

# BOLIVIA

## Drought



Need for international assistance	Not required	Low X	Moderate	Significant	Major
Expected impact	Very low	Low	Moderate X	Significant	Major

### Crisis overview

On 16 July the Bolivian Service of Improvement to the Amazon Navigation (SEMENA) declared a red alert for the Ibare, Mamoré, Grande, and Ichilo rivers in the Amazonian department of Beni, due to an alarming decline in flow. The navigation of large vessels was restricted, affecting the economy and public transportation.

Drought has been ongoing since October 2015, but has recently deteriorated dramatically. The drought has now impacted seven departments and 106 municipalities. Over 160,000 people as well as 90,000 hectares of agriculture and over 121,000 cattle have been affected. 104 municipalities have declared a state of emergency, with losses in agricultural production reported at USD 35 million among small farmers of the Pailon municipality alone.

Affected areas	Total No. of families (est.)	No. families affected (as of 31/07/2016)
La Paz	676,587	17,103
Chochabamba	439,535	34,514
Oruro	123,633	21,817
Potosi	205,879	8,639
Santa Cruz	663,771	12,405
Chuquisaca	144,038	4,724
Tarija	120,549	613
<b>Total</b>	<b>2,373,992</b>	<b>99,815</b>

Source: OCHA 31/07/2016; National Institute for Statistics (INE) 2012

### Key findings

#### Anticipated scope and scale

Dryness has been experienced in the country since October 2015. Drought and drought-related fires also raise concerns of incidence of air-borne and skin diseases.

The prolonged drought is expected to continue and will further affect pastures and agricultural production, impacting food availability, livelihood and water sources, especially for poorer households. Water shortages will cause concern regarding the risk of water-borne diseases. Economic impacts may cause further political instability.

#### Priorities for humanitarian intervention

- Food and livelihood assistance
- Safe drinking water provision
- Vulnerable poor households in rural areas

#### Humanitarian constraints

Indigenous peoples in hard-to-reach areas may mean, making needs assessment as well as aid delivery more difficult.

#### Limitations

The precise number of individuals affected is uncertain as the number of affected families reported multiplied by average household size results in a much larger number than the 160,000 reported affected so far. Sectoral data is lacking.

## Crisis impact

The Bolivian Service of Improvement to the Amazon Navigation (SEMENA) declared a red alert for the Ibare, Mamoré, Grande, and Ichilo rivers in the Amazonian department of Beni on 16 July, due to an alarming decline in flow. The navigation of large vessels was restricted, affecting the economy and public transportation (PAHO 18/07/2016).

El Niño-induced drought was first reported in October 2015 but impact has increased in recent months. As of 7 August, 104 municipalities have declared a state of emergency and reports have begun to emerge of 141 municipalities affected in nine departments. In addition, over 90,000 hectares of agriculture and over 121,000 cattle have been affected. (PAHO 04/08/2016; La Razon 07/08/2016).

Cochabamba and La Paz are among the departments that have reported the highest numbers of affected municipalities and families. These departments are also the two of the most populated in the country, suggesting that a large proportion of Bolivians are at risk of being affected by the drought (OCHA 31/07/2016; National Institute for Statistics (INE) 2012).

On 5 August, the country recorded 20,831 outbreaks of fire, that were all controlled (PAHO 08/08/2016).

The Ministry of Agricultural Development has declared this drought to be the worst in the last 25 years, affecting 160,000 people and causing a sharp decrease in food production for human and animal intake (Redhum 04/08/2016). According to official contingency planning reports of the Bolivian Civil Defense regarding El Niño effects between 2015 and 2016, 500,000 people may have been affected by excess rainfall or drought in 109 municipalities of the country. Bolivian authorities declared a state of emergency in the municipality of Omereque in Cochabamba in 2015, due to effects of drought on agricultural production. Approximately 2,000 people were affected and alarmingly low levels of water were recorded in the Mizque River. By 21 December 2015, a state of emergency had been declared in 27 municipalities of Oruro, Cochabamba and Chuquisaca due to drought (Reliefweb South America Drought. Access on 10/08/2016).

**Food** is a primary concern, for both humans and livestock. A 17% reduction in cereal output for 2016 is forecast. The fall in maize production has put poultry farmers on high alert. Pasture is affected, and cattle (Redhum 30/07/2016; Fewsnets 20/07/2016). Rainfall is forecast to remain below average (SEHAMI Access on 10/08/2016). Prolonged drought for the next three months will make pasture unfit for sowing and urgent assistance will be needed, as potato and maize sowing normally takes place in September and October, and barley, rice, wheat, soybean and sweet potato, in November (WFP 19/01/2011).

## Vulnerable groups

**Indigenous peoples:** Much of the poverty in Bolivia is concentrated among indigenous people, making this group particular vulnerable to the effects of geohazards, including drought. 28% of indigenous children face chronic malnutrition compared to 16% among the rest of the population, suggesting that damaged agricultural production due to drought will have a heightened impact on these populations (Oxfam 2009). A large share of Bolivia's indigenous people are located in Santa Cruz, where over 12,000 families and 30,000 hectares of pasture have already been affected by the current drought (OCHA 31/07/2016; National Institute for Statistics (INE) 2012).

**Poor households among farmers:** Farmers are among the most vulnerable: at the beginning of the 2000s, least 80% of poor households in Bolivia, Honduras and Nicaragua are small agricultural producers, and farmers are particularly vulnerable to the impact of drought (FAO 03/08/016; PAHO 04/08/2016).

## Aggravating factors

### Previous climate-related phenomena

All departments affected by the current drought have been previously impacted by climate-related hazards, suggesting a higher level of vulnerability among the population. In 2013, 52,142 families and 174,048 hectares of pasture in Chuquisaca, Santa Cruz, Cochabamba, La Paz and Tarija were affected by drought, while 11,459 families and 1,273 hectares of pasture in Cochabamba, Potosi, La Paz, Oruro, Chuquisaca and Santa Cruz were affected by frost or snow, and 733 families and 71,622 were affected by wild fires in five departments, including Cochabamba, Santa Cruz and Tarija (La Razon 09/09/2013).

### Political instability and economic crisis

In January 2015, Evo Morales was sworn in for a third mandate as President. Despite enjoying considerable popular support, Morales' popularity has decreased and he faces growing criticism (Correio Braziliense 22/01/2015, El Pais 06/03/2016). In February 2016, Morales called for a referendum to change the Bolivian constitution and allow him to run for a fourth term, but this was rejected (El Pais 24/02/2016). Though Morales has presided over a period of significant growth and development, he has been criticised for the emergence of corruption cases and recent economic retraction, heavily associated with a sharp decrease in oil and natural gas prices as well as the ongoing drought (El Pais 29/02/2016). An estimated USD 90 million in losses in agricultural production and pasture have been reported due to drought (La Razon 07/08/2016).

## Response capacity

### International response capacity

International institutions are present in the country and monitoring the situation, but none has been activated.

### Local response capacity

President Morales has confirmed 12 supreme decrees have been approved, aimed at improving agricultural production and mitigating the effects of the drought. The decrees include measures to guarantee water provision, credit for affected agricultural sectors, maize purchases and regulation of imports and exports (Pagina Siete 02/08/2016). Farmers have warned that these measures will not be sufficient and prices of both produce and seeds will rise. The lack of policies to address the impacts of the drought questions the efficacy of the local response (Redhum 02/08/2016). No request for international support has been made.

Cochabamba authorities have made 10 million Bolivianos (USD 1.4 million) available to mitigate the effects of the current drought (El Diario Noticias 02/08/2016).

## Information gaps and needs

- Detailed information on food availability, especially in rural areas is lacking
- Specific information regarding the needs of vulnerable groups such as poor households and indigenous people are lacking
- Sectoral data is lacking

## Lessons learned

- Livelihood damage can have serious impacts on mental health (Hindustan Times 16/04/2016).
- Drought and the consequent loss of livelihoods is often a trigger for population movement, particularly rural–urban migration. Population movement can lead to increases in communicable diseases and poor nutritional status resulting from overcrowding, and a lack of safe water, food and shelter (IPCC 2007).

- Insuring access to safe drinking water is a priority in order to avoid increasing the risk of waterborne diseases (Stanke, Kerac, Prudhomme, Medlock and Murray, 2013).
- With scarce rainfall, airborne dust and contaminants may exacerbate allergies and respiratory illnesses. Smoke from drought-induced wildfires may result in bronchitis and pneumonia. Drought conditions increase the amount of airborne fungus and associated diseases, such as Valley Fever, a potentially fatal respiratory infection (Everyday Health 14/08/2014; Stanke, Kerac, Prudhomme, Medlock and Murray, 2013)
- Associated with food insecurity, droughts may also exacerbate chronic malnutrition (Everyday Health 14/08/2014; Stanke, Kerac, Prudhomme, Medlock and Murray, 2013)

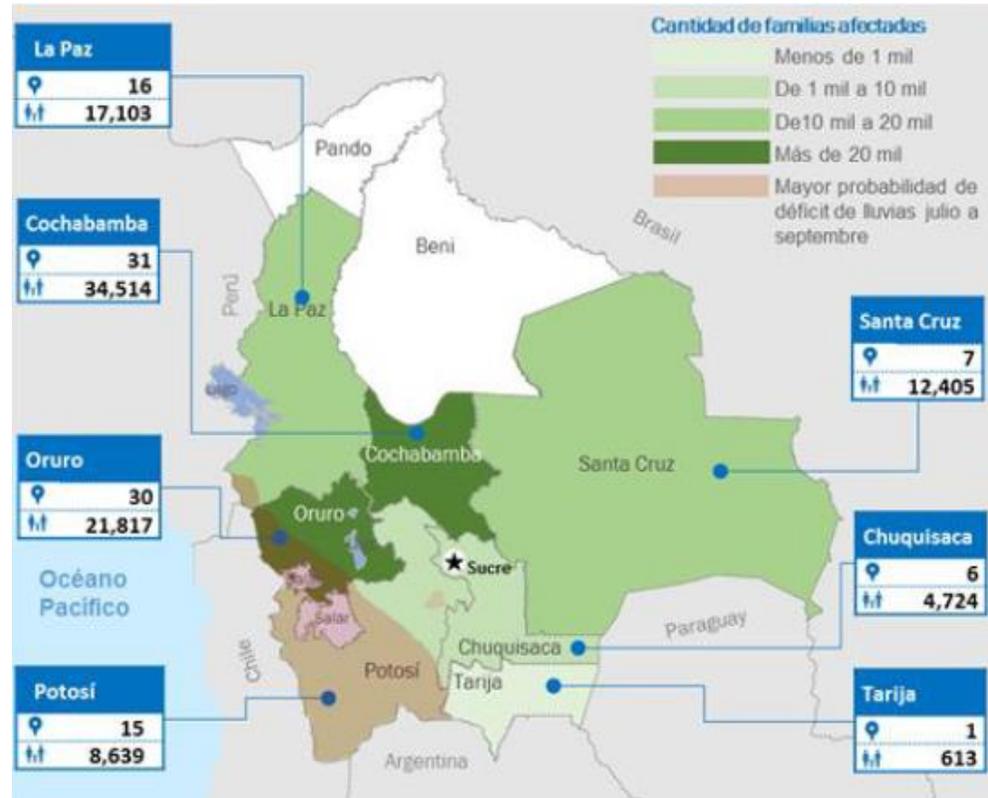
## Key characteristics

Key indicators	Bolivia
<b>Total population</b>	10,800,882
	0–24 years: 52.5%
	25–64 years: 42.44%
	65+ years: 5.06%
<b>Average household size</b>	4
<b>Gender distribution</b>	<b>50.5% female</b> <b>49.5% male</b>
<b>WASH</b>	
<b>Access to improved drinking water</b>	90% of population
<b>Access to improved sanitation facilities</b>	50.3% of population
<b>Health</b>	
<b>Maternal mortality ratio:</b>	206 deaths/100,000 live births
<b>Infant mortality rate:</b>	37.49 deaths/1,000 live births
<b>Life expectancy at birth:</b>	68.86 years.
<b>Food security</b>	Global Hunger Index: 16.9 – moderate incidence
<b>Nutrition levels</b>	
<b>Chronic malnutrition, moderate and severe:</b>	27.1%
<b>Global acute malnutrition:</b>	1.4%
<b>Literacy</b>	95.7%
<b>Cooking sources</b>	LPG (Liquefied petroleum gas)

Sources: UNICEF. Access on 10/08/2016; CIA World Factbook. Access on 10/08/2016; Clean Cookstoves. Access on 10/08/2016; Global Hunger Index 2015. Access on 10/08/2016

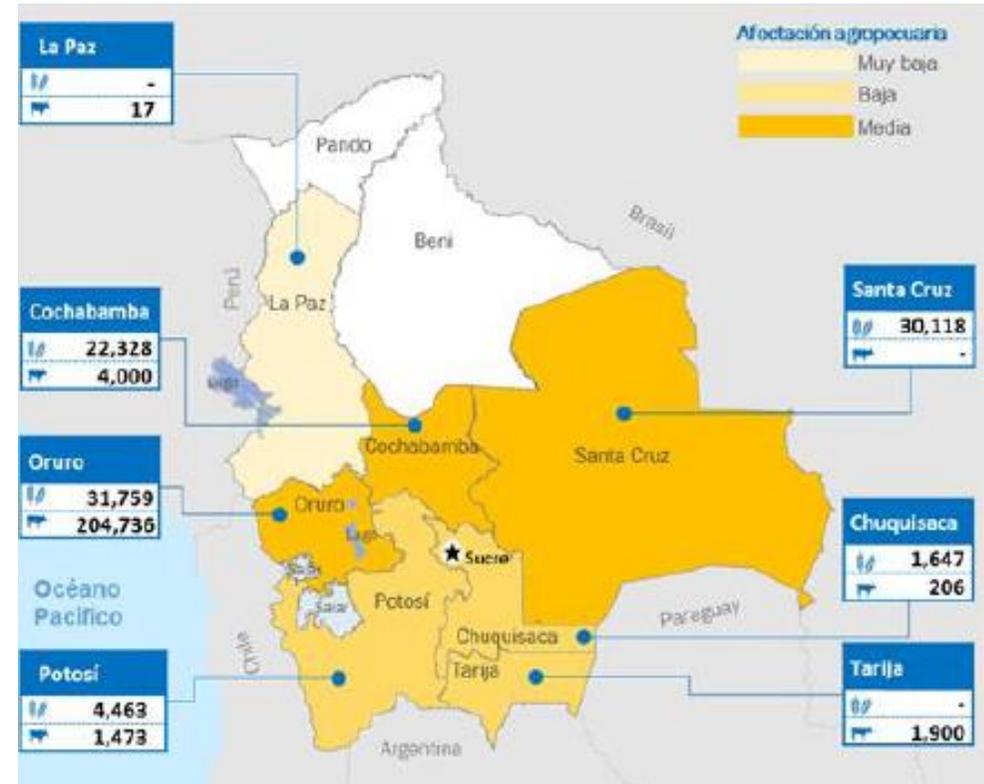
Map

Figure 1: Population affected by drought per department



Source: OCHA 31/07/2016  
 Number of municipalities and number of families affected by drought.  
 Legend: number of families affected in drought (in thousands)

Figure 2: Agricultural production and cattle affected per department



Source: OCHA 31/07/2016  
 Hectares of cropland and head of cattle affected by drought  
 Legend: very low, low, and medium impact on agriculture and livestock