



**Asia-Pacific
Economic Cooperation**

2019/SOM3/EPWG/015

Agenda Item: 10.1

Lessons Learned from El Niño Costero and the Eruption of Ubinas Volcano

Purpose: Information
Submitted by: Peru



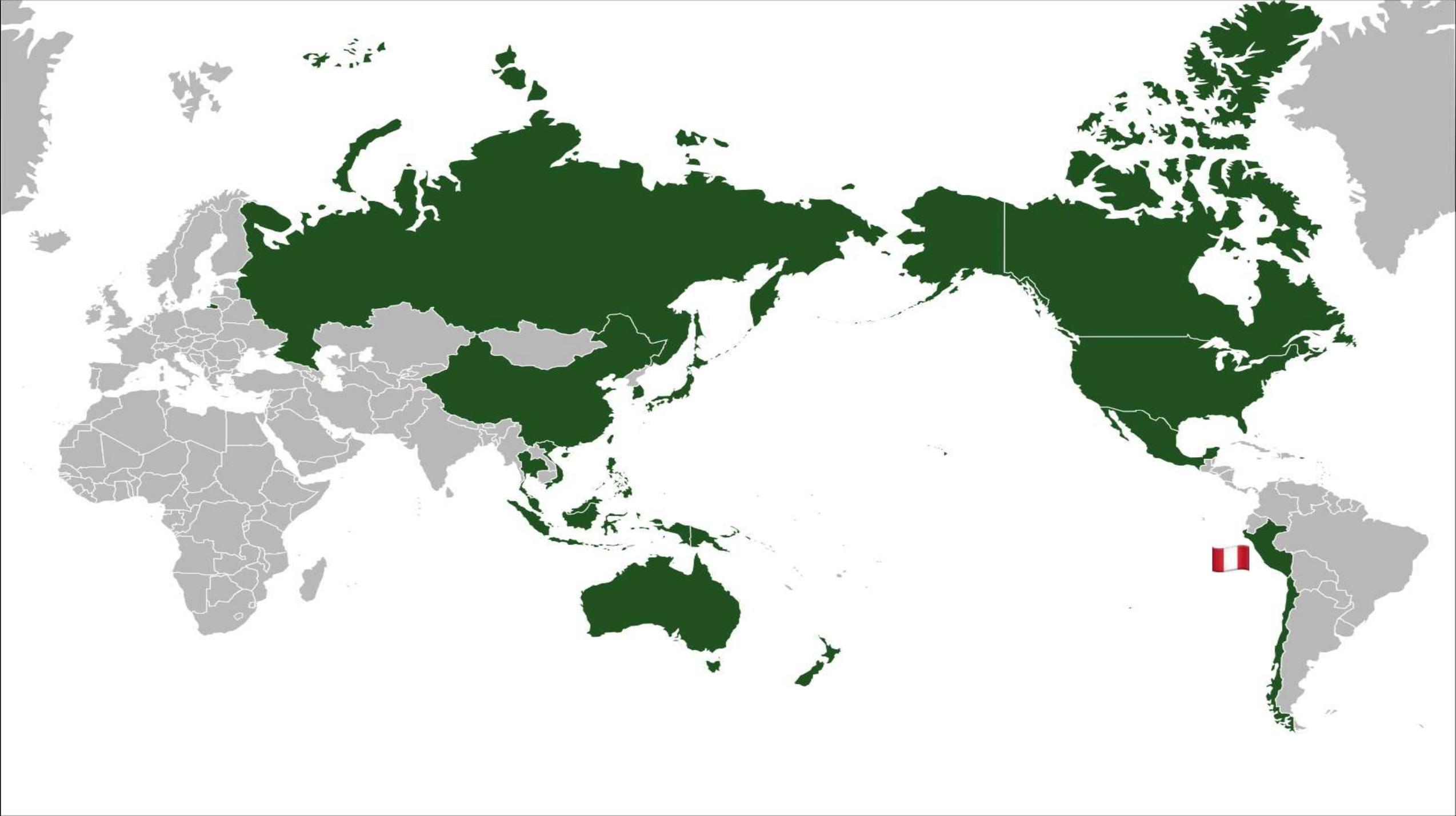
**15th Emergency Preparedness Working Group
Meeting
Puerto Varas, Chile
22 August 2019**



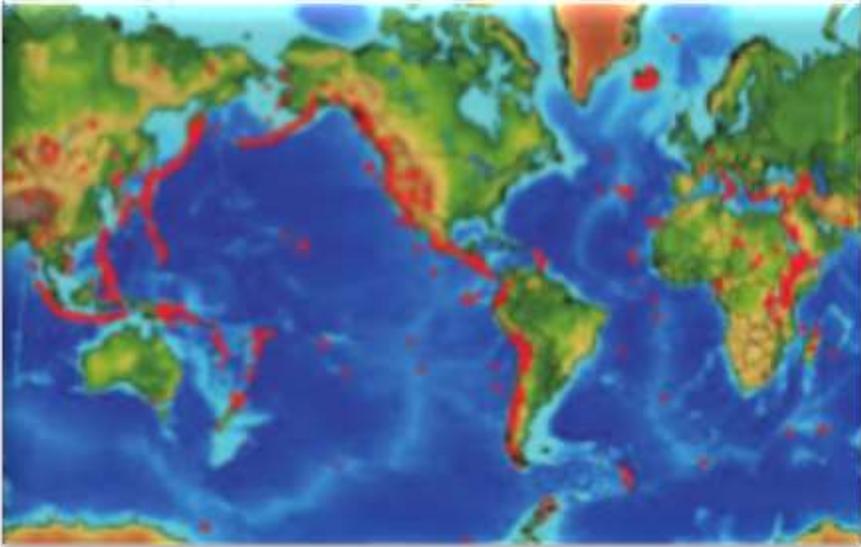
LESSONS LEARNED FROM EL NIÑO COSTERO AND THE ERUPTION OF UBINAS VOLCANO

August 21, 2019
15th APEC Emergency Preparedness
Working Group Meeting





RISKS FACTORS IN PERU



Ring of Fire

Earthquakes
Volcanoes
Tsunamis



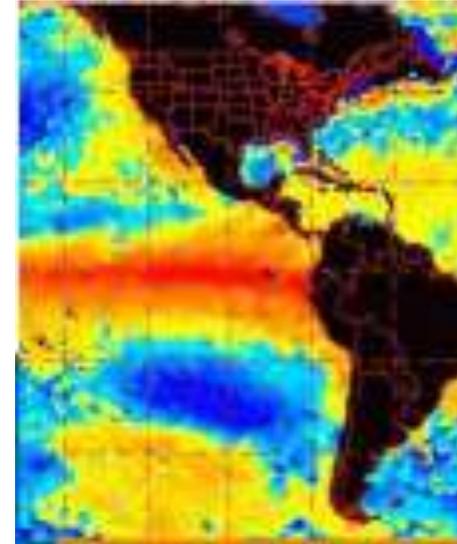
Andes Mountain Range

Geological phenomenon
Avalanches
Mass movements



Global Warming

Shrinking glaciers
Desertification
Climate Change



Tropical and subtropical areas

El Niño Phenomenon
Flooding
Cold spells
Drought



NATIONAL INSTITUTE OF CIVIL DEFENSE- INDECI

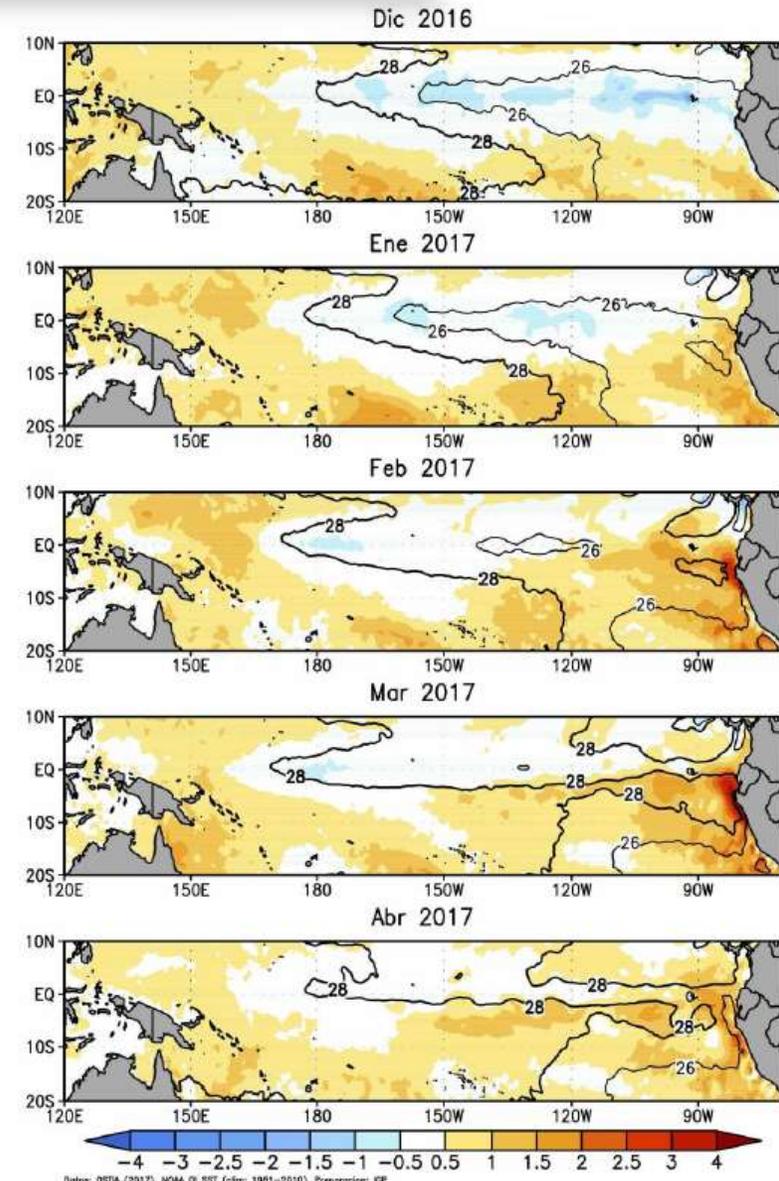
- INDECI provides technical advice to prepare for, respond to and rehabilitate from disasters, as well as technical assistance to local, provincial, regional and national level authorities during emergencies.
- Our mission is to “lead disaster risk management preparation and response processes, within the framework of the national disaster risk management system, and benefit the general population, their sources of livelihood, and the state’s assets in an immediate, permanent and efficient manner”.





El Niño Costero (2017)

- In January 2017, trade winds weakened which led to an abrupt increase in ocean surface temperature, reaching over 26°C at various points on the north coast, while the Equatorial Pacific Central was still in the transition from La Niña to neutral.
- This activated the second band of the Intertropical Convergence Zone (ITCZ) early and intensely off the coast of Peru, which led to the occurrence of very heavy rains in the northern zone. In addition, the “La Niña in the Central Pacific” type of weather conditions and the humidity in the north led to heavy rains in the western Andes.
- The intensification of the second ITCZ band in southern Ecuador activated a positive feedback mechanism that kept southern trade winds weak in the Equatorial area, and high temperatures in the northern coast until April.
- Following April, the seasonal reduction of solar radiation, made temperatures fall, deactivating the secondary band of ITCZ, and leading to the rapid decline of the event.





El Niño Costero (2017)

Based on impact, it was the 3rd most intense “El Niño Phenomenon” of the last 100 years in Peru.

It affected 1.7 million people in 23 regions of Peru.

More than 283,000 people lost their homes.

15 Regions declared in emergency.

26 countries from different continents (mainly LAC) provided humanitarian aid: shelter equipment, water, financial contributions and aircraft loans.





Ubinas Volcano Eruption (2019)

- On July 19 at 02:30 hrs, 3 explosions dispersed ashes south and southeast of the region. Ash emissions reached a height of 5000m from the crater base.
- On July 22 at 07:18 and 23:25 hrs., 2 explosions dispersed the ashes south and southeast of the region. Ash emissions reached a height of 1000m from the crater base.

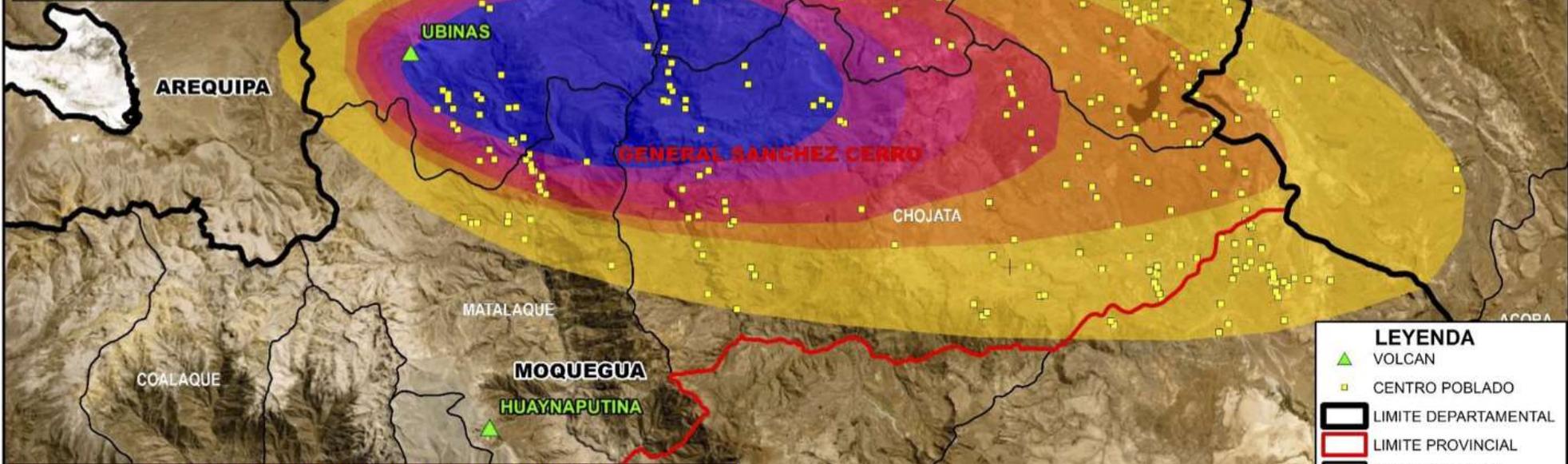
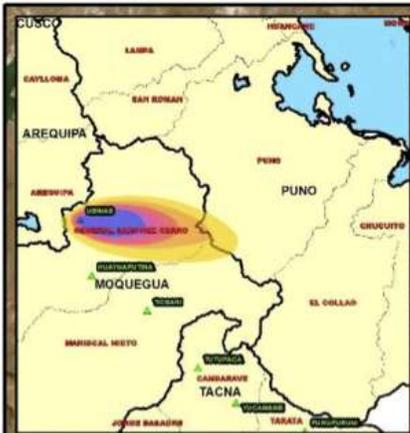




Ubinas Volcano Eruption (2019)

- Overall, 29,703 persons, 301,952 animals and 5,137 hectares of crops were impacted.





POBLACION EXPUESTA A CENIZAS VOLCANICAS VOLCAN UBINAS

DEPARTAMENTO	PROVINCIA	DISTRITO	CENTROS POBLADOS	POBLACION	CENTROS DE SALUD	CENTROS EDUCATIVOS
MOQUEGUA	GENERAL SANCHEZ CERRO	CHOJATA	81	708	4	12
		ICHUÑA	79	238	4	2
		LLOQUE	35	570	3	7
		MATALAQUE	21	323	3	7
		UBINAS	26	1,139	9	23
		YUNGA	6	6	-	-
PUNO	MARISCAL NIETO	CARUMAS	32	164	-	5
	PUNO	PICHACANI	7	173	2	1
TOTAL GENERAL			287	3,321	25	57


INSTITUTO NACIONAL DE DEFENSA CIVIL - INDECI
 DIRECCIÓN DE PREPARACIÓN
 Sistematización de Información sobre Escenarios de Riesgo de Desastres

POBLACION EXPUESTA A CENIZAS VOLCANICAS VOLCAN UBINAS del 22 Julio 2019

FUENTE: INE/IGPI/INGEMMET/OVS ELABORADO POR: INDECI - DIPRE - SIERD ESCALA: 1:423,051.93



LEYENDA

-  VOLCAN
-  CENTRO POBLADO
-  LIMITE DEPARTAMENTAL
-  LIMITE PROVINCIAL
-  LIMITE DISTRITAL

ESPESOR DE CENIZA DEPOSITADA EN EL SUELO (mm)

-  1 a 2,2
-  2,2 a 3,4
-  3,4 a 4,6
-  4,6 a 6,1
-  6,1 a 7,9
-  7,9 a 10



Ubinas Volcano Eruption (2019)



A State of Emergency was declared on July 20.

Water, food, masks, lenses, and cleaning kits were delivered, and temporary shelters installed in Anascapa, Sancaya, Chacalaque and Pucacancha.

On July 26 the populations of Querapi, Escacha, San Miguel de Ubinas and Ubinas were evacuated to a temporary shelter in Anascapa.

A “permanent” temporary shelter is being built in Sancaya to increase resilience.





Lessons Learned: Public Sector

- Urban growth without proper planning and consideration of existing risks, increases vulnerability rapidly, therefore, territorial planning processes must be strengthened at all levels of government.





Lessons Learned: Public Sector

- A unified “nerve” center (such as the National Emergency Operations Center – COEN) as well as clear protocols for coordination, communication and operations, is essential to efficiently coordinate, make decisions and manage operations during major emergencies.





Lessons Learned: Public Sector

- Social protection programs and mechanisms such as conditional cash transfers must be redesigned so that, during emergencies, they can serve the affected and affected population, strengthening humanitarian aid. This adaptation is underway in Peru.





Lessons Learned: Public Sector

- Whereas traditional “peace time” financial mechanisms and procurement procedures apparently available to local and regional governments to handle the emergency failed to provide the necessary liquidity needed to respond to large emergencies, a declaration of emergency and the provision of extraordinary financial resources directly to subnational governments helped expedite the initial response.





Lessons Learned: International Cooperation

- Given the importance of civil society, the private sector and international cooperation during emergencies, it is also necessary to establish precise communication and coordination protocols and procedures.a





Lessons Learned: International Cooperation

- The “National Humanitarian Network” is the main coordination mechanism between the Peruvian State and UN agencies, and international humanitarian organizations. It meets monthly.
- During El Niño Costero, it articulated 2,539 initiatives and interventions by 38 humanitarian organizations, which reached 900,000 affected people.





Lessons Learned: Private Sector

- During emergencies, citizens and private firms displayed a great deal of solidarity through donations. In order to better articulate private involvement, we streamlined procedures and regulations to facilitate donations.
- INDECI is establishing alliances and sharing information with business associations', so that donations from the business sector can be channeled in an organized, timely and transparent manner.





Lessons Learned: Private Sector

- State owned warehouses of humanitarian goods are not enough to deal with major disasters. Therefore, Peru is establishing agreements with the private sector to enable the creation of "Virtual Warehouses", so that in the case of a major disaster, supermarket chains would save up to 50% of their stock (from a pre-determined catalogue of products), which would be purchased by the government to provide humanitarian aid.



