A New Climate for Peace









Briefing Note No. 10

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Honduras has been a relatively stable democracy since military rule ended in 1981¹; unlike many of its neighbours, it did not experience a protracted civil war during the late 20th century. However, it remains the second-poorest country in Central America, with the world's highest homicide rate and widespread corruption and impunity. It is plagued by protracted development challenges including extreme economic inequalities, rural poverty, low levels of education, high levels of crime and gang violence, lack of economic opportunities, particularly among youth, and acute environmental degradation. Climate change and climate variability place additional strain on the Honduran government's capacity to effectively address these socio-economic challenges.

Climate change projections in Honduras

Honduras' climate is projected to get hotter and drier. By 2050, average temperature increase may reach up to 2°C, with expected annual precipitation reductions ranging from 7.5 to 14 per cent (UNDP BCPR 2013). Climate change effects will increase the frequency and severity of climate-related hazards, which already occur on a regular basis. Honduras experienced approximately 50 extreme weather events between 1980 and 2008 (GFDRR), including tropical storms and hurricanes, which often led to extensive flooding, landslides and mudslides, and had a devastating impact on crop production and critical infrastructure. Honduras is also vulnerable to periodic droughts, which particularly impact the rural poor. By mid-century, Western Honduras may become a "hotspot" of climate vulnerability in the region (USAID 2014). This is due to its exposure to climate hazards interacting with poverty, population growth, and the limited human, financial, and technical capacity of local institutions to respond. The consequences of climate-related disasters are wide ranging, impacting GDP, unemployment, livelihoods, food security and the prevalence of malnutrition; an estimated 1.5 million Hondurans already face hunger at some point each year (WFP 2015).

Compound risks: Links between climate change, fragility and security

1. Climate change, agriculture and livelihood insecurity

Agriculture² is the backbone of the Honduran economy, employing nearly 40 per cent of the workforce and contributing up to 40-45 per cent of the GDP (UNDP BCPR 2013). With almost 95 per cent of crops being rain-fed, the sector is highly dependent on stable climate conditions. Projected climate impacts will affect the productivity of all crops in Honduras, from nutritional staples such as maize and beans to export crops such as coffee and horticultural products, impacting agriculture-reliant livelihoods and household food security (USAID 2014).

In some ways, agriculture and aquaculture practices also increase vulnerability to climate-related shocks and stressors, for example, through unsustainable natural resource management resulting in rapid forest and land degradation. Honduras has the highest deforestation rate in Central America: between 1990 and 2005, 37.1 per cent of the forests of Honduras disappeared. Combined with the shift towards water-intensive monoculture of export crops and cattle ranching, smallholding subsistence farmers are pushed to ever-poorer and steeper soils (UNDP BCPR 2013). Other ecosystems such as mangroves have also been reduced substantially by increasing shrimp farm activity (World Bank, 2009). This increases vulnerability to shocks (e.g. storms), and to medium- to long-term stresses (e.g. sea-level rise) by removing the coastal barrier that protects against erosion and absorbs some of the destructive power of storms and high tides. Since 2012-13, the coffee leaf rust outbreak (la roya) is devastating coffee crops in Central America, reducing yields and quality. The negative impacts on jobs and particularly on unskilled day labourers have cascading effects on both

¹ We used the word "relatively" given that the country experienced a coup d'état in 2009.

² Agriculture is defined as a managed system of crops, livestock, soil management, forest resources (productive use, goods & services) and water resources (irrigation), including land use and land use change (World Bank 2009 Country Note on Climate Change Aspects in Agriculture- Honduras).

internal and external migration. This may potentially increase crime and insecurity, as coffee workers seek alternative incomes in drug-related livelihoods in gangs and narco-trafficking networks. Even if the consequences of such climate-induced shock are still under-researched, the example highlights how climate change can interact with the security environment and contribute to increasing fragility in a country like Honduras (Rüttinger et al. 2015).

Climate change, the Coffee leaf Rust, and fragility in Honduras

Coffee is the highest valued cash crop in Honduras and the main foreign exchange earner (FAO, 2011). The crop is particularly vulnerable to diseases or parasites even under moderate changes in temperatures and rainfall, specifically during blossoming and fruit development. The recent Coffee Leaf Rust (*la Roya*) outbreak began in 2011 following above-average rainfall and temperatures. This illustrated the knock-on consequences of a changing climate, through the impact of a fungus that plagued more than half of the total Central American coffee crops (USAID 2014). The impacts of Coffee Leaf Rust on coffee production, and consequently on livelihoods and the entire economy, were devastating in Honduras, the second-biggest coffee producer in Central America. In the 2012-2013 period, Honduras experienced significant economic losses totalling approximately \$230 million and 100,000 job losses, (representing almost 20 percent of the total workforce) particularly among unskilled and poor wage labourers in the agricultural sector (International Coffee Organisation 2013). These events indicate how sensitive the coffee value chain is to climate-related shocks and the magnitude of impacts on livelihoods and the economy. Negative coping strategies and effects on migration patterns are still unknown, but anecdotal evidence indicates that they may have negative impacts on household resilience in the longer term.

2. Climate change and natural disasters pushing states toward fragility

According to the Global Climate Risk Index 2015, Honduras was the country most affected by extreme weather events between 1994 and 2013 (Germanwatch, 2015). This ranking is partly due to the impact of **Hurricane Mitch** in 1998. In the aftermath of the disaster, an estimated 70 per cent of the country's crops and 70 per cent of the nation's transport infrastructure were destroyed, causing US\$3 billion in economic damages. The hurricane **triggered social dislocation and large-scale migration to the north, potentially contributing to the country's continued instability** (RUSI 2010).

The response to Hurricane Mitch highlighted the weaknesses of the Honduran state, which was unable to deal with both the immediate relief efforts and medium-term recovery planning (Jackson 2005). Honduran disaster response capability remains extremely weak due to a lack of financial resources and operational capacities, despite efforts toward disaster risk management and disaster risk reduction. Since the 1980s, repeated shocks, both economic³ and environmental, have increased Honduras' fragility. The economic impact of Hurricane Mitch took the country's development process back by almost 50 years (Fundacion Vida 2012). It created a dependency on foreign aid, which accounted for 16 per cent of GDP in 1999, compared with 6.3 per cent before the disaster (Mechler 2004).

Slow onset disasters are also a threat in Honduras. In summer 2014, a prolonged *canícula* (seasonal dry spell) occurred causing damage to crops and affecting more than 500,000 people. Maize production was almost 75 per cent below normal in the south-western region of Honduras (Fews Net 2014) leading to acute food insecurity, malnutrition and migration to urban areas. People moved from rural areas into overcrowded cities such as San Pedro Sula and Tegucigalpa, known for being among the most violent cities in the world, or out of the country to the USA, looking for employment. This further exposed them to urban violence and made the children of migrants particularly vulnerable to gang recruitment by *maras*. Combined factors in urban settings such as poverty, high levels of youth unemployment, and labour migration to urban centres which cannot cope with the demand for jobs nor infrastructure, are widely agreed to be specific conflict drivers (Fetzek and Vivekananda 2015).

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³ In 2008 the decrease of global prices of the exported crops, notably bananas and coffee impacted heavily State revenues from exports, aggravating the country external debt.

3. The climate change-migration-violence nexus in Honduras

Honduras has the highest crime rates in the world, with pervasive gang criminality (the *maras*), narcotrafficking and prostitution. Youth, who represent the majority of the population (50 per cent of Hondurans are under the age of 21; CIA World Fact book 2014) are particularly exposed to gang recruitment as they suffer endemic poverty and chronic unemployment. Honduras has become a transhipment place for drug trafficking, due to its porous borders with neighbouring countries and weak state capacities. **The limited budget and capacity of the state in providing adequate security has led to a focus of crime-reduction efforts in urban areas** (RUSI 2010). The resulting security vacuum in rural areas has enabled the proliferation of criminal groups, who are able to offer alternative sources of support to rural communities. In turn, the rise in criminality and violence is inflicting high costs to the Honduras state; the World Bank estimates that the annual costs of violence accounts for about 10 per cent of the country's GDP (nearly US \$900 million) (World Bank Honduras Overview 2015).

Violence is not just a security concern but also one of the main obstacles to economic and social development and to resilience in the context of climate change (Tellman 2014). Chronic insecurity and violence impact communities and livelihoods through death of family members, loss of assets or forced migration. Migration flows to overcrowded cities raises concerns of adequate economic opportunities, provision of basic services, potential for the fuelling of human trafficking and overall security situation (UNDP BCPR 2013).

Conclusion

Violence presents serious security, social and economic challenges in Honduras. The feedback loops between climate impacts on livelihoods, migration and state capacities are likely to exacerbate existing fragility and vulnerability risks in Honduras. There remains a significant gap in understanding migration patterns in Honduras in the context of multiple stresses and shocks, among them violence, climate change, and disasters.

Written By:

Clémence Finaz, Research Associate with International Alert's Environment, Climate Change and Security Programme

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