

## 2015/2016 El Niño in Asia - An Actor Analysis

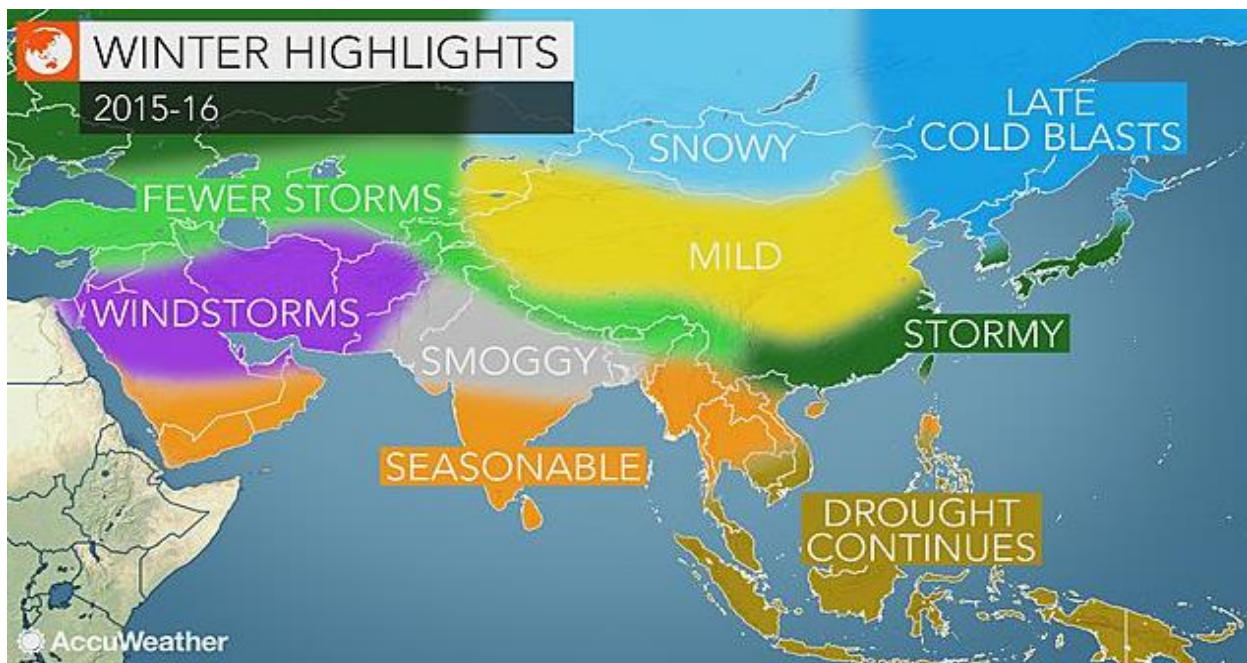
South and Southeast Asia

### Key Points

There is an approximately 95% chance that El Niño will continue through Northern Hemisphere winter 2015-16, gradually weakening through spring 2016<sup>1</sup>.

- El Niño is likely to be at its maximum strength towards the end of 2015 and will remain in place into the first half of 2016.
- Predictions announce a season of severe drought and erratic cyclones in the Asia-Pacific region, as the phenomenon reached the level of the particularly disastrous 1997-98 El Niño<sup>2</sup>.
- Countries in the region will be unevenly affected depending on a range of geographical, social and political factors.
- Rural agriculture and fisheries dependent households are at risk of higher impact.
- Complexity lies with the embedded dimensions of a long forecasted slow onset disaster, a global DRR shift, and a likely need for an emergency response in the most-affected countries (among those considered in this report: Indonesia and the Philippines).

### Overview of the 2015/16 El Niño in the Asia-Pacific Region



Source: [AccuWeather](http://AccuWeather) (10/2015)

<sup>1</sup> National Oceanographic and Atmospheric Administration (10/8/2015)

<sup>2</sup> Tropical meteorologist said sea surface temperature anomalies in the region of the equatorial Pacific Ocean were the warmest on record for September, 0.07°Celsius warmer than 1997. The Weather Channel (10/8/2015)

## RISKS

In 2015, drier than normal conditions are already being experienced in parts of Asia, and fears of a prolonged drought are increasing in some countries for the months ahead.

The risk of a typhoon in the Western and Central North Pacific will also be above normal until the end of 2015, while in the Southwest Pacific and the Bay of Bengal routes and intensity of tropical cyclones are expected to be altered for the 2015-2016 season.

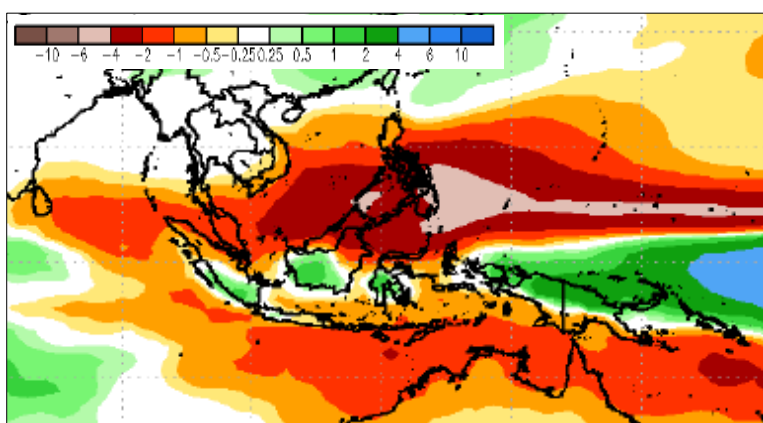
Concurrently, torrential rains, landslides and even snowstorms in extreme situations, can be side effects driven by the weather phenomenon. Bushfires and forest fires in Southeast Asia will also adversely contribute to potential compound disasters.

## CONSEQUENCES

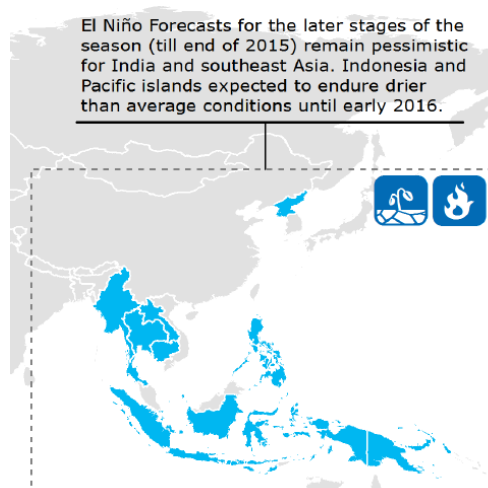
While strict causalities will remain difficult to establish -as with many weather phenomena-, crop failures, water shortages, food insecurity and illnesses can be directly or indirectly imputable to an El Niño, considering its impact on rainfall and cyclone patterns.

While the 2015/16 El Niño is expected to be one of the strongest in the last decades, its effects are therefore likely to endanger livelihoods, harvests, and the nutritional status of the rural poor households relying on subsistent agriculture or fishery activities in the most-affected countries.

Consequences over the most vulnerable populations, with limited resilience options, might reach major disaster levels.



Source: FEWS NET - Precipitations anomalies (mm/day)  
December-February 2016 (October 2015 initial conditions)



Source: WFP (11/2015)

El Niño is a global phenomenon which affects all continents. Central America, East and Southern Africa are particularly hit when a powerful El Niño occurs<sup>3</sup>. With a focus on Asia, this report is intended to support ACFIN missions' strategic decision-making and advocacy, by examining the potential impact of the 2015/16 El Niño in the region and by analyzing key stakeholders' positioning, intentions and means to respond to it. This report will focus on affected countries where the Action Against Hunger International Network implements programmes (India, Bangladesh, Myanmar, Cambodia, Indonesia and the Philippines).

<sup>3</sup> In the 35 countries covered by [FEWS NET](#) (none being in Asia) approximately 38 million people will be considered in Crisis (IPC Phase 3) or worse during FY16. This reflects a 30% increase compared to FEWS NET's estimates for FY15. Half of these needs are from countries where El Niño-related climate impacts are a key driver. EU decision, early December, to focus their response plan on these regions attests of an international prioritization scheme that excludes Asia so far.

## El Niño's Impact in Asia: A National Breakdown with a Focus on Food Security

There is no deterministic trend for El Niño as each episode varies and influences climate patterns differently. Therefore, this section should be seen as an attempt to highlight potential impact in each analysed country based on historical experience and conditions as for autumn 2015.

### INDIA

Situation to date

India has systematically been one of the countries that were most-affected by drought in the region with data showing that 10 out of 13 droughts since 1950 have had an El Niño connection<sup>4</sup>.

After a timely and wetter than average start of the 2015 monsoon season which can be attributed to a temporary weather factor<sup>5</sup>, India experienced rainfall deficits from late June onwards. This has led to lower than average vegetation cover across most of the subcontinent, notably in the major crop growing areas of the Northwest and Central North of the country. Water shortages were also particularly felt in the western half of India (from Gujarat to Karnataka), where water reservoirs - relying for about 75% of annual water usage on the Monsoon rains (as country-wise) - were dramatically emptying after June's early rains.

Regional Summary of Southwest Monsoon 2015 (Variance over Normal Rainfall)					
	June	July	August	September	Season
Country	16%	-17%	-23%	-23%	-14%
East & Northeast India	1%	-17%	13%	13%	-8%
Northwest India	31%	5%	-37%	-37%	-17%
Central India	23%	-17%	-34%	-34%	-16%
South Peninsula	19%	-49%	-21%	-21%	-15%

Source: Chennai Rains (9/30/2015)

The 2015 Monsoon, over since October 1<sup>st</sup>, averaged 14% below the normal rainfall across India and a faster-than-normal withdrawal from Northern and Central India further worsened the deficit in the following weeks.

Weather patterns



Source: AccuWeather (9/30/2015)

In October, the 2015 Monsoon continued to withdraw, leaving many pockets of drought in the country. Rainfalls by the end of 2015 are expected to overall remain from deficient to scanty<sup>6</sup>, while rural distress due to water shortage worsens across India. The first half of 2016, until the start of the next rainy season, already appears very challenging, with damaging unseasonal rains on top.

Besides, threats of tropical storms increase as the Indian Ocean remains very active on both coastal lines of India. However, development may not occur, and even if so, a weaker storm is the most likely result.

<sup>4</sup> The International Business Times (9/14/2015). [India to Witness Third Worst Monsoon in Three Decades This Year](#)

<sup>5</sup> [The Indian Express](#) (9/2/2015): "The surprisingly good rainfall in June was attributed to MJO, a moving system of wind, cloud and air pressure that brings rain as it circles the earth around the equator (...). MJO is a temporary phenomenon and lasts barely a week or 10 days in any particular region".

<sup>6</sup> See the Aridity Anomaly Maps, prepared by the Indian Meteorological Department (IMD) Drought Resistance Unit: during the kharif season (June-September) for the whole country and for North East Monsoon season (October-December) for 5 Meteorological Sub divisions-Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Kerala and Tamilnadu and Pondicherry on biweekly basis.

India's agricultural sector being highly dependent on Monsoon rains, the critical months in terms of seasonal performance are from July to September. During this period in 2015, the country experienced a shortage of water for irrigation, and water levels in major reservoirs dipped 16% below normal<sup>7</sup>. Historically, production loss during drought years was estimated at 30-40% (combining yield loss and area loss), while at the micro level drought-affected households could suffer rice production loss from 40 to 70%<sup>8</sup>. These estimates are believed to be an accurate prediction of the future potential impact of the 2015 drought on the Indian agricultural sector. Given this forecast, the economic cost could also be enormous on both national and international markets as India is one of the main rice exporters worldwide.

As of September 2015, the prices of rice and wheat are stable (around US\$ 0.50/kg)<sup>9</sup>. However, Monsoon-sown food grain production is predicted to decrease this year by almost two million tons (MT), from 126.3 MT to 124.05 MT<sup>10</sup>. The extent to which this decrease will be compensated by the government's willingness to import food to avoid inflation is uncertain. Besides, the impact of the drought on small farmers can already be witnessed as several states (nine as of November) declared a drought-related agrarian crisis and as attests the rising number of farmers suicides between January and September<sup>11</sup>. A failed winter crop would mean the fourth consecutive crop failure for a majority of Indian farmers.

The populations' resilience to environmental shocks in India is directly correlated to density and poverty. The areas that experienced severe arid conditions through July and August 2015 are also some of India's densest; while despite economic growth, high levels of poverty, food insecurity and malnutrition persist in the country. An estimated 32.7 percent of the Indian population lives on less than US\$ 1.25 per day, and the country is home to a quarter of all undernourished people worldwide<sup>12</sup>. With more than half of the Indian population directly involved in the agricultural sector - a poor monsoon is likely to significantly increase incidences of poverty and undernutrition as food availability and farmers' purchasing power decrease.

### Overview: Potential Impact of El Niño on India

- **By the end of 2015**, the effects of the current El Niño will continue to decline on the Indian peninsula, following the yearly ENSO pattern.
- **By mid-2016**, the consequences of the drought, essentially imputable to El Niño, will continue to weigh on small farmers as they hardly recover from successive poor harvest seasons.

	Areas Affected	Impact
India	<p>Punjab, Haryana, Rajasthan and Uttar Pradesh (growing regions of cotton, rice and sugar cane)</p> <p>Karnataka, Kerala and Andhra Pradesh (main producers of coffee, rice and rubber)</p>	<ul style="list-style-type: none"> <li>• Drought</li> <li>• Main harvest season affected</li> <li>• Potential poor secondary harvest season</li> <li>• Increasing levels of food insecurity and malnutrition</li> <li>• Food prices inflation</li> <li>• Water-borne diseases</li> </ul>

<sup>7</sup> Economic Times. (9/4/2015). Water Levels Dip in Reservoirs, Alarm Bells Ring Across States

<sup>8</sup> IFAD (2009). Droughts, coping mechanisms and poverty, Insights from rainfed rice farming in Asia

<sup>9</sup> [Food Security Portal](#), India (latest available figures)

<sup>10</sup> Indian Ministry of Agriculture and Farmers Welfare

<sup>11</sup> In Maharashtra alone, 2,234 farmers committed suicide between January and September, revealed a Right To Information (RTI) response from the state revenue department.

<sup>12</sup> World Food Programme, [India](#)



The Indian government's response to the seasonal flooding caused by Monsoons is usually highly effective in search-and-rescue and in the immediate provision of food and drinking water. Early drought warning from the IMD<sup>13</sup> in 2015 played a key role in the authorities' preparedness, at centre and state levels. However, complementary humanitarian initiatives are generally required to plug gaps for socially excluded communities. In addition, the question of water's quality is a national concern, exacerbated in situation of water scarcity.

### ACF India's views on the situation

*An Emergency Preparedness and Response Plan (EPRP) will be developed and adapted by ACF India in 2016-2017 to better orientate its response to emergencies, with a focus on assessment tools (SMART survey) and Nutrition in Emergency (NiE) interventions in Madhya Pradesh, Rajasthan and Maharashtra. The EPRP will also focus on developing community resilience and preparedness in disaster-prone areas with high prevalence of acute malnutrition, such as the states of Bihar, Jharkhand, Orissa or Assam. In addition, ACF will advocate for the setting up of a nutrition cluster and for UNICEF to take the lead in coordinating the efforts of stakeholders. ACF India is participating in the disaster preparation and response coordination meetings.*

*Too little has been done so far by donors and policy makers to address the problem of undernutrition in a changing climate. There is an urgent need to apply resources to fight undernutrition and help the most vulnerable building their resilience to a changing environment. Between 2005 and 2009, investments in nutrition interventions by major donors accounted for only 1% of the needs identified in the countries<sup>14</sup> with the highest burden of undernutrition, including India. Increased funding and technical support for nutrition specific and nutrition sensitive programs is more urgent than ever.*

*Immediate additional public funding is required in order to support adaptive strategies of the India's poorest to climate change. Better nutritional health can improve the resilience of the population to climate-related shocks and stresses. Therefore, government and donors should support nutrition focused adaptation and disaster risk management strategies, and should more specifically target women and children most at risk for undernutrition as a priority. A key challenge to that end is the fact that measures to address nutrition in emergencies are not integrated in the national nutrition policy or within the National Disaster Management Authority (NDMA)'s policies and guidelines.*

*ACF India's strategy of mitigation will remain limited at this stage, as our focus is on the treatment of severe acute malnutrition. However, nutrition sensitive activities are also being developed with a kitchen garden component to provide greater food diversity at cheaper prices, and to minimize the impact of the above mentioned climate change. Counselling, food demonstration, hygiene promotion, trainings are already in place and should be scaled up in partnership with the NDMA, UNICEF and SPHERE India. ACF is in discussion with UNICEF to develop a core technical group to work on guidelines and training package on nutrition in emergency and to build capacity of state task forces on addressing nutrition needs in emergency. In its area of intervention, ACF has conducted two SMART surveys in Khaknar block in November 13 and June 14, with persisting high prevalence of all types of undernutrition at 2 different periods of the year and one additional SMART survey in Baran in June 2014 (see Annex 1).*

<sup>13</sup> India Meteorological Department

<sup>14</sup> Horton S, Shekar M, McDonald C, Mahal A and Brooks JK (2010). Scaling up Nutrition: what will it cost? World Bank

## BANGLADESH

Situation to date

In Bangladesh, the risks usually associated with a strong El Niño are floods and landslides, correlated to irregular rain patterns. Due to the country morphologic specificities, between a third and half of the land is submerged in water during the Monsoon season, with major flooding being expected in July and August. In 2015, the country did experience early floods. However, they were caused by multiple factors (from the early melting of the snow-caps of the Himalayas to the complex regional geopolitics of water management), among which the 2015/16 El Niño appears as an indirect and marginal cause of compound disasters.

The El Niño cycle is not expected to have a significant impact on Bangladesh, despite a late onset of an uneven 2015 Monsoon. Good pre-Monsoon showers that covered many parts of the country have indeed lessened the impact of this delay.

### ACF Bangladesh's views on the situation

*The 2015/16 El Niño is unlikely to be credited a big impact on Bangladesh. However, ACF mission in the country is closely monitoring weather-related changes in general as a long lasting concern for populations. Rainfall patterns notably have dramatically changed over the past years. When south-east, south-west and north-eastern districts experienced comparatively heavier rainfall during the 2015 Monsoon season, the north-west part faced a drought-like situation. In recent years (2012, 2014) late monsoons have caused localized flooding. Considered in volume, the rainfall in October 2013 was 3.7 times higher than the rainfall at the same period in 2011.*

*Because of the physiographic features of the country and of the unique, massive regional hydraulic system it is part of, flood will remain a constant threat for Bangladesh. While the occurrence and intensity of flooding tend to increase, the population growth pushes more and more people to settle in flood prone areas, increasing their vulnerability. Over 45.5 million people were exposed in 2015 to severe and moderate floods (river flood, flash flood and tidal flood). Adaptation to climate change, disaster risk reduction and preparedness initiatives will have to be strengthened to help vulnerable populations coping with extreme weather events.*

## MYANMAR

Situation to date

The country has been and will remain sensitive to the El Niño phenomenon, even if to a relatively less extent than some of the other countries in the region.

Forecasts<sup>15</sup> in mid-May 2015 already highlighted that a strengthening El Niño would result in drier-than-normal conditions during the Monsoon months and post-Monsoon 2015-1016 dry season. As anticipated, central parts of the country have suffered in 2015 from reduced rainfall as compared to yearly averages during the Monsoon season. However, in spite of these shortages, unusually heavy rains in July and August which caused rivers and creeks to overflow with rainwater, flooding low lying lands, have also resulted in significant damages, killing dozens, and displacing thousands at the peak of the rainy season in 2015<sup>16</sup>.

<sup>15</sup> Myanmar Department of Meteorology and Hydrology

<sup>16</sup> Across all regions and states concerned, at least 150,000 people have had their homes moderately or severely damaged and needed some kind of shelter recovery assistance from repairs to new construction (Cluster Shelter update, 9/28/2015).

The country's mountainous features make it particularly vulnerable to landslides, these being more frequent and more dangerous with torrential rains, which affected Chin and Rakhine states and the Sagaing and Magway regions. Cyclone Komen aggravated the situation in the coastal area of the Rakhine state.

#### Weather patterns

While Myanmar entered its dry season (from November onwards), drier than average conditions remain the most likely threat to the country<sup>17</sup>, for late seasonal rains only provided temporary relief. Besides, rising water levels of the Ayeyarwady and Chindwin rivers pose renewed flood risk in the Ayeyarwady and Sagaing regions.

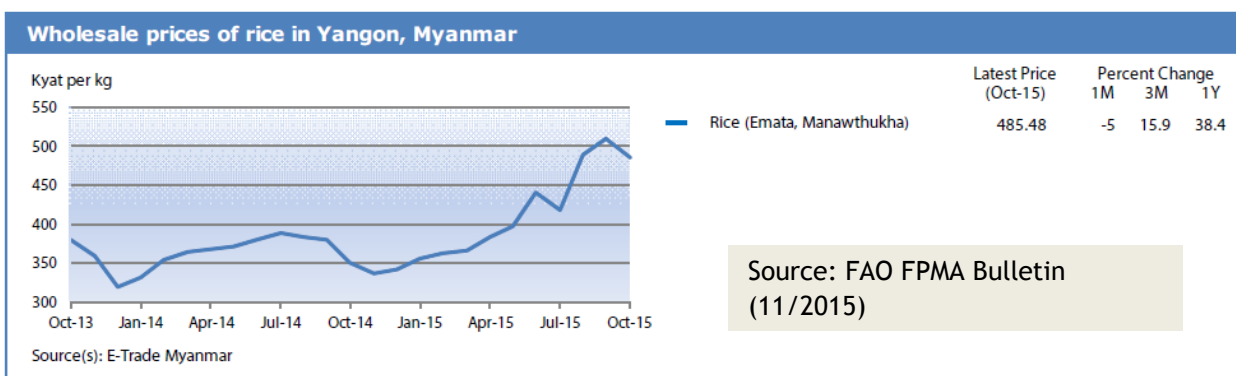
However, the menace of tropical storms (partly imputable to the El Niño-induced weather variations) withdraws for the cyclonic season ends by November 2015.

#### Impact on Food Security

El Niño has had an adverse effect on crop growing in the arid zone of central Myanmar, affecting traditional crops like sesame, beans and peas. As Myanmar is one of the world's main bean and pulse exporting countries (with the majority of its produce exported to India), the consequences of reduced rainfalls might affect the country's external trade and its national economy.

Besides, the flooding and cyclone Komen that happened in July and August 2015, during the growing phase of the main rice season (which accounts for the bulk of annual production), have seriously damaged rice production. Rice is the most important crop of the country, accounting for about 60 percent of the net sown area and 80 percent of the value of sector production. Some 210,000 hectares (or 3 percent of the total area) of standing paddy crop have been negatively affected<sup>18</sup>, which will likely result in increasing food insecurity for small farmers and deteriorating vulnerable households' nutritional status in the affected areas.

Losses of stored food and livestock as well as reported severe damage to housing and infrastructure, including roads, bridges, railway lines as well as ponds, irrigation and drainage canals, can lead to assume that recovery from these disasters will particularly take time as access to food, safe water, and to internal trade became an increasing challenge for the affected populations. The increase in wholesale prices of rice in Yangon (which can be seen as an indicator for the national situation), throughout 2015, adds a burden on the poorest household as they depend more and more on external access to food:



<sup>17</sup> Food and Agriculture Organization (2015). Early action overview of the 2015-2016 El Niño affected countries

<sup>18</sup> Myanmar Ministry of Agriculture and Irrigation's estimations

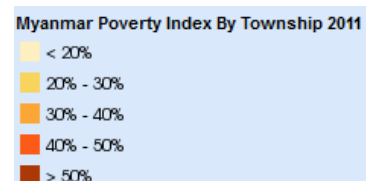
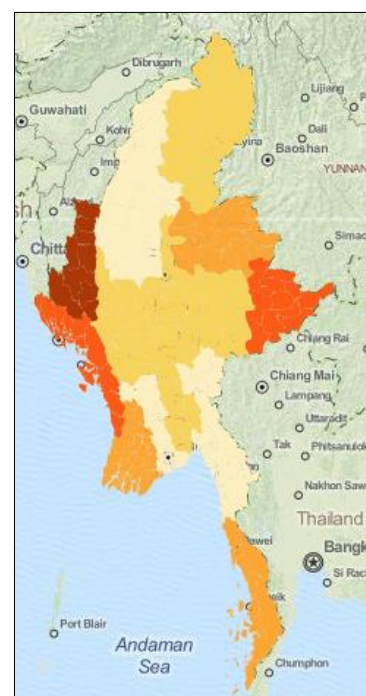
In addition, El Niño's effects on fisheries can be severe. As ocean temperatures rise, fish go deeper or migrate, leaving fishing communities without livelihoods. In Myanmar, fishing accounts up to 8 to 10 percent of GDP and is a major source of employment. All fishery products are primarily distributed for local food security and only the surplus are exported (around 6% in 2014/2015). The impact of a “Godzilla” El Niño, as some started to name it in reference to its exceptional intensity, is therefore susceptible to directly impact communities relying on fishery activities. When this happens, crewmen tend to be more vulnerable as their remuneration is generally lower than that of the fishing-boat owners.

## Resilience

In 2015, over a quarter of the population is estimated to live under the \$1.25 a day poverty line<sup>19</sup>, with 85% of the poor population living in rural areas and being particularly vulnerable to environmental shocks as some 70% of the labour force is engaged in agriculture or depends to a great extent on agriculture for income.

The rural poor typically consist of the landless, farmers with access to small and marginal landholdings (usually less than 2 ha each), and minority ethnic groups. Most of the poor live either in the central dry zone -where soils are sandy, rainfall low and population density high, and that have been affected by the drier than average conditions during the Monsoon season-, or in hill tracts populated by minorities -which are remote, have limited arable land and have been affected by conflict<sup>20</sup>. With volatile fishing or agricultural income and a limited variety of income earning opportunities, there is little scope for adopting income-diversification strategies (*ex ante* coping strategies) against risks and environmental shocks. As a result, rising food insecurity and impoverishment due to the consequences of El Niño are dire threats in these regions by mid-2016.

The areas in Rakhine state affected by the flood emergency in 2015 host a particularly vulnerable minority ethnic group. Politically, socially and economically marginalized, this population has even less means to cope with environmental shocks, as its movements are restricted over the Myanmar territory. An increase in precarious overseas-migrations outflows from Myanmar could be expected by mid-2016, in relation to the deteriorating situation and as the sailing season starts again end 2015.



Source: [WFP GeoNode](#)

## Overview: Potential Impact of El Niño on Myanmar

- By the end of 2015, Myanmar can face the concurrent threat of both renewed flooding episodes and warm temperatures and extended dryness in some (central) parts of the country.
- By mid-2016, the disaster threats will progressively decrease as the El Niño effect vanishes throughout the first months of the year.

<sup>19</sup> Asian Development Bank (2015): 25.6% of the population live under the poverty line.

<sup>20</sup> IFAD. [Rural Poverty Portal](#)



	Areas Affected	Impact
Myanmar	Chin and Rakhine states, the Sagaing and Magway regions, Central Myanmar	<ul style="list-style-type: none"> <li>• Drought (hydropower affected)</li> <li>• Flooding</li> <li>• Water-borne diseases</li> <li>• Repeatedly poor cropping seasons and crop failure</li> <li>• Increasing levels of food insecurity and malnutrition</li> <li>• Increasing food prices</li> </ul>

## National Response

Over 1.5 million people have been critically affected by monsoonal floods and landslides<sup>21</sup>, both likely being, at least to a certain extent, consequences of the El Niño's impact. On 31 July 2015, the President of Myanmar declared Chin and Rakhine states, and Magway and Sagaing regions, as natural disaster zones, allowing a joint rapid response in the most affected areas.

The Humanitarian Country Team in Myanmar (HTC) developed a governmental-led Floods Response Plan to pursue relief and recovery operations during the August to December 2015 period<sup>22</sup>. With overlapping objectives, the 2015/16 El Niño response could find in this Plan a framework within which to be deployed, at least towards the end of 2015. However, the poor and drier central regions of the country, which were not concerned by the July/August floods but might be further affected until the end of the year and in the first months of 2016, do not appear as a targeted area. Besides, the focus on the internationally praised elections of November could alleviate attention from slow-onset disasters at the time a new (and potentially inexperienced) NLD-led government takes over power (early 2016).

#### ACF Myanmar's views on the situation

*At the point of writing this report no impact on nutrition figures is observed. A SMART survey carried out in October 2015 in ACF's area of operation in Northern Rakhine State shows no increase in the prevalence of acute malnutrition. However, food security indicators have deteriorated (final SMART report will be released during December 2015) and an impact on malnutrition figures is usually seen only with a delay of a couple of months.*

*ACF has seen a considerable increase of admissions of SAM children in Rakhine State during the second half of 2015, most probably a pull factor from areas not covered by the program in direct relation to the impact of the August floods on food availability.*

*As a response to El Niño, the mission is implementing a strengthened monitoring system for food security indicators in Rakhine State as well as monitoring the availability and access to safe drinking water at community level. As the peak of El Niño and the post flood situation are coinciding with the beginning of the dry season, there is a serious risk of water shortages before the next rain season.*

<sup>21</sup> Humanitarian Country Team (HTC). Initial Flood Response Plan for Myanmar - August to December 2015

<sup>22</sup> As part of the enhanced 2015 Humanitarian Response Plan (HRP). Four main areas of action are targeted: (i) support to rural livelihoods - mostly farmers - and food security; (ii) restoration of equitable social services; (iii) rehabilitation of community infrastructure and temporary wage employment; and (iv) close coordination amongst Union and State/Regional governments, township administrations, civil society, private sector, humanitarian and development actors.

*In parallel, ACF is reinforcing its DRR programming strategy in Rakhine State. A follow up phase of the currently implemented Safer Coastal Communities Program is in design, with the aim to consolidate existing activities and further expand the geographical coverage. In line with this, the mission is also aiming at strengthening its response capacity for future disasters by reinforcing existing contingency stocks. In view of a potential impact of El Niño, and climate change more generally, the mission is also adapting its existing Food Security and Livelihood program strategy for Rakhine State towards a more climate change sensitive approach, seeking stronger integration and complementarity with Nutrition Security and DRR.*

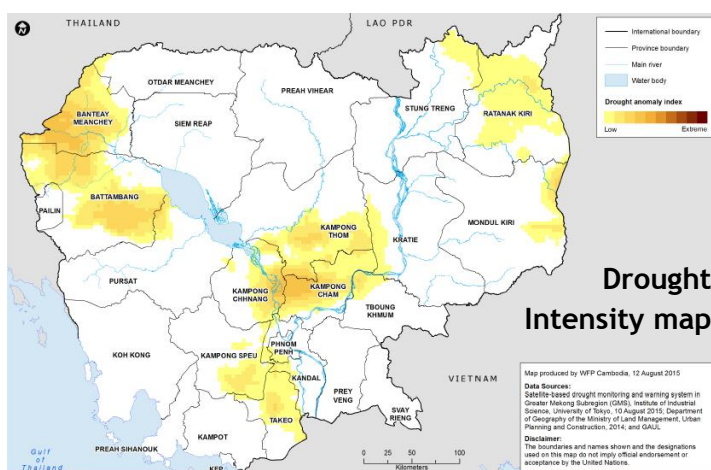
*The DRR 2016 phase consisting of CBDRR and Safe School Initiatives for a scale up in coastal communities in Rakhine State requires an estimated 500.000 Euros for an 18 months period. Additional flood preparedness measures targeting protection of water sources and livelihoods is estimated at 600.000 Euros for a 12 months implementation period. The reinforcement of the mission's contingency stock is estimated to require 50.000 Euro of procurement, warehouse expansion and maintenance. ACF could consider investing into the already existing stock and infrastructure in Myanmar as a regional resource, available to all Asia missions in case of disaster response.*

## CAMBODIA

### Situation to date

In June 2015, drought conditions monitored by satellite showed high water deficits in various parts of the country. Cambodia suffered from a 2015/16 El Niño-induced drought that could rival the devastating effects of the 1997-98 episode.

Cambodia is considered by international institutions a moderate priority country<sup>23</sup> among those most-affected by the 2015/16 El Niño. Areas of growing concern are located around the centre of the country and the North West.



Source: WFP Cambodia (8/2015)

### Weather patterns

Regional forecasts by the end of 2015 (October-December) indicate a moderately favourable improvement in rainfall patterns as compared to the seasonal averages. This could help alleviate the impact of the drier than average Monsoon months (July-September), usually providing about three-quarters of Cambodia's annual rainfall.

However, this relative improvement will be insufficient to compensate the existing deficit, which has already dried up many of the country's water sources with limited capacity to fill them again until the next wet season (monthly average rainfall during the dry season show only few days of rain per month on the country. While climatic conditions are expected to improve, the situation remains preoccupying in terms of water availability by mid-2016.

<sup>23</sup> Word Food Programme (10/2015)

As rains remained poor overall during the 2015 Monsoon, there is a high likelihood of a compressed agricultural season, crop losses and a resulting impact on livelihoods and food security. The main 2015 season paddy crop, which accounts for about 80 percent of the annual production, experienced delays and undermined yields of earlier-planted crops<sup>24</sup>, which would confirm this scenario. Early September, several thousand hectares of rice fields across Pursat and Battambang, as well as in the provinces of Banteay Meanchey, Takeo, Kampot, Kampong Speu and Siem Reap, were at risk of failure.

However, better rainfall conditions late in the Monsoon season allowed reaching close to last year's levels of crop planting<sup>25</sup>. Only 8 percent of the production area would remain affected by the earlier dry weather, with around 10,000 hectares completely lost.

Cambodia				
Cereal production				
	2010-2014 average	2014	2015 forecast	change 2015/2014
	000 tonnes			percent
Rice (paddy)	9 007	9 324	9 180	-2
Maize	784	550	500	-9
Others	0	0	0	0
Total	9 790	9 874	9 680	-2

Note: percentage change calculated from unrounded data.  
Source: FAO/GIEWS Country Cereal Balance Sheets

The 2015 aggregate rice production is anticipated to be 9.18 million tonnes. This is 2 percent down from last year, but still slightly above the five-year average.

The impact of the early season dry weather on the maize crop was more severe than for rice. As a result, forecast for 2015 maize production was lowered to 9 percent down from the 2014 reduced harvest and 36 percent below the five-year average.

Wholesale prices of rice increased in August, with concerns over the seasonal production adding upward pressure on food access. However, this increase remained lower than that of last year in most markets, balancing predictions over the extent to which food prices might increase by the end of 2015 and towards mid-2016.

Fishing communities along Cambodia's main rivers also saw their livelihoods threatened by the drought, which has reduced water levels and devastated fish numbers. The low level of waters means that flooding of the land where the fish breed and grow did not happen as usual, or to a lesser extent, impacting fish catching activities on the long run and certainly by mid-2016.

Cambodia's rural poverty remains a serious challenge, with approximately 80 percent of the country's population living in rural areas, and an estimated 71 percent of the population depending primarily on agriculture and livestock for their livelihoods. Poor storage and irrigation practices, and a lack of adequate infrastructure<sup>26</sup>, result in the rural poor population to be extremely vulnerable to weather events such as the drought experienced in 2015.

Coping mechanisms, for instance buying water for daily human consumption, is by no mean a sustainable solution when the daily labour salary is less than the cost of a container of water and is insufficient to cover the animals and farming needs. While populations have been witnessed to rely on such temporary solutions at the peak of the drought, there is a high probability that their financial and indirect costs (on reducing health expenditures notably) will continue to weigh on the most vulnerable households towards 2016, while water scarcity tends to decrease.

<sup>24</sup> The FAO Food Security Snapshot [GIEWS Country Brief](#)

<sup>25</sup> According to official estimates (as of 3 September)

<sup>26</sup> [Food Security Portal](#)

In the fishery sector, many of the households depending on fish catch for their living had turned to breeding fish in cages to make up for lost catches, but said the investment needed was landing many in debt, with lasting effects on households' food security by 2016.

### Overview: Potential Impact of El Niño on Cambodia

- By the end of 2015, the effects of El Niño on Cambodia will continue to decline.
- By mid-2016, Cambodia will have to deal with the consequences of the drought essentially imputable to the 2015/16 El Niño and of unsustainable coping mechanisms.

	Areas Affected	Impact
Cambodia	Bakan district has been particularly hard-hit by drought	<ul style="list-style-type: none"> <li>• Drought</li> <li>• Main harvest season affected</li> <li>• Fishing activities reduced</li> <li>• Increasing levels of food insecurity and malnutrition</li> <li>• Food prices inflation</li> </ul>

### National Response

Acknowledging the difficulties faced by the rural, agriculture-dependent population, the government of Cambodia has mainly issued warnings and advises on water conservation. Provincial authorities were devising plans to help pump water into farmers' fields in order to save their seasonal harvest. However, no national-scale scheme (for instance, planning to dig more reservoirs, or supporting irrigations systems) seemed to have been set up so far.

Besides, as Cambodia usually produces twice the amount of rice needed to feed its population, the government's strategy is oriented towards exportations. Direct rice exports between January and August 2015 have reached about 342 136 tonnes, nearly 50 percent up compared to the same period in the previous year. FAO forecasts total rice exports in 2015 at 1.2 million tonnes, 6 percent above last year's level, which could mean less food stocks remaining in the country in case of an extended food crisis.

### AAH<sup>27</sup> Cambodia's views on the situation

*Although much progress has been made in the last 20 years economically, socially and medically, it should not detract attention from the alarming nutritional situation. After a significant improvement between 1996 and 2005, the previous positive trends in nutrition have started to reduce and even to reverse, with a noted increase in wasting. In 2014, nearly 10% of the children are dangerously thin (wasted) and 32% are stunted.*

*For DRM, three main mechanisms are in place in Cambodia: the HRF (Humanitarian Response Forum for INGO), the CHF (Cambodian Humanitarian Forum for LINGO) and the NCDM (National Committee for Disaster Management for the government). The coordination between these 3 mechanisms progressively improves. However, there is still room for improvement. The Disaster Management law has just been approved. Lots of international actors are present and strongly involved in emergency preparedness and response (more than 30 international organizations). AAH is member of the HRF and closely follows up the situation. If needed, and if there is adding value compared to other partners, ACF will be ready to provide its support and expertise.*

<sup>27</sup> ACF stands for Action Contre la Faim, AAH for Action Against Hunger and ACH for Acción Contra El Hambre.



Currently AAH Cambodia is more focusing on a long term approach taking in account at the very early stage the climate change impact and El Niño impact to design the projects in three main directions: implementation of nutrition security project, technical assistance to the government and other actors, and advocacy to the government.

Building resilience of the communities, enabling positive environment along with nutritional outcomes are the core foundations of AAH strategy in Cambodia.

## INDONESIA

### Situation to date

Indonesia has been severely affected by the El Niño phenomenon in the past, with marked rainfall deficits extending throughout the year. In 2015, intensified drier-than-average conditions have resulted in extreme drought in several regions of the country, putting the country at serious risk of experiencing a 2015 drought-2016 dry season sequence with no rain break because of the phenomenon. With a consensus on the effects of the El Niño-induced compound disaster (drought, fire and haze) *in situ*, Indonesia is one of the top priority countries that international institutions and INGOS consider as most affected by the current El Niño<sup>28</sup>.

10  
provinces

Across Indonesia  
affected by El Niño  
related drought

84  
districts

Affected by El Niño  
related drought

22  
million

People rely directly on  
agricultural production in  
the affected districts, but  
many more people are  
likely to be affected

50  
million

People affected in Indonesia  
and adjacent countries with  
haze. The fires have significant  
impacts in terms of human  
health, loss of livelihoods,  
environmental and economic  
damages

### Weather patterns

Indonesia is expected to continue enduring drier than average conditions until early 2016. Late rains, if any at all, in between the country's two dry seasons (rainfall being usually expected between September and March) will result in crude water shortages.

Located south-west of the typhoon-prone area, the country is relatively protected from cyclones. However, fires and consecutive smokes (including harmful gases of ozone, carbon monoxide, cyanide, ammonia, formaldehyde, nitric oxide and methane) are likely to continue to affect Indonesia and neighbouring countries (with winds pushing particles towards Singapore, Malaysia, Cambodia, and beyond).



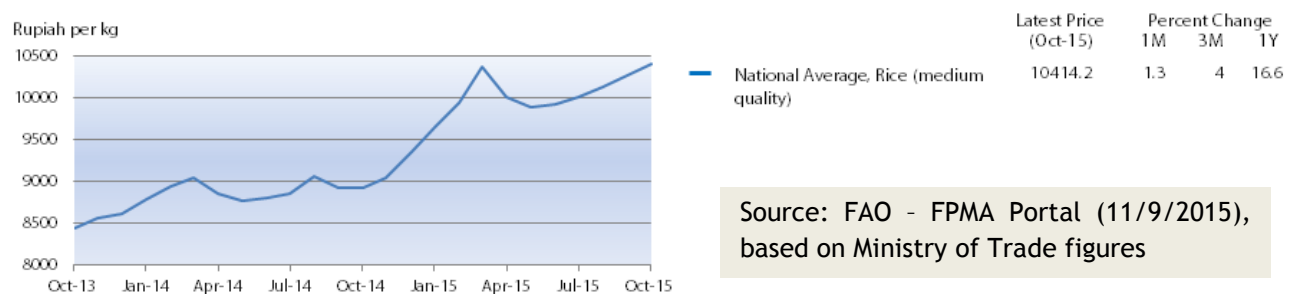
Source: ASEAN Haze Portal (10/26/2015)

<sup>28</sup> Estimates from the [UN Focus Group on El Niño](#)

The Indonesian cropping season occurs between October and February; the later months of the year being of particular importance for they correspond to the planting period, when the crop is very sensitive to water scarcity. Favourable weather during the former growing season, coupled with governmental initiatives to support production, have resulted in good yields for the 2015 first rice crop season<sup>29</sup>. However, the consequences of a lasting El Niño into 2016 already have a negative impact on the late 2015 agricultural season. Extended drought conditions will result in food and water scarcity and impact job security and income, especially in at-risk sectors such as agriculture and tourism. The lack of rainfall will reduce water supplies in reservoirs and the flow of rivers, decreasing the availability of water for irrigation. Lowland rice production areas particularly rely on an ample water supply, and thus are more vulnerable to drought stress (with an increased risk of harvest failure in locations at the tail end of irrigation systems). Overall, 200,000 hectares of land could be impacted by the heat wave, potentially causing crop failure in 10-20 percent of farmland, and impacting the country's exportations of palm oil, cocoa and coffee. At household level, reduced or failed agricultural production will mostly impact food security of subsistent farmers, already suffering from the lack of fertilizers and from a devastating urban sprawl (taking away some 200 km<sup>2</sup> of cropland a year to industry and human settlements in Java alone<sup>30</sup>).

Rice prices reached record levels in 2015, reflecting reduced levels of stocks and lower ongoing 2015 off-season harvests<sup>31</sup>. The price of rice coupled with year-on-year inflation of 6.5 percent will remain a concern for the 27 million living below the poverty line (11 percent of Indonesians).

Retail prices of rice in Indonesia



Source: FAO - FPMA Portal (11/9/2015), based on Ministry of Trade figures

While drought and fire threaten the country, localized areas (Nduga, Lanny Jaya, Puncak Regency) experienced extreme weather conditions, one can assume being also linked to El Niño to a certain extent: snowfalls, hailstorms and extreme drops in temperatures that impact crop production, lead to the death of livestock and to illness among inhabitants. As a result, these variations also provoke significant damages in the population's food security status.

As soon as early signs of a rainfall deficit are perceptible, farmers tend to switch to more drought-resistant crops. The reduction in rice production is therefore often concurrent to an increase in the production of secondary crops. This could be observed in previous drought episodes in Indonesia and some already witnessed farmers planting chilli instead of rice in Ketung Miri village<sup>32</sup>. However, this adjustment requires easy availability of and access to important

<sup>29</sup> Food and Agriculture Organization (07/2015). GIEWS Update, El Niño in Asia

<sup>30</sup> Food and Agriculture Organization (2012). Rice in Southeast Asia: facing risks and vulnerabilities to respond to climate change

<sup>31</sup> Food Price Monitoring and Analysis (11/2015)

<sup>32</sup> [IRIN](#) (10/22/2015)

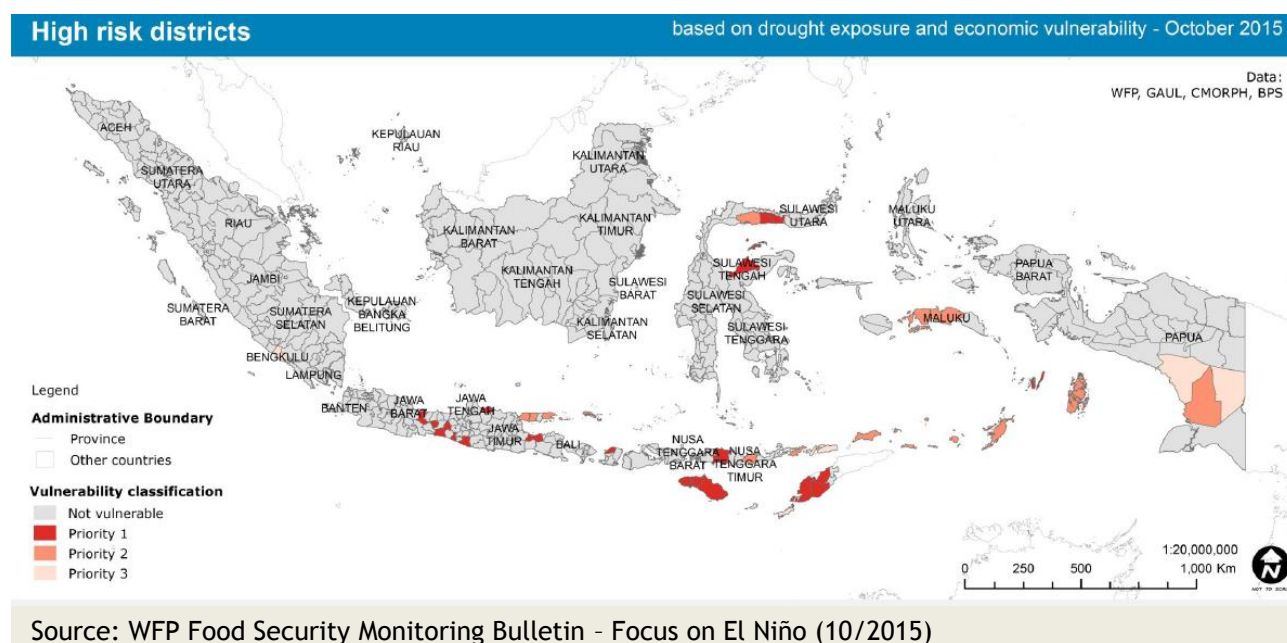
agricultural inputs such as fertilizers and seeds. In addition, with a majority of subsistent farmers, this adaptive strategy still weighs on household's food availability.

Indonesia experiences a massive deforestation trend (to which the peat marshes of Kalimantan are particularly exposed), being at the same time a coping mechanism to increase the surface of cultivated land and a major source of health challenges with carbon dioxide emissions. Deforestation can lead to increased or more severe landslides and flooding whenever tropical rain showers finally occur, which might be occasionally the case in the country by mid-2016. Besides, these man-made forest fires cause up to 300,000 deaths a year and also negatively affect the air quality in neighbouring countries, a situation that will continue to be closely monitored by the latest, Singapore notably, with potential new climate regulation transnational agreements to be discussed in the course of 2016. The aggravated 2015/16 El Niño could be seen as an accelerating factor to address these issues in a soon future.

### Overview: Potential Impact of El Niño on Indonesia

- **By the end of 2015**, the effects of El Niño on Indonesia will peak in the later stages of the season.
- **By mid-2016**, Indonesia will still remain vulnerable to the 2015/16 El Niño, before its decrease towards the spring 2016.

	Areas Affected	Impact
Indonesia	East Nusa Tenggara, West Nusa Tenggara, South Sulawesi, South and West Papua, Sulawesi, South Sumatra, central Java, Bali	<ul style="list-style-type: none"> <li>• Drought</li> <li>• Fires (and related haze)</li> <li>• Poor winter harvest season</li> <li>• Increasing levels of food insecurity and malnutrition</li> <li>• Increasing food prices</li> <li>• Water-borne diseases</li> </ul>



In order to stabilize the food prices increase, in October 2015, the Government started to distribute 300 000 tonnes of subsidized rice through the Raskin (“rice-for-the-poor”) program. Despite initial statements that rice stocks were sufficient to weather the peak of El Niño<sup>33</sup>, the Government also announced in November plans to resume rice imports by the end of 2015 to improve domestic supplies and further steady prices. Water distributions are also to take place. As a long-term measure, the Indonesian government plans to build 49 new reservoirs by 2019.

Governmental efforts to anticipate the El Niño-related drought and consecutive harvest failures (by building irrigation channels, small dams and shallow wells, and distributing water pumps to farmers) are undeniable. However, its capacity to evenly implement compensating measures -in particular in remote areas where the under-nutrition figures of already of concern- is uncertain, and pockets of vulnerable areas might remain completely unreached by mid-2016. The complex share of responsibilities and the discrepancy in means between national and local authorities in terms of disaster management also constitutes a serious challenge to that end.

Finally, in relation to Indonesia’s status of a middle-income country international donors’ support is mainly government to government in nature. This essentially means that almost all donor activities are aimed at supporting government agencies and that international aid is very much channelled through governmental mechanisms, which is likely to be as well the case for the El Niño’s response, as already shown by the dedicated UN Focus group’s mandate.

#### ACF Indonesia’s views on the situation

*ACF Indonesia is well focused on the slow onset crisis developing in the country and to the east. While there is limited hard data at this time to show changes and to be used as initial proxy for the impact of the disaster in the making, a number of observations can nevertheless be made (as of end of November):*

- **Background situation:** In 2015, during the wet (rainy) season, ACF has already identified a prevalence of acute malnutrition that is well above crisis levels (>20% GAM, 4% SAM & 50% stunting). Besides, a SMART survey conducted in February 2015 found that 50% of the households were moderate to severe food insecure. Agriculture accounts for over 50% of household subsistence. With the expected onset entrenchment of the ENSO, we could expect a worsening of these already critical numbers as household food insecurity rises. Initial screening in the CMAM program (ACF/UNICEF partnership to support implementation by the Indonesian MoH) identified around 20% GAM children (MUAC).
- **Harvest Failure:** Ende, Flores sub district, village Nuamuri: A total of 30 hectares of the 60 hectares of maize failed harvested by local communities following the hot weather that hit the region in recent months. Although corn crops are dead due to this dry season (drought), still the communities are able to get food supplies for their need from other types of food such as rice or from the sale of crops such as coffee and cloves.
- **East Manggarai District:** About 51.34 hectares of paddy crop failures  
A crop failure due to the drought until the beginning of October 2015 has been reported in the Sub-District of Kota Komba, affecting a land area of 51.34 hectares, while figures for eight other sub-districts are not yet available.

<sup>33</sup> The Jakarta Post (09/26/2015). [Food stocks enough to bear El Nino peak](#)



- **Drought: TTS District:** As a result of the long dry season this year, the water flow in a number of springs that used taps in TTS decreased. Thus, PDAM (Govt. Water Supply) initiates to reschedule the supply/distributions of water to customers four times per week to two times a week in order to accommodate the needs due to this flow water decrease. The water source with debit decrease are: Oenasi, decreased from 15 litres per second to 5 litres per second, five pumps water source in Nifu Huki decreased from 5 litres per second to 3 litres per second, water source Besi decreased from 2.5 litres per second to 1 litre per second, and water source Bu'at decreased from 2.5 litres per second to 1 litre per second. This year, the rainy season is expected to start only in December.
- **Drought: Ngada District:** Government of Ngada is concerned about clean drinking water access in Bajawa city and its surround, mainly because the water source in Muku Foka that is managed by PDAM is no longer enough to serve all customers optimally since the water flow is only 30 litres per second (while the water flow in Wae Woki is 200 litres per second). One of the efforts that must be done is to build reservoirs in Wae Woki in order to add water discharge.
- **Drought: Malaka District, District Kobalima, Village Renrua** are affected by drought. Five springs in the village began to dry up. The drought is not only affecting the villagers, suffering from clean water shortages, but also large livestock in the village such as cows and buffalos. According to residents, it takes them about 3 kilometres to walk to reach clean water.

The CMAM program supported by ACF/UNICEF has just started (first admissions as of November: 42 SAM children from 2 sites), and should allow in-site surveillance of under-five children. Besides, the program has conducted two initial screenings at a number of villages, founding 1.3% SAM (634 children) which were admitted for treatment. The main concern here is the size of the program, which is only taking place in 6 sub-districts of Kupang. In the SMART survey, the comparison districts where MoH will not implement CMAM or treatment has a SAM prevalence of 4.8% (3.5-6.7 95% CI) which is higher than the intervention sites at 3.1%.

While ACF works primarily in Kupang district, the mission has been approached by other communities in other districts to help them with water access. Other Provinces include Sumatera Selatan, Lampung, Jawa, Bali, NTB, NTT and Sulawesi Selatan. Currently, ACF does not have any FSL Programs in Kupang and will commence again WASH programs in January 2016.

## THE PHILIPPINES

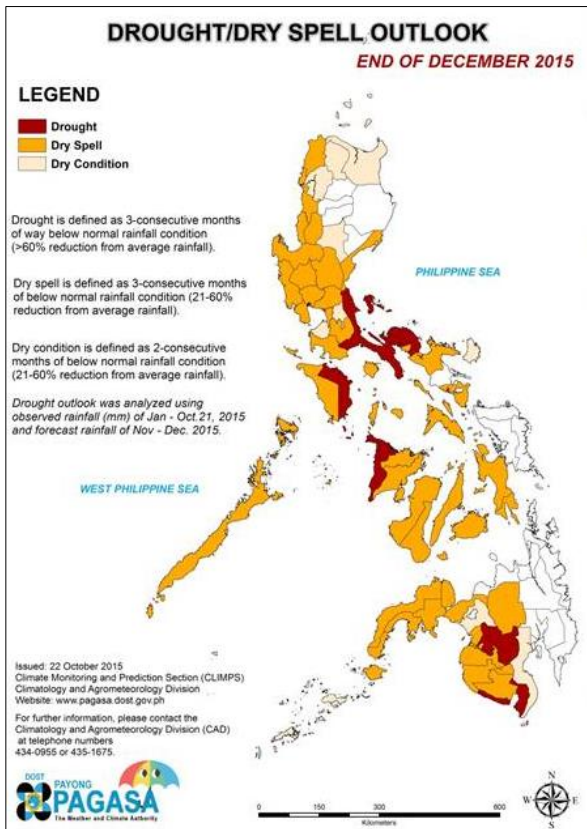
The Philippine archipelago is very sensitive to El Niño. The weather phenomenon is expected to hit the country (from moderate to strong impact) in the last quarter of 2015 and up to the first half of 2016<sup>34</sup>.

Indicators show that the 2015 dry spell would likely surpass the strength of the El Niño episode that lasted from 1997 to 1998<sup>35</sup>. While the situation has considerably changed since the last major El Niño, with enhanced response capacities, the country remains highly vulnerable to three categories of threat: torrential rains, drought and typhoons.

<sup>34</sup> The Philippine Weather Agency

<sup>35</sup> A statement from the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), 09/30/2015

Regional forecasts up to the end of 2015 announced reduced rainfall patterns in the Philippines. Predictions state that below normal rainfall conditions are likely to intensify into 2016. Simulations showed that large parts of the country would suffer from dry spells or reduced rainfall until May next year, before the weather system transitions into the rainy season by the third quarter of 2016.



Source: [PAGASA](#) (10/2015)

Pessimistic predictions announce that close to 70 percent of the country is to experience dry spell/drought by December 2015, and 85 percent of it could face drought by March 2016<sup>36</sup>.

The strengthening of El Niño could also trigger erratic behaviour of tropical storms by the end of 2015. Cyclone tracks are expected to shift northward and intensity could become stronger. An associated risk with cyclones is storm surge.

#### El Niño Effects in 2015



**USD 70.8 million**

total damage and production losses in crops (Feb-Aug 2015)



**65,800** affected farmers (Feb-Aug 2015)



**Top 15** rice and corn producing provinces to experience drought



**32,000** hectares of rice fields are left idle due to dry conditions

Source: OCHA (10/2015)

The El Niño phenomenon has records of serious impact over food security in the country. The 1997-98 El Niño affected 74,000 hectares of agricultural lands in 18 provinces in the Philippines and almost half a million agricultural families experienced hunger because of the drought, while the 2010 El Niño dry spell's damages to rice crops were estimated at \$240 million<sup>37</sup>.

Dryness has already led to delays in the start of agricultural activities and adversely affected yield potential of early-planted cereals (including soybeans and potatoes). Forecasted drier than average conditions towards December 2015 will affect the second season crops (corn, rice and sugar cane), with drought warnings issued in Central and Northern provinces. As temperatures are forecasted to be 2 percent higher than normal<sup>38</sup>, damage could reach \$700 million to \$800 million

<sup>36</sup> Office of Coordination of Humanitarian Affairs. Philippines: El Niño Snapshot (as of 05 October 2015)

<sup>37</sup> Asian Development Bank (estimates from climate change specialists)

<sup>38</sup> PAGASA

if the phenomenon lasts more than three months<sup>39</sup>, which experts agree is the most likely scenario. The severity of the situation is ranked “serious” (Global Hunger Index at 20)<sup>40</sup>.

Dry farmlands, stunted growth of livestock, fishes dispersing and moving to deeper and cooler waters are some of the effects that are already noticeable and that are likely to worsen by mid-2016. Early preparations were made to avoid price spikes. However, fears over the consequences of water shortage on food availability and goods production transpired in the media. Most certainly a food prices increase would have heavy consequences on household incomes as food represents the most heavily weighted component in the Philippines' consumer price index (at 39 percent). As of October 2015, no increase in the retail price of rice was reported yet<sup>41</sup>. A so-far-kept-low inflation might reduce the burden on households in the outlook.

## Resilience

55 percent of the population of 98 million live in rural areas. The effects of the El Niño are mostly felt by small-scale farmers and those who are fishery-dependent. Poverty is considered the most important factor in determining disaster vulnerability, and the proportion of Philippine families in extreme poverty was estimated at 7.6% during the first quarter of 2014<sup>42</sup>. The estimated number of extremely poor families is around 1.61 million<sup>43</sup>.

Three-quarters of the population in the 18 provinces of most-affected Mindanao fall under levels 2, 3 and 4 of the IPC<sup>44</sup>, with an estimated 1.96 million people suffering from severe chronic food insecurity (CFI), 3.67 million people from moderate CFI and 7 million people from mild CFI. Access to quality food and diversification of food consumed is poor, while the provinces classified under levels 3 and 4, indicate high prevalence of stunting, poor access to improved water source and low breastfeeding rates. The impact of the El Niño will build up a food security and nutrition situation that is already alarming in this part of the country.

In addition, the most vulnerable populations in the coastal regions of the country are still to fully recover from Haiyan super typhoon, which hit the country in 2013 and left behind tens of thousands of affected people with a particularly heavy toll on agricultural settings. The impact of the 2015/16 El Niño in these regions is likely to be exacerbated by these initial conditions, even if a large number of on-going disaster preparedness programs, including post-Haiyan recovery projects, have strengthened population's *ante* and *post*-disaster resilience over the last years. Storage-capacity focused initiatives<sup>45</sup> or funded irrigation systems building are indeed playing an important mitigation role to that regard. Finally, in the outlook the El Niño impact might contribute to the debates over the extensive use of GMO (the Philippines is now the twelfth biggest grower of genetically modified crops) as biotechnologies are being presented as a potential solution to disaster vulnerability of crops.

## Overview: Potential Impact of El Niño on the Philippines

- By the end of 2015, the effects of El Niño on the Philippines will peak in the later stages of the season.

<sup>39</sup> [Reuters](#) (09/2015)

<sup>40</sup> [Food Security Portal](#)

<sup>41</sup> FAO Food Price Monitoring and Analysis bulletin

<sup>42</sup> [Philippine Statistics Authority \(03/06/2015\)](#). Poverty incidence among Filipinos registered at 25.8%

<sup>43</sup> [Philippine Statistics Authority \(03/06/2015\)](#)

<sup>44</sup> Used in 40 countries, the Integrated Food Security Phase Classification (IPC) is an internationally-recognized process to determine and analyse the severity and causes of acute and chronic food insecurity in targeted locations. See [FAO](#).

<sup>45</sup> Building more resilient farming communities programmes ([FAO](#))

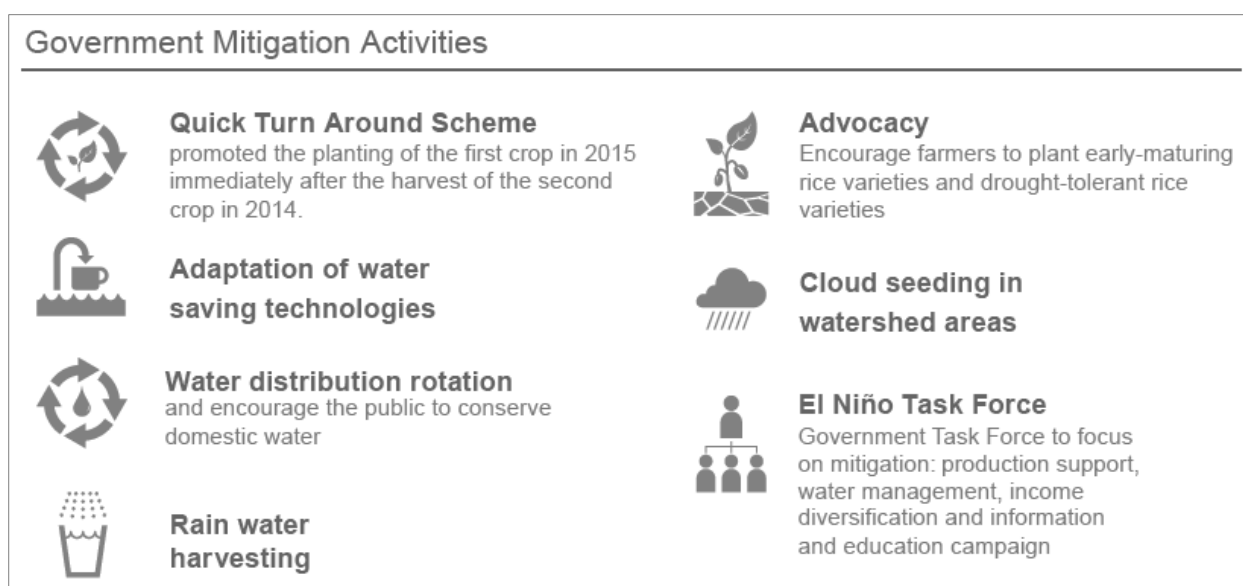
- By mid-2016, the country will remain exposed to El Niño's influence on climatic conditions.

	Areas Affected	Impact
Philippines	Mindanao (North Cotabato, Sarangani), Luzon (Quezon, Oriental Mindoro, Camarines Norte), Visayas (Aklan, Antique)	<ul style="list-style-type: none"> <li>• Drought</li> <li>• Repeatedly poor cropping seasons</li> <li>• Increasing levels of food insecurity and malnutrition</li> <li>• Increasing food prices</li> <li>• Power supply affected</li> <li>• Typhoons</li> </ul>

## National Response

The Philippine government and environmental groups have proven to be proactive and already instituted measures to mitigate the effects of the weather phenomenon. For instance, the EcoWaste Coalition has called on the public and all sectors of activity to reduce water and electricity consumption, while the Philippine government developed a Roadmap to Address the Impact of El Niño (RAIN) with a special focus on production of rice (being a political agenda) and importation to mitigate increases in price. The Department of Agriculture (DA) has implemented measures to lessen the impact of El Niño on the country's main agricultural products, by implementing cloud-seeding operations and initiating water-management programs<sup>46</sup>. Governmental programs also included the installation of small water-impounding projects and diversion dams in rice-growing regions.

Ultimately, although sizeable damage to crops is expected, governmental plans to import food as well as important remittances from Filipinos abroad should help mitigate the effects of El Niño.



Source: OCHA (10/2015)

### ACF Philippines' views on the situation

*Current nutrition status of children in the Philippines shows that malnutrition is a persistent public health concern in the country and is borne out of study results and official statistics. Among Filipino children, this involves several forms of undernutrition (wasting, stunting, and*

<sup>46</sup> [Channel News Asia](#) (09/2015). "Philippines braces for worse El Nino phenomenon"



underweight). Although the level of child malnutrition in the country is declining, the Philippines still lags behind its neighbouring South East Asian countries in terms of child nutrition. For example, the Philippines is next to Indonesia in terms of high prevalence of stunted children (30.3 percent, this means 3.1 million are too short for their age), while it tops the countries in the South East Asian region on the prevalence of wasted children (7.6% , this translates to about 769,000 children suffering From either moderate or severe wasting). The country has made it rank 9<sup>th</sup> in terms of countries with the highest burden of stunting. It ranks 10<sup>th</sup> among the countries with the highest burden of wasting<sup>47</sup>.

Prevalence of malnutrition varies by region; there is higher prevalence of underweight, stunted, and wasted children in Mindoro-Marinduque-Romblon-Palawan provinces (MIMAROPA), Bicol, ARMM, Zamboanga Peninsula, Ilocos Region, and Western Visayas. ACF SMART Survey 2014 shows stunting rates (38.7%) and Wasting Rate of (8.9%) in Western Visayas. Maguindanao is one of the poorest and under-served provinces under the Autonomous Region of Muslim Mindanao (ARMM) in the Philippines, where undernutrition is 29.8%, stunting as high as 44.8% and wasting 9.5%.

In August 2015, OCHA and FAO alerted the Philippine Humanitarian Country Team (HCT) of the likely occurrence of an El Niño event and of its potential effect in the country. At this stage FAO supports the Philippine government initiative assisting to the development of National DRR Strategy for Agriculture, conducting climate forums and restoring livelihoods within existing programs in Mindanao. Further, FAO is establishing a systematic Early Warning - Early Action Approach for El Niño to prevent, mitigate the impact of El Niño. However, while the FAO in line with the Government put most focus on food security and linkages with agriculture, and rice production (and importation) in particular, less attention is paid on the population health and nutrition situation resulting from the El Niño. The relationship between El Niño drought disasters (unreliable rainfall and insufficient water for crop and livestock production) and nutritional status is undermined as a major contributor to undernutrition.

The effects of the El Niño felt by small-scale farmers result in poor nutrition and recurrent infections in children from conception to their second year of life that make them impaired physically and mentally and more prone to death and diseases. Taking into account the relative likelihood that malnutrition rate in Philippine could be further severely affected due to El Niño, ACF Philippine Mission decided to put in place a Nutrition Response Plan in current area of interventions, Mindanao (North Cotabato, Sarangani) where El Niño drought effected is forecasted and reported. The plan will be harmonized in conjunction with existing programs and the necessary applicable plans and guidelines by stakeholders. It will aim to encompass a full continuum from preparedness, relief and rehabilitation, to mitigation and prevention measures. The response plan goal is to provide immediate humanitarian needs for people affected by the 2015/ 16 El Niño phenomenon in Mindanao (See Annex 2).

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<sup>47</sup> 2013 National Nutrition Survey

## 2015/16 El Niño impact: An Actor Analysis

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Forecasters are unanimous that the 2015/16 occurrence of El Niño in the Asia-Pacific region will strengthen further over the course of the outlook. However, [the extent to which it will impact socio-economically vulnerable households depends first on the evolution of the weather phenomenon and second on the capacities of societies to resist and adapt to this impact.](#)

In order to plan strategically despite these uncertainties, it is essential to understand the positioning and resources the actors who might be influential and/or involved in a coordinated response can, and intend to, mobilize. [These actors can be organized in four categories: national governments, UN agencies & donors, aid organisations and their network, and local communities.](#) As for the first and last categories, elements of response were already given throughout the previous section, for the national scale fits better their analysis. In addition, few key points about the four of them -in the context of the countries considered in this report- can be highlighted:

### National governments

- Overall, national governments in the region seem ready to acknowledge the impact of the 2015/16 El Niño on the concerned countries, and to engage into a coordinated response.
- As climate change and disaster preparedness became two pivotal axes in the global aid context, national governments might see the 2015/16 El Niño event as an opportunity to consolidate national DRR programs and strengthen their response capacity to food insecurity.
- Yet, considering together the flagrant impact the phenomenon has on agricultural settings and the national priority that food production represents (in terms of food sovereignty and of trade balance), governments tend to focus on the El Niño-driven production challenges, and on access matters (food prices), rather than on other dimensions (i.e. health issues).
- While it is certainly difficult to strictly differentiate direct from indirect consequences of the phenomenon, assessments at the national and local scales are needed to determine with more precision the systemic impact of the 2015/16 El Niño in the analysed countries, and to better identify potential gaps between governmental plans and humanitarian needs.

### Local communities

- Households relying on subsistent farming and fishing activities, in particular when located in disaster-prone areas (coastal zones, deforested mountainous regions, arid areas, densely populated districts) are the most vulnerable to the impact of the 2015/16 El Niño.
- While coping mechanisms, be they temporary (e.g. crop shifting) or longer-term (e.g. deforestation), contribute to the populations' resilience to environmental shocks such as the impact of the 2015/16 El Niño they also often participate to a vulnerability vicious circle.
- Food insecurity and impoverishment might appear as the first and foremost consequences of the El Niño's impact on vulnerable households, but secondary effects might be as problematic in the considered outlook (reduced expenditures on health, jeopardized next cropping season, precarious migrations, etc.).

### UN Agencies and other donors

- The impact of the 2015/16 El Niño has long been monitored by UN agencies and others (see Annex 3: resources review) in a global and regional perspective.

- Over the course of autumn 2015, some of the UN agencies (FAO, WFP, followed by OCHA, UNICEF and WHO) actively occupied the forefront of the regional response stage.
- The coordinating role these agencies could play by mid-2016 is particularly obvious in Indonesia and in the Philippines, two of the most-affected countries, where their support is mainly channelled through governmental-led plans.
- Other potential donors, such as ECHO, showed interest for field-based data demonstrating the 2015/16 El Niño's impact in the region. The announcement early December<sup>48</sup> of a European response of 125 million euros, none going to Asia, draws a worldwide priority map on which the region doesn't appear (yet?).

### NGOs and their network

- NGOs seem cautious about considering a great scale response to the slow onset disaster in the region, while the relatively unpredictable nature of the phenomenon together with some limited anticipation capabilities appear as two major reasons for their prudence.
- The recurrence of epi-disasters (such as droughts, heavy rains, or seasonal haze) that NGO witness and try to mitigate at field level could either be the thread leading to their greater involvement (identifying the 2015/16 El Niño as one important factor of compound crises), or, adversely, to remain distant vis-à-vis the event (will the 2015/16 El Niño really make a significant difference in an already hazardous reality for NGOs' beneficiaries?).
- The growing imperative to work through national networks and partnerships might also be an element to be taken into account if a humanitarian response is to take place by mid-2016.

To summarize, [the impact of the 2015/16 El Niño in the Asia-Pacific region arouses a general concern among a wide range of actors, while they do not necessarily share the same interest.](#) Potential interactions between ACFIN missions and these stakeholders will vary according to their respective mandate, resources, and goals.

The Action Against Hunger Network stands with three objectives: (1) Mitigate the consequences of hunger, (2) Address the causes of hunger, and (3) Change the way hunger is viewed and addressed. Considering how the 2015/16 El Niño is directly, or indirectly, affecting communities by putting at risks the livelihoods, access to food, health and overall ecosystem of the weather-depending populations, to mitigate the impact of the phenomenon on the most vulnerable households could fall under ACFIN's scope of intervention, if needs were to be confirmed in the concerned countries and resources allocated. To a certain extent, many implemented ACFIN programs in the affected countries already contributed to preparedness. Direct intervention, however, is only one option among a set of specific objectives that can be elaborated according to ACFIN's goals and considering the specificity of the El Niño phenomenon and its potential impact on the mentioned countries as analysed in the previous section.

### Specific objective 1: [Monitoring](#)

Early warning systems play a major role in allowing and encouraging adapted and sustainable coping strategies (e.g. planting drought-resistant crops). These systems depend on a regular observation and recording of the progress of the El Niño phenomenon.

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<sup>48</sup> [EU mobilises €125 million for countries affected by 'El Niño'](#)

In the coming months, the production and sharing of accurate and up-to-date information about the meteorological and socio-economic impacts of the phenomenon and of its offshoots in the region, in particular for the agro-fisheries sector, will be of particular importance.

### Specific objective 2: **Advocacy**

Considering the scale of the potential impact and the sectors that are or will likely be affected, the response will require adequate funding and appropriate coordination mechanisms involving national governments, international institutions, INGO and communities alike.

In the coming months, the capacity to actively plead for action and positively influence decision-making players to that end will therefore be determinant.

### Specific objective 3: **Funding**

The response's spatial coverage and efficiency will come at a cost. Acknowledging that dedicated funding opportunities will be necessary rather soon, the questions of evaluating the needs and ensuring appropriate financial support arise.


In the coming months, the availability of resources to fund interventions mitigating the impact of the El Niño on the most vulnerable populations will shape the dimension of the response.

### Specific objective 4: **Implementation**

The response is likely to require direct intervention via punctual support or a more extended and comprehensive DRR approach.

In the coming months, actors with the operational capacity, expertise, and a community-based solid implantation are to play an important role in order to contribute to the response.

**Potential synergies, or competing interest, between the actors against these four specific objectives can be summarized in the following table:**

 What ACFIN teams should know about and can expect from each actor as regard to each specific objective

Actor x Objective	Monitoring	Advocacy	Funding	Implementation
UN Agencies	<p><b>Opportunities</b> Many of the UN agencies are involved in monitoring activities and represent a useful resource for INGO to access accurate information. Regular updates of weather-related data and food security monitoring tools in particular.</p> <p><b>Challenges</b> Real time analysis</p>	<p><b>Opportunities</b> The role of the multiple UN agencies in the international aid system makes them a sounding board for advocacy. UNISDR in particular might appear as a growing actor in the field of disaster preparedness, even though on a longer-term perspective.</p> <p><b>Challenges</b> ACFIN usually relies</p>	<p><b>Opportunities</b> Might be some, but it is an element difficult to assess as funding mechanisms which could cover the El Niño response are not necessarily publicly announced.</p> <p><b>Challenges</b> The focus of UN agencies towards bilateral collaboration with national governments limits the extent to which</p>	<p><b>Opportunities</b> Some of the UN Agencies are committed to implement mitigation activities (WFP, WHO, UNICEF in particular), essentially through partnership. They might also make food and NFI available for distribution programs. Moreover, the UN agencies could play</p>



	<p>more than projections.</p> <p>Interpretation of technical data may require a certain level of expertise.</p> <p>Regional and national scope of monitoring tools more than accessible local datasets.</p>	<p>on established links with some of the UN Agencies (FAO, WFP, UNICEF, WHO) and do not necessarily explores further.</p> <p>Advocacy might be seen as a time consuming task (especially when targeting the UN).</p>	<p>INGO could access UN funding, especially in the Asia-Pacific region. The example of Indonesia is illustrative.</p>	<p>a coordinating role (as the UN Focus group on El Niño in Indonesia).</p> <p><b>Challenges</b> Consensus on a DRR approach with a focus on sustainable solutions.</p> <p>Focus on implementing partners already in the UN network.</p>
<b>Other Key Donors</b>	<p><b>Opportunities</b> Monitoring figures from the field (in particular in Nutrition and FSL sectors) can be seen as a valuable asset to strengthen ACFIN's positioning towards old or new donors.</p> <p><b>Challenges</b> Sharing programs figures (demonstrating the extent of the impact) can be a difficult task, esp. as needs assessments are not available and the causality to El Niño hard to prove.</p>	<p><b>Opportunities</b> Advocacy should be eased by the existing consensus on the seriousness of the 2015/16 El Niño impact.</p> <p><b>Challenges</b> Considering globally the areas in need, advocacy must be properly done to ensure funding in the Asia-Pacific region, especially for moderately affected countries (such as Myanmar), which might appear of limited priority as compared to regional and worldwide needs.</p>	<p><b>Opportunities</b> Some donors informally expressed their intention to fund an El Niño's response if impact is proven.</p> <p><b>Challenges</b> Be ready if funding opportunities are to be confirmed.</p> <p>The global effect of the phenomenon, hitting also (and maybe in worse proportions) East Africa and South America, might produce a competition effect between most affected areas.</p>	<p><b>Opportunities</b> New activities or more likely extension of existing programs could be funded as part of the international response.</p> <p><b>Challenges</b> Unpredictability of the El Niño might limit donors' engagement.</p> <p>Donors' likely focus on governmental-led plans as a baseline for the response.</p>
<b>National Governments of Affected Countries</b>	<p><b>Opportunities</b> Existing monitoring agencies (only in some countries, like India) might contribute to information sharing with more localized data.</p> <p><b>Challenges</b> Access, timeliness and potential limits to these datasets.</p>	<p><b>Opportunities</b> Potential niche for INGOs in terms of technical and community-based expertise and coverage of isolated areas in most affected countries.</p> <p><b>Challenges</b> Political sensitivity in advocacy stakes.</p>	<p><b>Opportunities</b> None.</p> <p><b>Challenges</b> Likely competition with INGO over funding opportunities.</p> <p>Legal framework could potentially limit INGOs access to funding.</p>	<p><b>Opportunities</b> Coordination mechanisms through governmental-led planning.</p> <p><b>Challenges</b> Conflicting focus on agricultural production rather than on undernutrition or other issues.</p>
<b>Other NGOS</b>	<p><b>Opportunities</b> Information sharing of programs data to consolidate the understanding of the local impact on most vulnerable households.</p>	<p><b>Opportunities</b> Common advocacy with INGOs already engaged in public awareness.</p> <p><b>Challenges</b> Benefit of common advocacy might not always be</p>	<p><b>Opportunities</b> Consortiums with other INGOs might facilitate funding opportunities (or be required).</p> <p><b>Challenges</b> Potential competitiveness</p>	<p><b>Opportunities</b> Partnerships could appear as a way to strengthen program implementation.</p> <p><b>Challenges</b> The response will have to be implemented rather</p>

	<b>Challenges</b> Requires existing solid relationship (trust).	perceived, especially as regard to prioritization stakes.	over funding, especially if those are limited.	soon if the objective is to limit the impact of the crisis.
<b>Local Communities</b> (most vulnerable and affected by El Niño 2015/16)	<b>Opportunities</b> Access to first-hand historical and local data. <b>Challenges</b> Data collection process and consolidation (and potential bias).	<b>Opportunities</b> Potential success stories to be collected and shared. <b>Challenges</b> Limited access to decision-makers.	<b>Opportunities</b> Some targeted communities might attract more easily funding opportunities. <b>Challenges</b> Adversely, some socio-politically marginalized communities might be skipped from the aid map.	<b>Opportunities</b> With appropriate assessment, potential virtuous circle of adaptive mechanisms to environmental shocks. <b>Challenges</b> Access to these communities / partnerships.

### Synthesis of the matrix

1. Most actors agree on the need to consolidate knowledge of the extent of this crisis on the making, while concrete possibilities for intervention are rarely discussed yet.
2. Now is a good timing for informed and active advocacy, both internally and externally, especially as the global context (COP 21) so permits and as donors and UN agencies started communicating plans of action.
3. To advocate efficiently for funding opportunities, ACFIN missions in Asia need to address two questions: how to collect and consolidate field-based hard data that demonstrate the need to intervene, and how specific would be an El Niño response in a comprehensive DRR approach?
4. Considering the most-affected countries (primarily Indonesia and the Philippines), on which the response is likely to focus (instead of a regional perspective) INGOs will probably need to fit into coordination mechanisms in a governmental-led dynamic, while ensuring that geographically and socially isolated populations among the most-affected communities are taken into proper consideration.
5. Beyond the scope of ACFIN current countries of intervention in the region, the question of the 2015/16 El Niño's impact on other areas (in particular East Timor, Papua New Guinea and the Pacific islands), and the extent to which the needs in these areas will be addressed, will remain of high concern by mid-2016.

### Conclusion

The 2015/16 El Niño is globally monitored (predictable in its cycle), widely compared to the 1997/98 last major occurrence, and yet surrounded with uncertainties regarding its exact consequences - be they positive or negative. Besides, while the seasonality of the phenomenon tends to announce a later impact on Asia (as compared to other regions: East, Southern and Central Africa, the Caribbean and Central America), preparedness and early response planning prove to partly depend on coordinated data systems that would efficiently share local, accurate information on the phenomenon's impact. This is certainly one of the challenges of the internationally praised shift from disaster management to disaster risk management.

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## Annexes

### Annex 1: ACF India - Nutrition situation in a) *Khaknar block* (SMART Surveys):

Indicators	Prevalence	
	SMART Nov 2013	SMART June 2014
Prevalence of GAM according to all WHO criteria <sup>49</sup>	24.6% [20.4% - 29.3%]	34.7% [30.6%-38.8%]
Prevalence of SAM according to all WHO criteria	3.4% [1.9% - 6.1%]	4.7 % [3.3% - 6.0%].
Prevalence of global acute malnutrition (GAM) in Z-score	21.0% [17.1% - 25.4%]	32.2 % [28.5% - 36.2%]
Prevalence of severe acute malnutrition (SAM) in Z-score	2.6% [1.4% - 4.7%]	4.4 % [3.2% - 5.9%].
Prevalence of global acute malnutrition (GAM) with MUAC	12.2% [9.1% - 16.3%]	12.8 % [10.3% - 15.8%]
Prevalence of severe acute malnutrition (SAM) with MUAC	1.3% [0.5% - 3.1%]	1.7 % [0.9% - 2.9%]
Prevalence of global chronic malnutrition in Z-score	58.9% [51.8% - 65.7%]	64.0 % [59.2% - 68.5%].
Prevalence of severe chronic malnutrition in Z-score	24.1% [18.8% - 30.4%]	25.8 % [22.3% - 29.6%].
Prevalence of global underweight	-	64.4 % [59.6% - 68.9 %].
Prevalence of severe underweight	-	25.4 % [21.5% - 29.9%]

### b) *in Baran, Rajasthan* (SMART Survey):

A SMART survey was also conducted in Baran, Rajasthan by ACF in June 2014 to assess the nutritional status of children between 6 and 59 months during pre-monsoon season. The results are far beyond the emergency thresholds admitted by WHO classification of severity of malnutrition with an overall prevalence of Global Acute Malnutrition (GAM) at 33.7 % [29.6- 37.8 95% CI] and a prevalence of Severe Acute Malnutrition (SAM) at 7.6 % [5.1 - 10.1 95% CI] (based on WHZ/MUAC/oedema criteria).

### Annex 2: Objectives and response activities to the 2015/16 El Niño by ACH Philippines

Objective: Contribute to the reduction of malnutrition-related diseases and mortality among vulnerable girls and boys (6-59 months), and pregnant and lactating women through curative and preventive nutrition activities.

- Treatment of acutely malnourished girls and boys <5 years, and pregnant and lactating women.
- Blanket supplementary feeding programme for children and pregnant and lactating women at risk of malnutrition.
- Infant and young child feeding education and counselling for pregnant women and women with children (0-24 months).

<sup>49</sup> MUAC/WFH/Oedema



Response activities further includes:

- Rapid nutrition assessments in the two provinces affected by El Niño
- Training on Nutrition in Emergencies to all local partners in El Niño affected provinces
- Nutritional screening for children and pregnant and lactating women
- Outpatient and Inpatient therapeutic feeding Programme
- Preposition of life saving nutrition supplies at health centres.

District/Province	Total Population Estimate(2013)	Vulnerable Population under the age of five	Estimated children that could be malnourished
Mindanao / North Cotabato	1,224,279	147,741	59,096
Mindanao /Sarangani	498,904	64,399	25,760

**Target Population:** 7,000 children, 2000 pregnant and lactating women

**Project duration:** 6 Months

**Project estimated budget:** 600,000 USD

### Annex 3: Resources Review - UN Agencies and other Institutional Donors

ACTOR & ON-LINE RESOURCES	GENERAL OBJECTIVE
<p>UN Office for Coordination of Humanitarian Affairs (<b>OCHA</b>)  OCHA dedicated website: <a href="#">Preparing for El Niño</a>  OCHA publication: Weekly Regional Humanitarian Snapshot</p> <p>UN Food and Agriculture Organization (<b>FAO</b>)  FAO dedicated website: <a href="#">El Niño</a>  FAO in emergencies: <a href="#">El Niño Crisis</a>  FAO GIEWS dedicated updates: <a href="#">El Niño Collection</a>  FAO Food Price Monitoring and Analysis: <a href="#">FMPA</a>  FAO Agriculture Stress Index Mapping: <a href="#">Earth Observation</a>  FAO Roadmap (latest draft, Nov 11)): <a href="#">2015-2016 El Niño Early action and response for agriculture, food security and nutrition</a></p> <p>UN World Food Programme (<b>WFP</b>)  WFP Publications: <a href="#">El Niño - Implications and Scenarios for 2015</a>  WFP Situation Report: <a href="#">El Niño Preparedness and Response</a>  WFP Food Security Analysis: <a href="#">Food Security Analysis</a></p> <p>UN Focus Group on El Niño in Indonesia (co-chaired <b>FAO-WFP</b>)  UN Focus Group dedicated website: <a href="#">El Niño in Indonesia</a></p> <p>UN World Health Organization (<b>WHO</b>)  WHO roadmap: <a href="#">Health preparedness for El Niño event 2015-16</a>  WHO status report: <a href="#">Global Situation Assessment of El Niño-related Health Risks</a></p>	<p>Following-up information  General advice on adaptation strategies (food security, WASH, health, shelters)</p> <p>FAO is monitoring the current El Niño event and designing and implementing early actions to reduce the effects on vulnerable populations in all high-risk countries and in some of the countries at moderate risk.</p> <p>WFP is closely monitoring the current El Niño, and preparing for, and responding to, its effects.</p> <p>Ensures a cohesive &amp; coordinated approach to support provided to the Government of Indonesia for El Niño preparedness &amp; response.</p> <p>WHO is providing support to WHO Member States and partners to enhance preparedness measures for the current El Niño event.</p>

UN Office for Disaster Risk Reduction (**UNISDR**)  
 UNISDR global roadmap: [Sendai Framework](#) (2015-30)<sup>50</sup>  
 UNISDR article: [El Niño threat to the Pacific](#)  
 UNISDR website: [PreventionWeb](#)

UN Children's Fund (**UNICEF**)  
 OCHA webpage: [Children and El Niño](#)  
 UNICEF Press release: [Children's lives at stake as El Niño strengthens](#)  
 UNICEF Briefing note: [A wake up call: El Niño's impact on children](#)

UK Department for International Development (**DFID**)  
 DFID roadmap: [Preparing for El Niño](#)

US Agency for International Development (**USAID**)  
 USAID roadmap: [Bracing for El Niño: How USAID is Helping Countries Prepare and Respond](#)

European Commission's Humanitarian Aid and Civil Protection department (**ECHO**)  
 ECHO updates: [ECHO daily Flash](#)  
 ECHO Sever weather events mapping: [ECHO daily map](#)  
 Emergency Response Coordination Centre: [portal](#)  
 EU funding decision (excluding Asia): [EU mobilizes €125 million for countries affected by El Niño](#)

Ambition to lead the international DRR community in achieving reduction in disaster losses.

UNICEF is supporting children, families and governments as they respond to El Niño. In partnership with NGOs they are training and supporting grassroots health workers to identify and treat children who are showing signs of malnutrition and diarrhoea.

DFID's country offices intend to play a key role to ensure help is available for those suffering as a result of El Niño.

This year, USAID is helping countries before, and during, El Niño to better prepare for the shocks of adverse weather and respond to people in need.

DG ECHO supports DRR as an integral part of humanitarian action aimed at preserving life, preventing and alleviating suffering, maintaining dignity and strengthening resilience in countries & communities affected by disaster.

#### Other Monitoring Agencies / Tools:

- [NOAA](#)
- [World Meteorological organization](#)
- [Tokyo university drought surveillance mapping](#)
- [IFPRI Food security portal](#)
- [VAM Food and Commodity Prices Data Store](#)
- [FEWS Net \(alert report\)](#)
- [Global Disaster Alert and Tracking System](#)
- [FAO Global Water Information System](#)
- [Asian Disaster Reduction Centre](#)
- Singapore National Environment Agency ([Haze surveillance](#))

#### Other Actors / Documents of Interest:

- Oxfam ([report](#), [press release](#))
- Care International ([advocacy paper](#))
- Welt Hunger Hilfe ([El Niño 2015](#))
- Asian Development Bank ([opinion paper](#))

<sup>50</sup> "The international response to the regional impact of the 2015-16 El Niño appears as an opportunity to implement the Sendai framework.", said the Head of the Pacific office of the UN Office for Disaster Risk Reduction ([UNISDR](#))