table 1 describes and Figure 1 shows.

Colombia has nearly 2 million people living in areas with *high* climate exposure. More than 1 million of these people live in *very high* climate exposure areas concentrated in less than 1 percent of the country's territory along the coast.¹⁴

The overall climate exposure map in Figure 1 shows high exposure along the coast, notably around the northern coastal cities of Barranquilla (with a population of more than 1.1 million) and Cartagena (with a population of nearly 1 million) where populations face storm surges, flash floods, and chronic aridity, and

7 USAID 2017.

8 Guha-Sapir, Below, and Hoyois 2017.

9 BBC 2010.

10 Tobella 2017; and Associated Press 2017.

11 USAID 2017.

12 The global climate exposure measure developed for this study for USAID is based on similar regional measures developed by Joshua W. Busby, Todd G. Smith, Nisha Krishnan, and Charles Wight for the Robert Strauss Center for International Security and Law's U.S. Defense Department-funded programs on Climate Change and African Political Stability (CCAPS) and Complex Emergencies and Political Stability in Asia (CEPSA).

13 *Cyclone winds* are measured as the average sum of winds in kilometers per year based on the frequency and speed of cyclone events. *Low coastal zones* are measured in meters above sea level. *Floods* are measured as the number of flood events per 100 years. *Wildfires* are measured as the number of wildfire events per year. *Chronic aridity* is measured as the coefficient of variation (CV) based on monthly variation, with low CV reflecting consistent rainfall and high CV reflecting long periods of very little rain punctuated by short periods of high rainfall. *Rainfall anomalies* are measured as months of drought. For data sources, the rationale for each indicator, and the process used to map individual climate hazards and overall exposure, see Appendix A in Moran et al. 2018.

14 *High* exposure areas are defined here as one standard deviation or more above the global mean exposure. *Very high* exposure areas are four standard deviations or more above the global mean exposure. For population-based metrics of climate exposure, see Smith, Krishnan, and Busby 2016. For territory-based metrics of climate exposure, see Krishnan, Busby, and Smith 2016.

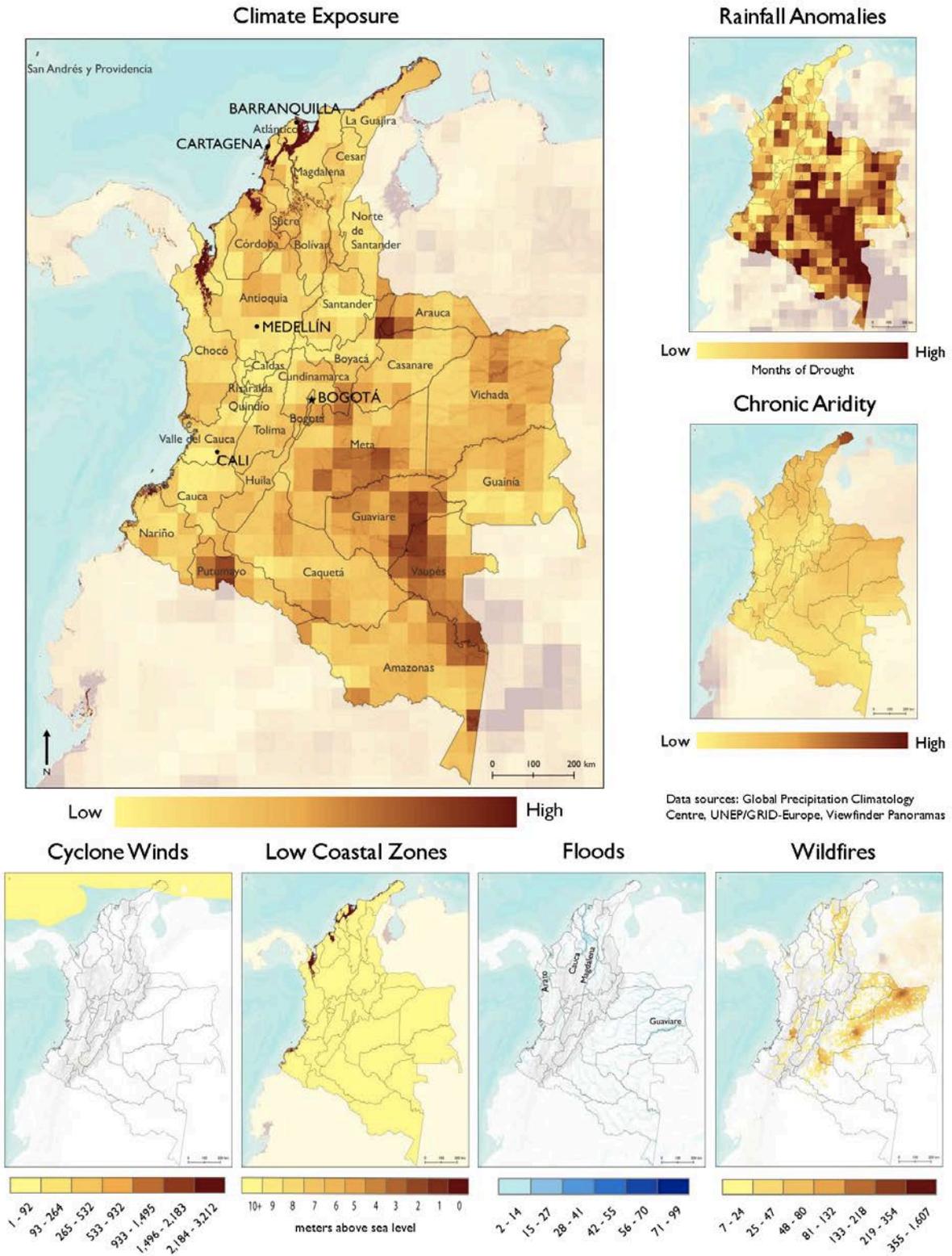
in the Nariño and Cauca departments on the southern coast where populations face coastal flooding and negative rainfall anomalies.

Other high-exposure areas include coastal and inland areas of Chocó, Antioquia, and Córdoba departments, which are susceptible to negative rainfall anomalies, riverine flooding, and coastal inundation stretching far inland along river deltas. Pockets of high exposure also occur in Putumayo department in the south, which experiences riverine flooding and negative rainfall anomalies; at the interstice of the oil-rich Arauca department with Boyacá and Casanare departments in the north, which also experiences negative rainfall anomalies; and in Guaviare and Vaupés departments in the far southeast, though that jungle region is lightly populated.

TABLE 1: INDICATORS USED TO ASSESS CLIMATE EXPOSURE

Hazard	Exposure in Colombia
Rainfall anomalies	Colombia has experienced large declines in rainfall compared to historic averages, particularly in the southern departments of Meta, Guaviare, Vaupés, and parts of Amazonas. Many of these are jungle regions of the country with low populations. Other pockets of the country with large declines in rainfall include localized areas in Putumayo, Vichada, and Guainía departments, as well as the area where Norte de Santander, Boyacá, Arauca, and Casanare departments meet.
Chronic aridity	Only the far northern peninsula of the northernmost department of La Guajira experiences high chronic aridity.
Low-elevation coastal zones	Several coastal regions face high exposure to future coastal flooding due to low elevation, including the departments of La Guajira, Magdalena (which includes the city of Barranquilla), Bolívar (which includes the city of Cartagena), Córdoba, Antioquia, northern Chocó, Cauca, and Nariño.
Cyclones	Cyclone winds are largely located offshore to the north of the country, thus impacting the archipelago of San Andrés, Providencia, and Santa Catalina, as well as the northern peninsula of La Guajira department. While the risks of landfall are generally low in a given year (roughly 1 to 5 percent), some major cyclones and storms have dumped large amounts of rain, particularly over the La Guajira peninsula in the far north of the country.
Wildfires	The most wildfire-prone regions are located in a band across the central part of the country. These include a pocket around Cali (home to more than 2 million people) in Valle de Cauca department, pockets in Meta department, the northern half of Vichada department, and much of Arauca department.
Floods	Flood-prone areas are located in the north of the country along the Magdalena, Cauca, and Arato rivers and in the east along rivers in the Orinoco Basin, including the Guaviare, Vichada, Tomo, and Meta rivers.

FIGURE I: SOURCES OF CLIMATE EXPOSURE



FRAGILITY RISKS

Colombia’s ability to address its localized climate risks depends greatly on its state capacity and societal resilience. This study understands fragility as being rooted in poor state capacity and poor state-society relationships, both of which can contribute to instability. It thus assesses fragility in terms of state effectiveness (i.e. capacity of public sector institutions) and legitimacy (i.e. public support for government arrangements, officials, and practices) in four key spheres: political, security, economic, and social.¹⁵ This study uses a country-level measure in which overall fragility reflects an accumulation of scores on a range of state effectiveness and legitimacy indicators, as Table 2 shows. Based on the accumulation of these indicator scores, each state receives an overall fragility score and a classification in one of five fragility categories: *low*, *some*, *moderate*, *high*, or *highest* fragility.

Colombia experiences *high* overall fragility compared to other countries globally, and in recent years it has experienced the greatest fragility of all countries in South America, though that ranking may change as the peace process continues in Colombia and stability deteriorates in Venezuela.¹⁶ While Colombia’s recent fragility levels are similar to those 15 years prior—a score of 43 in 2014 compared to 44 in 2000—fragility temporarily improved from 2000 to 2007 under a new president, an aggressive campaign to disband militants and reassert government control over state territory, and improvements in economic growth. Fragility has since worsened to prior levels and is holding steady at relatively *high* levels of fragility.

TABLE 2: INDICATORS USED TO ASSESS STATE FRAGILITY

Type	Effectiveness	Legitimacy
Political	Quality of public service # of successful coups d’état in last five years Government tax revenue as percent of GDP	Competitiveness of political participation Citizen participation in selecting government Asylum requests as percent of population
Security	Intensity of ongoing armed conflict Size of displaced population Proportion of country affected by conflict	State use of political terror Presence of militant groups against the state Number of rivaling military organizations
Economic	GDP per capita Poverty headcount ratio Primary commodity exports as percent of total	Control of corruption Rule of law and property rights protection # of days to start a business
Social	Infant mortality rate Child immunization rates Percent of population with access to improved	Military expenditures as percent of GDP Percent of parliamentary seats held by women

¹⁵ This global fragility measure was compiled for this study by Roudabeh Kishi and Andrew Linke with contributions from Clionadh Raleigh, Ashley Moran, and USAID Office of Conflict Management and Mitigation personnel. It is similar in composition and outcome to USAID’s internal methods and framework for analyzing fragility (see USAID 2005 and ARD Consortium 2005). *Total fragility* reflects an accumulation of scores on a range of state effectiveness and legitimacy indicators. Effectiveness indicators assess the capacity of public-sector institutions and practices. Legitimacy indicators assess the degree of direct or indirect public support for government arrangements, officials, and practices. These two sets of indicators are subdivided into political, security, economic, and social indicators to capture state effectiveness and legitimacy in each of these four key spheres, as Table 2 shows. For cross-national fragility scores and raw data, see Kishi and Linke 2016. For data sources, the rationale for including each indicator, and the process used to produce state fragility scores, see Appendix B in Moran et al. 2018.

¹⁶ The range of *total fragility* scores across all countries in 2014 is 0 to 69. Scores for countries with *high* fragility in 2014 ranged from 38 to 51, with Colombia near the middle with a score of 43. Scores for South American countries in 2014 ranged from 5 to 43, with Colombia’s score of 43 at the top. Global and regional fragility dynamics are discussed in more detail in Section 3.5 Global Fragility Patterns in Moran et al. 2018.

water source	Life expectancy at birth
--------------	--------------------------

Key Areas of Concern

Globally, legitimacy deficits contribute more to states' fragility, on average, than deficits in state effectiveness do. This pattern is particularly pronounced among states with high compound fragility-climate risks.¹⁷ Colombia, however, is an exception to this pattern, as its state *effectiveness* scores over the 15-year study period are worse than its state *legitimacy* scores—a trend that began in 2008 and has grown more pronounced.

The bulk of Colombia's effectiveness deficits lie in consistently poor *security effectiveness* and *economic effectiveness*, as Table 3 shows.¹⁸ The country's poor *security effectiveness* scores stem from the severe impact that its long-term armed conflict has had on the country in terms of the territory affected and population displaced. The slight worsening of Colombia's *economic effectiveness* scores stems from its high dependence on petroleum exports and its relatively high poverty rate.

TABLE 3: STATE EFFECTIVENESS DEFICITS IN COLOMBIA

Year	Total Effectiveness Deficits	Political Effectiveness Deficits	Security Effectiveness Deficits	Economic Effectiveness Deficits	Social Effectiveness Deficits
% change 2000-2014	↑9%	-	-	↑	↑
2014 score	24	2	12	8	2
2000 score	22	2	12	7	1

Note: The range of *total effectiveness* scores across all countries in 2014 is 0 to 34. *Total effectiveness deficits* for countries with *high* fragility in 2014 range from 12 to 27, with Colombia's score of 24 near the top. *Total effectiveness deficits* for South American countries in 2014 range from 4 to 24, with Colombia's score of 24 at the top. In the percent change row, an up arrow denotes that the country's *effectiveness deficit* score went up over those 15 years, indicating an increase in fragility; a down arrow denotes that the country's *effectiveness deficit* score went down over those 15 years, indicating a decrease in fragility.

Data source: Kishi and Linke 2016.

Though fragility in Colombia stems more from poor state effectiveness than from poor state legitimacy, aspects of state legitimacy remain areas of concern. As Table 4 shows, Colombia saw a slight worsening of *political legitimacy* over the 15-year study period. This slight decline stems from the growing number of asylum requests spurred by the ongoing conflict, signaling that a large and increasing number of people have lost faith in the legitimacy of the Colombian government and are taking diplomatic steps to leave the country.

Key Areas of Improvement

Colombia is making important gains in addressing fragility risks in several areas. Two particularly bright spots in state effectiveness in Colombia lie in the country's strong *political effectiveness* and *social effectiveness* scores, as Table 3 shows. Its *political effectiveness* scores have remained strong in recent years due to relatively good and improving political institutions in terms of the quality and independence of the civil service, policy development, and public service delivery. Its *social effectiveness* scores reflect a strong record of social service provision across a range of sectors, with low and decreasing infant

¹⁷ In 19 of the 26 states with the highest compound fragility-climate risks globally, the state's overall fragility score stems more from state legitimacy deficits than state effectiveness deficits. See Moran et al. 2018, 43.

¹⁸ This study's *total effectiveness* score comprises political, security, economic, and social indicators that capture state effectiveness in each of these spheres, as Table 2 shows. Fragility scores and raw data for all indicators discussed in this section are available in Kishi and Linke 2016.

mortality rates, child immunization rates above 90 percent, and access to improved water sources and sanitation also above 90 percent. *Social effectiveness* scores in Colombia are now slightly better than the regional average for South America in this area.

Colombia has also seen improvement in its overall state *legitimacy* score, with improvements specifically in the security, economic, and social spheres, as Table 4 shows.¹⁹ The modest improvement in *security legitimacy* scores comes from a slight reduction in state violence, though state legitimacy in the security sphere remained poor due to the continued presence of militant groups in the state. The gains in *economic legitimacy* scores stem from substantial improvements in the rule of law, private property rights protections, and channels for entering the formal economy, bringing Colombia to the best rating globally for *economic legitimacy*. The modest improvement in *social legitimacy* scores stems from improved representation of women in government positions and a consistently high life expectancy.

TABLE 4: STATE LEGITIMACY DEFICITS IN COLOMBIA

Year	Total Legitimacy Deficits	Political Legitimacy Deficits	Security Legitimacy Deficits	Economic Legitimacy Deficits	Social Legitimacy Deficits
% change 2000-2014	↓ 14%	↑	↓	↓	↓
2014 score	19	7	9	0	3
2000 score	22	6	10	2	4

Note: The range of *total legitimacy* scores across all countries in 2014 is 0 to 38. *Total legitimacy deficits* for countries with *high* fragility in 2014 range from 13 to 33, with Colombia's score of 19 in the bottom half. *Total legitimacy deficits* for South American countries in 2014 range from 0 to 23, with Colombia's score of 19 in the top half. In the percent change row, an up arrow denotes that the country's *legitimacy deficit* score went up over those 15 years, indicating an increase in fragility; a down arrow denotes that the country's *legitimacy deficit* score went down over those 15 years, indicating a decrease in fragility.

Data source: Kishi and Linke 2016.

Overall, Colombia's consistently strong effectiveness in the social and political spheres—and its strong and improving legitimacy in the social and economic spheres—reflect core areas of strength where the state has greater capacity to advance policies to address public needs. However, the high level of violence and accompanying population displacements continue to create risks for Colombians, including in some areas that also face high climate risks. The impact of these security vulnerabilities is discussed more in the next section.

Key Sources of Fragility

Vying for Peace with Guerilla Groups

Since the 1940s, Colombia has hosted low-level civil conflict, marked by periods of more intense violence, depending on the political climate and paramilitary groups' access to resources to finance their activities. The two most active guerrilla groups in recent decades—the FARC and the ELN—emerged in the 1960s as significant movements with a more widespread regional following than prior groups.

When President Alvaro Uribe took office in 2002, he began an intense military campaign against the guerrilla groups in Colombia, reasserting government control over large swathes of Colombia that had previously been unpassable for civilians. Uribe's successor, President Juan Manuel Santos, initiated a peace process with the FARC after he was elected in 2010 and with the ELN after he was re-elected on the platform of his peace talks in 2014.²⁰ Following the Colombian plebiscite narrowly rejecting the

¹⁹ This study's *total legitimacy* score comprises political, security, economic, and social indicators that capture state legitimacy in each of these spheres, as Table 2 shows. Fragility scores and raw data for all indicators discussed in this section are available in Kishi and Linke 2016.

²⁰ Johnson 2016.

peace agreement in 2016, the agreement was revised and subsequently ratified by parliament. However, the opposition has expressed frustration that some of its key demands have not been included in the agreement, and members of the public have expressed mistrust of a process perceived by some as too light-handed on guerrillas.²¹

The peace process has already had a marked impact on armed conflict in the country. Following the bilateral de-escalation agreement signed by the FARC and the government in 2015, levels of armed violence—in terms of number of civilians and combatants killed and wounded—fell to their lowest point in 52 years. In 2016, the year parliament ratified the peace agreement, only 10 FARC-instigated events were recorded; civilian deaths fell by 98 percent; and militants' deaths fell by 94 percent.²²

In 2017, the FARC reorganized itself as a political party and, in 2018, ran for the first time in parliamentary elections. FARC candidates received only 0.5 percent of votes, but the organization secured five seats in each chamber of the parliament in accordance with the peace agreement.²³

Rise in Political Violence

Although military confrontations between FARC and government forces have decreased during the de-escalation and peace process, political violence in Colombia more generally rose during this period as illegal armed groups—such as the ELN, AGC, and drug cartels—vie for influence over land and resources formerly controlled by the FARC. Political assassinations of social leaders, environmental activists, political party activists, and trade union members increased by 35 percent in 2015.²⁴ Lesbian, gay, bisexual, and transgender organizers made up 15 percent of the victims of political assassinations in 2015. These organizers tend to work in urban areas where they are targeted by security forces or gangs. Indigenous leaders made up 20 percent of the deaths in 2015. They tend to be active against mining or environmentally risky development projects in remote areas—particularly northern Cauca, southern Valle de Cauca, Caldas, Risaralda, and Nariño, which are generally controlled by illegal mining groups or drug traffickers.²⁵ Colombia continues to have one of the highest rates of assassinations of environmental activists anywhere in the world. According to Global Witness, 42 environmental activists were killed in 2017, up from 37 in 2016.²⁶

Increased state presence in rural, conflict-affected areas can help counter this rising violence, and many social leaders and activists have targeted work in these areas to promote licit economies and coca-substitution. Yet political assassinations and associated violence remain high. While these political assassinations are not directly related to the armed conflict, the political instability and corruption that generates these high levels of threats are rooted in the history of the armed conflict. The persistence of political violence remains a central challenge to instability, even as Colombia's peace process moves forward.

COMPOUND FRAGILITY-CLIMATE RISKS

Colombia's effective political institutions, well-developed social service delivery systems, and strong regulatory foundation for economic policy position the state to make important progress for its populace in each of these areas. However, the historically high level of violence and accompanying

21 Johnson 2017.

22 CERAC 2016.

23 BBC 2018.

24 CERAC 2016.

25 Restrepo 2016.

26 Global Witness 2017.

population displacements continue to create risks for Colombians, including in areas that also face high climate risks.

The aforementioned April 2017 flood in the southern city of Mocoa provides a key example of how compound fragility-climate risks can pose critical challenges in Colombia. Mocoa is at risk of drought due to rainfall anomalies and also faces flooding risk from nearby rivers.²⁷ At the same time, the city has expanded increasingly into floodplains as its population has grown in recent years, particularly due to the arrival of people displaced by ongoing conflict.²⁸ The population's vulnerability to climate risks in this region has been made worse by a lack of government regulation preventing settlement in flood-prone areas²⁹ and by deforestation that has made the town more susceptible to flash flooding and mudslides.³⁰ The convergence of climate risks and government mismanagement of those risks, as well as state deficiencies in addressing the conflict and displacement that put more people in harm's way, combined to make the April 2017 flood in Mocoa one of Colombia's worst disasters on record.

A similar confluence of fragility and climate risks is seen in the routine flash flooding that besets the country's largest coastal city, Barranquilla. The city lies on the northern coast of Colombia in a low flood plain next to the Magdalena River delta. It faces substantial flooding risks from storm surges and riverine flooding, which is made worse by limited government planning and responses to address these risks. The city lacks rainwater storm drains, so the population experiences flash flooding through city streets during heavy rains, which can cause loss of life, infrastructure damage, and decreased productivity that is estimated to cost Barranquilla 20 percent of its GDP each year.³¹ This combination of climate-exposure risks and state mismanagement of these risks has led economists from the World Bank and the Organisation for Economic Co-operation and Development (OECD) to identify Barranquilla as one of the top coastal cities globally expected to have the largest increase in flood risk by 2050.³² With state capacity stretched thin by a decades-long conflict, this fragility in the security sector has thus impacted the degree to which the state has been able to address other chronic risks faced by Colombians.

Colombia's experiences in Mocoa and Barranquilla underscore how compound fragility-climate risks can heighten the insecurity of populations by increasing their vulnerability to humanitarian emergencies. In highly fragile states that have a large number of people facing *very high* climate exposure in a concentrated area—as in the case of Barranquilla—the concentrated nature of this exposed population could be an opportunity for targeted interventions in these areas to address specific climate risks. As the case of Mocoa highlights, however, many fragile states have chronic, unaddressed risks from high exposure in parts of the state that are less densely populated. Interventions in these states should thus consider not only high-profile, densely populated areas but also less densely populated, high exposure areas where national fragility dynamics impede effective responses.

CONCLUSION

Overall, high climate risks in pockets across the country and government mismanagement of those risks have converged to increase Colombians' vulnerability to humanitarian emergencies. Despite the state's commitment to address climate change risks, long-standing armed conflict has strained the state's capacity to effectively manage its climate risks, and it has also contributed directly to people's vulnerability to climate risks where displaced populations have resettled in high-exposure areas. This is

27 See Figure 1 in the Climate Risks section of this brief.

28 Associated Press 2017.

29 Ibid.

30 Tobella 2017.

31 World Bank 2011, 2.

32 Hallegatte 2013.

seen in high-exposure rural areas like Mocoa where the population's vulnerability to local flooding risks is increased by the influx of displaced Colombians, lack of government regulation to prevent settlement in flood-prone areas, and deforestation that has removed natural barriers to flash flooding and mudslides. This is also seen in high-exposure urban areas like Barranquilla, where substantial risks from storm surge and riverine flooding are made worse by limited integration of climate change considerations into government planning and responses to address these risks, resulting in extensive economic losses and infrastructure damage each year due to fairly predictable climate risks.

The good news is that Colombia has a relatively robust set of resources to be able to address these challenges. Notably, Colombia has shown public commitment to addressing climate-related challenges. Colombia's 2010-2014 National Development Plan listed climate adaptation as a priority and established a National Climate Change System to improve coordination among institutions. Since 2014, a National Climate Change Policy has focused on mitigation and adaptation actions by increasing resilience and achieving low-carbon development. In 2016, Colombia created the Intersectional Commission on Climate Change to implement and coordinate climate change efforts at the national level and the Regional Nodes for Climate Change to coordinate regional efforts. In 2017, the government completed a National Climate Change Adaptation Plan.³³

The country's political will to address climate change, its consistently strong effectiveness in the social and political spheres, and its strong and improving legitimacy in the social and economic spheres reflect core areas of strength where the state has greater capacity to advance policies to address public needs. Colombia can draw on its political institutional capacity to adopt—and its social service capacity to implement—policies aimed at preventing climate hazards from becoming disasters, but this requires addressing aspects of both its fragility and climate challenges. On the climate side, preventing future disasters requires adoption of planning, zoning, and environmental policies to address the specific climate risks of each region, as the pockets of climate exposure across Colombia reflect different climate hazards and different regulatory failures. On the fragility side, preventing future disasters requires a reduction in the violence that strains state capacity and drives population displacements that put more people in insecure situations in high-exposure areas.

Unlike most other countries with high compound fragility-climate risks, Colombia's fragility stems more from poor state effectiveness than from poor state legitimacy. This poor state effectiveness is concentrated in the security and economic spheres, reflecting the high level of violence and accompanying population displacements that continue to create risks and impact livelihoods for Colombians. Improving state effectiveness in the security and economic spheres is thus essential to reducing fragility overall, as is removing these drains on the state's capacity to meet its population's physical and climate security needs.

Colombia's experience highlights how, even in countries with strong effectiveness in some spheres, capacity deficits in the security sphere can undermine the government's overall ability to implement policies focused on preparing for (even near-term) future risks. This is particularly evident on cross-cutting issues like climate change, which require integrated planning across sectors. This underscores the need for a coordinated approach in states with high compound risks to focus on reducing interrelated fragility and climate risks, lest improvement in mitigating one of these risks be undermined by lack of improvement in the other.

33 USAID 2017.

RESOURCES AVAILABLE FROM THIS STUDY

Reports

Ashley Moran, Joshua W. Busby, Clionadh Raleigh, Todd G. Smith, Roudabeh Kishi, Nisha Krishnan, and Charles Wight. 2018. *The Intersection of Global Fragility and Climate Risks*. Washington: U.S. Agency for International Development (USAID), Office of Conflict Management and Mitigation.

Ashley Moran, Clionadh Raleigh, Joshua W. Busby, Charles Wight, and Nisha Krishnan. 2018. *Fragility and Climate Risks in Bangladesh*. Washington: USAID Office of Conflict Management and Mitigation.

Ashley Moran, Clionadh Raleigh, Joshua W. Busby, and Charles Wight. 2018. *Fragility and Climate Risks in Colombia*. Washington: USAID Office of Conflict Management and Mitigation.

Ashley Moran, Clionadh Raleigh, Joshua W. Busby, and Charles Wight. 2018. *Fragility and Climate Risks in Nigeria*. Washington: USAID Office of Conflict Management and Mitigation.

Data and Maps

Joshua W. Busby, Todd G. Smith, Nisha Krishnan, and Charles Wight. 2016. *Subnational Climate Exposure Indicator Maps and Raster Layers*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Todd G. Smith, Nisha Krishnan, and Joshua W. Busby. 2016. *Population-Based Metrics of Subnational Climate Exposure*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Nisha Krishnan, Joshua W. Busby, and Todd G. Smith. 2016. *Territory-Based Metrics of Subnational Climate Exposure*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Roudabeh Kishi and Andrew Linke. 2016. *Global Fragility Dataset*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Roudabeh Kishi, Andrew Linke, Charles Wight, Ashley Moran, and Clionadh Raleigh. 2016. *National Fragility Indicator Maps*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Todd G. Smith, Charles Wight, Nisha Krishnan, Roudabeh Kishi, Andrew Linke, Joshua W. Busby, Ashley Moran, and Clionadh Raleigh. 2016. *Climate and Fragility Bivariate Map Data*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

REFERENCES

- ARD Consortium: ARD Inc., University of Maryland, and ISciences, L.L.C. 2005. *Measuring Fragility, Indicators and Methods for Rating State Performance*, Produced for USAID Bureau for Democracy, Conflict, and Humanitarian Assistance/Office of Conflict Management and Mitigation. Washington: USAID.
- Associated Press. “Years of Warnings Preceded Deadly Flood in Southern Colombia,” *Associated Press*, April 5, 2017.
- BBC. “Colombia Flooding Continues with Thousands Homeless,” *BBC*, December 16, 2010.
- BBC. “Colombia Election: FARC Fails to Win Support in First National Vote,” *BBC*, March 12, 2018.
- Centro de Recursos para el Análisis de Conflictos (CERAC). “Un Año de Desescalamiento: Conflicto Casi Detenido, Pero que se Resiste a Desaparecer,” CERAC, July 20, 2016.
- Global Witness. 2017. *Defenders of the Earth: Global Killings of Land and Environmental Defenders in 2016*. London: Global Witness.
- Guha-Sapir, Debarati, Regina Below, and Philippe Hoyois. 2017. *EM-DAT: The CRED/OFDA International Disaster Database*. Brussels: Université Catholique de Louvain.
- Hallegatte, Stephane, Colin Green, Robert J. Nicholis, and Jan Corfee-Morlot. 2013. Future Flood Losses in Major Coastal Cities. *Nature Climate Change* 3: 802-806.
- Johnson, Kyle. 2016. *The National Liberation Army (ELN) Joins Colombia’s Search for Peace*. Brussels: International Crisis Group (ICG).
- Johnson, Kyle. 2017. *In the Shadow of “No”: Peace after Colombia’s Plebiscite*. Brussels: ICG.
- Kishi, Roudabeh and Andrew Linke. 2016. *Global Fragility Dataset*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.
- Krishnan, Nisha, Joshua W. Busby, and Todd G. Smith. 2016. *Territory-Based Metrics of Subnational Climate Exposure*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.
- Moran, Ashley, Joshua W. Busby, Clionadh Raleigh, Todd G. Smith, Roudabeh Kishi, Nisha Krishnan, and Charles Wight. 2018. *The Intersection of Global Fragility and Climate Risks*. Washington: USAID Office of Conflict Management and Mitigation.
- Organisation for Economic Co-operation and Development (OECD). 2015. *Colombia Policy Priorities for Inclusive Development*. Paris: OECD.
- Restrepo, Jorge. “Violencia Política en Colombia: Creciente y Cada Vez Más Selectiva,” CERAC, May 23, 2016.
- Smith, Todd G., Nisha Krishnan, and Joshua W. Busby. 2016. *Population-Based Metrics of Subnational Climate Exposure*, Produced for USAID Office of Conflict Management and Mitigation. Austin: Robert Strauss Center for International Security and Law.

Tobella, Alba. "Flood-Stricken City in Colombia Mourns as Death Toll Climbs," *Time*, April 3, 2017.

USAID. 2005. *Fragile States Strategy*. Washington: USAID.

USAID. 2017. *Climate Risk in Colombia: Country Risk Profile*. Washington: USAID.

World Bank. 2018. GINI index (World Bank estimate). *World Development Indicators*. Washington: World Bank.

World Bank. 2011. *Barranquilla Flood Management, Project Information Document, Concept Stage*. Washington: World Bank.

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523