BOLIVIA

Flooding and landslides in Beni, La Paz, and Pando departments

acaps
Briefing note
25 March 2024

CRISIS OVERVIEW

Since November 2023, Bolivia has been experiencing above-average rainfall, particularly in February 2024, resulting in floods and landslides. As at 18 March, floods and landslides had affected over 150,000 people and killed 52 (ECHO 20/02/2024; PL 18/03/2024; IFRC 15/03/2024). Cobija municipality (Pando department) has been particularly affected as, on 27 February, levels in the Acre River rose above the historical maximum, flooding 14 communes and leading to the declaration of a state of emergency (IFRC 15/03/2024; OCHA 01/03/2024).

As at 11 March, the National Meteorological and Hydrological Service had issued orange alerts for significant rainfall and thunderstorms (the intermediate level on a three-tier scale) in certain areas of central and western Chuquisaca, eastern Potosí, and northwestern Tarija departments. Red hydrological alerts warning of escalating river levels had been activated for portions of La Paz and Pando departments, with orange advisories extended to other rivers throughout the country (Crisis24 11/03/2024). As at 18 March, municipalities on orange alert included 10 municipalities in Beni, 29 in Chuquisaca, 47 in Cochabamba, 32 in La Paz, 31 in Oruro, 10 in Pando, 33 in Potosí, 12 in Santa Cruz, and 11 in Tarija departments (PL 18/03/2024). Overall, the floods had affected 133 municipalities, with 35 in emergency status and 17 in disaster status as at 18 March (PL 18/03/2024; Los Tiempos 18/03/2024).

As at 18 March, the floods had damaged over 1,300 homes and destroyed 900, with the affected population most in need of shelter and education (PL 18/03/2024; IFRC 15/03/2024). On the 2024 INFORM Risk Index, Bolivia scored high on river flooding frequency (5.5/10) and medium on lack of coping capacity (5.3/10), mainly as a result of limited institutional disaster risk reduction protocols and inadequate infrastructure to cope with flooding, hazard response, high socioeconomic vulnerability levels, and limited healthcare access (EC accessed 18/03/2024).

CRISIS IMPACTS

Shelter and NFIs

As at 18 March, the floods had damaged over 1,300 houses and destroyed 900, the majority in La Paz department (ECHO 06/03/2024; PAHO 04/03/2024; OCHA/UNCT Bolivia 06/03/2024). The national authorities have conducted evacuations in affected departments, including Pando, from where over 5,500 people have been evacuated (PAHO 04/03/2024; IFRC 15/03/2024). Initial assessments of the affected population in Cobija municipality (Pando department) indicate that a minimum of around 300 people have lost all or some of their belongings. As at 1 March, the Cobija municipal government had established 11 shelters, providing accommodation for a total of 1,022 individuals from 326 families. Among these shelters, four were accommodating the largest numbers: 158 individuals were being housed in the Ernesto Nishikawa Coliseum (representing 15.45% of the total), 156 individuals in the La Peta Coliseum (15.2%), 155 individuals in the La Amistad Coliseum (15.1%), and 141 individuals in the Vaca Diez Educational Unit Coliseum (13.8%) (IFRC 15/03/2024).

WASH and health

As at 18 March, the heavy rainfall and flooding had killed 52 people and affected over 150,000, many of whom are facing critical healthcare needs in shelters for displaced people (PL 18/03/2024; IFRC 15/03/2024).

The flooding has caused damage to water supplies and sanitation infrastructure, impinging access to safe water, as drinking water systems and their sources become contaminated (IFRC 15/03/2024; Wybe News 14/03/2024). There is also a need for hygiene items, particularly among households not living in shelters (IFRC 15/03/2024). The use of contaminated water poses significant health risks, particularly for children, exposing them to infections such as dengue fever, diarrhoeal diseases, and illnesses transmitted through contaminated water and food sources (IFRC 15/03/2024; STC 01/03/2024).

Since the beginning of 2024, over 11,000 dengue fever cases have been reported in Bolivia, with La Paz department reporting over 2,000 cases, Pando nearly 1,200, and Beni over 700 (PAHO accessed 16/03/2024). Flooding worsens the proliferation of the mosquitoes that cause

dengue fever, as stagnant water creates their ideal breeding ground. Flooding can also disrupt mosquito control measures and displace populations, forcing them into crowded living conditions with limited access to sanitation and mosquito nets (Siddiqi et al. 09/2023; The Rockefeller Foundation 10/11/2022).

In Cobija municipality (Pando department), the Mapajo healthcare facility suffered physical damage, resulting in the loss of all furniture, a portion of medicine and supplies, and some minor medical equipment. A fully equipped rehabilitation centre for people with disabilities was also destroyed in the same area (IFRC 15/03/2024). A September rapid survey conducted in Cobija city estimated that up to 14% of residents could be in need of mental health support (UNICEF 09/03/2024).

Food security and livelihoods

Between 1 November 2023 and 4 March 2024, heavy rainfall and flooding affected over 38,300 hectares of crops (1% of total arable land) and killed over 122,900 livestock as at 15 March (IFRC 15/03/2024; Macrotrends accessed 17/03/2024). As Bolivia faced reduced rainfall and drought conditions from 2018–2022, over half the population was already facing food insecurity, with 25% experiencing severe food insecurity (OCHA 23/10/2023; WFP 31/03/2023). Bolivia ranked 71st out of 125 countries on the 2023 Global Hunger Index with a score of 15.6, reflecting a moderate level of hunger (GHI accessed 19/03/2024). Among South American countries in November 2023, Bolivia had the highest prevalence of hunger (19.4%), followed by Venezuela (17.9%) and Ecuador (13.9%), equivalent to 2.3 million, 5.1 million, and 2.5 million people, respectively (FAO et al. 21/11/2023). In 2022, over 16% of children under five in Bolivia experienced linear growth failure as a result of malnutrition, with rates reaching 23% in rural areas. La Paz is one of the departments grappling with heightened food insecurity and malnutrition (WFP 12/11/2022).

As at 15 March 2024, local businesses in the affected departments had also been affected, as flooding had worsened the demand for consistent employment among the affected population, especially those dependent on daily earnings from informal cross-border trade with Brazil (IFRC 15/03/2024).

Protection

As at 15 March, over 1,000 individuals – including women, men, children, adolescents, individuals with chronic illnesses, people with disabilities, and older people – were being housed in temporary shelters in Cobija municipality and required protection. Such protection requirements include the provision of separate hygienic facilities for men and women, designated areas for children and the elderly, and the implementation of effective reporting and response mechanisms to address any potential safety and wellbeing threats. Many affected people's identification documents have also been damaged during the emergency, highlighting the urgent need for assistance to recover or obtain new identification to access both governmental and humanitarian support (IFRC 15/03/2024).

Education

According to the Ministry of Education, two educational facilities in Cobija municipality, Héroes de la Distancia and Sofía Cal Piñeiro, lost their computers and furniture, as well as saw damage to infrastructure, as a result of flooding as at 15 March. Additionally, it remains unclear whether these schools have resumed education provision. The loss of school supplies has also hindered the resumption of schooling for many children (IFRC 15/03/2024).

ANTICIPATED IMPACTS

In the midst of a hot, record-breaking winter in 2023, which saw temperatures reach as high as 40 degrees celcius. Bolivia has also been grappling with persistent flooding since November (Save the Children 28/09/2023). These inundations have devastated agricultural land, already affected by drought during the 2023 planting season that limited maize planting, leading to below-average crop levels in 2024 (FAO 08/03/2024). This is expected to aggravate food insecurity in the country, particularly for those with low purchasing power in rural areas (STC 01/03/2024).

The National Oceanic and Atmospheric Administration anticipates the effects of the current El Niño to persist until April 2024, potentially triggering more extreme weather events across Bolivia. Such events could aggravate existing vulnerabilities to food insecurity in areas already grappling with crop and livestock losses (WFP 05/03/2024). According to the National Meteorological and Hydrological Service, as at 18 March, an orange hydrological alert had been issued for 11 rivers in the tropical region of Cochabamba, as their levels had been steadily rising between 13–22 March, potentially resulting in increased flooding and landslides. These rivers include the Chapare, Chipiriri, Chimoré, Eterazama, Ichilo, Ichóa, Isiboro, Ivirgarzama, Magareño, Mamorecillo, and Veinticuatro Rivers (Los Tiempos 18/03/2024).

DRIVERS OF THE CRISIS

El Niño and climate hazards

In Bolivia, the climate crisis has increased the frequency and severity of extreme weather events (SIDA accessed 18/03/2024). Between 1 November 2023 and 4 March 2024, flooding destroyed over 38,300 hectares of crops and killed over 122,900 livestock across the country (PL 18/03/2024; IFRC 15/03/2024).

According to the Global Climate Risk Index 2021, Bolivia was the country most affected by extreme weather-related events in South America and ranked tenth worldwide for climatic risk (Germanwatch 25/01/2021). In 2023, the return of the El Niño phenomenon intensified weather extremes and raised temperatures, worsening the already escalating effects of the climate crisis (STC 01/03/2024; Los Tiempos 26/09/2023). The long periods of drought experienced in 2023 resulted significant changes in soil properties, and sunlight dries out topsoil, leading to compaction and reduced pore space. This impaired the soil's ability to absorb water. As a result, when rain returned, it run off leading to flooding (WHH 07/12/2023).

Bolivia's northern territories, specifically Beni, northern La Paz, and Pando, are particularly susceptible to recurrent and expansive floods during the rainy season (October–April). This vulnerability stems from a combination of factors, including the extensive presence of wetlands and the existence of major rivers, such as the Beni and Mamore Rivers (Euroclima 2010; FloodList 11/03/2021)

COMPOUNDING FACTORS

Socioeconomic vulnerability

As at February 2024, nearly 27% of Bolivia's workforce was employed in agriculture (Statista 28/02/2024). This heavy dependence on rain-fed agriculture makes the population particularly susceptible to drought, floods, and other climate disruptions that affect crop yields and livestock production. According to the 2023 Notre Dame Global Adaptation Initiative, Bolivia ranked 133rd among 185 countries on vulnerability to food insecurity (ND-GAIN accessed 19/03/2024). Around 60% of the population resides in regions susceptible to floods and drought. Given that livelihoods in these areas rely heavily on natural resources and agricultural production, which are vulnerable to climate variability, communities' food security and nutrition are precarious (WFP 12/11/2022).

The departments currently affected by floods and landslides host the largest population of indigenous groups in Bolivia (WFP accessed 17/03/2024). Despite continued economic growth, significant inequalities persist among Bolivia's urban, peri-urban, and rural areas, particularly affecting indigenous communities and women, both of whom have faced historical marginalisation. These demographics continue to reside in areas highly vulnerable to food insecurity, low incomes, reliance on subsistence agriculture, and limited access to markets essential to ensuring adequate nutrition and promoting economic progress (WFP 03/01/2024). Hindered by historical marginalisation, limited access to resources, and minimal representation in decision-making processes, these communities often face environmental challenges such as climate change and deforestation. Their dependence on traditional livelihoods linked closely to the land renders them particularly vulnerable to weather pattern shifts and natural hazards, heightening their susceptibility compared to other population groups in the region (Anti-Slavery International 09/08/2021).

HUMANITARIAN RESPONSE

Funding and response capacity

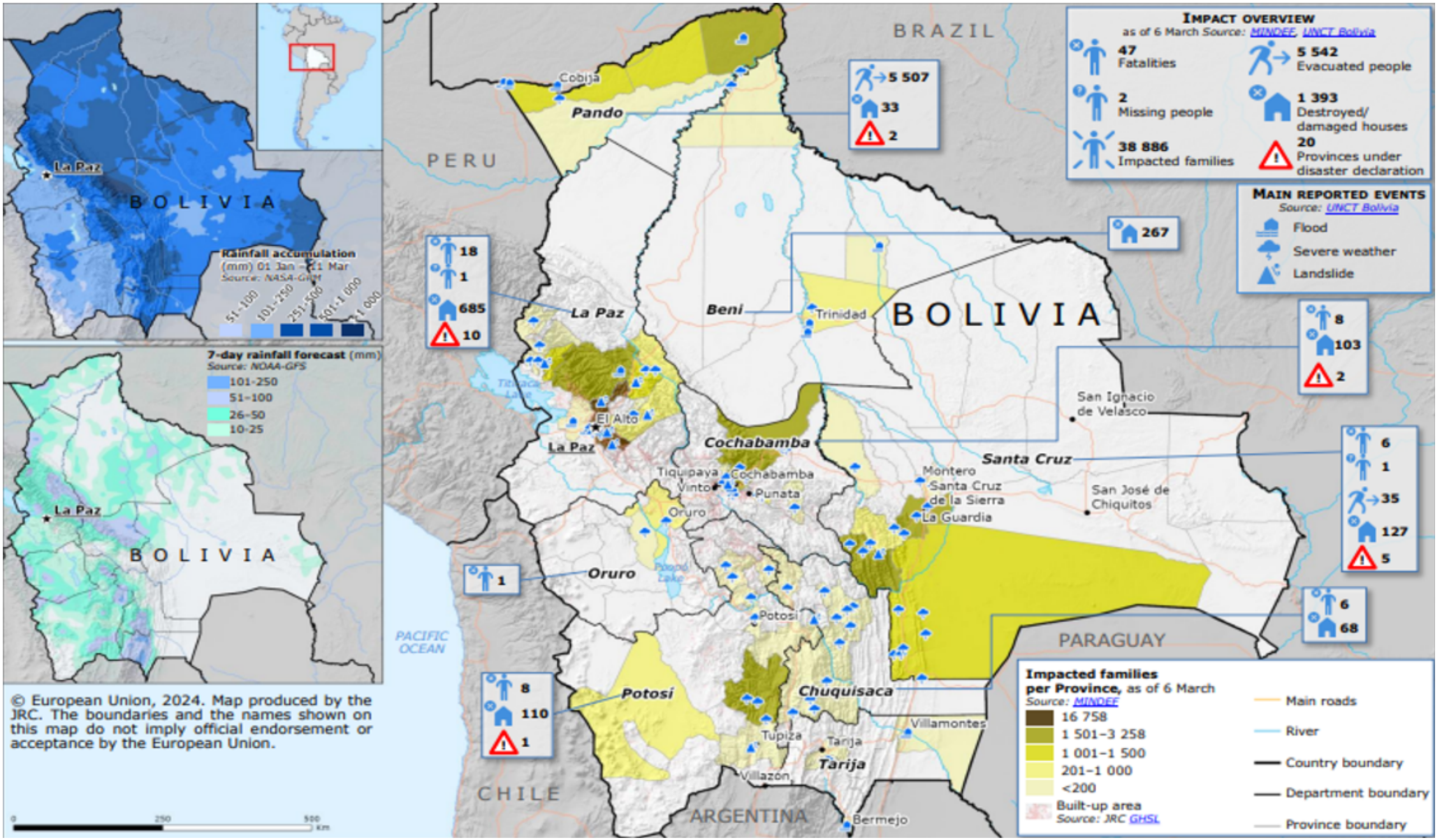
As at 18 March, the national authorities had allocated BOB 43 million (USD 7 million) to the response in La Paz department, where soldiers, equipment, and machinery were mobilised to channel rivers and assist families affected by heavy rains (PL 18/03/2024). 173MT of humanitarian aid was distributed, representing over BOB 1 million (USD 144,000), which amounts to over BOB 5 million (USD 721,000) in assistance when considering the delivery of materials such as cement (Los Tiempos 18/03/2024).

On 11 March, the Ministry of Defence initiated an emergency plan for La Paz municipality, intending to dispatch machinery and experts to assist affected communities for 60 days. According to the Ministry of Health, over 3,000 medical consultations had been conducted in communities affected by floods and landslides as at 11 March (PAHO 11/03/2024).

On 8 March, Sweden, in collaboration with UNICEF Bolivia, pledged USD 96,540 to aid the victims of flooding in Cobija, over 4,300 families in 16 neighbourhoods. This support will address WASH and protection needs (UNICEF 15/03/2024). Save the Children Bolivia, in collaboration with the Consortium of Humanitarian Agencies in Bolivia and regional authorities, is also aiding those affected by the floods across all the country's nine departments (STC 01/03/2024).

As at 15 March, the Government's Joint Command of Response to Adverse Events, in conjunction with the Amazon Strategic Operational Command and the Sixth Naval District Pando, had dispatched 279 military personnel to post-flood operations (IFRC 15/03/2024).

IMPACT OF THE FLOODING IN BOLIVIA AS AT 13 MARCH



Source: ECHO (13/03/2024)