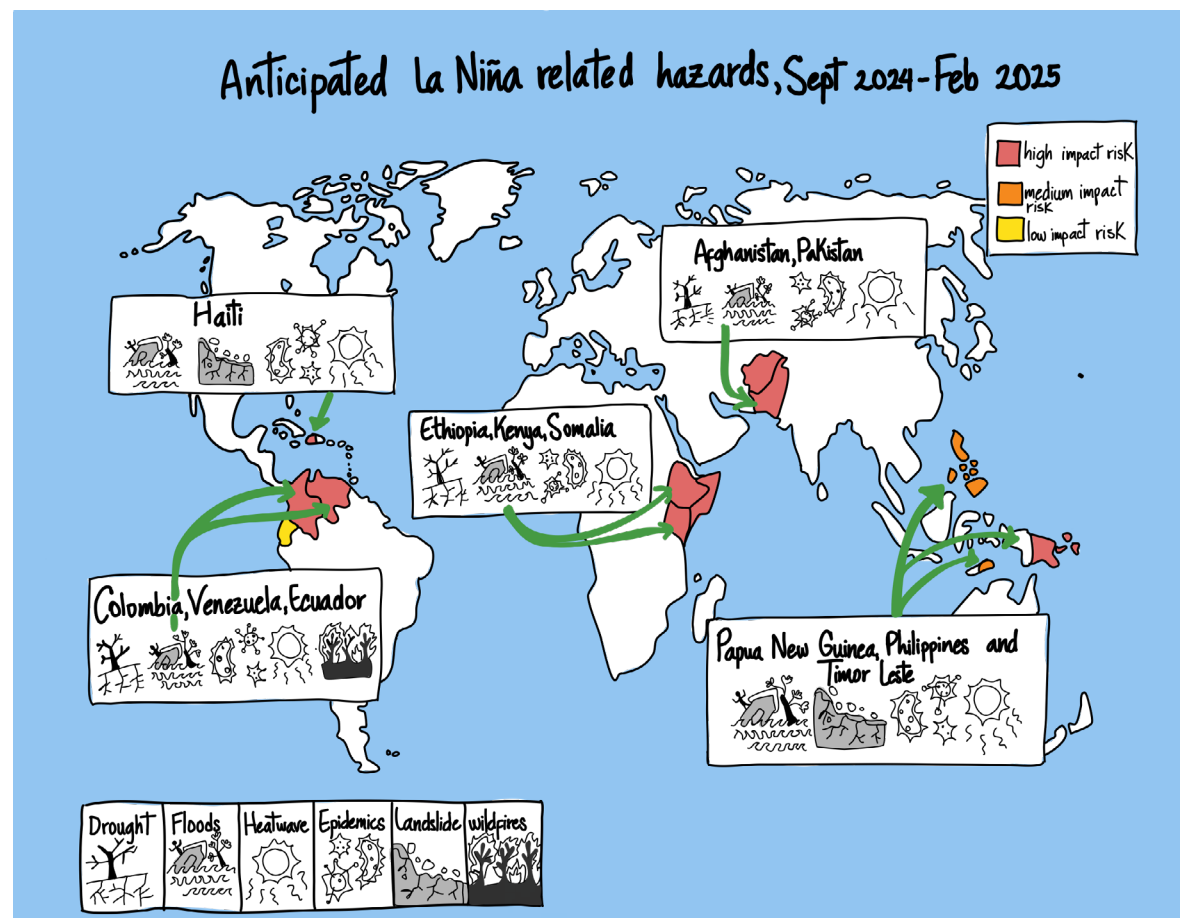


LA NIÑA OVERVIEW

Anticipated humanitarian impact in 2024–2025

KEY MESSAGES

- **La Niña, which is expected to emerge during the last quarter of 2024, is likely to drive rainfall and temperatures anomalies** in regions already affected by the recent 2023–2024 El Niño, which ended in May 2024 and whose impacts will be still felt through 2024.
- **Seasonal forecasts, particularly for the December 2024–February 2025 period, anticipate some of the typical precipitation anomalies** brought by La Niña in Central and South America (dry/wet conditions), the Caribbean (wet conditions), East Africa (dry conditions), southern Africa (wet conditions), Central Asia (dry conditions) and Asia and the Pacific (wet conditions). **Temperatures are expected to remain above average across all global tropical and subtropical regions**, particularly in Asia, the Americas, and several African countries.
- Due to the anticipated above-average hurricane season, which may be further intensified by La Niña, countries in South and Central America and the Caribbean could experience an increase in the frequency and intensity of hurricanes, particularly between October and November, when La Niña is expected to be in effect.
- **Drought, flooding and landslides, heatwaves, wildfires, crop and animal pests and diseases, and human infectious disease outbreaks (water-borne and vector-borne) are the main hazards anticipated in the effected regions**, with dengue and cholera outbreaks being of high concern in several countries across Africa, South and Central America and Asia.
- Between the end of 2024 and the beginning of 2025, the effects of La Niña are likely to compound those caused by exceptionally high global average temperatures due to climate change. **Countries at the highest risk of severe humanitarian impacts** caused or worsened by La Niña between September 2024 and–February 2025 are Afghanistan, Colombia, Ethiopia, Haiti, Pakistan, Papua New Guinea, Kenya, Somalia, and Venezuela.



Source : ACAPS

ABOUT THIS REPORT

Aim

This report provides a global overview of the anticipated humanitarian impact of La Niña between September 2024 and February 2025, aiming to support strategic planning and anticipatory action in the humanitarian sector.

Methodology

This report is based on historical data covering the impact of previous La Niña events, seasonal climate forecasts, and secondary sources from humanitarian organisations, think tanks, and local and international media. The analysis also builds on three ACAPS datasets: the *Severity Index*, *Humanitarian Access Index*, and *Seasonal Calendar*.

Scope

The geographic scope of the report is global. The report does not provide exhaustive coverage of all countries exposed to La Niña, as it focuses on areas where temperature or precipitation anomalies, in combination with pre-existing crises and hazards vulnerability factors, are expected to trigger moderate or severe humanitarian impacts between September 2024 and February 2025. The selection of the countries covered by this report and the attribution of the level of La Niña impact risk is based on the analysis of the indicators/factors listed as follow:

- Historical impact of previous La Niña events in the country
- Typical influence of La Niña between September and February in the country
- Seasonal precipitation and temperature forecast for September 2024-February 2025
- Impact of El Niño in 2023-2024 in the country and materialisation of seasonal forecasts/alerts
- Pre-existing humanitarian crises and vulnerabilities to La Niña-related hazards, including the impact of El Niño in 2023-2024
- National/local disaster response capacity
- Potential impact on agriculture, livestock, and fishery based on agricultural seasonality
- Potential spillover effects of La Niña on local food prices and the economy
- Potential disease outbreaks and increased health needs

Limitations

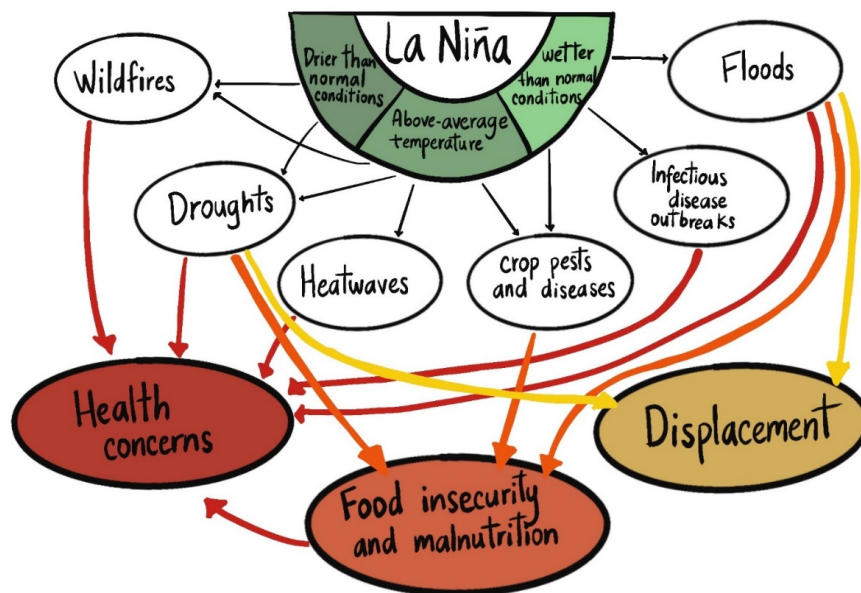
It is important to note that each El Niño-Southern Oscillation (ENSO) event is unique, and the effects observed in the past may not necessarily occur in the upcoming La Niña, especially if it is of moderate strength or has a brief duration. The interaction between this La Niña, current record-high global warming, maritime heatwaves, and other interannual variability phenomena can lead to unexpected outcomes. The accuracy of climate forecasts, which provide valuable tools for anticipating the effects of La Niña in the coming months, typically decreases when the lead time exceeds three months.

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LA NIÑA IN 2024 AND 2025: SITUATION OVERVIEW

Figure 1: Global effects of La Niña



Source: ACAPS

La Niña, together with El Niño, is one of the two extreme phases of the natural climate variability phenomenon known as El Niño-Southern Oscillation (ENSO). ENSO is characterised by oscillations in the sea surface temperatures of the equatorial Pacific Ocean. El Niño occurs when the surface waters in the central and eastern Pacific Ocean become warmer than average, and La Niña occurs when these waters become cooler than average. More detailed information on what ENSO, El Niño and La Niña is, can be found in our El Niño impact reports for 2023 and 2024.

The previous El Niño started in June 2023 and ended in May 2024. ENSO is currently in neutral conditions¹. La Niña is likely to emerge between September and November (71 % chances) and very likely to persist through November-January (NOAA 13/06/2024; NOAA 16/09/2024).

The Indian Ocean Dipole (IOD), which typically interacts with ENSO and influences the intensity of both El Niño and La Niña, is forecasted to remain neutral (with temperatures

across the tropical Indian Ocean being close to normal) until January 2025 (Climate Impact Company 11/04/2024; BoM Govt. of Australia 06/08/2024).

In July 2024, a record high daily global average temperature was recorded, likely due to above-average temperatures in Antarctica. Although it is too early to predict, 2024 may be warmer than 2023 - the warmest year on record (EU 25/07/2024; Reuters 08/07/2024). The end of El Niño, which contributed to record-high atmospheric temperatures in 2023, and the onset of La Niña, which typically has cooling effects, are unlikely to reduce global temperatures, as their increase is primarily driven by greenhouse gas-induced global warming (WMO 03/05/2024).

During the second half of 2024, temperatures are forecasted to remain above average in large regions of the world, particularly East Asia and the Pacific, Central and South America, Middle East, and Central and Southern Africa, heightening the risk of heatwaves and wildfires in these regions (WMO accessed 19/08/2024).

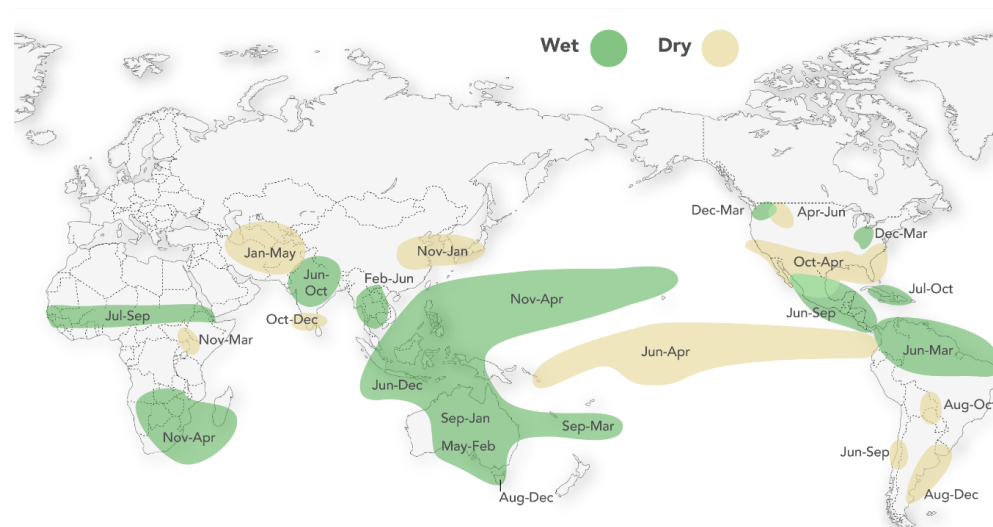
Main anticipated humanitarian impacts of La Niña in 2024-2025

If La Niña materialises by the end of 2024, La Niña-induced rainfall anomalies can be expected in various regions during the period covered by this report (September 2024–February 2025). These anomalies might include **wet conditions** in Southern Africa, South Asia, Southeast Asia, the Pacific, Central America, the Caribbean, and Northern Latin America, as well as **dry conditions** in parts of the greater Horn of Africa and Central Asia (IRI accessed 19/08/2024). The exact start of La Niña, its intensity and duration are hard to be predicted, as they depend on complex oceanic and atmospheric interactions (NOAA 16/06/2024).

In regions such as southern Africa, southeast Asia and the Pacific, La Niña is generally associated with a **higher probability of above-average rainfall**, which tends to be conducive for agricultural production. La Niña typically drives a global increase in rice and maize yields (FAO 2021). Hence, in countries that experienced below average precipitation during El Niño, including southern Africa, La Niña could improve agricultural outputs, alleviating humanitarian needs for drought-affected populations. On the other hand, heavy rainfall leading to floods in dry terrain can potentially exacerbate existing humanitarian needs for countries or areas previously affected by El Niño-induced weather anomalies. Also, **floodings** associated with La Niña often reduces crop yields and agricultural productivity, which can severely **disrupt livelihoods**, especially for agriculture-dependent communities. Floods can also contribute to the **displacement** of agricultural workers away from their farmlands or livestock, which can lead to the disruption of planting and harvesting of key crops (FAO accessed 01/08/2024). In 2009, heavy rains fuelled by La Niña led to the most severe flooding in Namibia for decades, causing the internal displacement of thousands of people.

¹ ENSO neutral conditions refer to the period in between the two extreme phases of ENSO, this being El Niño and La Niña. During ENSO neutral conditions, temperatures, winds and precipitation in the equatorial Pacific region tend to be within their long-term average (NOAA accessed 04/09/2024).

Map 2: Typical precipitation anomalies induced by La Niña



Source: IRI accessed 20/08/2024

They also caused extensive damage to crop and public infrastructure in neighbouring Zambia (FAO 2021; TNH 20/03/2009). In 2022, a persisting La Niña for a third consecutive year triggered severe floods leading to displacement in countries such as Pakistan, Nigeria and Brazil. La Niña also fuelled drought in Somalia, Ethiopia and Kenya, triggering around 2.1 million displacements (IDMC 11/05/2023).

Countries in Eastern Africa such as Ethiopia, Kenya and Somalia tend to experience **drier-than-normal conditions** during La Niña. These countries which rely heavily on agriculture, may face disruption to agricultural activities and reduced maize and sorghum crop yields. (Science Direct 10/04/2024; Xinhua 12/03/2024). La Nina-induced drought will likely exacerbate levels of **food insecurity** due to failed harvests and livestock deaths that destroy the food and income sources of affected communities, increasing their dependence on humanitarian aid (FAO accessed 01/08/2024). About 943 million people worldwide are projected to face severe food insecurity levels by 2025, due to different drivers including climate change and El Niño-Southern Oscillation (ENSO) (WB 29/01/2024). Due to the impact of the 2021/2023 La Niña and other factors, such as ongoing conflicts in various regions, nearly 258 million people in 58 countries faced Crisis food security levels or worse (IPC Phase 3 or above) in 2022 (FSIN 03/05/2023). In 2010, La Niña contributed to severe flooding in Pakistan that affected 18 million people and displaced many. It also destroyed key crops such as rice and wheat

that are staple food items in the region. This exacerbated an already existing food insecurity crisis (NASA 06/04/2011; TNH 04/08/2010; TearFund 31/01/2012).

Other countries that continue experiencing the impact of prolonged drought, such as Colombia, Ethiopia, and Somalia, will likely continue to face water shortages, affecting drinking water supplies and agriculture, and increasing food insecurity (OCHA 19/04/2024; WFP 27/03/2024).

Both, water contamination and sanitation infrastructure damage due to floods and water shortages due to dry conditions, contribute to reducing access to clean water and sanitation facilities, increasing the risk of **disease outbreaks**, such as cholera. Every year, between 1.3 – 4 million cholera cases are reported (CDC 12/05/2024). Some of the countries most impacted by disease outbreaks like Ethiopia and Nigeria are already grappling with cholera outbreaks that La Niña is likely to aggravate (OCHA 13/05/2024 and 27/04/2024). La Nina-induced precipitation and temperature anomalies are also expected to increase the incidence of vector borne diseases, such as malaria and dengue in the affected countries. In 2010, La Niña contributed to a spike of Dengue fever cases in countries in Indonesia and the Philippines, when over 156,000 and 173,000 cases were reported, respectively (NIH 17/05/2024 and 06/11/2014).

El Niño and humanitarian impacts in 2023 and 2024

El Niño, characterised by unusually warm ocean temperatures in the Pacific, has impacted global weather patterns from July 2023 through May 2024, with its peak occurring between September – December 2023 (WMO 05/03/2024; OCHA 17/05/2024). Various regions experienced notable temperature and precipitation anomalies. For example, countries in Southeast Asia and the Pacific, like Indonesia and the Philippines, faced drier-than-usual conditions, while East Africa countries such as Somalia and Kenya, experienced heavy rainfall and flooding beyond the expected levels for their typical rainy season. The impact of El Niño on these regions exacerbated humanitarian needs in countries with existing humanitarian crises, including food and health needs. As El Niño continued into early 2024, its effects were characterised by above-average temperatures and varying precipitation patterns across many regions, leading to heatwaves, flooding, droughts, and wildfires (FEWS NET accessed 31/07/2024; ACAPS 07/02/2024; OCHA 17/05/2024; AAH, WFP 23/04/2024).

In terms of humanitarian impacts, El Niño has affected global crop production, particularly for rice and maize. This has exacerbated food insecurity across different regions in 2023 and is expected to continue impacting global **food security** into 2024. In Southern Africa, over 61 million people are facing drought conditions, particularly in Mozambique, where agricultural production has been affected, leading to increased malnutrition and food shortages. Maize production in Southern African countries is expected to decrease by 22% in 2024 because of

reduced yields from droughts associated with El Niño, as farmers face challenging growing conditions (OCHA 20/05/2024; FS Cluster accessed 31/07/2024 ; FEWSNET 13/05/2024). In Central America, prolonged droughts and water shortages in the Dry Corridor region (includes parts of Costa Rica, Guatemala, El Salvador, Honduras, and Nicaragua) and heavy rainfall in coastal areas of Ecuador and Peru have disrupted harvest and reduced agricultural output, leaving 1.3 million people exposed to the impact of drought (WFP 27/03/2024; AAH,WFP 23/04/2024). Overall, up to 110 million people globally were projected to need food assistance through at least early 2024, with El Niño contributing to rising food insecurity rates (FEWS NET 03/10/2023).

El Niño had also an impact on **public health**, especially in East Africa, where heavy rains and flooding have contributed to cholera **outbreaks**, particularly in Somalia and South Sudan (Health Cluster, WHO 29/07/2024; OCHA 24/12/2023). 14 countries in Africa were experiencing a cholera outbreak as of June 2024, including Ethiopia, Kenya, Burundi, and others (WHO 01/06/2024). In Southeast Asia, the spread of dengue fever in countries like Bangladesh, which reported more than 321,000 cases and over 1,700 deaths in 2023, was exacerbated by water shortages and poor sanitation due to dry conditions triggered by El Niño. Additionally, the climate-sensitive nature of dengue as a vector-borne disease means that changes in temperature and rainfall patterns can affect mosquito breeding and survival, further contributing to outbreaks (WHO 26/10/2023; AJ 02/10/2023; ICDDR 10/07/2024).

Finally, weather anomalies associated with El Niño have driven **displacement**. Over 700,000 people have been displaced across Ethiopia, Somalia, Kenya, Burundi and Uganda due to floods occurred in November 2023 (OCHA 17/11/2023). Unprecedented flooding in Brazil due to heavy rains associated with El Niño also led to the internal displacement of between 500,000 and 600,000 people between April and May 2024 in the southern state of Rio Grande do Sul (WMO 07/05/2024; OCHA 20/05/2024; MSF 20/05/2024). Similarly, El Niño induced drought was one of the drivers of climate-induced displacement in the central and southern Mozambique in May 2024 (IOM 02/05/2024).

For more information on El Niño and its impacts between 2023-2024, you can consult previous ACAPS reports [here](#).

REGIONAL AND COUNTRY IMPACT

Africa

Between September and February, La Niña typically brings above-average rainfall in Southern Africa, parts of West Africa, Central and Eastern Africa and below-average rainfall in other parts of West Africa (IRI accessed 21/08/2023). The previous La Niña (2021-2023), is considered one of the main drivers, together with climate change, of the historically severe drought recorded in the Horn of Africa between 2021 and 2023 (OCHA 21/09/2022; WWA 27/04/2023; WMO 22/02/2023).

In the Greater Horn of Africa, seasonal forecasts predict below-average rainfall for the October to December rainy season, which typically provides a substantial portion of the annual precipitation, affecting southern Ethiopia, Somalia, Kenya, much of Uganda, Rwanda, Burundi, and Tanzania. The most severe impacts are anticipated in central and southern Somalia, southern Ethiopia, and the arid and semi-arid regions of Kenya (FSNWG 02/08/2024).

In southern Africa, seasonal forecasts for September to November anticipate near-normal precipitation in Mozambique, Zambia, Malawi, and Zimbabwe. The forecast for Madagascar for the same period anticipates a low probability of below-average precipitation in some parts of the eastern and southern regions. Above-average temperatures are expected in all Southern Africa countries during the same period. Between December and February, seasonal forecasts anticipate near-normal precipitation in most of Southern Africa, while temperature are expected to remain above-average (WMO Accessed 21/08/2024; C3S Accessed 21/08/2024). While the expected near-normal precipitation may provide relief to the drought-affected region, the anticipated above-average temperatures might delay the recovery from 2023/2024 El Niño-induced drought, which led to crop and livestock losses, food shortages, and increasing food insecurity, particularly in Malawi, Zambia, and Zimbabwe (SADC 05/06/2024; OCHA 19/04/2024; SkyNews 03/04/2024 ; Bloomberg 03/04/2024). Up until May 2024, nearly 22 million people in Malawi, Zambia, and Zimbabwe were experiencing severe food insecurity (IPC Phase 3 or above) (SADC 05/06/2024).

Ethiopia

INFORM RISK SCORE: 7.1/10 - Very High

La Niña impact risk: high

Projected hazards for September 2024 – February 2025 and main exposed localities

The seasonal precipitation forecasts for September to November indicate a high probability of above-average rainfall in most regions (north, west and central) of the country, which may trigger new flooding and landslides.

The Somali region and some parts of Dire Dawa region are expected to receive below-average precipitation. Temperatures are likely to remain above average during the same period in the whole country (WMO Accessed 21/08/2024; IRI Accessed 21/08/2024).

The below-average rainfall anticipated in the Somali region may affect the second rainy season which runs from October to December. Forecasted below-average rains could minimise the growth of pasture and limit access to water for human and animal use. (ACAPS Accessed 30/07/2024; REACH 31/07/2024; FSNWG 02/08/2024).

Seasonal forecasts for December-February anticipate below-average precipitation in northern, central and southern regions. The rainy season, however, typically begins in early or mid-February in these regions and ends in May. Temperatures are expected to remain above-average in the entire country during the same period (WMO accessed 22/08/2024; C3S accessed 22/08/2024; IRI accessed 22/08/2024). This may trigger drought and water scarcity in the affected areas.

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

Ethiopia has been affected by the 2023/2024 El Niño-induced heavy rainfall and subsequent flooding in many regions of the country. Between April and May 2024 alone, floods affected more than 590,000 people, and displaced around 95,000 in Afar, Amhara, Central Ethiopia (CE), Oromia, Sidama, Somali, South Ethiopia (SE) and Tigray regions, many of them are still displaced (IFRC 03/06/2024 ; OCHA 06/06/2024 ; UNICEF 11/06/2024). From July 2024, new flooding and landslides were recorded in western and southern Ethiopia, respectively. Over 21–22 July, heavy rains triggered landslides in Gofa zone (Southern Ethiopia region), causing over 200 deaths and directly affecting around 15,000 people (Aljazeera 27/07/2024; DW 12/08/2024; IFRC 01/08/2024).

Ethiopia has also been facing recurrent severe droughts (2010/11, 2016/17 and 2020/23) resulting from consecutive poor seasonal rains (FSNWG 02/08/2024). At the beginning of 2024, 6.9 million people needed humanitarian assistance following below-average Kiremt (long rainy season) rains from June-August 2023. The drought affected mainly Afar, Amhara, Tigray, and parts of Oromia, Somali, and Southern regions (OCHA 12/03/2024 ; GoE 02/02/2024). Food insecurity and malnutrition levels have been heightened by drought particularly in zones of Afar, Amhara, Somali, and parts of South Ethiopia Region (SER) (OCHA 10/06/2024 ; GoE 02/02/2024).

In Tigray region, the impact of two years of conflict (2020 – 2022), drought, an eight-month (May–December 2023) pause in humanitarian food aid, access restrictions such as roadblocks and road closures continue to drive communities' humanitarian needs up to now (UNICEF 11/06/2024; ACLED 27/02/2024). In Amhara, the ongoing conflict continues to limit access to food and livelihoods in the region (FEWS NET 20/07/2024). Transportation and supply of both commercial and humanitarian goods have also been disrupted in the regions (Wazema Radio X 20/02/2024 ; AS 06/04/2024; ACLED 10/04/2024 ; ACLED 28/02/2024 ; BBC 24/02/2024 ; AS 06/04/2024)

Up until June 2024, Ethiopia is home to more than one million refugees and asylum seekers, the majority of whom are from South Sudan and Somalia. They reside in areas affected by conflict, drought, and floods heightening their needs for humanitarian assistance (UNHCR Accessed 04/07/2024; FEWS NET 20/07/2024). Until June 2024, an estimated 4.4 million people were internally displaced in Ethiopia. Of these, 18% were displaced due to drought and 7% due to floods (UNHCR 15/07/2024).

Anticipated humanitarian impact of La Niña

Below-average rainfall in October–December in Somali and some parts of Afar regions can exacerbate humanitarian conditions in the drought-affected regions. Water scarcity is likely to affect pastoralism which is a dominant source of livelihood especially in the Somali region, reducing pasture and water for animals (FEWS NET 26/07/2024). Water scarcity could also force people to consume unsafe water making them more susceptible to cholera (OCHA 10/06/2024).

From December 2024 to February 2025, other regions of Ethiopia will also experience below-average precipitation. This will increase the risk of waterborne diseases, mainly due to reduced domestic water supply, leading to poor handwashing and hygiene practices. Cholera is an endemic disease in Ethiopia and the country has an ongoing outbreak since August 2022. From January to June 2024, more than 18,000 confirmed cases and 130 related deaths have been reported (WHO 07/07/2024).

The heightened competition for limited water resources because of below-average rainfall could lead to resource-based conflicts between pastoralists as they need to feed and provide

water for their herds leading to further displacements (IGAD 10/06/2024 ; REACH 31/07/2024 ; IFRC 02/08/2024). In areas impacted by conflict and likely to receive below average rainfall such as Somali region, and above-average rainfall like northern Ethiopia (Amhara), the already high humanitarian access constraints are likely to limit the response to humanitarian needs caused or exacerbated by La Nina (OCHA 26/04/2024; WHO 07/07/2024; ACAPS 07/2024).

Disruptions to agriculture and livestock caused by below average rainfall will likely result in reduced food availability and higher market prices. As of July, grain prices remained significantly higher than those in 2023 and the four-year average. The combination of high prices and fuel shortages due to supply chain disruptions during the June 2024 to January 2025 outlook will continue to drive up transportation and supply costs. Areas with long-lasting fuel shortages may experience disrupted movement of goods, leading to lower market supply and higher fuel prices (FEWS NET 26/07/2024).

Areas expected to be affected by the impact of La Niña host over 1.6 million IDPs (UNHCR 15/07/2024). IDPs have often been impacted by climate shocks like drought and floods leading to food insecurity, displacements and loss of livelihoods (OCHA 04/07/2024).

Kenya

INFORM RISK SCORE: 6.2/10 - High

La Niña impact risk: high

Projected hazards for September 2024–February 2025 and main exposed localities

Seasonal precipitation forecasts anticipate dry conditions in the Northeastern, Eastern and Southeastern part of the country during the short rainy season in October – December 2024, which is typical during La Nina (IRI accessed 22/08/2024; ACAPS accessed 22/08/2024; WFP 17/07/2024; FSNWG 02/08/2024). Dry conditions may exacerbate drought in Kenya's arid and semi-arid lands (ASALs) and reduce agricultural and livestock productivity. Above-average rainfall are anticipated in the highlands west of the Rift Valley, the Lake Victoria basin region, parts of the highlands east of the Rift Valley, and the northwestern region, increasing the risk of flooding (WMO accessed 22/08/2024; ICPAC accessed 22/08/2024; C3S accessed 22/08/2024).

Temperatures across the country are expected to be warmer than the average for the season, with a high probability of above-normal temperatures in Eastern, Northeastern, and Coastal regions (IRI accessed 22/08/2024; WMO accessed 22/08/2024; ICPAC accessed 22/08/2024).

Seasonal forecast is mixed for the December 2024–February 2025 period. However, some models anticipate below-normal precipitation in the eastern parts of the country, which could lead to drought conditions (WMO accessed 22/08/2024; C3S accessed 22/08/2024). The central and eastern parts of the country are expected to experience above-normal temperatures, which could further intensify the impact of reduced rainfall by increasing evaporation rates and placing additional stress on both crops and water resources (WMO accessed 22/08/2024; IRI accessed 22/08/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

The impact of El Niño-induced heavy rains and flooding during the long rainy season (March-May 2024) and short rainy season (October-December 2023) has been severe (OCHA 21/11/2023; OCHA 03/05/2024). Flood-prone and riverine areas were particularly affected, with flooding impacting 43 of the 47 counties. As of 24 June 2024, an estimated 293,200 people had been displaced by floods and landslides caused by the March-May rains, while more than 500,000 people were displaced by the October-December 2023 rains (UNICEF 10/07/2024; REACH 22/04/2024). Some of the displaced people sought refuge with relatives or rented houses while nearly 54,000 remained in displacement sites by 19 June (OCHA 19/06/2024). The

heavy rains and floods have caused significant damage to infrastructure, including houses and schools, in 38 of the 47 counties, destroyed crops and farmlands, and diminished access to water and sanitation, increasing the risk of diseases such as cholera (OCHA 03/05/2024).

Over 80% of Kenya's landmass is classified as arid and semi-arid that are susceptible to flash floods and drought (KMD accessed 31/07/2024). Between February 2024 and March 2024, approximately 1.9 million people faced Crisis (IPC Phase 3) or worse food insecurity levels in ASAL areas (IPC 26/03/2024). The semi-arid regions, where pastoralism is the main livelihood, were among the most affected by the impact of the El Niño-induced rains.

Kenya hosts around 777,000 registered refugees and asylum seekers, primarily in the Dadaab and Kakuma camps located in Garissa and Turkana counties, respectively (UNHCR accessed 31/07/2024). These arid areas, vulnerable to drought, were also severely impacted by the El Niño-induced heavy rains. By 20 May, over 23,000 refugees had been displaced from their the Dadaab and Kakuma refugee camps. (UNHCR 03/05/2024 and 20/05/2024).

Anticipated humanitarian impact of La Niña

The combination of below-average rainfall and above-average temperatures in northeastern, eastern, and southeastern areas of Kenya may affect the outcome of the October-November short rains. The counties expected to be most affected, as they receive the October-November rainfall, include Embu, Garissa, Isiolo, Kitui, Machakos, Makueni, Mandera, Marsabit, Meru, Tharaka-Nithi, and Wajir, leading to poor crop yields. Insufficient rainfall may also delay the onset of the general planting season as the soil moisture may not be adequate for seeds to germinate (ACAPS accessed 03/08/2024). This may lead to food shortages and soaring prices for staple foods.

In the 23 ASAL counties, dry conditions may further reduce available pastures, adversely affecting livestock health. This could negatively impact livestock milk production and escalate migration and resource conflicts. Consequently, food availability may diminish, and food prices rise, worsening food insecurity (FEWS NET 01/06/2024; NDMA 16/07/2024). IPC Phase 3 (Crisis) outcomes are expected to persist, particularly in drought-affected areas and areas previously hit by floods, such as parts of Garissa and Tana River counties (IPC 26/03/2024; FEWS NET 01/06/2024). Refugees in camps like Dadaab and Kakuma, located in ASAL regions, may face additional hardships as food availability diminishes and worsening overall food security.

Water scarcity may also increase the prevalence of waterborne diseases and exacerbate malnutrition, especially among children and pregnant women (IPC 26/03/2024). Between January and July 2024, over 390 cases of cholera and three related deaths were reported across the country (USAID 23/08/2024). Finally, prolonged drought conditions are also likely to lead to displacement as people move in search of water and food, straining resources and increasing competition among displaced populations and host communities.

Somalia

INFORM RISK SCORE: 8.9/10 - Very High

La Niña impact risk: high

Projected hazards for September 2024–February 2025 and main exposed localities

According to seasonal forecasts, southern Somalia is expected to experience below-average precipitation between September and November. Warmer-than-normal temperatures may be observed across the entire country during the same period (WMO accessed 22/08/2024; C3S accessed 22/08/2024; IRI accessed 22/08/2024; WFP 17/07/2024). Below-average precipitation is likely to affect the performance of the Deyr rains running between October – November, threatening drought-like conditions.

Between December 2024 and February 2025, below-normal precipitation may be observed in large parts of Somalia, particularly in southern and northern regions. Temperatures are expected to remain above-average across the entire country during the same period (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024). These combined forecasts suggest significant challenges for water availability, agriculture, and overall livelihoods in the affected areas, especially following the below-average rainfall during the Deyr rains.

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

Like its neighbouring countries, Somalia has experienced heavy rains linked to El Niño, which resulted in flood events around the country. Until 26 December 2023, at least 2.4 million people were affected by the floods, including 1.2 million people displaced from their homes mostly in particularly in Puntland, Galmudug, South West, Hirshabelle states and in areas along the Juba river in Jubaland State (OCHA 26/12/2023). In addition, between March and May 2024 heavy rains have affected over 163,000 people and displaced about 37,120 in Hirshabelle, Jubaland and South West states (OCHA 03/05/2024; OCHA 06/05/2024).

Approximately 6.9 million people in Somalia will require humanitarian assistance by December 2024 due to a cycle of escalating climate shocks, including recurrent droughts and floods, ongoing conflicts and armed violence, as well as disease outbreaks and economic disruption (OCHA 27/12/2023). The country hosts approximately 3.8 million IDPs, 18,000 refugees and 20,000 asylum seekers (UNHCR accessed 01/08/2024). Crisis (IPC Phase 3) and Emergency (IPC

Phase 4) outcomes were projected in Somalia for the period of June–September 2024. Until March 2024, about 800,000 people were in Emergency (IPC Phase 4) and nearly 3 million in Crisis (IPC Phase 3) (FEWS NET 23/07/2024; UNHCR accessed 01/08/2024). Malnutrition rates are also increasing, with an estimated 1.7 million children under five anticipated to face acute malnutrition from January – December 2024 (IPC 15/02/2024). With already limited resources, below average and poorly distributed rainfall will deplete food and water supplies, leaving thousands of people, especially children, at risk of acute malnutrition (FEWS NET 23/07/2024; Govt.Somalia, Nutrition Cluster, UNICEF 12/08/2024; UNICEF 23/06/2024).

Anticipated humanitarian impact of La Niña

The forecasted below-average Deyr rains (short rainy season between October and December) are expected to heighten food insecurity, particularly in central and southern Somalia and will affect the Deyr 2024/2025 harvest. Poor rains may also result in earlier depletion of water and pasture, negatively impacting livestock body conditions, productivity, and market values (FSNAU accessed 04/08/2024; IGAD 09/07/2024; ACAPS accessed 04/08/2024). Southern agropastoral areas are of highest concern, where below-average Deyr crop production is likely to follow significantly below-average *Gu*² crop production (FAO 20/06/2024; FEWS NET 11/06/2024; FAO accessed 04/08/2024).

Cholera and waterborne cases are likely to increase in drought-affected areas, as was observed after the *Gu* rainy season in regions such as Lower and Middle Shabelle, where higher numbers of cases were recorded (UNICEF accessed 04/08/2024; OCHA 19/05/2024; Care 11/07/2024). The situation will likely worsen due to a lack of clean water which have dried up surface water sources and damaged WASH facilities.

Competition for limited resources such as water and grazing land is likely to intensify, leading to an increase in resource-based conflicts among clans especially in Gedo, Lower Shabelle, Middle Shabelle, Mudug and Lower Juba regions. (ACLED 31/07/2024). These conflicts will exacerbate insecurity and further hinder movement for both civilians and aid workers.

² The *Gu* rainy season (April–May–June) is the country's main wet season while the Deyr rainy season has a shorter duration and less precipitation.

Asia and the Pacific

During La Niña, Asia and the Pacific typically experience rainfall anomalies. In the central and eastern Pacific, sea surface temperatures become cooler, which leads to increased precipitation in the western Pacific. Thus, countries like Indonesia, the Philippines, and Papua New Guinea can experience above-average rainfall that causes flooding, landslides, and disruption to agricultural activities. The central Pacific, on the other hand, typically experiences below-average rainfall and dry conditions (SPREP 21/04/2023; Reuters 07/02/2024; AW 19/05/2024; Opensnow 18/06/2024).

Seasonal forecasts anticipate above average precipitation in Southeast Asia and the Pacific between September 2024 and February 2025, especially in the Philippines, Indonesia, Timor Leste, and Vietnam (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024). The likelihood of above-average rainfall may benefit agriculture, providing a relief in countries that have been affected by drought and drought-like conditions brought by El Niño in 2023 and the first half of 2024. In the region, La Niña conditions tend to boost the production of commodities like rice, wheat, sugarcane, palm oil, barley, and canola, which may contribute to lowering commodity prices and help reduce inflation (Coface 18/07/2024; ZCA 14/05/2024). At the same time, the higher-than-average rainfall expected in parts of Pakistan, the Philippines, Papua New Guinea and Timor Leste is likely to increase the risk of flooding and landslides, damaging infrastructure and crops, and disrupting lives and livelihoods (ZCA 14/05/2024; WMO 30/04/2024). With flooding, the risk of waterborne diseases such as diarrhoea also increases (Nature 28/03/2024).

In Central Asia, La Niña typically triggers below-average precipitation between January and May, with countries such as Afghanistan, Pakistan (northern regions), Iran, Turkmenistan, Uzbekistan, Kyrgyzstan and Tajikistan potentially experiencing dry conditions (WMO 29/10/2020; IRI accessed 22/08/2024). Seasonal forecasts already anticipate below-average precipitation across Central Asia starting from September 2024, which may continue during at least the first quarter of 2025 (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024).

Southern India also typically experiences below-average rainfall. On the other hand, in northern parts of India and southern Pakistan, La Niña brings above-average precipitation; seasonal forecasts for 2024 indicate a high probability of above-average precipitation during the September-November period, increasing the risk of flooding (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024).

Afghanistan

INFORM RISK SCORE: 7.7/10 – Very High

La Niña impact risk: high

Projected hazards for September 2024–February 2025 and main exposed localities

Between September and November, Afghanistan is expected to experience below-average precipitation, particularly in the northwestern provinces. Temperatures are anticipated to be above-average in the entire country (WMO accessed 26/08/2024; IRI accessed 26/08/2024; C3S accessed 26/08/2024; OCHA 16/05/2024). This may lead to a poor or delayed start of the winter rainy season (which normally runs from October to April), threatening drought-like conditions and water scarcity across the country.

Below-average precipitation and above-average temperatures are expected to continue throughout the December 2024–February 2025 period, especially in the northern provinces (WMO accessed 26/08/2024; IRI accessed 26/08/2024; C3S accessed 26/08/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

In 2024, heavy spring rains (April–May 2024) attributed to El Niño resulted in severe flooding and landslides mainly in the northeastern and western provinces of the country (Carbon Brief 13/06/2024; IFRC 17/05/2024). The floods destroyed thousands of homes as well as hectares of crops, worsening food shortages, and threatening agricultural livelihoods (IFRC 13/06/2024). By 6 June, April–May floods had affected more than 100,000 people throughout 32 affected provinces (OCHA 06/06/2024). Over 9,500 families were affected by the floods. Around 250 people were injured, an estimated 9,100 livestock was killed and nearly 20,800 acres of farmland were destroyed, while numerous bridges and roads were also damaged. These floods have exacerbated humanitarian needs, as many households were already struggling due to economic hardship and previous disasters (IFRC 17/05/2024).

In July, stone fruit yields were expected to be below average due to a cold snap in February and March 2024, followed by above-average temperatures. However, favorable spring precipitation (March to May) contributed to improved water and reservoir levels for summer irrigation, and helped winter wheat conditions recover to near-normal levels just before the harvest began (FEWS NET 06/2024; FEWS 07/2024). 12.4 million were projected to face acute food insecurity, classified in IPC Phase 3 or above (Crisis or worse) between May and October

2024 due to weak economic conditions, climatic shock affecting agricultural production and livelihoods, as well as political tensions with Iran and Pakistan impacting trade and labour migration (IPC 27/05/2024; FEWS NET 06/2024).

Anticipated humanitarian impact of La Niña

The 2020–2023 La Niña brought significant precipitation and temperature anomalies in Afghanistan, compounding the effects of climate change. In 2021, the country experienced its worst drought in decades, which hit more than 80 percent of the country. Drought-like conditions continued in 2022 and 2023, and by mid-2023, 25 out of 34 provinces were still reported by OCHA as in either severe or catastrophic drought conditions, affecting more than 50% of the population (OCHA 14/11/2022; OCHA 01/08/2023).

Below-average precipitation and above-average temperatures anticipated between September 2024 and February 2025 may lead to a delayed or poor winter rainy season, causing a delay in planting and poor crop growing conditions (FEWSNET accessed 28/08/2024). As agricultural production employs 80% of the population – both directly and indirectly – and accounts for at least 25% of the country's GDP, drought's impact on livelihoods, agriculture, and food security would be particularly severe (UNAMA 23/10/2016; FAO 19/11/2021).

Dry conditions may also further reduce access to water and safe WASH facilities. About 79% of Afghans lack adequate access to water, which has become increasingly scarce, particularly in southern and western parts of the country (UNDP 22/03/2024; IPS 14/12/2023).

The combination of insufficient access to safe water and exposure to high temperatures increases the risk of waterborne diseases (UNICEF 2022; Masood et al. 23/05/2022). Cholera, diarrhoea, dysentery, hepatitis A, typhoid, and polio, which is endemic in Afghanistan, are all linked to contaminated water sources (UNICEF 2022).

Pakistan

INFORM RISK SCORE: 6.4/10 - High

La Niña impact risk: high

Projected hazards for September 2024–December 2025 and main exposed localities

According to seasonal forecasts, southeast Pakistan, including Sindh province and parts of Punjab, is expected to experience above-normal precipitation between September and November 2024. In northern Pakistan, Gilgit-Baltistan, Khyber Pakhtunkhwa, and Jammu and Kashmir provinces may experience below-average precipitation during the same period (IRI accessed 22/08/2024; C3S accessed 22/08/2024; WMO accessed 22/08/2024; PMD 31/07/2024). Above-normal rainfall increases the risk of localised flooding in southern regions, while below-average precipitation in the north may trigger drought-like conditions (PMD 31/07/2024). Temperatures are likely to exceed normal levels across most parts of the country, increasing the risk of heatwaves (WMO accessed 22/08/2024; IRI accessed 22/08/2024; PMD 31/07/2024).

Between December 2024 and February 2025, seasonal forecasts anticipate below-normal precipitation in northern and central provinces, including Gilgit-Baltistan, Khyber Pakhtunkhwa, Jammu and Kashmir, Punjab, FATA and northern Balochistan, which may trigger drought-like conditions. (WMO accessed 22/08/2024; IRI accessed 22/08/2024). Above-normal temperatures are expected across most of the country during the same period (WMO accessed 30/07/2024; IRI accessed 30/07/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

Pakistan is highly vulnerable to climate hazards like droughts, heatwaves, floods, and landslides, leading to widespread displacement, humanitarian needs, and worsening food insecurity and malnutrition. Following the 2022 floods, at least 10.5 million people still require humanitarian assistance. Over 1.3 million remain displaced, with around 356,000 households without aid, particularly in Sindh and Balochistan (EU accessed 29/07/2024; OCHA 28/06/2024; USAID accessed 29/07/2024; UNFPA accessed 29/07/2024). In April 2024, El Niño-induced heavy rainfall caused floods in Khyber Pakhtunkhwa and Balochistan that affected around 1.5 million people. Between January – May nearly 1.3 million people were without proper sustainable WASH services are particularly vulnerable to disasters (OCHA 30/04/2024; ECHO 23/04/2024; UNICEF 23/05/2024). Between May and June 2024, Pakistan experienced severe heatwaves, especially in the southern province of Sindh and Karachi. Temperatures soared

above 52 degrees Celsius (125.6 degrees Fahrenheit), resulting in numerous fatalities (ECHO 28/06/2024; CNN 28/05/2024; Reuters 27/05/2023). Food insecurity persists, with about 8.6 million people in Balochistan, Sindh, and Khyber Pakhtunkhwa faced severe acute food insecurity between March and June 2024, including 1.6 million in IPC Phase 4 (Emergency) and 7 million in IPC Phase 3 (Crisis) (IPC 23/05/2024; UNICEF 30/05/2024). One in five children under five is undernourished and suffering from acute malnutrition (UNICEF 30/05/2024). Pakistan hosts approximately 3.2 million Afghan refugees, nearly 76% of whom are women and children, often susceptible to issues such as poverty, lack of access to healthcare, malnutrition and in need of humanitarian assistance (UNHCR 11/05/2024; ACF 25/01/2024).

Anticipated humanitarian impact of La Niña

Above-average rainfall brought by La Niña in Southeast Pakistan, including Sindh province and parts of Punjab may cause flooding, damage critical infrastructure, including schools, health facilities, and water systems. Contaminated waters and limited or lack of access to WASH facilities potentially increase prevalence of waterborne diseases like cholera as well as vector-borne disease due floods waters (UNICEF accessed 30/07/2024). Between January–July 2024 nearly 26,000 suspected cases of cholera, more than 1.3 million cases of malaria and over 11,000 cases of dengue were reported (Save the Children 17/07/2024; Pakistan Today 04/06/2024). Access to affected areas may be hindered due to potential damage to bridges and roads. The heavy rainfall is also expected to trigger landslides, resulting in casualties and property damage (UNICEF 10/04/2024).

Although above-average precipitation is generally benefitting for water-intensive crops, extreme rainfall events and flooding in the southeast may affect rice and cotton production. Damaged agricultural land and infrastructure can put at risk the rabi planting season (which includes crops like wheat, barley, and mustard) in Sindh and Punjab (October–December). This accounts for 57% of national cereal production. This poses a significant threat to food security across the country (FAO accessed 30/07/2024; Acaps accessed 30/07/2024; IPC 23/05/2024). Above-average rainfall could also lead to livestock losses, causing significant economic setbacks for local farmers and communities, compounding previous losses experienced during the El Niño heavy rainfall in parts of Sindh, Balochistan and Punjab (FAO accessed 30/07/2024; OCHA 30/04/2024). Heavy rains and high temperatures in parts of southwestern Pakistan is also likely to hinder crops' growth and development, leading to reduced agricultural productivity.

Below-average rainfall during the September–November period in northern Pakistan and the December–February period in central and northern provinces, including Khyber Pakhtunkhwa, Punjab, and Balochistan, will likely impact agriculture, lowering crop yields and driving up food prices (Govt. Pakistan 14/01/2024 and Govt. Pakistan 10/01/2024). Livestock in arid regions like Balochistan could suffer from a lack of water and grazing resources,

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increasing mortality rates (Govt.PK accessed 24/08/2024). Above normal temperatures could shorten the Rabi crop season in Sindh and Punjab (Govt. Pakistan 14/01/2024 and Govt. Pakistan 10/01/2024). High temperatures during the December - February season will accelerate soil moisture evaporation, exacerbating drought conditions and increasing the risk of crop failure (WMO accessed 30/07/2024; CGTN 27/05/2024). In Upper Khyber Pakhtunkhwa, Gilgit-Baltistan, and Kashmir it may accelerate snowmelt, increasing river inflows and the risk of further flooding (PMD accessed 30/07/2024; WMO accessed 30/07/2024).

Papua New Guinea

INFORM RISK SCORE: 5.7/10 - High

La Niña impact risk: high

Projected hazards for September 2024–December 2025 and main exposed localities

Seasonal forecasts indicate a moderate to high probability of Papua New Guinea experiencing above average rainfall between September and November 2024. Temperature forecasts indicate high probability of above average temperatures in the entire country (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024).

According to seasonal forecasts, above-average precipitation are expected to persist into the December 2024 to February 2025 period, along with above-normal temperatures (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024)

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

Intercommunal violence, high vulnerability to natural hazards, and political and economic instability affects Papua New Guinea. In 2022, violence related to general elections and intercommunal violence affected an estimated 265,000 people and displaced an estimated 87,000, many of whom later returned home (UNCT PNG 09/08/2022; The Guardian 28/09/2022; IOM 19/12/2022). Intercommunal violence increased in 2023 compared to 2022 and is continuing in a similar trend in 2024, resulting in new displacements (The Guardian 29/08/2023; ACLED accessed 04/08/2024; IOM 31/07/2024). El Niño-induced heavy rainfall in March, April, and May 2024 have resulted in floods and landslides in several parts of the country, causing deaths, displacements, and damage and destruction to infrastructure such as roads, health and WASH facilities, houses, and food gardens, which are used for farming and are a source

for daily food and income generation, and other sources of livelihood (IFRC 01/06/2024; Govt. Japan 12/04/2024; Al Jazeera 20/03/2024; IOM 31/07/2024; IOM 29/07/2024). By early August, around 33,000 people were in need of humanitarian assistance due to floods in Western Province (UNDP 01/08/2024).

Nearly 90% of the total population live in remote areas with lack of infrastructure and services (USIP 03/10/2022). The poor road network contributes to community isolation and access constraints. Papua New Guinea's topography comprises large and complex mountain chains, swamps, rivers and remote islands, making it difficult for transportation. Most of the national road network is discontinuous and is considered to be in a poor state. Such issues hinder humanitarian access in the country (LCA accessed 15/08/2024; PNGNRI accessed 15/08/2024). In May 2024, heavy rainfall and landslides in Enga province damaged or destroyed road infrastructure, impeding the transportation of fuel and food supplies to affected communities, besides hindering timely humanitarian assessments and response. Heightened insecurity due to intercommunal violence also constrained humanitarian response for the landslides (IFRC 01/06/2024; UNICEF 14/06/2024).

In Papua New Guinea, 60% of the total population do not have access to safe drinking water. Damage and destruction to WASH infrastructure caused by potential heavy rains brought by La Niña would aggravate the lack of access to water, sanitation, and hygiene facilities (WB 21/03/2024).

Anticipated humanitarian impact of La Niña

La Niña-induced above-average rainfall is likely to cause floods and landslides across the country, especially in the Highlands region and coastal provinces as they tend to experience more floods and landslides, potentially damaging or destroying houses, WASH facilities, food gardens and other sources of livelihoods, schools, and road infrastructure. (IFRC 01/06/2024; UNICEF 14/06/2024; OXFAM 07/05/2013).

Flooding would also increase the needs for food, potable water, access to sanitation and hygiene facilities, and healthcare support (IFRC 01/06/2024; UNICEF 14/06/2024; OXFAM 07/05/2013).

Healthcare needs would increase, especially among the displaced people, due an increased incidence of waterborne diseases such as diarrhoea and vector-borne diseases such as malaria, acute respiratory infections, and skin diseases (The Conversation 31/05/2024). Affected people experiencing floods and landslides would need mental health and psychosocial support (IFRC 01/06/2024; UNICEF 14/06/2024; OXFAM 07/05/2013).

The majority of households in the country depend on their land for their daily food and income. Damage to these gardens would significantly affect their food security and livelihood (University of Oxford accessed 05/08/2024; IFRC 01/06/2024; The National 24/03/2020; Mongabay 26/11/2018; NBC PNG 01/06/2024).

The Philippines

INFORM RISK SCORE: 5.4/10 - High

La Niña impact risk: medium

Projected hazards for September 2024–February 2025 and main exposed localities

Historically, in October-December periods of La Niña years, the Philippines experiences significant above average rainfall, especially in the Luzon islands (one of the three major islands the country is divided into) (WB 02/04/2019). Seasonal forecasts anticipate a high probability of above normal precipitation and a very high probability of above normal temperatures across the country between September and November 2024 (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024). Cyclonic activity is usually higher during La Niña, which may lead to more frequent and intense cyclones between September and December 2024 (GOVPH 12/07/2024; GOVPH accessed 25/08/2024; PNA 26/03/2024).

Seasonal forecasts indicate that above-average precipitation may persist into the December 2024 to February 2025 period, along with above-normal temperatures (WMO accessed 22/08/2024; IRI accessed 22/08/2024; C3S accessed 22/08/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

The Philippines is one of the most natural hazard-prone countries in the world and it is exposed to frequent typhoons, earthquakes, and volcanic eruptions (CAP 28/08/2024). On average, the country is crossed by eight tropical cyclones per year. Generally, the peak of the cyclone season occurs from July-October (PAGASA 15/08/2024).

In 2024, El Niño induced drought and dry conditions in 71 out of the 82 country provinces, affected the livelihoods of around 175,000 farmers and fisherfolk (OCHA 25/03/2024; DA 22/05/2024). This damaged crops and triggered water shortages. Around 170,000 hectares of cropland were affected, resulting in the loss of around 442,000 MT of crops, including of the two main staple crops, rice and corn (DSWD 03/05/2024). (DA 11/06/2024). In July 2024, the southwest monsoon and multiple cyclones have brought heavy rains and floods in the country, leading to displacements and destroying around 15,300 hectares of cropland (RI 01/08/2024; AHA Centre 24/07/2024; NDRRMC 26/08/2024).

Domestic rice prices increased significantly between February 2023 and April 2024, reaching record high levels. The drivers for the spike included the agricultural losses triggered by

El Niño-induced drought, a rise in international rice prices, largely attributed to the export restrictions imposed by India, and concerns about the impact of drought/dry weather conditions on rice crop in the country (IRRI 04/07/2024; FAO 01/08/2024). Prices stabilised in May and June 2024 due to improved precipitation but remained at near-record levels (FAO 01/08/2024).

The Philippines is frequently affected by natural hazards such as typhoons, heavy rainfalls, floods, earthquakes, and volcanic eruptions, resulting in displacement of millions of people each year, most of them temporarily (UNFPA 01/2019; WB 07/03/2023; IDMC 02/2015; OCHA 16/01/2024). In the Mindanao islands, armed conflict, violence, clan feuds, and crime also contribute to humanitarian needs, including food, potable water, shelter, and WASH assistance. Up until 23 August 2024, more than 224,000 people are displaced in the Mindanao, of which around 110,000 are displaced due to the heavy rainfall and floods brought in by the southwest monsoon (OCHA 13/08/2024; DSWD 23/08/2024).

Anticipated humanitarian impact of La Niña

Increased rainfall and cyclonic activity is likely to trigger significant population displacement, most of which likely to be temporary (OCHA 16/01/2024; DSWD 24/08/2024). These events are likely to also damage/destroy housing, WASH facilities, increasing the risk of water-borne diseases such as diarrhoea, and critical infrastructure such as roads and bridges (WHO 10/2009; IFRC 06/01/2022; NDRRMC 23/08/2024). Overcrowding in relief/evacuation centres could raise the risk of contracting acute respiratory infections (ARI), measles, and meningitis. Stagnant water sources could lead to increased population of mosquitoes, increasing the risk of contracting vector-borne diseases such as malaria and dengue (WHO 10/2009; IFRC 06/01/2022; Yonson 2018; PNA 18/05/2024; GoP 31/07/2024).

Although storms and heavy rainfall can damage croplands and consequentially worsen food insecurity, above average rainfall is generally conducive for agriculture and will likely increase crop yields, especially compared to the El Niño period. July-September and September-December are the main harvest season for maize and rice, respectively, contributing 60% of the total annual output for both crops (ACAPS accessed 03/08/2024; FAO 01/08/2024).

Timor-Leste

INFORM RISK SCORE: 3.6/10 - medium

La Niña impact risk: medium

Projected hazards from September 2024 to February 2025 and main exposed localities

La Niña events in Timor-Leste typically result in above-average annual precipitation, extending the wet season that usually runs between December–May and increasing rainfall during the dry season (Bacon et al. 10/10/2013; WB accessed 27/08/2024; ACAPS accessed 27/08/2024).

Seasonal forecasts anticipate above-average precipitation and temperatures between September–November 2024 in Timor-Leste (C3S accessed 22/08/2024; IRI accessed 22/08/2024; WMO accessed 22/08/2024). The anticipated above-average precipitation is likely to increase the likelihood of heavy rainfall and flooding, which could heighten the likelihood of mudslides, rockslides, and heatwaves (IPC 29/02/2024; WFP 23/04/2024).

Above-average precipitation and temperatures are expected to persist into the December 2024 to February 2025 period (C3S accessed 22/08/2024; IRI accessed 22/08/2024; WMO accessed 22/08/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including the impact of El Niño)

Between 2023 and the first half of 2024, El Niño triggered a drought in Timor-Leste (FAO/OCHA 05/03/2024). This has resulted in crop failures, livestock deaths, and water scarcity, severely affecting food security and nutrition. The country saw below-average maize and rice harvests from the end of 2023 to early 2024, alongside with increased food prices. Rice and maize, which are staple crops in Timor-Leste, are normally harvested between December–March and October–January, respectively (ADB 29/02/2024; WFP 23/04/2024; ACAPS accessed 26/04/2024; FAO 04/03/2024 and 23/10/2023). Food inflation also reached a ten-year high of 12.4% in December 2023, before declining to 5.4% in March 2024 (WFP 23/04/2024, 15/12/2023, and 22/04/2024; FAO 04/03/2024; Govt. Australia 30/01/2024; IPC 14/02/2023). With more than 70% of the population depending on agriculture for livelihood, the drought's impact has been profound, being the main driver of acute food insecurity in the country (WB accessed 08/01/2024; IPC 29/02/2024). In May–September 2024, about 360,000 people were estimated to face high levels of acute food insecurity (IPC 3 or worse) (Anticipation Hub 24/11/2023; WFP 15/12/2023; IPC 29/02/2024; WB 21/03/2024). The drought has also reduced the availability of drinking water in a country where over a third of households lack piped or protected well water (AHP 21/02/2024; IPC 29/02/2024; ADB/WB 18/11/2021; Govt. Timor-Leste 18/05/2023).

The country lacks robust frameworks for disaster risk and information management, resulting in poor coordination, early warning, and resource allocation during past natural hazard-related disasters (CFE-DM 03/03/2022; UNDRR 29/01/2022; GFDRR/WB 23/01/2022). Community aid remains a key coping strategy in parts of the country (WFP 23/04/2024).

Anticipated humanitarian impact of La Niña

Above-average rainfall during La Niña may offer temporary relief to farmers, but it also increases the risk of floods and landslides, which can damage critical infrastructure and farmland (IPC 29/02/2024; WB/ADB 2021). This is expected to worsen food insecurity, as floods and landslides may lead to the loss of livestock and crops, damage transport routes, and limit market access (IPC 29/02/2024).

The anticipated increase in rainfall will likely intensify WASH challenges. Flooding could contaminate water sources, increasing the likelihood of waterborne diseases, such as diarrhoea, and providing favourable conditions for the spread of vector-borne diseases, such as dengue fever and chikungunya (WB 15/05/2018; de Neri Machado et al. 10/04/2024; Tatoli 27/02/2024).

The country's road network is in dire condition, with an estimated 92% categorised to be in poor or very poor condition. Heavy rains may further damage these roads, isolating rural communities (Logistics Cluster accessed 02/05/2024). Weak telecommunications in rural areas also hinder the effective dissemination of early warning messages during natural hazard-related disasters. With minimal access to reliable weather forecasts, communities will remain ill prepared for the extreme weather conditions associated with La Niña (CFE-DM 03/03/2022; WFP 23/04/2024).

Latin America and the Caribbean

La Niña typically brings above-average precipitation and cooler temperatures in northern South America, Central America and the Caribbean, while it can lead to below-average rainfall and above-average temperatures in southern South America (Cambio 27/02/2024, WMO 31/08/2022).

The previous La Niña, which lasted from mid-2020 to mid-2023, caused important rainfall and temperature anomalies in the region, whose impacts are expected to persist through 2024, especially for communities dependent on agriculture (OCHA accessed 05/09/2024). Between 2022 and 2023, below-average precipitation triggered droughts in Central America and southern South America, while above-average rainfall caused floods and landslides in the northern part of the Subcontinent and in parts of Central America (New Scientist 22/02/2023; VOA 01/11/2022; BBC 10/10/2022; Seminario Universidad 01/09/2022). Dry and warm conditions, along with stagnant water, facilitated the spread of water- and vector-borne diseases. In 2023, the region recorded 4.5 million dengue cases. By June 2024, dengue cases had already reached 9.3 million, twice the number of cases reported in all of 2023 (OCHA accessed 05/09/2024; PAHO 20/06/2024).

Between September and November 2024, seasonal forecasts anticipate below-average rainfall in most of South America. Meanwhile, Central America and the Caribbean are likely to experience above-average precipitation. The entire region is expected to face above-average temperatures. Seasonal forecasts for the December 2024 to February 2025 period predict that above-average precipitation will continue in Central America and the Caribbean, with the conditions also expanding into northern South America. Temperatures are expected to be near-average in most of South and Central America, while in the Caribbean and parts of Central America they are very likely to remain above-average (IRI Accessed 25/08/2024; WMO Accessed 25/08/2024; C3S accessed 25/08/2024).

The prediction of above-average rainfall in Central America could benefit the production of maize and rice, two main staple crops in the region, which were severely affected by drought in 2023. The Dry Corridor, which spans through Nicaragua, Honduras, El Salvador, and Guatemala experienced droughts and irregular rainfall in 2023 due to El Niño, putting pressure on the food security of around 10 million people (WFP 27/03/2024; VoA 30/07/2024). However, abundant rains may also cause localised flooding, which have already affected parts of El Salvador, Honduras and Guatemala in 2023. In Guatemala, almost four million people were affected (GDACS accessed 05/09/2024; Guate Vision 02/11/2023; OCHA 08/05/2024). The expected warmer-than-average temperatures could also increase the incidence of crop pests and diseases, damaging crops (IRI Accessed 01/08/2024; Prensa Libre 04/04/2024). The incidence of dengue may remain high in Central America countries due to the combination of above-average temperatures and precipitation, which provide favourable breeding conditions for mosquitoes.

Below-average rainfall expected in South America may aggravate ongoing droughts affecting populations already suffering from low rainfall in Bolivia, and parts of Peru and Colombia (WFP 27/03/2024).

In the Caribbean, Haiti and the Dominican Republic are particularly vulnerable to the risk of flooding and landslides. Potential damage to sanitation infrastructure, stagnant water and the expected above-average temperatures may drive an increase in the incidence of waterborne diseases, such as cholera, and vector-borne diseases, such as malaria and dengue, particularly towards the end of the rainy season, between September and October (PAHO 26/04/2024; RCC Accessed 26/08/2024). The two countries may also be more exposed to hurricanes until the end of the hurricane season, as La Nina increases the frequency of hurricanes and contributes to the formation of more intense storms (NOAA accessed 25/08/2024).

Colombia

INFORM RISK SCORE: 5.6/10 - High

La Niña impact risk: high

Projected hazards for September 2024–December 2025 and main exposed localities

Between September and November 2024, seasonal forecasts anticipate above-average precipitation and lower-than normal temperatures in northern Colombia. Central and southern areas are expected to receive below-normal precipitations and above-normal temperatures (WMO accessed 02/08/2024; IDEAM 19/07/2024). Areas receiving above-average precipitation face an increased risk of flooding and landslides, which could damage critical infrastructure and affect agriculture and cattle raising, particularly in low-lying regions such as Chocó, Antioquia, the Amazon Basin and La Mojana in northern Colombia (ACAPS 08/08/2024; 3iS et al. 25/04/2024). In the archipelago of San Andrés and Providencia, forecasts anticipate a particularly active Atlantic hurricane season (June–November) with a 10–40% increase in the precipitations (IDEAM et al. 10/09/2017; ACAPS 13/05/2024). In central and southern areas, the combination of below-normal precipitation and above normal temperatures may increase the risk of drought and dry spells.

Seasonal forecasts for the December 2024–February 2025 period anticipate precipitation to be above normal in most of the country (WMO accessed 23/08/2024). Departments in the Amazon region such as Guaviare, Guainía and Vaupés, as well as in the Orinoquía and Pacific region, are expected to experience an increase in rainfall of between 10% and 20%, for the months of November, December and January 2025 (Ministerio de Ambiente 18/07/2024; IDEAM 19/07/2024). Precipitation anomalies brought by La Niña are likely to cause severe flooding and landslides due to extreme rains, affecting coastal and riverine areas, which may strain local infrastructure and response systems (IDEAM 19/07/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

Since 2020, non-state armed groups (NSAGs) have expanded their presence in the country, controlling up to 47.5% of Colombia's territory by 2023. 68% of areas under NSAG-control are rural. The territorial expansion has intensified territorial disputes among rival NSAG as the primary driver of conflict-related humanitarian needs (OCHA 15/03/2024). These disputes have resulted in significant humanitarian impacts, including multiple security risks, mass displacements, forced confinements, and disruptions to livelihoods, particularly in regions

like the Pacific, Amazon, and Magdalena Medio (OCHA 10/05/2024). NSGAs actions limit humanitarian aid delivery and overall humanitarian access to the most affected territories. Overall, many communities in Colombia, especially in rural areas and those hosting indigenous and Afro-descendant populations, lack access to basic services (OCHA 13/02/2024). Additionally, over 8.5 million people have been displaced due to conflict, with 5 million still internally displaced by the end of 2023 (IDMC 30/05/2024). Due to conflict and violence, economic vulnerability, and climate hazards, as of late 2023, 13 million people (25% of households) in Colombia were experiencing moderate to severe food insecurity, with 1.6 million facing severe conditions (WFP 02/05/2024).

During the first half of 2024, El Niño-induced rainfall anomalies triggered droughts and water shortages in various regions of Colombia, particularly affecting rural areas and municipalities in the Caribbean and Andean regions (ET 25/06/2024). This has disrupted essential services and increased the incidence of water and vector-borne diseases (3iS et al. 25/04/2024; IDEAM 19/07/2024). El Niño-induced flooding has severely impacted regions like the Caribbean and Andean areas, leading to significant disruptions in infrastructure and agricultural activities. The most affected regions include Chocó and the Amazon rainforest (ColombiaOne 08/02/2024; MinAmbiente 04/11/2023). A significant increase of malaria and dengue cases was reported during the first half of 2024, likely driven by rising temperatures due to global warming and El Niño-induced precipitation anomalies (PAHO 18/06/2024; INS 09/08/2024; INS 18/08/2023; PAHO accessed 05/09/2024). The impact of drought on agriculture and livelihoods during El Niño has been severe, with water shortages affecting crop yields and livestock, particularly in vulnerable regions like the Andean and Caribbean areas. The expected La Niña phenomenon later in the year may further exacerbate these conditions (El Espectador 24/11/2023).

Anticipated humanitarian impact of La Niña

As before, large parts of the country are expected to remain dry. However, starting from November 2024, La Niña-induced floods and landslides may damage or destroy housing and infrastructure. The potential impact is likely to be higher in the northern part of the country between the Caribbean and the Andean regions. These regions are particularly susceptible due to their mountainous terrain, which increases the risk of landslides, and their proximity to river systems, which are prone to flooding during periods of heavy rainfall (CPC 05/08/2024; IDEAM 19/07/2024). While above-average precipitation can be beneficial for agriculture, damage to crops due to flooding could reduce yields in the affected locations (Ministerio de Ambiente 18/07/2024).

Flooding and landslides may also damage or destroy water and sanitation infrastructure (El Nuevo Siglo 17/07/2024). This could result in unsafe water consumption, potentially leading to waterborne infections such as diarrhea and leptospirosis, which are associated with contaminated water during heavy rainfall events. Additionally, the increased precipitation

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may exacerbate the spread of vector-borne diseases like dengue and malaria due to the proliferation of mosquito breeding sites in stagnant water (3iS et al. 25/04/2024). Populations most at risk include those living in rural and remote areas and those facing difficult access to services, such as smallholder farmers, displaced persons and indigenous and Afro-descendants' populations (IDEAM 19/07/2024; OCHA 13/02/2024). Migrants and refugees are at risk due to the limitations they face to access basic food, shelter, and health services because of a lack of legal documentation (OIM 28/02/2023; OCHA/UNCT Colombia 01/03/2024).

Ecuador

INFORM RISK SCORE: 4.7/10 - Medium

La Niña impact risk: low

Projected hazards for September 2024–February 2025 and main exposed localities

In Ecuador, La Niña typically brings drier-than normal conditions, particularly to the Amazon and Inter-Andean regions, increasing the risk of drought (El Universo 02/06/2024; CCKP accessed 02/08/2024). Seasonal forecasts anticipate below average precipitation from September to November in large parts of the country, while temperatures are expected to remain above-average during the same period (WMO accessed 22/08/2024; C3S accessed 22/08/2024). The combination of below-average precipitation and above-average temperatures may trigger droughts and dry spells in the affected geographic locations.

Between December 2024 and January 2025, below average precipitation is forecasted in central and western parts of the country, including the Inter-Andean regions, heightening the risk of drought and water scarcity (WMO accessed 22/08/2024; IRI accessed 22/08/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

In Ecuador, the last El Niño caused severe flooding and landslides in the western coast and droughts in the Andean valleys (OCHA 15/05/2024; AP 17/04/2024). Heavy rainfall in the first half of 2024 has led to overflowing rivers and rapid flooding in vulnerable communities, triggering landslides that significantly damaged infrastructure (Aljazeera 17/06/2024; ECHO 24/05/2024; Reuters 25/04/2024). In the Andean region, drought linked to El Niño has depleted water reservoirs, limiting outputs at hydroelectric plants. This has led to power rationing and cuts in the country (The Guardian 16/04/2024; Euro News 24/04/2024).

More than one fourth of Ecuador's population lives below the national poverty line, making them particularly vulnerable to the economic and social impacts of ENSO. These impacts typically affect areas with poor infrastructure and lead to agricultural losses that particularly hit smallholder farmers (CCKP accessed 02/08/2024a; DDCF accessed 02/08/2024; WB 04/2024). Health risks, such as waterborne diseases are heightened in areas with inadequate sanitation due to floods contaminating of water sources and damaging sewage and water distribution systems (DDCF accessed 02/08/2024; Fair Planet 24/08/2023; IFRC 11/03/2024).

The agricultural sector was one of the most impacted by El Niño, especially small farmers growing cacao, corn, and coffee who faced significant losses due to heavy rains, floods, and above average temperatures (DDCF accessed 02/08/2024; Fair Planet 24/08/2023; IFRC 11/03/2024; NBC 09/10/2023).

The impacts of climate hazards impact on agriculture exacerbate food insecurity in the country, especially for communities reliant on agriculture for their livelihoods. In addition, losses in agriculture production contribute to the increase in food prices and food imports (WMO 08/05/2024; WFP accessed 15/08/2024; Global Issues 10/10/2023; USDA 09/04/2024).

Ecuador has the highest levels of violent crimes in Latin America, with the homicide rate reaching 47.2 per 100,000 inhabitants by the end of 2023. Economic, political, and social instability has been to this high level of violence in the country. This is exacerbated by the pressures brought by El Niño on economic and social conditions (TNH 07/05/2024; Gallup 19/04/2024).

Anticipated humanitarian impact of La Niña

Below-average precipitation may lead to a poor wet season, which typically runs from December to January. Increased dry conditions raises the risk of forest fires and could worsen the electricity shortage in the country due to the depletion of water reservoirs, limiting the output of hydroelectric plants that produce about 75% of the country's power (AP 17/04/2024; El Universo 02/06/2024). The decrease in temperature that could be brought by La Niña may impact the agricultural sector, which contributes 8% to the national GDP (GoE 09/2023; Primicias 02/10/2023). This will be especially relevant for banana production, as low temperatures hinder the plant development (Primicias 02/10/2023).

La Niña may also affect the fishery sector, Ecuador's third-largest revenue source, as cooler sea temperatures drive fish away from coastal areas, such as tuna fish that contribute significantly to the sector's production (Primicias 02/10/2023; Fair Planet 24/08/2023; TCD 13/03/2023; Global Marine Commodities accessed 15/08/2024).

Haiti

INFORM RISK SCORE: 7.2/10 - Very High

La Niña impact risk: high

Projected hazards for September 2024–February 2025 and main exposed localities

Current seasonal forecasts indicate that Haiti is likely to experience above-average precipitation between September and November 2024, particularly in the south. Temperatures are expected to remain above-average during the same period (WMO Accessed 25/08/2024, IRI Accessed 25/08/2024).

Above-average precipitation and temperatures increase the risk of waterborne diseases such as cholera, dysentery, Salmonella, Hepatitis A and Typhoid Fever, particularly in flood-prone areas (Lifewater Accessed 31/07/2024; CDC Accessed 31/07/2024). Together with above-average precipitation, the above-average hurricane season expected in the last half of the year, increases the risk of storms and flooding (Actalliance Accessed 31/07/2024; Reuters 31/07/2024).

Seasonal forecasts for December 2024 and January 2025 indicate a moderate probability of above-average precipitation for the island, in the western parts of Haiti. Temperatures will be highly likely to remain above-average (WMO Accessed 25/08/2024; IRI Accessed 25/08/2024). The interactions between both above-average precipitation and temperatures will continue to create a breeding ground for waterborne diseases (Lifewater Accessed 31/07/2024; CDC Accessed 31/07/2024).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

There were 5.5 million people in need by January 2024 in Haiti, from which 4.7 million required healthcare assistance, 4.4 million were food insecure, and around 3.4million needed WASH services (OCHA 28/02/2024). By May, most of the country experienced crisis level of food insecurity (IPC Phase 3 or worse) driven by insecurity and crime, inflation, limited food availability, and disruptions of the food supply chain due to security risks (FEWS Net 24/05; Crisis24 29/02/2024; Haitian Times 05/06/2024).

Additionally, the previous El Niño reduced agricultural production in Haiti, a sector that primarily relies on rainfall, due to below-average rainfall and droughts, limiting the availability of beans, cassava and breadfruit. That increased food prices, reducing the population's access to food (Ayibopost 27/03/2024; FAO 02/04/2024).

Since early 2024, there has been a rise in gang violence, particularly in the Metropolitan Area of Port-au-Prince (ZMPP). This has caused the closure of several health centres, restricted people's freedom of movement, leading to many being unable to go to work and school, disrupted food transportation, and resulted in approximately 100,000 people leaving the ZMPP to the Great South (South, Nippes, Grande'Anse and South-East departments Haitian Times 05/06/2024; UN 26/07/2024; Flowminder Foundation 03/05/2024; GITOC 01/07/2024; IOM 09/06/2024).

Longstanding issues in accessing WASH services also exacerbate the humanitarian crisis on the island. At least 26% of all Haitians do not have access to water sources, 75% do not have handwashing facilities with soap and around 70% cannot access improved sanitation systems, all of which have worsened due to an increase in displacement since the beginning of 2024; the scene is ripe for waterborne diseases to spread (UNICEF Accessed 26/08/2024; UNICEF 08/05/2024; MSF 24/08/2024).

Finally, access to health is also a problem in Haiti. In the capital, just over 20% of hospitals have been functioning properly since the beginning of the year, a direct consequence of gang violence, limiting maternity wards particularly (OCHA 26/08/2024; HOPE 09/05/2024).

Anticipated humanitarian impact of La Niña

The main anticipated humanitarian impact of La Niña-induced above-average rainfall and temperatures in Haiti would be an increase in waterborne diseases, particularly cholera, which typically peaks between September and October (ACAPS Accessed 30/07/2024; PAHO 27/04/2024).

That is because the rainfall may overflow the sewage systems contaminated with cholera, especially affecting those who must share bathrooms, such as those living in IDP shelters in the ZMPP, and spread the disease (WHO 11/12/2023). By January there were almost 80,000 suspected cholera cases across Haiti, with a third located in the Ouest department, where Port-au-Prince is located, so the national capital may face the worse effects (CDC Accessed 31/07/2024; PAHO 15/03/2024).

Flooding in Artibonite and the Ouest department, where the agriculture production is concentrated, could impact the overall harvest of rice and maize, two of the main crops for national consumption, creating further obstacles for people to access food, particularly to those who rely on their crops to feed and those already displaced who may not have the means to buy food as their prices increase (AAH, WFP 27/03/2024; ICPAC Accessed 31/07/2024).

Humanitarian access, which is a major challenge in Port-au-Prince and throughout Haiti, could worsen if flooding occurs on main roads such as National Routes No. 1, 2 and 3, and Route de Santo, which are the only connections between the national capital and the rest of the country (Logistic Cluster Accessed 13/08/2024; OCHA 02/04/2024).

In June 2023, flooding destroyed infrastructure and blocked roads in ten departments, limiting the ability to reach 200,000 people (IFRC 07/07/2024; Aljazeera 05/06/2023).

Venezuela

INFORM RISK SCORE: 5.6/10 - High

Impact risk: high

Projected hazards for September 2024–February 2025 and main exposed localities

Seasonal forecasts anticipate below-average precipitation between September and November 2024 in large parts of the country, while northwestern areas may experience above-average rainfall. Temperatures are expected to be above average, particularly in the eastern regions, during the same period (C3S accessed 25/08/2024; IRI accessed 25/08/2024; WMO accessed 25/08/2024). Areas expected to receive above-average precipitation may see an increased risk of flooding, while those expected to receive below-average rainfall may face drought. The active hurricane season increases the risk of floods and storms (Eldiario 09/02/2024).

Between December 2024 and February 2025, seasonal forecasts anticipate above average precipitation across the country, particularly in the north, and above average temperatures (WMO accessed 22/08/2024; IRI accessed 22/08/2024). Above-average precipitation raises the risk of flooding, as well as mudslides and rockslides, throughout this period (Belonging Berkeley 02/08/2024; Magnetic Media 13/10/2022).

Existing humanitarian conditions aggravating the impact of La Niña (including El Niño impact)

The past El Niño triggered a severe drought in 2023 and early 2024, which impacted agriculture and led to substantial crop losses such as rice, corn, and coffee, affecting livelihoods and increasing food insecurity, particularly among rural farmers (Reuters 11/07/2024; IADB 16/07/2024; AAH 06/11/2023; OCHA 15/05/2024; OCHA 28/11/2023; EIJ 18/01/2024). The reduction in precipitation has also strained electricity generation, contributing to rising energy prices and increasing inflationary pressure (UNRCP 08/2023; IADB 16/07/2024).

Climate hazards, such as drought exacerbate political instability, poverty, and displacement in Venezuela, worsening an already dire humanitarian situation marked by infrastructure deterioration, hyperinflation, and shortages of food and medicine (IOM accessed 02/08/2024c; IOM 02/08/2024d). El Niño has intensified malnutrition and increased waterborne diseases, further compounding the humanitarian crisis (IOM 02/08/2024d; WHO 2023).

On 1 July 2024, Hurricane Beryl, a Category 5 hurricane, devastated northeastern Venezuela, particularly Sucre. The hurricane caused severe flooding, especially from the Manzanares River, affecting over 29,000 people. Essential services like water and electricity were

disrupted, and many families were forced to evacuate due to landslides and extensive damage to homes, crops, and local businesses, severely impacting livelihoods in the region (IFRC 17/07/2024).

Approximately 7.6 million people require humanitarian assistance in the country. Nearly half of the total population lives below the poverty line, and Stressed food security (IPC Phase 2) is expected across the whole country until January 2025, with a portion of the poorest households are expected to remain in Crisis food security (IPC Phase 3) (FEWS Net 06/2024).

Anticipated humanitarian impact of La Niña

Between September and November, the anticipated below-average precipitation expected in most of southern and central states, may lead to a weak September–November rainy season that may delay the start of maize and rice planting activities and reduce the planted areas, affecting labour demand and food security (FEWS 06/2024; FEWS 04/2024).

In the northwestern states, such as Zulia, Falcon, and Zaria, above average precipitation may trigger flooding and landslides. Flooding could cause farmland damage and mud and rockslides, causing damage to infrastructure and disruption to mobility and negatively affecting livelihoods and food security (Belonging Berkeley 02/08/2024; Magnetic Media 13/10/2022; ECHO 28/11/2022; IFRC 17/07/2024; FEWS 06/2024).

The above-average precipitation expected across the whole country between December and January could provide relief from the recent drought by creating favourable conditions for the 2024/2025 crop growing season, which would likely favour rice and corn production in Venezuela (USDA 11/04/2024). This may reduce food import needs, which would help stabilise prices in the country. Furthermore, the expected favourable weather conditions might increase the demand for agriculture labour, improving the livelihoods conditions in the country, especially for small farmers (FEWS Net 06/2024).

The anticipated increase in rainfall would allow for less reliance on mechanical irrigation and fuel use, especially that the above-average rainfall will improve dams' optimal water levels, which should benefit production in that area (USDA 11/04/2024).

However, the impact of La Niña also translates into a greater probability of storm formation and intense rainfall. This could lead to an increase in landslides, floods and soil erosion in the country (Efecto Cuyo 11/02/2024; Magnetic Media 13/10/2022). This could damage farmland, especially in coastal and mountainous areas (IFRC 24/11/2022; Belonging Berkeley accessed 02/08/2024; Caracas Chronicles 11/10/2022).

Potential floods and landslides from the anticipated above average rainfall could also contaminate water sources and destroying WASH infrastructure, such as sewage and water distribution systems, which could require a WASH response to counteract potential loss of access to safe water supplies and increased health risks from waterborne diseases (OCHA 02/07/2024; ECHO 28/05/2024).