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COUNTRY BRIEF

FRAGILITY AND CLIMATE RISKS
COLOMBIA

OVERVIEW

Colombia experiences *very high* climate exposure concentrated in small portions of the country and *high* fragility stemming 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 making important progress. Yet, at present, 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 risks, the country's historically high level of violence has strained state capacity to manage those risks, while also contributing directly to people's vulnerability to climate risks where people displaced by conflict have resettled in high-exposure areas.

Source: USAID Colombia

This is 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 government planning and responses to address these risks, resulting in extensive economic losses and infrastructure damage each year due to fairly predictable climate risks.

This brief summarizes findings from a broader USAID case study of fragility and climate risks in Colombia (Moran et al. 2018b) and a USAID report on *The Intersection of Global Fragility and Climate Risks* (Moran et al. 2018a). Key findings from the global report are summarized in the box on the next page.

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KEY FINDINGS

Fragility Risks: Colombia experiences *high* overall fragility compared to other countries globally, and in recent years it has faced 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. 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 key gains 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.

Climate Risks: Colombia has nearly 2 million people living in *high* exposure areas. These include: 1) low-lying coastal zones, particularly around Barranquilla and Cartagena, at risk of storm surges, flash floods and chronic aridity; 2) coastal and inland areas of Chocó, Antioquia and Córdoba departments that face decreased rainfall, riverine flooding and coastal flooding; and 3) pockets of high exposure in Putumayo department in the south that faces flooding and decreased rainfall.

Compound Fragility-Climate Risks: Colombians' vulnerability in high-exposure places like rural Mocoa—where conflict displacement, unchecked deforestation and unregulated settlement exacerbate flood risks—and coastal Barranquilla—where government response has not mitigated routine flooding—highlight what can happen when climate risks converge with mismanagement of those risks by a government affected by fragility. However, Colombia can draw on its political institutional capacity to adopt—and its social service capacity to implement—policies to reduce the future impact of climate hazards, but this requires addressing aspects of both its fragility and climate challenges.

FRAGILITY AND CLIMATE RISKS: KEY TAKEAWAYS

1. Fragility is an important dimension in understanding the indirect pathways between climate risks and potential conflict outcomes. Considering state-society relations and the dynamics of legitimacy and effectiveness enhances our ability to identify and understand indirect pathways through which vulnerability is compounded and, conversely, where resilience efforts can have co-benefits for climate, environment and conflict prevention goals.
2. Compound fragility-climate risks can heighten insecurity but conflict is context-specific. Fragility and climate risks generally interact by increasing vulnerability to humanitarian crises and/or political instability. However, even states with similarly high compound fragility-climate risks and similar rates of violence can host very different types of conflict. This reality underscores the central role that governance plays in the development of conflict.
3. State legitimacy is poor across nearly all states with high compound fragility-climate risks. Poor state legitimacy contributes more than poor state effectiveness to the overall fragility of these states, on average. Improving state legitimacy can thus be an essential element to increasing stability and reinforcing government-led efforts to address climate risks.
4. Many people around the world face high compound fragility-climate risks. The majority of highly fragile states have a large number of people or a large proportion of the population living in high exposure areas. Further, several moderately fragile states have among the highest numbers of people living in high exposure areas, posing grave risks to large numbers of people if fragility worsens and government response capacity declines in these countries.
5. Multiple climate risks often affect the same populations and institutions in highly fragile states. Populations in very high climate exposure areas generally face several overlapping climate stressors, which can heighten overall vulnerability and can place repeated stress on a range of institutions and social and economic systems.
6. Yet in a few highly fragile states, single climate stressors can be just as damaging as multiple hazards. Some highly fragile states face high exposure to a single climate stressor to a degree that risks exceeding their capacity to address it.

Source: Moran et al. 2018a. Access the full report at here.

FRAGILITY RISKS IN COLOMBIA

From 2000 to 2007, Colombia's fragility decreased due to an aggressive campaign to disarm and disband militants and reassert government control over state territory, along with related improvements in economic growth. That improvement proved only temporary, though, and Colombia's fragility has since risen to prior levels and is holding at relatively *high* levels of fragility. The table below summarizes trends in political, security, economic and social dimensions of state legitimacy and effectiveness in Colombia from 2000-2014.

Key Areas of Concern and Improvement in Colombia (2000-2014)

KEY AREAS OF CONCERN

- Growing deficits in state effectiveness: while globally legitimacy deficits contribute more to states' fragility, on average, than effectiveness deficits do, Colombia is an exception: its state effectiveness today is worse than state legitimacy
- Very poor security effectiveness reflected in population displacement and other impacts of long-term armed conflict
- Slight worsening of economic effectiveness due to high dependence on oil exports and relatively high poverty rate
- Slight worsening of political legitimacy reflected in increasing asylum requests, signaling that a growing number of people have lost faith in the Colombian government and are taking diplomatic steps to leave the country

KEY AREAS OF IMPROVEMENT

- Very strong political effectiveness due to quality and independence of the civil service, policy development and public service delivery
- Very strong social effectiveness with low and decreasing infant mortality rates, child immunization rates above 90 percent and access to improved water sources and sanitation also above 90 percent
- Very strong economic legitimacy stemming from substantial improvements in the rule of law, private property rights protections and channels for entering the formal economy
- Strong social legitimacy from improved representation of women in government and consistently high life expectancy
- Modest improvement in security legitimacy stemming from a slight reduction in state violence

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.

MEASURING FRAGILITY

The global fragility measure developed for this study is similar in composition and outcome to USAID's internal methods and framework for analyzing fragility (USAID 2005, ARD Consortium 2005).

Total fragility reflects both state effectiveness and legitimacy. *Effectiveness* indicators assess the capacity of public sector institutions and practices. *Legitimacy* indicators assess the degree of public support for government arrangements, officials and practices. These two sets of indicators are subdivided into political, security, economic and social indicators.

For this study's cross-national fragility scores and raw data for the 15-year study period (2000-2014), see Kishi and Linke 2016. For the rationale for each indicator and the process used to create the fragility measure, see Moran et al. 2018a.

KEY SOURCES OF FRAGILITY

Vying for Peace with Guerrilla 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 Fuerzas Armadas Revolucionarias de Colombia / Revolutionary Armed Forces of Colombia (FARC) and the Ejército de Liberación Nacional / National Liberation Army (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 reelected in 2014 (Johnson 2016). Following the Colombian plebiscite narrowly rejecting the peace agreement in 2016, the agreement was revised and subsequently ratified by parliament. However, the opposition at that time 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 (Johnson 2017).

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 (CERAC 2016).

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 (BBC 2018).

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. Political assassinations of social leaders, environmental activists, political party activists and trade union members increased by 35 percent in 2015 (CERAC 2016). Certain groups are particularly at risk, such as indigenous leaders and lesbian, gay, bisexual or transgender organizers. 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 (Global Witness 2017).

While these political assassinations are not directly related to the armed conflict, the political instability and corruption are rooted in the history of the armed conflict. The persistence of political assassinations and intimidation remains a central challenge to stability, even as Colombia's peace process moves forward.

CLIMATE RISKS IN COLOMBIA

Colombia's climate varies widely, from arid deserts to tropical rainforests. Colombia's most densely populated areas face diverse climate stressors, with water shortages and land degradation in the mountainous Andes and routine storm surge and flooding in the coastal areas.[1] Colombia's cyclical exposure to droughts and floods is closely tied to El Niño and La Niña (USAID 2017).

Northern coastal cities of Barranquilla (with more than 1.1 million people) and Cartagena (with nearly 1 million people) face storm surges, flash floods and chronic aridity. Southern coastal populations (in Nariño and Cauca departments) face flooding and reduced rainfall.

Coastal and inland areas of Chocó, Antioquia and Córdoba departments face decreased rainfall, riverine flooding and coastal flooding stretching far inland along river deltas. Pockets of high exposure also occur in Putumayo, Arauca, Boyacá and Casanare departments and in the sparsely populated jungle regions of Guaviare and Vaupés departments.

CLIMATE EXPOSURE IN COLOMBIA AT A GLANCE

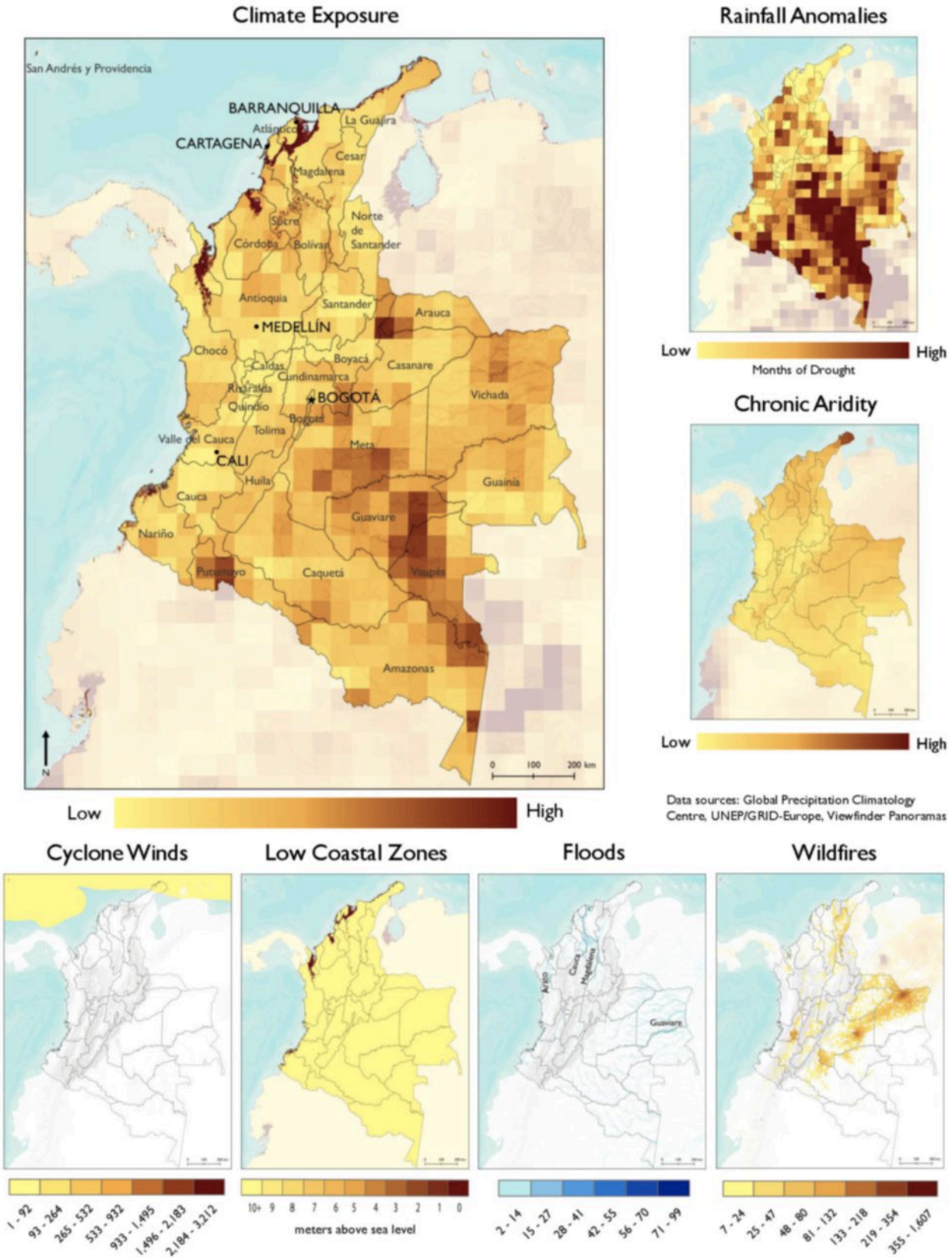
- Nearly 2 million people live in areas with high climate exposure, with half concentrated in less than 1 per-cent of the country's territory along the coast.
- Colombia experienced 56 climate-related disasters from 2000 to 2016 (Guha-Sapir, Below and Hoyois 2017).
- Floods are the most damaging and deadly hazard; a 2010 flood killed over 400 and affected 2.7 million people (Guha-Sapir, Below and Hoyois 2017).
- In April 2017, flash floods and mudslides inundated the southern city of Mocoa, killing at least 279 people (Tobella 2017; Associated Press 2017).

Climate Hazards and Exposure in Colombia

HAZARD	EXPOSURE IN COLOMBIA
Rainfall Anomalies 	Colombia has experienced large declines in rainfall compared to historical averages, particularly in the southern departments of Meta, Guaviare, Vaupés and parts of Amazonas. 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 La Guajira experiences high chronic aridity.
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.
Sea-Level Rise 	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, 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.
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.

1 For this study's population-based metrics of climate exposure worldwide, see Smith, Krishnan and Busby 2016. For its territory-based metrics of climate exposure worldwide, see Krishnan, Busby and Smith 2016.

Figure 1. Sources of Climate Exposure



Note: *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. More information on how these climate indicators are measured and produced is available in Appendix A of Moran et al. 2018a.

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 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. 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 armed conflict (Associated Press 2017). 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 areas and by deforestation that has made the town more susceptible to flash flooding and mudslides (Associated Press 2017; Tobella 2017). 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 floodplain 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 gross domestic product (GDP) each year (World Bank 2011). 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 (Hallegatte 2013). With state capacity stretched thin by decades-long conflict, this fragility in the security sector has thus impacted the degree to which the state is 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 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 and variability risks, longstanding 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.

The country's political will to address climate change and variability, 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.

COLOMBIA'S COMMITMENT TO ADDRESSING CLIMATE CHANGE

Since 2010, Colombia has put into place several policies, strategies and institutions to address climate change (USAID 2017):

- The 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.

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.

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 that 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 risk be undermined by lack of improvement in the other.

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