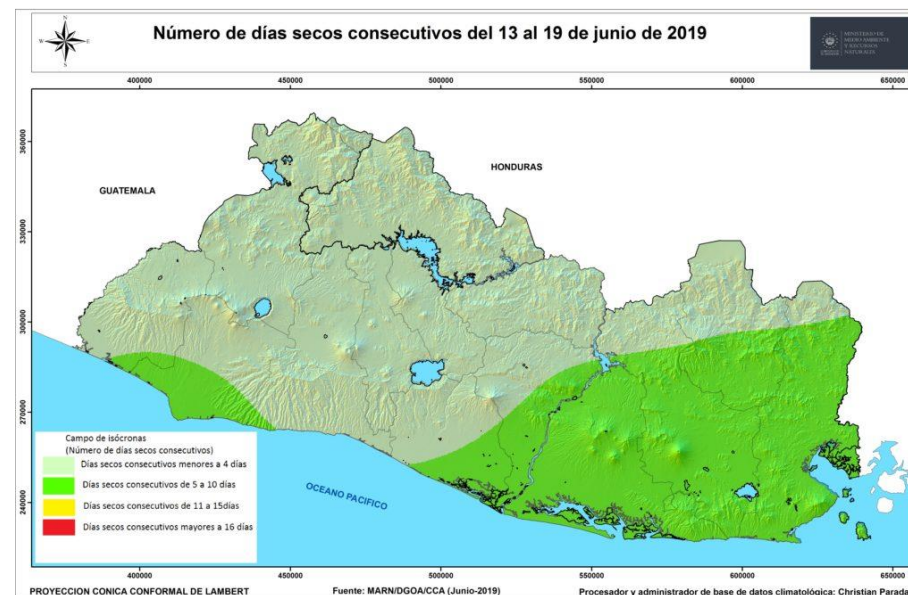


# EL SALVADOR

## Drought

A weak El Niño phenomenon has developed since February affecting Central America, in particular what is known as the Dry Corridor. Eastern regions of El Salvador are now undergoing at least 7 days without rains since 13 June, which was the fourth driest months since 1971. The drought conditions are impacting agriculture and water sources, leading to higher levels of food insecurity and more pressing WASH needs. Erratic and below average rainfall will likely result in a poor Primera harvest in August, pushing more vulnerable households to continue adopting negative coping strategies, prolonging the period of food expenditure and further depletion of assets. Some 300,000 people are already expected to be food insecure in July, with Usulután and Morazán being most affected, followed by La Union and San Miguel. Climatic projections estimate that the dry period will continue until the end of July and beginning of August.



### PROBABILITY



### NEED FOR INTERNATIONAL ASSISTANCE



### IMPACT



## Key priorities



**+300'000**

People in IPC phase 3 and 4 between April-July



**Safe drinking-water** limited and with high levels of contamination



**Displacement** due to effects of drought on food security and livelihoods

## Humanitarian constraints



The main access constraints in El Salvador are related to violence and the presence of armed groups controlling passage of people and goods in certain areas, which could potentially affect needs assessments exercises and distribution of food aid.

### Limitations

Information regarding response and preparedness, as well as lessons learned from previous emergencies, is limited. There is no breakdown available of people affected by locality and their immediate needs.

## Drivers of the crisis

The El Niño phenomenon which developed during February 2019 and continued into the month of May, June and currently July, is affecting more than half of El Salvador's municipalities (CRRH-SICA 24-25/04/2019). On 18 June, the Ministry of Environment and Natural Resources of El Salvador published a bulletin indicating a weak meteorological drought between 5 and 10 consecutive days without rains in the eastern regions of the country since the 13 of June (FEWSNET 30/06/2019).

In the eastern departments of La Unión, Morazán, San Miguel and Usulután more than 300,000 people are estimated to be food insecure in IPC phase 3 and 4 (Crisis and Emergency) between April-July, an increase on the 214,000 people estimated food insecure between December (2018) and March (IPC 27/11/2018). Last year's IPC analysis for the period of December (2017)-February (2018) and March-May (2018) did not report any people in IPC phases 3 and above (IPC 27/11/2017).

A poor Primera harvest in October 2018 impacted the Postrera sowing taking place in November, with families adopting emergency coping strategies such as consumption of seeds meant for the Postrera, sale of breeding animals and land, and higher food expenditure therefore unable to store enough food for the following months (IPC 27/11/2018; WFP-FAO 23/08/2018). The presence of a weak El Niño is already impacting sowing for the Primera season of 2019, meant to happen between May and July, due to irregular and below average rainfall which will likely increase people vulnerabilities in terms of food security and livelihoods (FEWSNET 30/06/2019).

Climatic projections estimate that the dry period will continue until the end of July and beginning of August, leading crop pests and a shortage of animal feed (MARN 26/04/2019; El Mundo 27/04/2019; Central America Data 07/05/2019)

## Anticipated crisis impact

El Salvador's rainy season normally runs between May and October, while the dry season goes from November to April. The late onset of the rains due to El Niño will likely have an impact in the long term, as the people affected will likely turn to negative coping strategies and will be unable to recover before the start of the regular dry season.

In the Dry Corridor areas of El Salvador, an estimated 2.2 million people live in poverty and are highly impacted by climate vulnerability, with more than half of the population depending on the production of basic grains as their main livelihood (FAO 19/10/2018).

Continuous droughts and other adverse climatic events, in combination with little economic growth and wide inequality have increased the population vulnerability and worsen their coping mechanisms. Yet more dryness in the eastern regions of El Salvador

will very likely push people into higher levels of food insecurity, eventually leading to health issues, worsening access to WASH facilities, and increasing displacement from affected areas.

**Food and livelihoods:** IPC analysis for April-July estimates 775,000 people affected by food insecurity in the eastern departments of La Unión, Morazán, San Miguel and Usulután including 473,000 in Stressed phase, 239,000 facing Crisis levels and 63,000 in Emergency (IPC 27/11/2018). Households were already using crisis and emergency coping strategies at the beginning of 2019 during the main dry season, with half of the households spending more than 50% of their expenditure on food purchases due to a poor Primera harvest in 2018 (IPC 27/11/2018). The price of basic grains has been increasing since June due to high scarcity, whereas the price of red beans will be stable, below average, and that of corn above the average of last five years (FEWSNET 30/06/2019). While the sowing for the Primera season of 2019 seems to have been carried out without major delays, prolonged period of dryness could affect the harvest in August (FEWSNET 30/06/2019). Due to the lack of rain an increased presence of pests in crops such as corn, beans and sorghum is predicted. Livestock health is also likely going to be compromised due to food shortages and multiplication of vectors like flies, fleas and ticks (Central America Data 07/05/2019). The fishing sector has been less impacted, although in some specific areas fishers might have been affected by operational constraints also to be attributed to the El Niño like extra-regional storms producing high waves and strong currents (ClimaPesca 01/07/2019).

**WASH:** Prolonged dry spells in El Salvador have led to scarcity of water, with the population in rural villages lacking complete access to safe drinking water and hundreds of thousands more with limited or intermittent access (National Geographic 02/11/2018). During the rainy season, water is collected in communal tanks and then sold during the dry season; however, due to below average rainfall during past months the people affected will likely be unable to use this strategy now and later in the year. In addition, 90% of the water resources are contaminated and conventional methods of filtration and chlorination cannot be used to purify river waters due to wastewater from the sewage system and runoff from industry and agriculture (National Geographic 02/11/2018; MARN 12/2017). The persistence of El Niño effects in the Dry Corridor is expected to exacerbate the already strained water resources.

**Health:** Health related issues are very likely, particularly waterborne diseases, because of high levels of contamination in the rivers' waters. Drought can also have secondary effects on public health in relation to displacement of those affected to small unsanitary spaces (ECLAC 08/2018). Despite a lack of health information pertaining to the current drought in El Salvador, a series of health related issues have been highlighted in connection to climate change in Central America, such as: increase in mortality and

morbidity indices; increase in infectious and non-infectious, vector-borne and non-vector-borne diseases (malaria, dengue, etc.); increase in malnutrition and dehydration indices due to difficulties accessing water and food; damages to public health infrastructure; psychosomatic effects such as post-traumatic disorders and depression, caused by the climatological phenomenon (ECLAC 08/2018). Currently, there are 4,100 cases of dengue reported up to the beginning of June with possible outbreaks in 236 out of 262 municipalities in the country (OCHA 01/07/2019). During the 2015 drought, reports indicate that surgeries in hospitals had to be delayed due to lack of water, which could be the case for the current drought should it continue. (TruthOut 05/08/2018).

**Protection:** Due to lack of water sources, people are obliged to look for resources further from their houses. The presence of armed groups controlling many areas in El Salvador exposes women, in particular, to higher risks of being assaulted when walking alone to look for water. Climatic shocks such as droughts and floods are also one of the main causes (in combination with violence and economic difficulties) for internal and international displacement particularly from the rural areas of El Salvador (FAO 19/10/2018). In October 2018, between 7,000 and 10,000 migrants left Honduras, El Salvador, and Guatemala to form two large caravans and multiple smaller groups travelling by foot towards the United States border. Another smaller caravan headed north between 14 and 30 January 2019. Migrants are on the move to escape violence and persecution, improve their economic situation, or reunite with their families. Around 12,600 migrants have crossed borders or are now residing irregularly in Guatemala or Mexico (UNCHR 01/2019).

**Education:** As a result of water scarcity during the 2015 drought, the education sector was also impacted, resulting in 300 schools having to suspend (TruthOut 05/08/2018). A similar impact is somewhat likely to be expected should the dryness extend and intensify.

## Impact on critical infrastructure

Damages to pipelines due to mismanagement of resources and infrastructure led to more than one million people lacking access to water services in July 2018 (TruthOut 05/08/2018). It is not clear whether these issues have been fully addressed by the Government, since reports indicate people, particularly in rural areas, lacking proper access to water resources.

Power generation through the hydroelectric system has also been declining since 2010 as a consequence of the drought, leading to an increase use of fossil fuels and imported electricity in order to compensate (National Geographic 02/11/2018).

## Vulnerable groups affected

Women and children are particularly affected by the impact of the drought, especially regarding water shortages as they carry the burden of fetching water for domestic use,

thus being exposed to higher risk of robbery, rape and other assaults. The poor population ends up being more affected by the effects of the drought on water availability, ending up drinking contaminated water due to lack of resources. Overuse of water from large-scale industry also leaves communities living in the surrounding areas without adequate water resources (National Geographic 02/11/2018). It is likely that people with disabilities face a higher impact due to challenges in collecting water. In the context of a drought and an increased scarcity of water, it must be considered that elderly people are also more vulnerable, as they can be impacted more quickly by lack of hydration.

## Humanitarian constraints

Access to affected people in El Salvador is likely to be hampered by the presence of armed groups controlling different areas of the country and even a more fragmented presence at the local level. De facto authorities in their respective areas, armed groups can prevent the passage of goods and people, divert aid, and pose protection threats to humanitarian actors operating in the country. Invisible barriers create so-called red zones, each controlled by a different gang. If one's local health centre is in an area controlled by a rival gang, reaching its services can be almost impossible due to threats and fear of violence (MSF 11/02/2019; CrisisGroup 26/11/2018).

## Potential aggravating factors

### Water scarcity, contamination and mismanagement

Despite Central America being rich in water resources, El Salvador is the most water-stressed country in the region, mainly due to the proportion between its small land size and population, as well as the effects of climate change, pollution and mismanagement of resources (National Geographic 02/11/2018).

Aquifers in the coastal and central part of the country have receded by 4 metres in recent years. Decision-makers have proved to prioritise industrial plantations, mining corporations, luxury housing developments and bottling companies for economic interest, leaving communities without enough resources and with the little water available being contaminated by industrial activities (National Geographic 02/11/2018). Inadequate regulations put in place by the government, including the constant threat of privatization, are unable to ensure control on overexploitation of resources which have a more severe impact on the most vulnerable parts of the population (CABEI 2016).

### Climate change

El Salvador is one of the most vulnerable countries to climate change (El Salvador 16/08/2018). The effects of climate change have manifested through substantial variation in rainfall distribution patterns along with increase in more recurrent adverse climatic events in recent decades (CABEI 2016). El Salvador was affected by 14 events of El Niño

between 1971 and 2019 (El Mundo 27/04/2019). El Niño is the warm phase of the El Niño Southern Oscillation (ENSO) and occurs when sea surface temperatures in the tropical Pacific Ocean rises to above-normal levels for an extended period of time, which as a result can lead to intense storms in some places and droughts in others (NIWA 27/02/2007). In addition to soil degradation and deforestation by extensive industrial agriculture activities, which have made the soil impenetrable to rain, climate change in El Salvador is also bringing more sudden and intense rainfalls: a combination for severe floods that lead to livelihoods destruction, food insecurity and displacement (National Geographic 02/11/2018).

Due to El Niño, the tropical cyclones season the Oriental Pacific will likely be more active than normal between June and November 2019 (CRRH-SICA 24-25/04/2019).

## Other factors of vulnerability

### Violence

El Salvador has one of the highest rates of homicides in the world, despite some improvements in recent years. Between 2014 and 2017, nearly 20,000 Salvadorans have been killed, a murder rate of 103 homicides per 100,000 inhabitants in 2015, declining to 60 homicides per 100,000 people in 2017 and 50,3 in 2018, mostly by hands of local criminal gangs known as *maras*. Levels of gender-based violence are also really high (CrisisGroup 26/11/2018; CICR Informe Annual 2019). The gangs extort residents in the areas they control collecting a kind of rent from businesses in exchange of 'protection', or even by pretending money to cross invisible checkpoints on the way to work or school. For these reasons, many Salvadorans stay away from public places and are even afraid of walking down the street, particularly at night. This climate of fear has contributed to the decision of many families to abandon their houses and head towards other countries (CrisisGroup 26/11/2018).

## Additional contextual information

### Previous droughts

The eastern departments of La Unión, Morazán, San Miguel and Usulután form part of the Dry Corridor of Central America which extends from southern Mexico to Panama, mostly affecting Guatemala, El Salvador, Honduras and Nicaragua.

In 2015 El Salvador was affected by a severe drought, a culmination of 4 years of dry spells that affected over 710,000 people who depended on agriculture for food security. As of January 2016, an estimated 825,000 people (20% of the population) were considered food insecure on account of the drought (IFRC 26/08/2015). June and July 2018 also registered below average rainfall, with up to 40 days of dryness in certain areas (El Mundo 27/04/2019). The drought affected the sowing of the Primera, the first and main cycle

of cultivation in Central America, affecting 280,000 tons of grains equal to 42.3 million of dollars in losses, which led the Government of El Salvador to declare a red alert in July 2018 (WFP-FAO 23/08/2018; El Mundo 27/04/2019). Despite the current El Niño is considered to be weak, the impact on El Salvador's population could be higher due the recurrence of these natural events which have led to depleted assets and reduced coping strategies.

## Response capacity

### Local and national response capacity

In recent years the government has improved water services and created systems to monitor water quality and supply, however there are still 20 different institutions to manage the distribution of water, with more than 2,000 locally run networks established to cover gaps in rural areas (National Geographic 02/11/2018; MARN accessed 01/07/2019).

During previous emergencies, local organizations like Provida, supported by Oxfam, have launched programmes of vouchers distribution to affected families to buy food and other basic goods (OXFAM accessed 03/07/2019).

### International response capacity

WFP and FAO are the most active international organizations responding to the effects of the drought in El Salvador. In 2018, FAO developed a project to enhance the resilience of households, communities and institutions to prevent and respond to disasters affecting agriculture, food security and nutrition.

MSF has a stable presence providing healthcare in red zones neighbourhoods.

## Information gaps and needs

There is an overall lack of information regarding displacement figures, both towards other countries, but particularly internally. No breakdown available in terms of the motives, although usually it is a combination of economic situation, violence and lack of opportunities, as well as food security crisis as a result of the drought.

## Lessons learned

- There is a need to enhance a rainwater storage system in order to reduce the impact of the next droughts (WFP-FAO 23/08/2018).



- Agreements should be put in place to allow temporary regulated migration for the people most affected by drought (WFP-FAO 23/08/2018).
- Human intervention, without an environmentally sustainable approach, has led to losses in valuable ecosystems, such as mangroves, wetlands, coffee plantations, water bodies and watersheds. Between 1996 and 2010, the amount of land covered by forests in El Salvador declined from 18.6% to 12.8% (CABEI 2016).
- El Salvador has been one of the countries with the lowest availability of water per capita in Latin America. The quality of water sources is poor due to the irresponsible management of toxic materials, domestic and industrial waste, which is discarded without proper treatment, and the abuse of chemicals in agriculture (CABEI 2016).

## Key characteristics

The Human Development Index (HDI) of El Salvador was 0.664 in 2013 and 0.666 in 2014, making it a medium-HDI country, ranked 116th in the world. The Gini coefficient in 2010 was 0.46 and by 2015 it had declined to 0.37 (PAHO accessed 01/07/2019).

**Demographic profile:** El Salvador spans 21,041 km<sup>2</sup> and has the highest population density in the continental Americas. Its 2016 estimated population was 6.42 million: 55% were aged < 30 years and 12% were aged > 60 years; 52.7% were female, and 62.4% lived in urban areas (PAHO accessed 01/07/2019; World Bank accessed 02/07/2019).

**Nutrition levels:** Based on anthropometric indices, chronic malnutrition declined from 19.0% in 2008 to 13.6% in 2014, while acute malnutrition increased from 1.0% to 2.1% in the country (2.2% in urban areas and 2.0% in rural areas). The highest levels of chronic malnutrition were reported in the Paracentral and Western regions (16.4% and 1.3%, respectively); differences were also observed among chronic malnutrition levels in the country's departments, with the highest prevalence rates, higher than the national average, concentrated in Cuscatlán (18.5%) and Cabañas (17.7%) (PAHO accessed 01/07/2019).

**Health:** The maternal mortality rate was 42.3 deaths per 100,000 live births in 2015, and 19.0% of maternal deaths occurred among girls and adolescents. In 2015, El Salvador had prenatal care coverage above 77%; hospital deliveries were at 99%; and over 89% of newborns received their first check-up. In 2014, the mortality rate in children under 5 was 20 per 1,000 live births, 17 in children under 1 year, and 11 in neonates. Neonatal mortality was due mainly to premature birth and congenital malformation (PAHO accessed 01/07/2019).

**WASH:** In 2015, 86.6% of households had access to piped water, and 95.4% had electricity (PAHO accessed 01/07/2019). A report on Measurement of Multidimensional Poverty in El

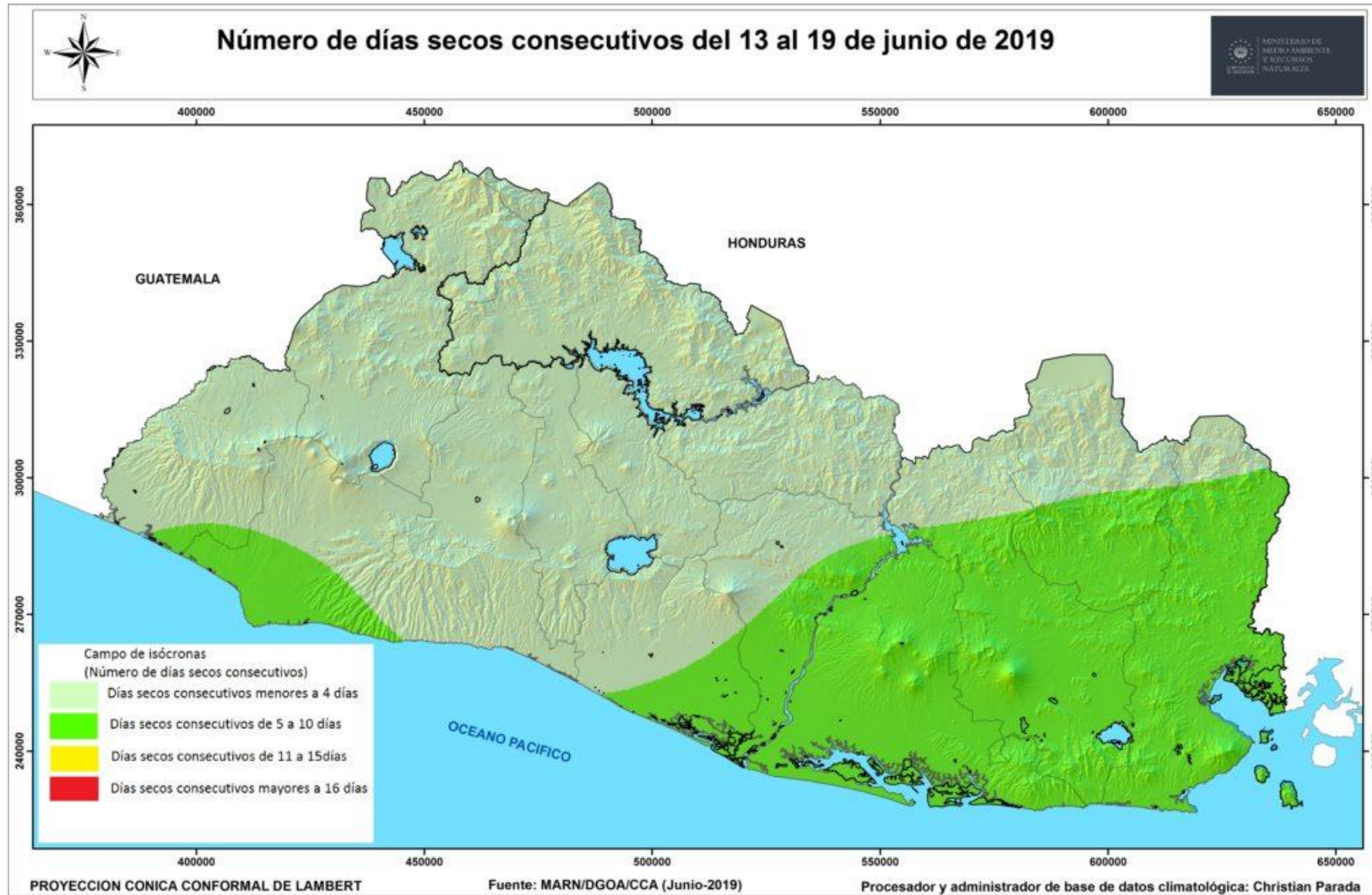
Salvador states that 23.7% of Salvadoran households do not have access to safe drinking water, while 46.9% of them are affected by lack of access to sanitation (CABEI 2016).

**Literacy levels:** In 2015, the illiteracy rate was estimated at 10.8% in the population (women, 12.4%; men, 9.0%), with an annual reduction of 2.0% since 2011 (PAHO accessed 01/07/2019).

**Poverty:** In 2015, 34.9% of households were poor (38.8% rural and 32.7% urban), while 8.1% were extremely poor (10.1% rural and 7.0% urban). Out of 1.8 million households, 44.4% were overcrowded (61.4% rural and 34.9% urban). Historically, rural areas have the greatest percentage of people living in poverty, compared to national and urban percentages. The dependency ratio reported for 2013 was 58.9%, which dropped to 53.9% in 2015; unemployment remained at 7.0% (6.5% urban and 7.9% rural); 8.4% of men and 5.0% of women were unemployed (PAHO accessed 01/07/2019).

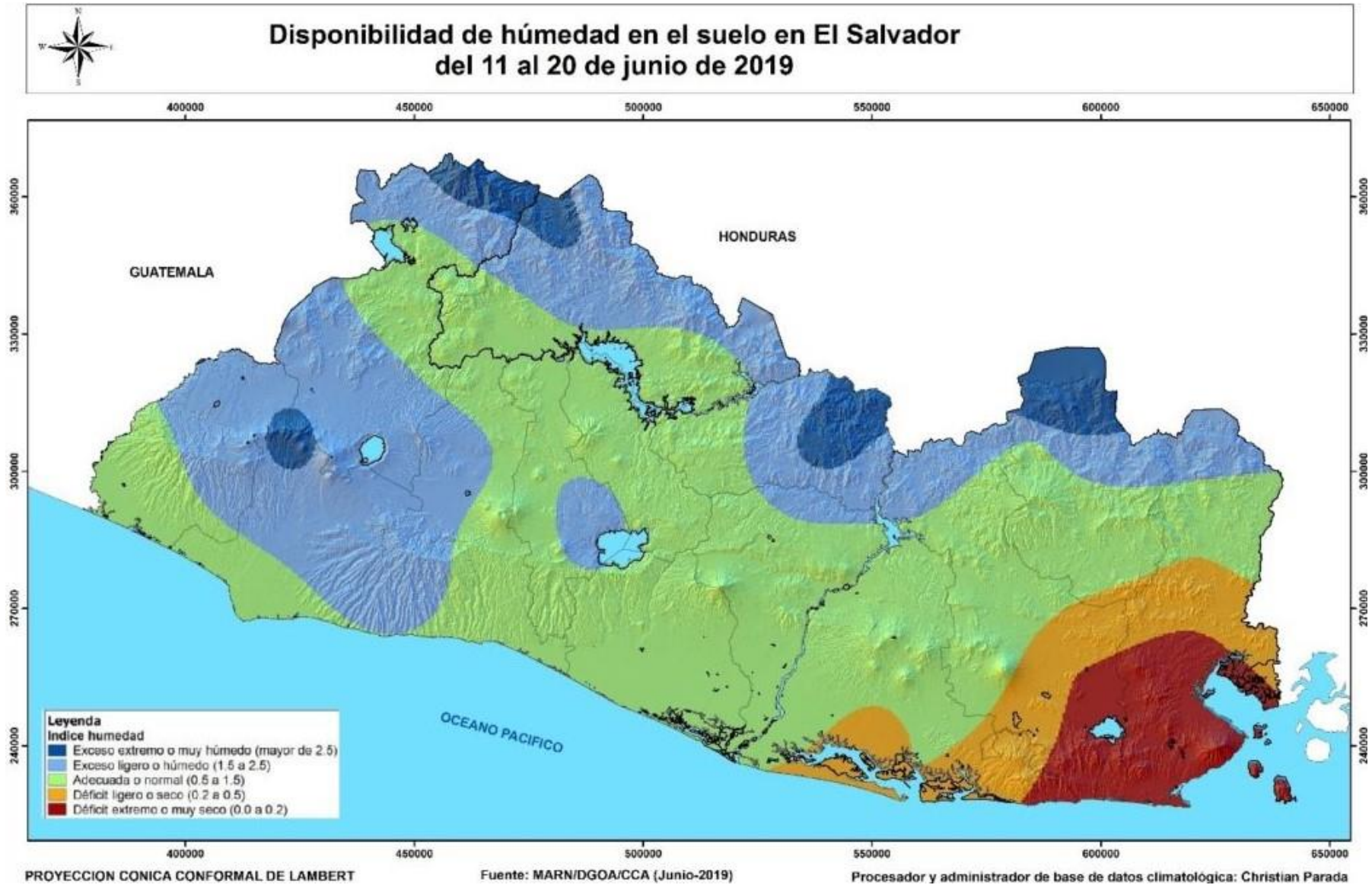
## Maps

### Number of consecutive dry days between 13-19 June



Source: MARN 19/06/2019

## Wet soil in El Salvador between 11-20 June 2019



Source: MARN 28/06/2019



## Projection of expected rainfall between May-July 2019



Source: MARN 26/04/2019