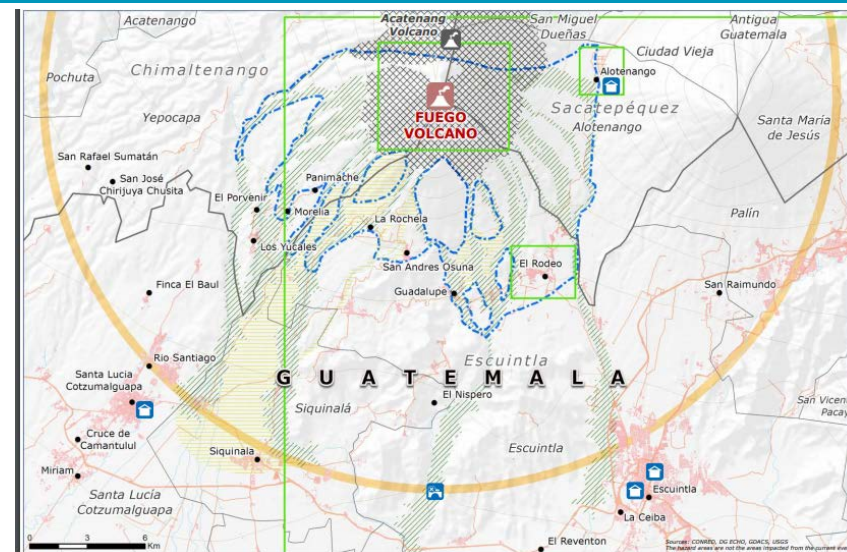


GUATEMALA

Fuego Volcano eruption

Fuego Volcano, the most active volcano in Guatemala erupted on 3 June generating a column of ash, lava, and pyroclastic flows up to 10km from the crater (RT 03/06/2018; OCHA 04/06/2018; ECHO Daily Flash 04/06/2018). The eruption affected over 1.7 million people in Sacatepéquez, Escuintla, and Chimaltenango departments. On 5 June a new violent descent of pyroclastic lava flow led to new evacuations and casualties (ECHO Daily Flash 06/06/2018). A new lahar (volcanic mudflow) formed on 7 June and is descending through the valleys of Santa Teresa, Mineral, and Taniluya (ECHO Daily Flash 07/06/2018; INSIVUMEH 07/07/2018; Le Point 07/07/2018). Some 12,407 people have been evacuated and over 4,000 are living in emergency shelters. Urgent shelter, health, food, and WASH needs have been identified.



Source: ERCC 04/06/2018

NEED FOR INTERNATIONAL ASSISTANCE



IMPACT



Anticipated scope and scale

Fuego volcano continues to be active and descent of **lahar** is likely to continue in the upcoming days and might be aggravated by the ongoing and **forecasted rainfalls**, which increase the risk of mudslides and landslides (OCHA 04/06/2018; ECHO Daily Flash 07/06/2018; INSIVUMEH 07/07/2018; Le Point 07/07/2018). The affected, missing, and casualty figures are likely to increase (Euronews 07/06/2018; CONRED 07/06/2018). National and international response is ongoing but **cross-sectoral needs** seems to be high.

Key figures

+1,700,000
people affected

+12,400
people evacuated

197
missing people

109
deaths

Humanitarian constraints



Search and rescue operations are very difficult in some areas, especially in the foothills towards Fuego volcano, due to the presence of lava and pyroclastic flow. The general level of insecurity in the country should also be taken into consideration when planning operations.

Limitations

Figures of affected population and victims change rapidly and needs assessments are ongoing. A breakdown of people affected and in need of humanitarian assistance per department is so far unavailable. Fuego Volcano is still active and new descents of pyroclastic flow are likely to occur. The situation has not stabilised yet and both figures and needs are likely to increase since publication.

Crisis impact

On 3 June Fuego Volcano, located approximately 40km from Guatemala City, erupted generating a column of ash, lava, and pyroclastic flows (mixture of hot ash, rock, and gases) up to 10km from the crater (RT 03/06/2018; OCHA 04/06/2018; ECHO Daily Flash 04/06/2018). Between 5 and 7 June the volcano continued to emit seismic activity generating pyroclastic lava flows, ash, and lahars (volcanic mudflows) (ECHO Daily Flash 07/06/2018; INSIVUMEH 07/07/2018; Le Point 07/07/2018).

By 7 June, 1,713,617 people had been affected, 12,407 people evacuated, 197 people are missing, 109 dead, and 58 injured (Euronews 07/06/2018; CONRED 07/06/2018). Since the beginning of the eruption the most affected areas have been Chimaltenango, Sacatepéquez, Escuintla, Mixco, and some areas of Guatemala City. The villages of La Libertad, EL Rodeo, and San Miguel Los Lotes (also known as Los Lotes) were completely covered by ash, and rendered inaccessible for search and rescue operations teams (AGN 05/06/2018; BBC News 06/06/2018; Al Jazeera 06/06/2018; OCHA 04/06/2018). The communities of Sangre de Cristo, Finca Palo Verde, Panimaché I and II were evacuated by the fire brigades and CONRED first response teams on 3 June, while the communities of La Reyna, El Rodeo, Canaveral I and IV, Magnolia, and Hunnapu were preventively evacuated on 5 June (OCHA 04/06/2018; CONRED 05/06/2018).

Fuego Volcano continues to be active and descent of lahar (volcanic mudflow) is likely to continue in the upcoming days, which are likely to be aggravated by the forecasted rainfalls in the affected departments. National alert levels remain in place for Escuintla, Chimaltenango, and Sacatepéquez departments, as well as for the municipalities of Escuintla and Santa Lucia Cotzumalguapa (Escuintla), Alotenango (Sacatepéquez) and Yepocapa (Chimaltenango) (CONRED 07/06/2018).

Shelter and NFIs: Over 12,000 people have been evacuated by CONRED first response teams and Guatemala fire brigades. Of them, only 4,175 people have been relocated in 22 official and unofficial emergency shelters put in place by CONRED, which include churches, schools, cultural and sports centres, and town halls in the departments of Escuintla, Sacatepéquez, Santa Rosa, Guatemala, and Suchitepéquez (CONRED 07/06/2018; CONRED 06/06/2018). The number of people in emergency shelters doubled from less than 2,000 people to over 4,000 people in less than three days (Oxfam 07/06/2018). NFIs such as mattresses, hygiene kits, and camp beds are urgently needed by the affected communities (CARE 05/06/2018; OCHA 04/06/2018).

WASH: The provision of clean water for affected communities is a priority need, as they have no access to clean water. There is a high risk of contamination of sources of drinking water, including wells, dams, catchment areas, and river system in the communities near the volcano, due to the continuous fall of ash and the descent of debris from the eruption (Direct Relief 05/06/2018; CARE 05/06/2018; OCHA 04/06/2018).

Health: Health and psychosocial assistance are among the most urgent needs (OCHA 04/06/2018). Besides burns and injuries, the most common health problems related to a volcanic eruption are respiratory and eye issues. Maternal and child care as well as assistance of people suffering from chronic disease or pulmonary issues should also be taken into consideration during the response (Direct Relief 05/06/2018).

Food: Fuego volcano eruption and the descent of lahar and pyroclastic flow destroyed or damaged crops and livestock in Chimaltenango, Sacatepéquez, and Escuintla, having a negative impact on the livelihoods of some of the most affected communities in the three departments. Ash and lava flows are also reportedly limiting the supply of foodstuff to the evacuated communities (Oxfam 07/06/2018; Direct Relief 05/06/2018; CARE 05/06/2018).

Protection: Of the 75 deaths reported on 6 June only 23 victims have been identified. Some 197 people are reported missing (Time 06/06/2018; BBC News 06/06/2018). The lack of identification of victims and missing people will require restoring of family linkages (OCHA 05/06/2018).

Education: On 4 June the Ministry of Education of Guatemala suspended classes in Escuintla, Chimaltenango, and Sacatepéquez departments as risk prevention (OCHA 04/06/2018). In addition, at 7 June one school was destroyed and three were damaged by pyroclastic flow and lahar descending from Fuego volcano (CONRED 07/06/2018).

Nutrition: OCHA reported on 7 June that although emergency shelter have sufficient food aid the moment, child food consumption does not meet nutritional requirements for their age (OCHA 07/06/2018).

Impact on critical infrastructure

The Aurora International Airport, in Guatemala City, was closed following the 3 June volcanic eruption because of the presence of volcanic sand in the air but was later reopened. In addition, the Dirección General de Protección Vial (PROVIAL) closed the national road 14 that connects Escuintla department to Sacatepéquez department as well as a part of the highway Palin-Escuintla in order to improve the efficiency of evacuation operations. Two energy networks and one bridge were destroyed, and four roads were damaged following the eruption and the descent of pyroclastic flow and lahar (CONRED 07/06/2018; CONRED 06/06/2018; OCHA 05/06/2018; OCHA 04/06/2018). One school was also destroyed and three were damaged (CONRED 07/06/2018).

According to UNITAR-UNOSAT first estimations, some 411 buildings, industrial sites, and the resort of La Reunión have been damaged or destroyed as they were affected by the pyroclastic flow of 4 June (UNITAR-UNOSAT 07/06/2018).

Vulnerable groups affected

Guatemala Ministry of Health Carlos Soto informed on Wednesday that two minors and a woman had to be transferred to the United States as they suffered from serious burns and needed transplants (El Día 06/06/2018). Pregnant women and newborn children are in need of particular attention and medical care (OCHA 04/06/2018).

According to OCHA Situation Report of 7 June, shelters put in place to receive the evacuated population are still inadequate to receive people with disabilities, and pregnant and lactating women (OCHA 07/06/2018).

Humanitarian and operational constraints

Rescue operations in Guatemala were suspended on 5 June in the afternoon after pyroclastic flow streamed down the southern side of the volcano (The Guardian 06/06/2018; BBC News 06/06/2018). Operations have resumed on 6 June, but search and rescue operations are difficult as active lava makes some areas hard to reach. Ongoing heavy rains and the risk of flooding and mudslides are further limiting humanitarian access in the area (CARE 05/06/2018). On 7 June search and rescue operations were newly suspended in the areas devastated by Fuego Volcano as both climatic conditions and the presence of hot volcanic material puts the life of rescuers at risk (Time 08/06/2018).

High levels of violence in Guatemala, as well as in other countries of the “Northern Triangle” (El Salvador and Honduras), create significant dangers. The general level of insecurity in the country should be taken into consideration when planning operations (ECHO 24/01/2018).

Aggravating factors

Seismic activity in Guatemala

Guatemala is located within the geographic area with the most elevated seismic activity in the world, known as the Ring of Fire or Circum-Pacific Belt. The Ring of Fire is a 40,000 km seismic belt of earthquakes epicentres, active volcanoes, and tectonic plates boundaries in the Pacific basin (Tele13 04/06/2018; Britannica 04/05/2018).

Fuego Volcano in Guatemala is considered one of the most active volcanoes in Latin America (Time 06/06/2018). Guatemala has some 288 volcanos and volcanic structures. Four volcanoes are currently active in Guatemala: Fuego, in Sacatepéquez and Escuintla departments, Santiaguito in Quetzaltenango, Pacaya in Escuintla and Guatemala departments, and Tacaná in San Marcos department (INSIVUMEH 2018; Canal Antigua 15/08/2017).

The Fuego Volcano eruption on 3 June has been the deadliest volcanic eruption in the country since 1902, when Santa Maria Volcano erupted killing some 6,000 people. Other minor eruptions were registered after 1902, without leaving any damage or casualties. The latest eruptions occurred in May 1998 and January 2000 of the Pacaya volcano. (Time 06/06/2018; INSIVUMEH 2018).

Pyroclastic flows

The Fuego eruption has been particularly deadly due to pyroclastic flow. Pyroclastic flow is a fast-moving mixture of hot ash, rock and volcanic gases that can reach a speed of up to 700km per hour. The gas and rocks in the flow reach between 200 and 700 degrees Celsius. Pyroclastic flows and lahars (volcanic mudflows) can be much more dangerous than lava (BBC News 06/06/2018).

Latest natural disasters

Guatemala is prone to geophysical and hydrological disasters. Sacatepéquez department was recently affected by floods due to heavy rains starting on 20 May 2018. Some 5,794 people have been affected by May floods in Petén, Quiché, San Marcos, Sololá, Suchitepéquez, Sacatepéquez, Guatemala, El Progreso, and Chiquimula departments. Over 100 houses were damaged, as well as seven roads and one bridge (OCHA 31/05/2018; FloodList 19/05/2018). The succession of natural disasters is likely to aggravate the humanitarian conditions and needs of the affected population in Sacatepéquez.

Seasonal factors and risk of heavy rains

Rainy season: There are two rainy seasons in Guatemala. The first rainy season lasts from the beginning of May to mid-July. The second rainy season starts in mid-August and lasts until the end of October (FEWSNET 2013). On 5 June CONRED and INIVUMEH alerted the risk of flooding and landslides due to heavy rains that are likely to affect Escuintla —among other departments such as Alta Verapaz, El Progreso, Jalapa, Guatemala, and Santa Rosa (AGN 05/06/2018; CONRED 06/06/2018).

The National Hurricane Institute (NHI) also announced the formation of the Tropical Storm Aletta in the Pacific Ocean, launching an alert for Guatemala. At 6 June Tropical Storm Aletta was moving from the Mexican coast westward at a speed of 45km/hr. There is a risk that the storm will develop into a hurricane. However, if Tropical Storm Aletta continues to travel west on its current trajectory it is unlikely to hit Guatemala (CONRED 06/06/2018).

The presence of both heavy rainfall and ash caused by the pyroclastic flow is likely to create mudslides that might cause accidents, as well as bring debris and rock (OCHA 04/06/2018).

Population density

Fuego volcano erupted in densely populated urban areas. Marcos municipality of Escuintla department and San Miguel Los Lotes, in Escuintla, which have been the most affected towns. El Rodeo counts some 14,125 inhabitants (Census 2002; Caritas 06/06/2018). El Rodeo and Los Lotes are located just at the base of the volcano (CNN 05/05/2018).

Underlying food insecurity

Around 47% of Guatemalan children under five suffer from stunting, one of the highest rates in Latin American and the Caribbean. Malnutrition and food insecurity are closely related in Guatemala. Almost half the population cannot afford the basic food basket (UNICEF 2018). Four years of consecutive drought, between 2014 and 2017, have had a negative impact on the farmers' livelihoods (USAID 17/01/2018; WFP 08/2016). Loss of or damage to crops in these areas is likely to further aggravate food insecurity and malnutrition.

Key characteristics (national)

- **Total population:** 16.5 million (in 2016).
- **Food security and livelihoods:** 2/3 of the population lives on less than USD 2 per day.
- **Nutrition levels:** Chronic malnutrition (stunting) at 47% among children under five.
- **Health statistics:** Under-5 Mortality rate (per 1,000 live births): 29; Life expectancy at birth (years): 73; Presence of HIV (% of total population in ages 15-49): 0.5.
- **WASH statistics:** Access to improved water sources (% of population with access): 93; Access to sanitation facilities (% of population with access): 64.
- **Lighting and cooking sources:** Population without electricity: 1.6 million.
- **Literacy levels:** 81.5% of the total population (aged 15 and over).

Sources: CIA World Factbook; The World Bank 2016; WFP, 31/08/2017; USAID 18/05/2018.

Response capacity

Local and national response capacity

The National Coordination for Disaster Reduction (CONRED) is the agency in Guatemala in charge of preventing natural disasters, reducing their impact, and organising response by coordinating disaster relief activities. All information related to Fuego Volcano activity and heavy rains is currently being provided by the National Institute for Seismology, Volcanology, Meteorology and Hydrology (INSIVUMEH) of the CONRED.

Following 3 June eruption, the Government of Guatemala raised a national alert level for the departments of Chimaltenango, Sacatepéquez, and Escuintla. CONRED has mobilised first response teams, as well as the Guatemalan Red Cross and military staff, to the departments of Escuintla, Sacatepéquez, and Chimaltenango. Some 1,200 people are carrying out search and rescue operations, as well as evacuations of the communities in affected areas (OCHA 04/06/2018).

CONRED opened temporary shelters for those who were forced to flee. At least 21 emergency shelters were put in place, though the total population in shelters is significantly less than the total number of people evacuated (CONRED 06/06/2018).

CONRED is also in charge of coordinating the transportation and distribution of humanitarian aid, which will include foodstuff, health assistance, and support to farmers for the recovery of their crops. A plan for the reconstruction of housing and the road network is also being discussed by the Ministry of Communications, Infrastructure, and Housing and the Ministry of Defense. National funds designated for disasters have already been allocated for the response (AGN 05/06/2018).

International response capacity

A significant number of international organisations and UN agencies are responding to the crisis caused by the Fuego volcano eruption since 3 June. Response includes monitoring the situation, supporting CONRED and national authorities in relief operations, and providing both sector specific or cross-sectoral aid (OCHA 07/06/2018).

Foreign states are also supporting the response by the donating foodstuff, NFIs or cash. The United States have allocated some USD 300,000 for the response to the Fuego Volcano eruption (AGN 06/06/2018). Israel and Spain have donated food and NFIs, such as blankets, pillows, sleeping bags, and disposable diaper packs to the affected populations (AGN 05/06/2018). The European Commission has also allocated around 100,000 euros for the humanitarian relief of affected communities (ECHO 07/06/2018). Development agencies, such as the Spanish Agency for International Development Cooperation (AECID) or

USAID, and UN agencies such as UNICEF, are also financing the response (OCHA 07/06/2018).

On 6 June the International Federation of the Red Cross and the Red Crescent Societies (IFRC) announced the release of more than CHF 250,000 from its global emergency fund to Guatemala in order to support frontline emergency operations (IFRC 06/06/2018).

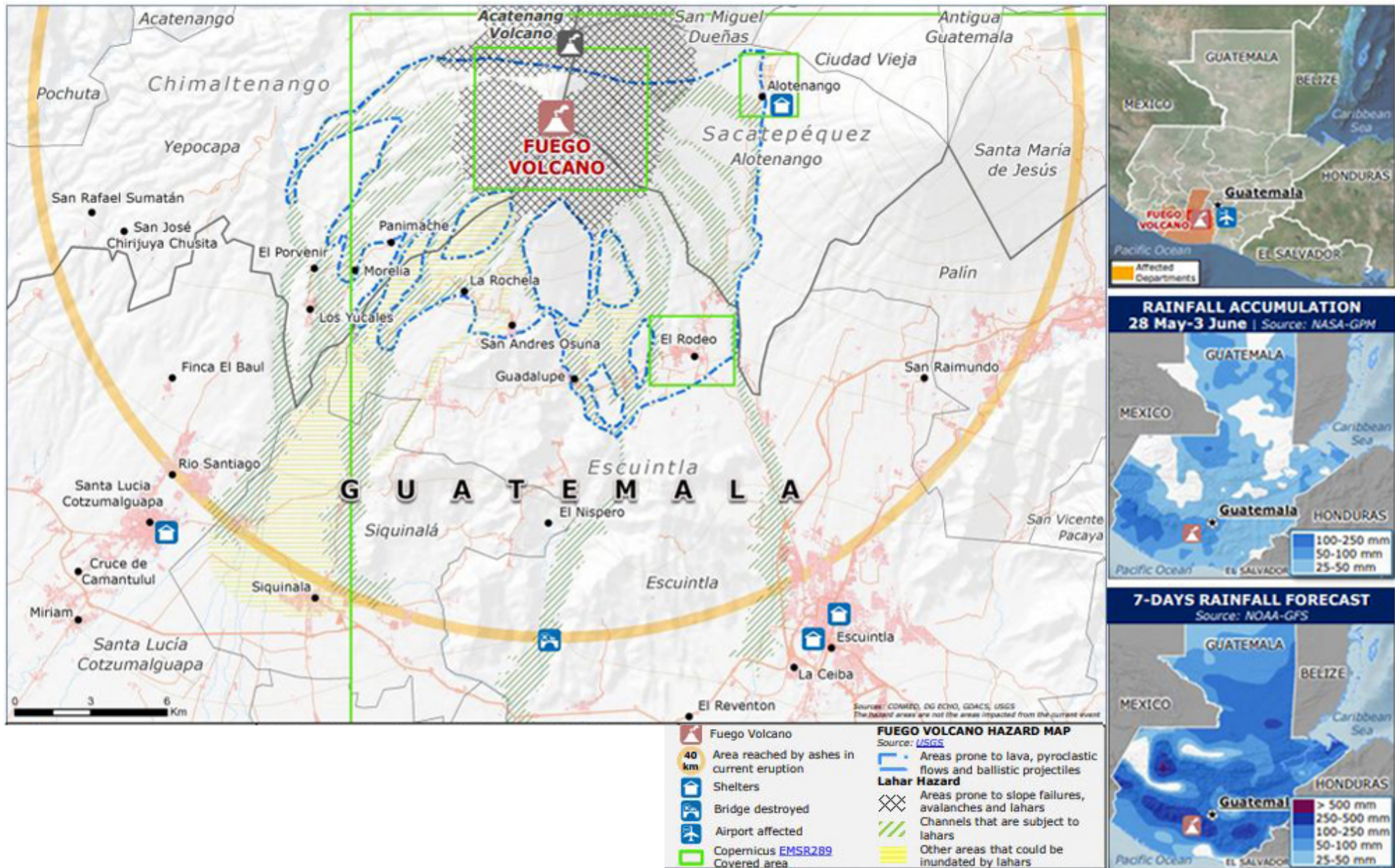
Information gaps and needs

- Latest census in Guatemala was conducted in 2002. Therefore, Guatemala authorities lack of updated information on the exact number of people living in the areas affected by Fuego Volcano eruption (The Guardian 06/06/2018).
- There is limited information on the number/state of sanitation facilities in the affected areas before and after the disaster.
- Information on the type of housing and infrastructure in the affected areas is lacking.
- Information on the type/quality of the emergency shelter put in place by CONRED is limited.
- A breakdown of affected population per department is not available.
- The national and international response is significant, yet it is still unclear if it is sufficient to meet the needs of the affected population.
- Figures related to people sheltered and number of available shelters are contradictory.
- It is unclear if people evacuated not in emergency shelters are in host families. people sheltered are way lower than the number of people evacuated.

Lessons learned

In October 2005, El Salvador, one of the neighbouring countries of Guatemala, was affected by the Iamatepec eruption on 1 October. This event was followed by heavy rains on 4 October. A similar scenario, although on a bigger scale, is likely to occur in Guatemala given heavy rains are forecast and are likely to hit the same departments affected by Fuego volcano activity. Following the Iamatepec eruption and heavy rains in October 2005, shelter, NFIs, WASH, health assistance, including psychosocial assistance, and education were identified as priority needs. Rapid response for El Salvador was accompanied by rehabilitation programmes (IFRC 29/05/2006).

Fuego Volcano eruption and forecasted heavy rains



Source: ERCC 04/06/2018