

Floods in Argentina, Bolivia, Paraguay and Uruguay

Figure Analysis – Displacement Related to Disasters

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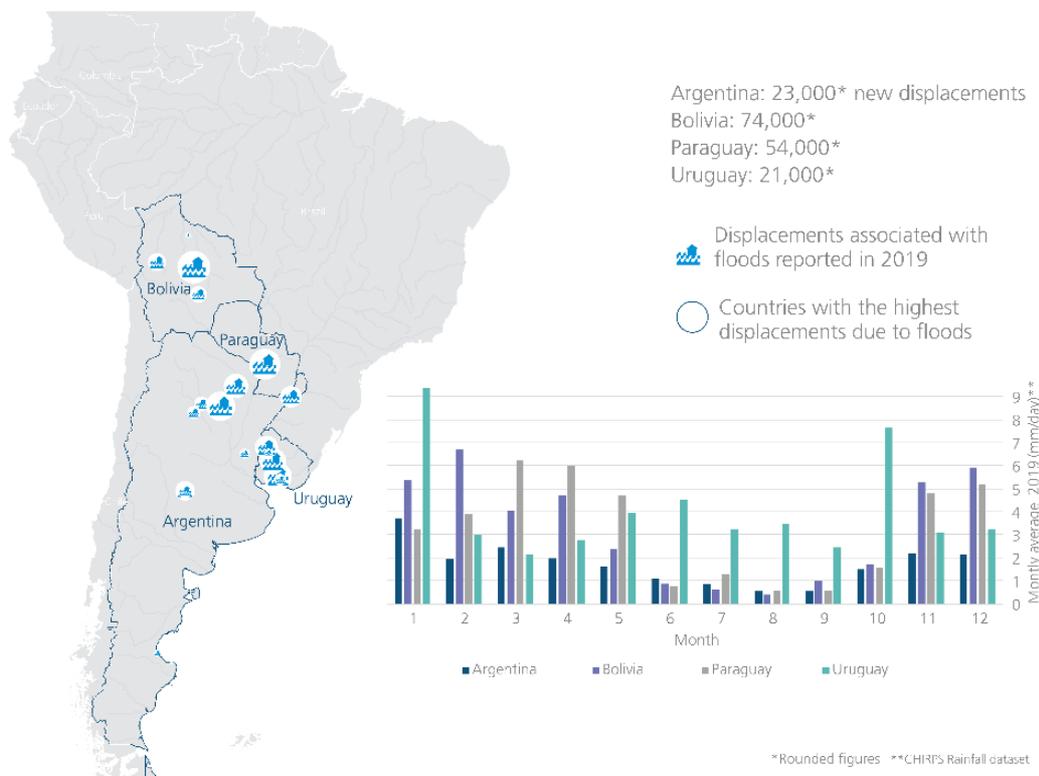
CONTEXTUAL INFORMATION

The disaster events

The 2019 rainy season generated extensive floods and record precipitations in some regions of [Argentina](#), [Bolivia](#), [Paraguay](#) and [Uruguay](#). The rainy season in these countries occurs during the Southern Hemisphere summer, with most of the precipitation reported between the months of October and April. [The season began with above average precipitation](#). Most of the displacements associated with floods were reported during this period. In 2019, IDMC reported the highest number of people displaced by floods over the past four years in Bolivia (75,000 new displacements) and in Paraguay (54,000 new displacements). About 11,000 new displacements were reported in Uruguay, and 23,000 new displacements were reported in Argentina.

Displacements linked to floods

Map 1: New displacements associated with floods in Argentina, Bolivia, Paraguay and Uruguay



North-east Argentina, and the adjacent areas of Uruguay and Brazil, were hit with extensive flooding between January and April, with rainfall well above the long-term, expected average. On 8 January, the Argentine city of Resistencia recorded 224 mm of rainfall. [That was a 24-hour record, the previous one](#)

[recorded in January 1994, being 206 mm, according to SMN Argentina, the national meteorological service.](#) Six provinces reported displacements in January as a result of floods: Chaco, Corrientes, Santiago del Estero, Tucumán, Santa Fe and Entre Ríos. [Floods have become more frequent in recent years as a result of the impact of climate change, urban growth, agricultural production and deforestation.](#) Floods in November affected some areas around the capital Buenos Aires, [generating water levels as high as one metre in some residential areas and resulting in new displacements.](#)

In Bolivia, severe weather, including lightning strikes, heavy rain and hail storms, struck between January and April. [Floods affected about 123 municipalities in all nine departments, compromising water systems, roads and agricultural production.](#) Thousands of homes constructed with local materials as well as some dwellings made from wood and lighter materials, were highly affected. About 73,417 people from 23,683 households were evacuated to local shelters and other safe areas between January and April. The International Federation of Red Cross and Red Crescent Societies (IFRC) noted that by the end of 2019 the shelters were closed and families had returned to their repaired homes. Local environmental organizations say the 2019 floods in Bolivia could be associated with the El Niño phenomenon, which, in turn, is exacerbated by the effects of climate change and deforestation. The government in recent years has promoted deforestation in favor of the expansion of agricultural areas for the production of soy, cotton and corn. [It has done so without considering that forests, which play a role as climate regulators, are generators of environmental services, according to the director of the local NGO Probona.](#)

[Floods struck throughout Paraguay, affecting thousands of families, agricultural activities and infrastructure.](#) Some parts of the Paraguay river [reached more than 6 metres in height, 1.48 metres higher than the critical level. These were the highest levels registered in the past 48 years.](#) The increase in the severity of floods in Asunción may [have been caused by decades of deforestation and changing riverbeds.](#)

The lack of access to stricken areas was the main challenge in assisting the affected population. Some communities were practically cut off, [including several areas in the Chaco region which were unreachable by land.](#) More than 60 per cent of people living in shelters were under 30 years old, and about 35 per cent were adults or older adults. [All of them were people living in poverty or extreme poverty.](#) Numerous homes were reported as damaged, and thousands of people were sheltered in evacuation areas. Some displaced families lost almost all their belongings during the floods and lived in [improvised shelters in public spaces, like parks and squares. Emergency shelters providing for displaced people had limited access to sanitation infrastructure.](#)

[The rainy season in Uruguay, from November to February, coincides with summer. During 2019 the values of accumulated precipitation were above normal and generated extended floods.](#) Some areas suffered the worst floods in 30 years, with water levels reaching between [0.5 metres and 0.7 metres in height.](#) Four departments remained [flooded for 10 to 20 days hampering access to affected areas by disaster management agencies.](#) Overall, 18 out of 19 departments were affected, with the departments of Canelones and Florida, the most frequently affected, [and the department of Paysandú recording the highest number of people displaced, followed by Salto and Durazno.](#) The cumulative number of displaced people across the country between January and February was about 7,500. A second wave of displacements resulting from floods was reported 3 June when 2,700 people were displaced in Salto, Paysandú and Bella Union departments. Between 11 June and 15 June about 10,200 people were displaced in the departments of Canelones, Durazno, Flores, Florida, Maldonado, Montevideo, Rio Negro, San Jose, Soriano and Treinta y Tres. Floods affected five departments and displaced about 270 people in October.

Table 1: Summary of the impact of floods

Floods in Latin America 2019	Argentina	Bolivia	Paraguay	Uruguay	TOTAL
New displacements ¹	23,000	74,000	54,000	21,000	163,000
Estimated IDPs as of 31 December 2019 ²	N/A	0	N/A	N/A	N/A
Houses destroyed ³	N/A	24,000	N/A	N/A	24,000
Displacements relative to population [%] ⁴	0.1	0.7	0.8	0.3	
People pre-emptively evacuated before the event ⁵	N/A	N/A	N/A	N/A	N/A
People officially sheltered after the event ⁶	5,300	XXX	54,000	N/A	59,300
Notes					
¹ This corresponds to new instances of internal displacement related to the disaster event					
² This corresponds to the total number of individuals living in a situation of internal displacement as of 31 December 2019 as a result of the disaster event					
³ This corresponds to the number of houses destroyed by the disaster event					
⁴ This corresponds to new instances of internal displacement related to the disaster event relative to total population using UN population data					
⁵ This corresponds to the number of people that have been detected as pre-emptively evacuated before the disaster event					
⁶ This corresponds to the total number of people that have been sheltered following the event					

DATA SOURCES AND METHODOLOGY

In Argentina, IDMC used multiple sources that were aggregated to calculate the number of new displacements associated with floods during 2019. The total figure is based on nine different caseloads. About 50% of the figure was published by IFRC, quoting a report from the [National System for Integrated Risk Management \(SINAGIR\)](#). Information about the methodology used to collect the data was not specified in the report. The second half of the figure was extracted from media monitoring, which, in almost all cases, relied on information from local authorities and SINAGIR.

Three main caseloads were aggregated to estimate the number of new displacements in Bolivia. The first caseload, representing more than 90% of the total figure, was published by IFRC, using as its source the Ministry of Defence. The rest of the estimate comes from local media, which reported small caseloads of people evacuated as a result of the floods.

IDMC used [data from the Directorate of Health Surveillance \(DGVS\) in Paraguay](#) to calculate the number of new displacements there. A report by the DGVS contains an analysis of the daily monitoring of people sheltered in areas affected by the floods. Seven departments plus the capital were assessed for three months. The document contains information about the number of people displaced, the number of shelters and assistance provided.

The new displacements estimate for Uruguay was calculated from reports by the [National Emergency System \(SINAE\)](#) complemented by information gathered by IDMC's media monitoring. Data on displaced people is collected in Uruguay using [the Risk Monitoring System \(MIRA\)](#). [MIRA records the statistics and indicators to support the assessment of the impact of hazards and the number of people displaced](#) as a result of government-assisted evacuations or self-evacuations. IDMC figures are thus composed by the

aggregation of the total number of people sheltered or evacuated and the total number of people self-evacuated.

Main caveats and monitoring challenges

Country	New displacements	Estimation of the Total number of IDPs	Number of houses destroyed
Argentina	23,000	N/A	N/A

It was difficult to disaggregate displacements as a result of the rainy season in Argentina because of the yearlong reporting of floods. The figure presented in this report is thus an aggregation of all displacements resulting from floods and reported in the country in 2019. Information about the methodology used in the different reports was not clearly specified. To avoid double counting, we based our analysis on the reports' dates and geographical coverage. Additional information on the time of displacement, humanitarian conditions or the demographics of affected people was not found. Information about housing damaged as a result of the floods was not available either.

Country	New displacements	Estimation of the Total number of IDPs	Number of houses destroyed
Bolivia	74,000	N/A	24,000

Bolivia's defence ministry reports that fewer than 24,000 households were left homeless as a result of the floods in the country's nine departments. We used an average household size of 3.1 members to estimate the total number of people displaced. By the end of 2019, the shelters had closed and the families had returned to their repaired homes, according to IFRC. Additional information about the methodology used to assess the number of homeless households was not found.

Country	New displacements	Estimation of the Total number of IDPs	Number of houses destroyed
Paraguay	54,000	N/A	N/A

The report by the Directorate of Health Surveillance in Paraguay indicated that its figures were preliminary. The figure reported by IDMC may thus be an underestimate. The figure represents the total number of people displaced that were sheltered in areas monitored by the regional epidemiological units from the National Centre for Health. Information about housing destruction, the demographics of the affected population and the total number of people sheltered with host families was not found. After the last update of the figures in June 2019, IDMC has not found additional information about the total number of people displaced as of December 2019. IDMC's reported figure could thus be an underestimate.

Country	New displacements	Estimation of the Total number of IDPs	Number of houses destroyed
Uruguay	21,000	N/A	24,000

In **Uruguay**, SINAE does systematic monitoring of the total number of people displaced. This includes those in official shelters or evacuation centres as well as those staying with host families. The reports used by IDMC for the calculation of the final figures, however, had information on the maximum number of people displaced (accumulated figures) by department. Information about housing destruction, the demographics of the affected population and the total number of people sheltered with host families was not found.