Early Warning Early Action report on food security and agriculture
Overview

The Early Warning Early Action (EWEA) report on food security and agriculture is produced by the Food and Agriculture Organization of the United Nations (FAO). It provides a quarterly forward-looking analysis of major disaster risks to food security and agriculture, specifically highlighting:

- potential new emergencies resulting from imminent disaster threats
- new developments in countries already affected by protracted crises which are likely to cause a further deterioration of food insecurity

This report is part of FAO’s efforts to systematically link early warnings to anticipatory actions. By providing specific early action recommendations for each country, the report aims to prompt FAO and partners to proactively mitigate and/or prevent disasters before they start to adversely impact food security.

High risk
Countries are categorized as “high risk” when there is a high likelihood of a new emergency or a significant deterioration of the current situation with potentially severe effects on agriculture and food security.

On watch
Countries categorized as “on watch” instead have a comparatively more moderate likelihood and/or potential impact, requiring close monitoring.

This report represents a summary and a prioritization of analysis provided by FAO’s corporate and joint multi-agency information and early warning systems:

- Global Information and Early Warning System on Food and Agriculture (GIEWS)
- Food Chain Crisis and Emergency Prevention System (FCC-EMPRES)
- Integrated Food Security Phase Classification (IPC) and Cadre Harmonisé

In addition to these, a number of other external sources are consulted. The list of sources is available on page vii.

Countries with ongoing emergency response efforts are not included in the report, unless there are signs of potential significant deterioration. An overview of countries worldwide with humanitarian response plans or emergency plans is provided on page vi.

More details on the risk ranking methodology and the early action recommendations are provided on page ii.
Methodology

Risk value

- **High risk**
  FAO and partners should start implementing early actions on a no-regrets basis

- **On watch**
  FAO should strengthen corporate monitoring, preparedness and plan for the implementation of certain low cost early actions

The countries and regions flagged in this report are selected through a consultative process led by early warning focal points from the EWEA, GIEWS, FCC-EMPRES and IPC teams. The main steps of the process are:

1. Shortlist countries flagged by FAO’s corporate early warning systems, IPC and Cadre Harmonisé
2. Triangulate risk information with other datasets and external early warning systems
3. Verify and rank the final list of risks based on the following three criteria:
   - **Likelihood of occurrence** is classified into five levels (very unlikely, unlikely, moderately likely, likely and very likely). The term likelihood applies to the probability that, within the time period considered, either a new disaster risk or the significant deterioration of the situation will occur.
   - **Potential impact** is classified into five levels (negligible, minor, moderate, severe and critical). The impact is analysed both in terms of magnitude (the number of potentially affected people and/or geographical extent of the impact on agriculture, livelihoods and food security) and severity (the gravity of the impact on agriculture, livelihoods and food security, especially in relation to pre-existing vulnerability and food insecurity).
   - **Country capacity** to cope with and respond to potential disasters or deteriorated situations is also classified into five levels (very low, low, medium, high and very high). The Index for Risk Management (INFORM) is further applied to measure the coping capacity of a country.

Famine declared and risk of famine

As per IPC guidance, when a new emergency or further deterioration of the situation might lead to an increased risk of famine, this aspect is highlighted in the global risk map and narrative of the report as “risk of famine”. When the occurrence of famine has been declared, this is labelled as “famine declared”.

Recommendations for early actions

Early action recommendations are indicated for each risk that features in this report. They outline a range of the most appropriate interventions over the coming months which could prevent, mitigate or prepare for the potential impact of a specific disaster on the agriculture sector and livelihoods. The interventions are also sector specific and non-binding in nature. Early actions can vary from activities aiming to protect livelihood assets to planning and preparatory activities. The recommendations are developed by FAO through a consultative process involving technical experts and FAO country, sub-regional and regional offices.

Global risk map

The map on the right provides a visualization of major disaster risks to food security and agriculture in the indicated reporting period. When a new emergency or deterioration of the current situation is very likely and might have severe impacts, it is indicated as “high risk”. In case of moderate to high likelihood and moderate and significant impact, the risk is listed as “on watch”. Ongoing humanitarian crises, such as protracted emergencies, are not highlighted in this report unless a deterioration is likely.
Global risk map: October–December 2018

Legend
- High risk – country
- High risk – region
- On watch – country
- On watch – region
This map provides an overview of the timeline of cyclone formations and their historical tracks. There are seven tropical cyclone basins, with specific peak timings during the calendar year. When available, the seasonal forecast (below- or above-average cyclone activity) is also provided.

**Tropical cyclone basin names**
- North Atlantic Ocean, the Gulf of Mexico and the Caribbean Sea
- Northeast Pacific basin
- Northwest Pacific basin*
- North Indian basin
- Southwest Indian basin
- Southeast Indian/Australian Basin
- Australian/Southwest Pacific basin

**Seasonality calendar**

*Northwest Pacific cyclone season slightly above the long-term average*
Animal health risks

This map highlights selected countries facing animal health risks during the reporting period.

Countries are only highlighted if the risk has the potential to impact food security. The information used to compile this map was extracted from the Food Chain Crisis Management Framework (FCC) Early Warning Bulletin for the period October-December 2018.

For a complete list of countries and threats, and more detailed information see: www.fao.org/foodchain-crisis/early-warning-bulletin

The information provided was compiled as of 19 September 2018
EWEA risks within the wider humanitarian context

The EWEA report exclusively highlights new emergencies in food and agriculture and ongoing crises in which a potential significant deterioration is likely. The report does not cover ongoing crises with no indication of an upcoming deterioration. This map shows countries flagged by the report in Humanitarian Response Plans in which a major deterioration is not foreseen over the reporting period.

Source: Global Humanitarian Overview 2018, OCHA
Sources of information

This report consolidates information provided by GIEWS, FCC-EMPRES and IPC, and external sources of information. The analytical basis for the prioritization of countries and the major sources of information and data presented in the report are three main groups of datasets:

- countries requiring external assistance and the food security situation of low-income food-deficit countries*
- forecasting threats to the food chain affecting food security in countries and regions**
- IPC and Cadre Harmonisé acute food security analysis

Additional information and data presented in the report are consolidated from the following external sources (including but not limited to):

- reports and bulletins by agencies of the United Nations (UN), in particular OCHA, Office of the United Nations High Commissioner for Refugees (UNHCR), United Nations Children’s Fund (UNICEF), World Food Programme’s (WFP) Vulnerability Analysis and Mapping Unit and the World Meteorological Organization (WMO)
- updates from external sources including INFORM, Famine Early Warning Systems Network (FEWSNET), International Research Institute for Climate and Society – Columbia University (IRI), Reliefweb, local and international media

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*Crop Prospects and Food Situation Bulletin, and Crop and Food Security Assessment Missions (CFSAM), GIEWS

**Food Chain Crisis early warning bulletin, FCC-EMPRES, Animal Production and Health Early Warning Systems Team
Yemen is facing the world’s largest food security crisis. As the conflict continues, exacerbated by below-average rainfall and fall armyworm infestation, food insecurity is likely to worsen and the number of people who currently rely on humanitarian assistance is likely to increase.
High risk

The matrix provides an overview of the ranking of risks featured in this report. The risks are prioritized based on the severity, likelihood and magnitude of their impact, while also balanced against the countries individual coping capacity.

In order of intensity, for the period October–December 2018, the high risk section includes:
- Yemen
- Democratic Republic of the Congo
- South Sudan
- Afghanistan
- Bangladesh and Myanmar
- Syrian Arab Republic
- El Niño
- Fall armyworm

Photo: ©FAO/Soliman Ahmed
Yemen

Continued assault on and around Al Hudaydah port and below-average rainfall likely to compound food insecurity, endanger lives and exacerbate an already critical humanitarian crisis.

**Risk overview**

- As of June 2018, the situation in Al Hudaydah remains extremely fragile. The Saudi-led coalition continues to lead an assault on the port, with heavy shelling from air, sea and land. The coalition offensive raises concerns on the potential damage or disruption to imports through the Red Sea ports.
- According to the 2018 Humanitarian Response Plan, 22.2 million people (75 percent of the population) are in need of humanitarian assistance. The December 2017 Famine Risk Monitoring results revealed that 17.8 million people are food insecure, of which 8.4 million are severely food insecure.
- Al Hudaydah and Al Salif ports facilitate 70 percent of monthly food imports and 40–50 percent of monthly fuel imports into Yemen. As of September 2018, the ports remain open, albeit volatile. In 2018, average monthly wheat imports are 10 to 15 percent below monthly import needs. Due to heavy fighting, transportation and delivery of commercial and humanitarian assistance to other governorates is currently experiencing longer delays.
- Livelihood and economic activities have either stopped or have been significantly disrupted in most parts of the country. In Al Hudaydah, the majority of businesses have closed and electricity cut off for most parts of the governorate. Economic deterioration has also caused mass demonstrations and protests in several parts of Yemen including Abyan, Aden, Al Dale'e, Hadramout, Lahj, Sana’a and Taiz. In September, the rial is trading at an average of 600 to the United States dollar – an increase from 425 in January. This negatively affects food and fuel commodity prices across the country.
- The below-average rainfall in June–September affected the growing season of main cereals from July to August 2018 – a key growing period for 80 percent of the governorates. Combined with the unavailability of inputs, fall armyworm infestation and limited access to fields in conflict zones, October harvests are not expected to significantly improve food security outcomes.
- The World Health Organization has warned that ongoing violence and destruction of key health facilities has the potential to exacerbate the ongoing cholera crisis. As airstrikes target key water facilities and health infrastructure, clean drinking water and medicine supplies are becoming scarce. Accordingly, the damage to such critical infrastructure significantly increases the risk of cholera and malnutrition.

17.8 million people food insecure, of which 8.4 million are severely food insecure.

Average monthly wheat imports are 10 to 15 percent below monthly import needs in 2018.

The Yemeni rial has lost more than half of its value against the United States dollar since the start of conflict.
Potential impact

- As the conflict continues, food insecurity is likely to worsen, in particular in and around Al Hudaydah and other governorates that rely heavily on Al Hudaydah port imports. In particular, displaced populations and vulnerable households in conflict zones are likely to face the most severe food insecurity outcomes.
- Intensifying conflict in Al Hudaydah raises concerns about the future of trade and access in and out of Yemen. The port is a lifeline for the country from which humanitarian actors provide about one-quarter of total cereal imports into Yemen. If access is lost to these areas, it is unlikely that humanitarian and commercial imports from other Yemeni seaports or neighbouring countries could fill the large import gaps that would be created.
- Ongoing devaluation of the Yemeni rial against the United States dollar and conflict will likely have a significant impact on availability and prices of food, fuel and other essential commodities in local markets.
- With expected low agricultural production due to below-average rainfall and fall armyworm infestation, food insecurity will most likely further worsen. It is likely that the number of people who currently rely on humanitarian assistance will increase.
- Ongoing violence and destruction of key health facilities has the potential to exacerbate the ongoing cholera crisis and worsen the level of malnutrition, particularly in children below the age of five and other particularly vulnerable populations, such as displaced households.

Recommended early actions

Crops
- Distribute and promote the use of good quality crop seeds in areas where planting is still possible between October and December.

Cash
- Implement unconditional cash transfer, cash+ and capacity building activities in conflict-affected areas by December to safeguard the livelihoods of the most vulnerable farmers.

Livestock
- Distribute animal feed for livestock belonging to vulnerable households in conflict-affected areas between October and December, especially in Al Hudaydah and other areas with high concentration of displaced households with livestock.
- Distribute and promote the use of good quality fodder seeds in areas where planting is still possible between October and December.
- Continue the vaccination campaign to safeguard pastoralists’ assets in all governorates by December.

Monitoring and assessment
- Continuously monitor the food security situation in all governorates and in particular those under heavy fighting such as Al Bayda, Al Hudaydah and Sa’ada.
- Monitor the devaluation of the Yemeni rial against major currencies and its impact on food and fuel commodity prices.

Partnership and accessibility
- Advocate access for and protection of humanitarian actors, farmers and livestock raisers in conflict-affected areas.
Democratic Republic of the Congo

Food security countrywide is expected to deteriorate significantly as a result of persistent insecurity, displacement and the resurgence of the Ebola virus disease.

- The Democratic Republic of the Congo continues to be affected by a severe and widespread humanitarian crisis, with conflict and insecurity as the main drivers affecting food security and livelihoods, and causing massive displacement.
- The intensity of insecurity over the last months remains high in Ituri, and North and South Kivu due to intercommunal conflict. A large number of people are experiencing a severe disruption of their livelihoods and loss of productive assets due to the widespread displacement across the country – about 4.5 million internally displaced people (IDP) as of June 2018.
- Agriculture has been severely affected by insecurity, as people were forced to abandon their lands. At the same time, 1.8 million people have returned to their communities in South Kivu, Tanganyika and the greater Kasai region, and are in urgent need of livelihoods support and food assistance.
- The recurrence of disease outbreaks, including measles, cholera and a recent resurgence of the Ebola virus disease (EVD) in the eastern part of the country, is also of concern.
- Following a previous EVD outbreak that was contained in the Equateur province and declared over on 24 July 2018, a new EVD outbreak was declared on 1 August in North Kivu. As of 16 September, The World Health Organization (WHO) reported 142 EVD cases, of which 111 confirmed and 31 suspected. To date, the affected areas are Beni, Butembo, Mabalako, Musienene and Oicha in North Kivu, and Mandima in Ituri. The ongoing conflict and the presence of various armed groups controlling some of the affected areas is hindering efforts to respond to the outbreak, and to contain its spread to neighbouring provinces and to bordering regions in Uganda. The death toll from the outbreak stands currently at 97 deaths reported since April 2018.
- On 11 August, Ugandan medical authorities issued a “high risk” alert due to the EVD outbreak in the Democratic Republic of the Congo. Thousands of refugees from the Democratic Republic of the Congo have crossed Lake Albert to reach western Uganda in 2018. It is unknown how many failed to register with the authorities upon arrival, thus failing to receive medical screenings for Ebola.
- Agricultural livelihoods in northeastern and central provinces have been severely affected by insecurity. According to the Famine Early Warning Systems Network (FEWSNET), the harvest for season B in these regions is expected to be below-average compared with the last two seasons.
The EVD outbreak and the early onset of the lean season pose a severe threat to food security in affected areas. Early action is needed to support the crop harvesting season in the northern part of the country, and to diversify the livelihoods of the most vulnerable people.

**Potential impact**

- An IPC analysis covering the period from August 2018 to June 2019 is being finalised. Protracted insecurity, displacement and disease outbreaks are likely to result in a sharp increase of the number of people facing acute food insecurity.
- According to WHO, the EVD outbreak is likely to continue to spread in North Kivu and Ituri. If the aggravating factors, such as insecurity and the subsequent limited humanitarian access, are not mitigated, the outbreak is likely to spread further into neighbouring provinces (e.g. South Kivu) and countries (e.g. Uganda and Rwanda). The risk of further EVD spread is considered high by WHO and the national health authorities.
- The below-average harvest in the northeastern and central regions of the country is expected to lead to a shortage in food stocks and to the onset of an early lean season – August instead of October. Affected populations are likely to be dependent on markets and imports to overcome food shortages until the next season A harvest (January–March 2019). FEWSNET foresees that populations in the affected areas are likely to face Crisis (IPC Phase 3) levels of food insecurity between September and January.
- In an already tense political climate, the risk of increased political violence and insecurity in the lead up to the elections is high and could further destabilize the country.

**Recommended early actions**

**Crops**

- Distribute inputs for market gardening (vegetable seeds) and implement conditional cash transfers (CCT) by October in Beni Territory (North Kivu) to displaced people in need of assistance. CTT should prioritize women with the condition of participating to nutrition awareness sessions.
- Implement cash for work (CFW) and seed distribution (vegetable) by October in Ituri (Irumu), targeting pygmies affected by the ban on hunting due to Ebola. CFW should be linked to farming activities (weeding, hoeing, preparing nurseries) and beneficiaries will receive cash in various installments (based on time or progress of work).

**Assessment**

- Ensure continuous and timely monitoring of the food security situation in the areas affected by conflict and EVD outbreak.

**Partnership and accessibility**

- Advocate for improving farmers’ access to cultivated lands in conflict-affected areas to facilitate the harvesting season.
- Integrate livelihood-based responses to improve water, sanitation and hygiene outcomes, Ebola preparedness, household health and nutrition.
South Sudan
Conflict affects food security, with continued risk of Catastrophe levels of food insecurity

Risk overview

- Nearly 60 percent of the population of South Sudan was pushed into severe acute food insecurity during the peak of the lean season in June-July, as a result of persistent conflict, disruption of livelihoods, poor economic conditions and humanitarian access challenges. More than 6 million people are facing Crisis or Emergency levels of food insecurity (IPC Phases 3 and 4) – an almost 20 percent increase compared with the same period in 2017, even after taking into account the refugee outflow.
- More than 1.8 million IDPs live in South Sudan, and remain among the most vulnerable populations in the country. Furthermore, there are over 2.5 million South Sudanese refugees in neighbouring countries.
- The areas of greatest concern regarding food insecurity are Leer and Mayendit counties in former Unity State, Greater Upper Nile region, where there are large numbers of IDPs, and people face continued insecurity. Other areas of heightened concern include the wetlands border of northern Jonglei and central and southern Unity; Greater Baggari subarea in Wau, Raga in Western Bahr el Ghazal; Yirol East, Yirol West, and Rumbek North in Lakes state.
- Parties involved in the South Sudanese civil war signed a peace agreement in September, following several months of negotiations. However, it remains unclear whether the political process will contribute to improve the humanitarian situation in the country in the coming months.

Potential impact

- In July 2018, the United Nations warned that a sustained absence of humanitarian assistance due to fighting in central Unity State’s Koch, Leer and Mayendit counties could push up to 55,000 vulnerable families in these areas into Catastrophe (IPC Phase 5) levels of food insecurity.
- While cropping conditions are generally favorable in the country (Crop Watch Bulletin, FAO), extensive areas in southern and eastern South Sudan experienced below-average (less than 75 percent) rainfall in July‒August 2018, with Kapoeta East being the worst-affected. Kapoeta East and neighbouring counties are thus likely to experience below-average yields in localized areas by the end of the cropping season (September).
- In the areas most affected by armed conflict during the March‒June 2018 planting season, many households were likely unable to harvest, resulting in the possibility of extreme food insecurity until the next harvest in 2019.
- Fall armyworm continues to cause substantial damage in affected fields, mainly in the maize and sorghum growing areas of the Green Belt. Losses of up to 30 percent are expected in severely affected fields.
- According to FAO, South Sudan is also at risk of the spread of Rift Valley fever (RVF) due to expected above-average wet conditions over the coming months. This would create environmental suitability for vector amplification. RVF is a
viral zoonosis that mainly affects animals, causing significant economic losses due to abortion and death among RVF-infected livestock, but can also infect humans.

**Recommended early actions**

**Assessment**

- Continue to monitor the food security situation closely, particularly in areas at greater risk such as Leer and Mayendit counties in former Unity State; northern Jonglei and central and southern Unity; Greater Baggari subarea in Wau, Raga in Western Bahr el Ghazal; Yirol East, Yirol West, and Rumbek North in Lakes state.
- Support surveillance, technical and extension fall armyworm control and management using a coordinated approach from county to regional level.

**Crops**

- Distribute fast-maturing crop (cowpea and vegetable) to vulnerable farmers in lowland areas with access to surface water or residual soil moisture from receding flood water.

**Fisheries**

- Distribute fishing kits to vulnerable farmers in lowland areas with access to surface water from receding flood water.

**Livestock**

- Strengthen RVF surveillance across the country and along the borders to prevent outbreaks of the disease.
- Advise veterinary services and livestock farmer communities to remain vigilant about the occurrence and spread of RVF.
Risk overview

- In April 2018, the Government of Afghanistan officially declared a drought emergency following months of persistent dryness across most of the country. A precipitation deficit of up to 70 percent and above-average temperatures have affected the 2017/2018 main cropping season, resulting in the lowest wheat production level in five years.
- As dry conditions persisted during the spring and summer seasons, farmers were not able to cultivate crops. In intensive irrigated areas, crops were planted across a significantly smaller area than last year due to poor water availability and the impact of plant pests and diseases such as senn pest and locust.
- Significant reduction in rainfed wheat cultivation is likely to contribute to increased food insecurity, especially of smallholder subsistence farmers. Although food prices have not increased due to the availability of imported main staples, significant income reduction was reported in most of the country, affecting access to food.
- As of September 2018, the number of IDPs surpassed the number of conflict-induced displacements due to persisting drought conditions. Over the course of the month, 275,000 new IDPs were recorded, primarily in the west.
- Livestock keepers have reported desiccation of extensive pastureland. This has led to a deterioration in livestock body conditions and productivity, with deaths and increased distress sales of core breeding stocks across the country. The poor production of fodder in 2017 and 2018 has increased its market price and has prevented many livestock keepers from storing enough fodder ahead of the next winter.

Potential impact

- An IPC analysis covering the period from August 2018 to February 2019 is being finalized. The key drivers of humanitarian needs such as conflict, drought, forced displacements and cross-border movements are likely to result in a sharp increase in the number of people facing acute food insecurity in Afghanistan.
- The Ministry of Agriculture, Irrigation and Livestock estimates a national wheat production deficit between 2–2.5 million tonnes. Preliminary production estimates further indicate that the 2018 wheat harvest will be the lowest since 2011. This shortage is likely to affect vulnerable households primarily reliant on wheat as their main staple. An inadequate supply will be available for stocking ahead of the winter months. Needs are particularly great in Badghis, Badakshan, Kandahar and Nuristan.
- Negative coping mechanisms are likely to increase as agropastoral livelihoods are disrupted by both drought and conflict. Pastoralists and agropastoralists may attempt to
migrate to areas with better security, pasture and water availability or to sell livestock at below-average prices. As a result of distress sales of core breeding stocks, pastoralists may have a challenge to restock their flocks over several seasons.

**Recommended early actions**

**Crops**
- Distribute certified wheat seeds and fertilizers to drought-affected smallholder farmers in the west, north, northeast, south, east and central regions between October and December.
- Distribute vegetable seeds and home gardens to vulnerable farming households in west, north and south regions between October 2018 and February 2019.
- Distribute fodder crop seeds (Egyptian Clover) to vulnerable livestock keepers in the west, north and south regions between September 2018 and April 2019.

**Livestock**
- Distribute concentrated animal feed to households in drought-affected provinces between October and December.
- Administrate deworming medicine to drought-affected livestock in north, west and south regions once livestock body conditions are recovered before the peak of winter.
Risk overview

- More than 919,000 Rohingya refugees currently reside in Bangladesh. To meet their basic needs, 1.3 million Rohingya refugees and Bangladeshi host community members — a majority of whom are children — rely on humanitarian assistance. These populations live in desperately overcrowded camps and communities, highly vulnerable to monsoon rains and the upcoming cyclone season, which will peak in October.

- Since June 2018, monsoon rains have been affecting the Rohingya refugee camps. On 25 July, 463 mm of rain fell in Cox’s Bazar — equivalent to two-thirds of the average June rainfall. More than 4,400 refugees living in the camps were impacted by the downpour, including 3,100 people affected by landslides, 700 people by floods and 510 people by waterlogging. Shelters, water points and latrines were damaged and are no longer useable. As of May 2018, when the monsoon season began, more than 49,000 people have been impacted, including more than 6,000 people who were relocated to higher areas. There currently are no emergency shelters identified for the refugee population.

- Areas impacted by heavy rain and landslides have experienced significant damage to existing health facilities, schools and infrastructure. A recent assessment of more than 100 health facilities conducted by the Bangladeshi Ministry of Health and health experts has revealed that medical waste management is a key gap in camps and increases risks of water and vector-borne diseases.

- The monsoon season has also brought heavy rainfall and widespread flooding to Myanmar, particularly in Bago Region, Mon and Kayin states. At the end of July and beginning of August, more than 120,000 people have been displaced by flooding across nine provinces as a result of the Southwest Monsoon. In Bago Region, an estimated 152,500 people have taken shelter at 388 temporary relief camps. Damage to infrastructure and agricultural land was reported in Shan and Kayin states. The Ministry of Agriculture, Livestock and Irrigation indicate that about 1.2 million acres have been flooded countrywide, including 900,000 acres of damaged agricultural land.

- As of June 2018, UNHCR and the United Nations Development Programme signed a tripartite memorandum of understanding with the Government of Myanmar to establish a framework for cooperation aimed at creating conducive conditions for the voluntary, safe, dignified and sustainable repatriation of Rohingya refugees to their places of origin or of their choosing. The two UN agencies and the Government aim to create improved and resilient livelihoods for all communities living in Rakhine State.

- In September 2018, the UN released the Report of the Independent International Fact-Finding Mission on Myanmar. It concluded that the patterns of gross human rights violations and serious violations of international humanitarian law in Rakhine State resulted in a mass exodus.
Early action is required before the October–November peak period of the second cyclone season to prevent potential impacts on the livelihoods and food security of refugees and host communities in Cox’s Bazar, and of vulnerable communities remaining in Northern Rakhine.

Potential impact

- While a normal cyclone season is forecasted for the October–November peak period, the high level of exposure in Cox’s Bazar raises grave concerns. Although the first cyclone season passed without incident, it is imperative to continue preparedness activities for this second season. A large-scale cyclone event is by far the most dangerous threat to refugees, host communities and to the Bangladeshi population in general. Thousands of hand-built tarpaulin and bamboo shelters are threatened by strong winds and heavy rain. An estimated 39,000 Rohingya refugees, living on steep, deforested slopes of sand and clay are the most at-risk from landslides and flash flooding.

Recommended early actions

For refugees and host communities in Cox’s Bazar

Crops
- Accelerate the biological land stabilization programme to contribute to landslide mitigation efforts during the remaining weeks of the planting season, particularly in expansion sites of western camps.

Energy and natural resources
- Expand alternative cooking fuel distribution programmes to ensure households can boil water and cook rations.

Food storage
- Continue the distribution of waterproof food storage drums for the safe storage of food rations and valuable items.

For vulnerable communities remaining in Northern Rakhine

Assessment
- Disseminate timely and quality food security information analysis for decision-making and activation of early actions.

Cash
- Urgently provide cash+ assistance to accessible vulnerable communities.

Crops
- Distribute agricultural inputs to increase availability of fresh mineral- and vitamin-rich food among vulnerable communities with limited access to agricultural land and markets.
- Train farmer groups on agricultural practices to reduce impact of dispossession and social tensions on reduced access to food.

Energy and natural resources
- Promote energy-saving measures and alternative fuel options to address cooking fuel needs.

Fisheries
- Support the establishment of aquaculture systems (rice-fish production) to increase availability of protein-rich food.

Livestock
- Support the establishment of poultry units to increase availability of protein-rich food.
Syrian Arab Republic

Possible Idlib takeover coupled with crop deficit in northeast areas is likely to exacerbate food insecurity

**Risk overview**

- As of June 2018, the number of IDPs reached 6.6 million. In August, 5.6 million Syrian refugees were registered in the Near East and North Africa region.
- On 21 September, Turkey and the Russian Federation agreed on a demilitarized zone along the border of Idlib Governorate – the largest area in the country outside the control of the Syrian Government. The plan would require armed groups to surrender weapons and withdraw from the area by mid-October. The precise details of the plan are still being developed, but at least one opposition group has declared it would not support the initiative. Although the plan is regarded as a positive development, uncertainty still remains for the population at large, and the Government remains determined to reassert control over Idlib by any means necessary.
- Risks of an offensive on Idlib by government forces are substantial. In September, the UN Special Envoy for the Syrian Arab Republic said conditions for a “perfect storm” are taking shape, with likely severe humanitarian consequences.
- Rains did not start until the first ten days of January 2018 and ceased in early March, followed by a dry spell affecting crucial stages of crop development and greatly limiting possible yields, particularly in the northeast. The cropping season ended with torrential rains from mid-April to early May, making many areas unsuitable for harvesting.

**Potential impact**

- A possible offensive to take over Idlib could uproot more than 800,000 people – far more than the number of those displaced in previous assaults. Implications for food security will likely be significant and humanitarian access severely hindered.
- According to GIEWS, wheat production in Idlib was approximately 5 percent of the total national wheat production in 2017. The Al Ghab plain, a fertile depression under its own agricultural authority lying both in Hama and Idlib governorates, has a similar share of total production. Military operations might damage planting expected to start in October. This could have an impact on national food security, particularly should a poor harvest occur in the rest of the country in the 2018/19 crop year. Populations displaced by conflict and moving with their livestock could also lead to the spread of livestock diseases.
- In June–July 2018, a Crop and Food Security Assessment Mission was jointly conducted by FAO and WFP in the country. The report with the final production estimates will be released over the coming weeks. Preliminary results indicate that this year’s cereal harvest in the northeast is expected to be significantly reduced compared with the already low level obtained in 2017 due to poor rainfall in the 2018 cropping season, estimated at 30–40 percent below average. The northeastern region, which corresponds to the Al Hassakeh Governorate, is traditionally considered to be the breadbasket of the country, providing 80 percent of national grain production. A below-
The expected further worsening of the food security situation can be mitigated through early actions in support of the ongoing planting season.

average harvest in the northeast is thus likely to strongly affect national food security, exacerbating current vulnerabilities.

- Overall losses in the agriculture sector due to the conflict amount to an estimated 16 billion dollars. Wheat production has gone from 4 to 2 million tonnes and livestock population has halved. The conflict will continue to put a strain on the agriculture sector. The limited availability and high costs of farming inputs in addition to livestock decimation are likely to further increase dependency on external assistance.

Recommended early actions

Crops
- Distribute cereal and vegetable seeds as soon as possible to the most vulnerable farmers in order to mitigate drought losses in the grain-producing northeast of the country as well as related impacts on food security.

Livestock
- Carry out emergency livestock treatment measures to contain possible spread of diseases, targeting the most vulnerable households in drought- and conflict-affected areas.
- Distribute animal feed to the most vulnerable households in order to limit drought- and conflict-driven animal mortality throughout the October–December period.

Cash
- Conduct cash-based programmes in targeted areas to support the livelihoods of the most vulnerable drought- and conflict-affected people.
Risk overview

- El Niño is a recurrent atmospheric-oceanic phenomenon that is associated to an increase in sea surface temperatures in the central tropical Pacific and a sustained weakening of the trade winds.
- The official forecasts provided by the International Research Institute for Climate and Society (September 2018) point to a 62 percent chance of El Niño in October–December 2018 that increases to 67 percent in December 2018–February 2019. A high chance of an El Niño event occurring during the winter in the Northern Hemisphere is also confirmed by the World Meteorological Organization and the Australian Bureau of Meteorology.

Potential impact

- As a global phenomenon, El Niño can affect the climate system worldwide, resulting in precipitation anomalies that may affect agricultural production, especially if they coincide with critical stages of crop and pasture. Given that some regions of the world are still recovering from extended periods of dry spells or are currently enduring flooding, a further continuation of extreme weather events later in the year would greatly curtail recovery and exacerbate existing vulnerabilities, with serious impacts on food security.
- An El Niño event during September 2018–April 2019 is likely to result in above-average rainfall conditions in the Horn of Africa. Rainfall is already forecast to be above-average in Somalia and northeastern Kenya – the areas most affected by floods following abundant rains in March–June 2018, increasing the risk of a second season of flooding. This could cause crop losses in riverine and lowland areas, resulting in significant needs for assistance.
- Historically, El Niño has been associated with below-average rainfall in the Southern Africa region, particularly between October and December, when summer cereals are planted. An El Niño event could contribute to lower levels of planting and weeding as well as moisture stress and poor crop development thus damaging the 2019 main harvest. Reduced rainfall could also result in lower availability of agricultural labour for poor households, who rely on this source of income during the lean season that typically runs from November through March.
- Fall armyworm infestations are more likely in dry conditions, which could result in heightened risk for the Southern Africa region over the coming months.
- An El Niño event during September 2018‒April 2019 is likely to result in above-average rainfall in Central America, particularly in the area of the Dry Corridor. An El Niño event could exacerbate existing dry conditions, and result in delays in plantings and vegetative development of basic grains of the postrera season with planting starting in September and harvest in November. This could result in a more pronounced 2019 lean season (usually between April and August).
- In the Pacific region, El Niño generally triggers drought and above-normal cyclone activity, which can occur concurrently. Below-average rainfall can impact both the Northern and Southern Pacific. In the Northern Pacific (Kiribati, Marshall Islands, Micronesia [Federated States of] and Palau), this event usually coincides with the dry season (December‒April) and can obstruct access to fresh drinking water or harm key crops that rely on rainfall mechanisms. While the Southern Pacific enters into its rainy season (October-April), below-average rainfall is also a typical consequence of El Niño in the area, particularly for Fiji, Papua New Guinea, Solomon Islands, Tonga and Vanuatu.
- An El Niño event is also likely to result in dry spells in southern India, areas of South-East Asia, as well as the northwestern part of South America. El Niño is also likely to drive above-average wet conditions in Central Asia, parts of South America and the Gulf of Mexico.
Historical El Niño trends

Source: NWS/NCEP Climate Prediction Center
Risk overview

- Fall armyworm, an insect native to tropical and subtropical regions of the Americas, was detected in Africa (Benin, Nigeria, Sao Tome and Principe, and Togo) in early 2016. On 30 January 2018, almost all the countries in sub-Saharan Africa (except Comoros, Djibouti, Lesotho and Mauritius) detected and reported fall armyworm, with tens of millions of hectares of maize infested.
- The insect has recently been detected in southern India – the first time in Asia – as well as in Yemen. The pest has the capacity to fly long distances (100 km per night) and given the region’s favourable tropical and subtropical climate, there are always crops and weeds all year round that the pest can feed on.
- Fall armyworm’s larvae prefers maize as a host plant, however it can feed on more than 80 other plant species including rice, sorghum, vegetable crops and cotton, hence potentially causing damage to economically important crops for vulnerable farmers across the continent.

Potential impact

- The presence of fall armyworm in Eritrea and Sudan increases concern of further spread to Egypt and Libya. With the presence of the pest in most Sub-Saharan African countries, the upcoming cropping seasons across the continent are considered to be at high risk, in particular in Southern Africa.
- Fall armyworm is likely to spread from India to other parts of Asia, with southeast Asia and southern China most at risk, according to FAO’s Food Chain Crisis experts.
- In Asia, where small-scale farmers cultivate about 80 percent of the region’s farmlands, rice and maize are among the most produced and consumed cereals. More than 200 million ha of maize and rice are cultivated annually in Asia and more than 90 percent of the world’s rice is produced and consumed in the Asia and Pacific region. China is the second largest maize producing country in the world.
- Left unmanaged or in the absence of natural biological control, fall armyworm can cause significant yield loss in maize and other crops. For maize, fall armyworm can reduce yields by up to 20 percent. This would mean an estimated 8.3 million tonnes per year loss of maize worth around USD 2.5 billion. Yield losses are likely to be higher if its impact is quantified for the other species.

Recommended early actions

- Scale-up efforts to collect specific evidence on the spread and impact of fall armyworm in African and Asian countries, with a specific focus on countries known to be at high risk of food insecurity due to the pest.
- Through advocacy and dissemination, increase the use of the Fall Armyworm Monitoring and Early Warning System – a mobile application used to identify and report the level of infestation – and map its spread.
- Since the pest cannot be eradicated, the long-term focus lays on the development of economically sound and sustainable pest management techniques for smallholder farmers.
- Support biological control efforts, such as the development of natural pesticides like predators and parasitoids.
- Support the implementation of farmer field schools for the training of smallholder farmers on pest management.
- Support south-south cooperation to share knowledge by facilitating events.
Fall armyworm outbreak – countries affected and at risk

Source: FAO, September 2018
In the Central African Republic, armed groups around IDP sites continue to prevent IDPs from accessing water, food and basic services, and receiving humanitarian assistance.
On watch

The matrix provides an overview of the ranking of risks featured in this report. The risks are prioritized based on the severity, likelihood and magnitude of their impact, while also balanced against the countries individual coping capacity.

In order of intensity, for the period October–December 2018, the on watch section includes:

- Central African Republic
- Central America
- Nigeria
- Horn of Africa
- Iraq
- Palestine
- Venezuela (Bolivarian Republic of)
- Democratic People’s Republic of Korea
- Cameroon
- Lake Chad Basin
- African swine fever outbreak – Asia
- Highly pathogenic avian influenza

Photo: ©FAO/Catianne Tijerina
Risk overview

- Widespread insecurity continues to drive a dire humanitarian situation in the Central African Republic. The presence of armed groups competing for resources is severely affecting people’s access to food and their livelihoods, forcing many to leave their homes. Furthermore, frequent attacks against aid workers and peacekeepers severely affects operations, hindering both life-saving and recovery efforts.

- In the first half of 2018, the Protection Cluster recorded over 6,600 incidents in the country, as well as the death of six humanitarian workers. The number of incidents against aid workers has nearly doubled between the first and second quarter of 2018 – from 63 to 118. As a result, 15 organizations had temporarily (April–May 2018) suspended their activities in the country.

- Armed groups around IDP sites, where most IDPs currently reside, continue to prevent them from accessing water, food and basic services, and receiving humanitarian assistance. There are over 614,000 IDPs and 545,000 refugees in neighbouring countries (Commission mouvement des populations, 31 July 2018).

- According to the IPC analysis conducted in March 2018, seven areas with high concentration of IDPs were classified to be in IPC Phase 4 (Emergency), as well as ten prefectures and two areas with high concentration of IDPs in IPC Phase 3 (Crisis) – with about 2 million people projected to face acute food insecurity during the lean season (April–August 2018).

- The most vulnerable populations are located in areas with high concentration of IDPs in the main cities of the conflict-affected prefectures (Alindao, Bambari, Batangafo, Bangassou, Bria, Kaga-Bandoro, Obo, Rafai and Paoua). A large proportion of the displaced population is located in these areas, with one-third residing in IDP sites and two-thirds in host families.

- According to FAO’s Global Information Early Warning System, favourable weather conditions prevailed during the cropping season in the southern maize-producing areas. The cumulative rains from March to the end of July were however below average in Mbomou, Kemo and slight deficits were registered in other prefectures such as Ombella-Mpoko and Lobaye. Persisting civil insecurity has negatively affected crop production following a significant reduction in planted areas due to the abandonment of a substantial number of farms. Furthermore, five consecutive years of reduced output has led to the depletion of households’ already inadequate productive assets, particularly seeds and farming tools.
Potential impact

- Given the presence of different armed groups in the country, widespread insecurity and frequent attacks on humanitarians and UN peacekeepers are likely to continue during the upcoming months. These levels of insecurity are likely to continue affecting the main supply routes in the country, potentially reducing or causing the suspension of humanitarian assistance in the upcoming months.
- As a result of the severe impact of the conflict on agricultural activities, the 2018 aggregate output is preliminarily estimated to be below average and significantly reduced compared with the pre-crisis levels in 2013.

Recommended early actions

Crops
- Distribute vegetable seeds (amaranth, cabbage, cucumber, okra, onion, spinach and tomato) by October to 20,050 vulnerable households in Basse-Kotto, Mbomou, Nana-Mambéré, Ombella Mpoko, Ouaka, Ouham, Ouham-Pendé and Sangha Mbaéré in order to support the market gardening season.

Livestock
- Distribute hogs by October to support the livelihood diversification of 1,000 vulnerable households in the prefecture of Kemo (Dekoa, Mala and Sibut).
Risk overview

- A severe drought is affecting Central America’s Dry Corridor, potentially impacting 2.1 million people in El Salvador, Guatemala, Honduras and Nicaragua. These countries have experienced prolonged periods without rain since late June 2018 – longer than usual. This has significantly affected food production during the *primera* season – with planting starting in the middle of April and harvest ending in July–early August.
- Maize and bean crops grown for consumption are expected to be the most affected. The yield decrease is expected to be from 20 percent to a total loss of crops in some areas of the Dry Corridor, with less impact on beans (sorghum), compared with maize thanks to their resistance to drought.
- As of 15 August, the Governments of El Salvador, Guatemala and Honduras reported losses of 281 000 ha in maize and bean crops. According to El Salvador’s Ministry of Agriculture and Livestock, the drought affected approximately 500 000 people and 58 000 ha of land. In Guatemala, drought conditions affected almost 1.3 million people. In Honduras, the drought impacted 390 000 people, and the Government declared a state of emergency. According to the Global Information Early Warning System (GIEWS), Nicaragua has likely experienced a lesser impact of dry conditions on production, with losses reported in the departments of Madriz and Chinandega.

Potential impact

- The period of food shortages is typically between April and August. According to GIEWS, this season’s crop losses could make the next lean season more pronounced, with tight supplies and a worsening food security situation setting in earlier than normal in 2019 in the Dry Corridor.
- The International Research Institute for Climate and Society (IRI) and the Climate Forum in Central America forecast below normal rainfall over the remainder of the year. Moreover, IRI projects a 62-percent chance of El Niño during October–December 2018, which could compound dry conditions in Central America. Dry conditions could affect the *postrera* season, with planting starting in September and harvest in November.
- In addition to drought, Nicaragua is experiencing widespread political unrest since April. Due to the low exports, limited tourism, lack of employment and foreign investment, the average household income has significantly decreased. A food security crisis could affect the country over the coming months.
- The current dry conditions and the impact on food security could lead to an increase in migration from rural areas. Instability in Nicaragua is also resulting in increasing migration, which is likely to continue over the coming months. The main destination is Costa Rica, where an estimated 25 000 people are already seeking refuge (Office of the United Nations High Commissioner for Refugees, August 2018).
Early actions should be swiftly implemented to mitigate the impact of the current drought while strengthening the resilience of vulnerable agricultural households in the Dry Corridor.

**Recommended early actions**

**Assessment**
- Participate actively in forecasting and monitoring mechanisms on crops and food security, including the Food Security Forecasting System and the crop forecasting and crop monitoring roundtable in Guatemala.
- Support for strengthening the monitoring system focused on production, prices and food security in Nicaragua (Municipalities of Estel, Madriz and Nueva Segovia).
- Contribute to the establishment of a national drought monitoring system in agriculture in Guatemala, Honduras and El Salvador.
- Support the coordination with government agencies in the finalization of crop monitoring and the implementation of the Government’s Action Plan in Honduras.

**Livestock**
- Promote the breeding and raising of rabbits, goats and backyard birds for livelihood diversification in the Dry Corridor of Guatemala between October and December.
- Promote the use of suitable crops that did not produce grain due to drought as animal feed, and promote the use of ancestral fodder varieties in the Dry Corridor.
- Encourage the use of alternative feeding in El Salvador (Municipalities of Guatajiagua, Semsembra and Yamabal).
- Strengthen the capacities of promoters and families in the prophylaxis of large and small livestock, and carry out animal prophylaxis and veterinary campaigns targeting vulnerable livestock raisers in the Dry Corridor of Guatemala and Nicaragua by December.
- Provide technical assistance and capacity building on fodder storage and livestock management techniques in municipalities of the Dry Corridor of Nicaragua and El Salvador by December 2018.

**Crops**
- Support the establishment of fodder (sorghum) banks by December to ensure availability in Nicaragua.
- Establish community seed banks of vegetables and basic grains in the Dry Corridor of Guatemala by December.
- Establish local seed banks of adapted and drought-resistant varieties in the municipalities of the Dry Corridor of Honduras and Nicaragua (Estelí, Madriz and Nueva Segovia) by December.
- Provide technical assistance and training for the establishment of community banks for commercialization of maize and beans, using the Contingency Mutual Funds approach in the Dry Corridor of Guatemala by December.
- Establish irrigation systems for the production of grains and vegetables in Guatemala and Nicaragua by December.
- Establish family and community backyard gardens, including through distribution of rainwater harvesting equipment in Guatemala and Nicaragua by December.
- Strengthen the strategic food reserves at the national and local levels, for a better management of the post-harvest and storage mechanism by October in Dry Corridor of Honduras.

**Fisheries**
- Support the breeding of fish in community and family reservoirs (rainwater harvesting and natural spring intake), targeting 350 small producers in the Dry Corridor of Guatemala.

**Water**
- Provide technical assistance on the management and maintenance of reservoirs, and on rainwater harvesting in El Salvador (Municipalities of Guatajiagua, Semsembra and Yamabal) by December 2018.
Displacement in the northeast remains critical, and the herder-farmer conflict in the country’s Middle Belt drives food insecurity

2.3 million people severely food insecure in the northeast are likely to have increased to 2.9 million in June–August 2018

1.8 million IDPs

22,000 suspected cholera cases

Risk overview

- The conflict-affected areas of Adamawa, Borno and Yobe states in northeastern Nigeria are likely to suffer from limited harvests, as conflict perpetuated by the Boko Haram insurgency and response by the military spurs further displacement. Most of the northeast remains impacted, with Abadam, Bama, Dikwa, Guzamala, Kala Balge, Kukawa, Mobbar, Monguno, Ngala and Marte local government areas, likely among the worst-affected. About 7.7 million people are estimated to be in need of humanitarian assistance in the northeast, and over 1.8 million people are displaced (IOM, May 2018), with only about 40 percent in camps or camp-like settings.

- Over 2.8 million people have been supported with food security assistance as part of the 2018 Humanitarian Response Plan in the northeast over the first half of 2018, two-thirds of whom with food, and the remainder with agricultural and livelihood assistance. There are areas that remain inaccessible to humanitarian actors, where food security outcomes are likely to be unchanged.

- The number of people facing acute food insecurity in Adamawa, Borno and Yobe has significantly reduced over the past year, from 4.7 million (March‒May 2017) to 2.3 million (March‒May 2018) thanks to large-scale humanitarian assistance. However, according to the latest Cadre Harmonisé food security analysis (March‒May 2018), an additional 660,000 people were expected to be severely food insecure in June–August 2018 for a total of over 2.9 million.

- Over 1,300 deaths were reported in mid-2018 due to the increased agropastoral conflict in the Middle Belt states compared with 934 deaths in 2017. Acts of banditry and cattle rustling at the expense of civilians in rural communities in Kaduna, Zamfara, Taraba, Adamawa and Plateau states have also been perpetuated in the context of the farmer–herder crisis.

- The proliferation of weapons in the country and overextension of military forces as they have to grapple with the Boko Haram crisis in the northeast and armed militias in the oil-producing south are allegedly some of the more immediate causes of the higher death toll in 2018. The conflict has displaced hundreds of thousands and has sharpened ethnic, regional and religious polarization.

- A regional cholera outbreak is currently affecting the Lake Chad Basin which includes areas of Cameroon, Chad, the Niger and Nigeria. To date, Nigeria is the most impacted country, with 22,000 suspected cases and 255 deaths. In the conflict-affected northeast, the Borno State Ministry of Health reported 380 suspected cases of cholera, including 14 deaths, as of 5 September 2018.

Potential impact

- The farmer-herder conflict will likely continue to damage the country’s economy and food security. Most of the communities in the Middle Belt are in the so-called ‘food basket’ of the country. Cattle is the primary source of animal protein for most Nigerians and the security breakdown threatens the ability to get them to their markets in the south.
Continued efforts are required to support peacebuilding, reduce food insecurity and ensure the regular development of agricultural activities in conflict-affected areas.

- With the continuation of the offensive targeting Boko Haram, more areas of the northeast are expected to continue to become accessible, and population returns to continue. Nonetheless, the number of people displaced is expected to remain high, and Adamawa state will continue to experience both Boko Haram-related conflict as well as the farmer/herder conflict.

**Recommended early actions**

**Livelihood assistance**
- Increase agriculture and livelihood assistance to the returnees, IDPs and host communities in the hardest hit communities in the newly accessible areas in Adamawa, Borno and Yobe, and to displaced populations in the states affected by agropastoral conflict.

**Crops**
- Engage with military authorities to secure a larger radius around the main rural communities affected by the Boko Haram-related insurgency to allow farmers to undertake their activities and harvest between October and November, targeting vulnerable farmers and agropastoralists in Borno (Dikwa, Gwoza, Jere, Konduga, Kukawa, Monguno, Ngala and Nganzai) and Adamawa (Madagali and Michika).
- Additional support to farmers to engage in off-season farming mainly growing a variety of vegetables, maize and rice in Adamawa, Borno and Yobe allow farming households to have food supply until the main cropping season.

**Livestock**
- Delimitate grazing areas and animal route/corridor, targeting agropastoralist communities in the Benue, Nasarawa, Taraba, Adamawa, Plateau, Kaduna and Zamfara States by October.
- Strengthen the capacities of vulnerable herders in affected states on the production of feedstock and on ranching.

- Restore the livelihood assets of vulnerable families (returnees and host communities) through restocking (small ruminants and poultry).

**Peacebuilding**
- Conduct community sensitization on peaceful coexistence between farmers and herders.
- Security agencies should enhance special operations to address banditry and cattle rustling, particularly in Zamfara, Katsina, Kaduna and Plateau states, and other parts of the Middle Belt region.

**Acute food insecurity situation**
(June–August 2018)

**IPC phase classification**
- Famine
- Crisis
- Minimal
- Stressed
- Emergency
- Not analysed
- Insufficient data

Source: Cadre Harmonisé, March 2018
A second consecutive flood season is expected to cause additional crop losses.

More than 1.4 million people already affected by floods

More than 1.5 million people to face severe food insecurity conditions in Somalia

Risk overview

- The March-to-June long rains have been above the normal seasonal levels in most of the Horn of Africa. Heavy rainfall has improved crop and livestock conditions in many areas, resulting in improved food security outcomes in much of the region. In southeastern Ethiopia, Somalia and Kenya, the exceptionally abundant rains, with cumulative rainfall estimated at up to twice the long-term average, coupled with the continued delivery of humanitarian assistance, have improved food security outcomes. However, severe floods affected more than 1.4 million people, and resulted in population displacement, localized crop, and livestock losses, damage to infrastructure, coupled with an upsurge of vector and water borne diseases.
- Wetter conditions are expected over much of the equatorial sectors of the greater Horn of Africa region in the short rain period between October and December 2018 (Greater Horn of Africa Climate Outlook Forum [GHACOF] bulletin, August 2018). In addition, the International Research Institute for Climate and Society (IRI) forecasts a 40‒50-percent probability of above average rainfall over much of southern Somalia, Kenya and southeastern Ethiopia in the forecast period. Finally, IRI points to a 62-percent chance of El Niño during October‒December 2018, which is likely to drive above-average rainfall.
- Renewed intercommunal violence in Gedeo-West Guji in southwestern Ethiopia since the beginning of June has displaced over 1 million people. Food security outcomes have deteriorated for about 1 million conflict-displaced people along Ethiopia’s Oromia-Somali regional border in southeastern Ethiopia. This displacement is driving large-scale, multi-sectoral assistance needs.

Potential impact

- There is a risk of a second season of flooding in the region, which could cause crop losses in riverine and lowland areas. Risks of flooding exist in Somalia. According to GHACOF, flood risk also concerns the western part of Burundi (Imbo region), along Kenyan Coast and Baringo county, in western and northern parts of Rwanda, and along the River Nile (Jungule, Malakal). Flash flood risks exist in urban areas of Uganda, as well as risk of spilling in dams in the region. Landslide risk is most prominent in the Munirwa region in Burundi, in Central Kenya, especially Muranga, and Elgon areas, Kasese, Kisoro, Teso areas in Uganda. Water logging risks are flagged in Uganda’s Teso region.
- According to GHACOF, likelihood of flood risk in flood prone areas calls for putting in place preparedness and mitigation measures with close monitoring of the rainfall forecasts and performance. If flooding materializes, a peak in humanitarian needs is expected in flood-prone areas of northern East Africa through September and in riverine and lowland areas of the Horn of Africa through December.
- According to the Somalia Food Security and Nutrition Analysis Unit, above average Deyr rains, off-season harvest and favorable market conditions are expected to contribute to improvements in the food security condition in Somalia in 2018. Over 1.5 million people will face Crisis or worse (IPC Phases 3 or higher) levels of food insecurity between September and December, compared with 2.7 million people between February and June. However, in the absence of humanitarian assistance, food security outcomes are expected to deteriorate to Emergency (IPC Phase 4) in the Guban Pastoral livelihood zone and to Crisis (IPC Phase 3) in the Northern Inland Pastoral of Sool and Sanaag regions.
Heavy rains and floods coincide with the end of the growing season in many areas of the Horn of Africa, potentially causing extensive crop losses. Acting early is crucial to reduce crop losses, as well as to avoid the spread of Rift Valley fever.

- Increased livestock productivity in Ethiopia (particularly camels) should begin to drive longer-term improvements in food security from October. However, IDPs in Ethiopia are likely to remain particularly vulnerable.
- According to FAO, the following countries are considered to be at high risk of Rift Valley fever (RVF) spread during the forecast period: Somalia, Kenya, northeastern Tanzania, South Sudan, Sudan, Uganda, southern Ethiopia, Rwanda and Burundi. This is a result of predicted environmental suitability for vector amplification resulting from above-average wet conditions, as well as the previous and current RVF situation in the region.

**Recommended early actions**

**Assessment**

- Ensure systematic sharing of information between countries on RVF outbreaks in order to prevent the spread of the disease across the subregion.
- Closely monitor and assess potential outbreaks of crop pests throughout October–December.

**Crops**

- Sensitize vulnerable farmers by October on the most suitable crop harvesting time and on good practices for crop storage in flood-prone areas, in order to reduce post-harvest losses.
- In lowland areas, construct river embankments and rehabilitate water canals before the start of the rainy season.

**Livestock**

- Sensitize livestock keepers on the need to start harvesting fodder and on good practices for fodder storage and preservation in case of floods.
- Advise veterinary services and livestock keeper communities to remain vigilant about the occurrence and spread of RVF.

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**Acute food insecurity situation – Somalia**

(August–December 2018)

- **IPC phase classification**
  - Famine
  - Crisis
  - Minimal
  - Insufficient data
  - Emergency
  - Stressed
  - Not analysed

Source: IPC, September 2018

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**Automatic captions:**

- **Ethiopia**: Gedo Bay, Lower Juba, Bakool, Galguduud, Mudug, Nugaal, Bari, Sanaag, Togdheer, Woqooyi Galbeed, Awdal, Sool, Banaadir, Hiraan, Lower Shabele, Middle Shabele, Middle Juba.
- **Kenya**: Arabian Sea, Gulf of Aden, Lower Juba, Bari, Sanaag, Sool, Banaadir, Hiraan, Lower Shabele, Middle Shabele, Middle Juba.
Iraq

Drought affecting the agriculture sector and vulnerable livelihoods

Risk overview

- Poor rains were witnessed during the 2017/2018 cropping season, particularly in northern Iraq, a region that traditionally supplies a large share of domestic cereal production, affecting rainfed production and irrigation water availability. Neighbouring countries had also rerouted several rivers and tributaries, which used to help irrigate the country. Limited availability of irrigation water coupled with damaged irrigation infrastructure are seriously affecting agricultural production.
- According to sources from Iraq’s Ministry of Water Resources, a particularly dry season has left the country with only enough water to irrigate half of its farmland this summer. Out of the 10 million acres of cropland, only 150,000 were cultivated and the rest left barren, driving farmers off the land and into cities. In June, GIEWS reported that the preliminary wheat production forecast based on Government estimates indicates a reduction of approximately 14 percent from last year’s level and an almost 20 percent decline compared with the five-year average.
- Local authorities estimate substantial cattle losses across southern Iraq, either perishing or being sold off for slaughter at depressed prices. This could result in significant damage to the livelihoods of the estimated 475,000 families who make a living from their livestock.
- According to GIWES, remote sensing information indicates that significant land in northwestern parts of Mosul and Dohuk provinces might have not been sown, possibly due to conflict-related constraints. Machinery and irrigation structures in conflict areas are reported to be damaged.
- According to the International Organization for Migration, the number of returnees in the entire country is on the rise and reached 3.9 million as of July 2018. Reasons for returns included the perception that areas of origin are safe, as levels of violence have decreased in most parts of Iraq. As a result, 1.9 million people were in need of food security assistance in December 2017, down from 3.2 million in December 2016. That said, 1.9 million individuals remain displaced. Conditions in internally displaced camps continue to be challenging amid a gradual scale down of services due to limited funding, resulting in insufficient fuel supply and water issues.
- Iraq’s public distribution system supplies subsidized bread and other essential foods to the population. The country’s Grain Board is responsible for procuring and distributing wheat. Although the Board expects to obtain 350,000 tonnes of wheat from four silo complexes in Ninewah this year, only 103,000 tonnes had been collected by mid-July – well into harvest time.
Potential impact

- In August, the UN envoy to Iraq has warned that 25 percent of residents in southern Iraq – whose rural economy largely depends on livestock – may have to abandon their homes due to water shortages. According to FAO, if farmers are pushed to look for alternative livelihoods, they might resort to negative coping strategies.
- Protests throughout southern Iraq in the summer may have sparked as a response to the perceived inability of the Government to deliver essential services. Issues relating to water scarcity are reportedly among the driving factors. Although an annual occurrence, protests are larger and more intense this year, increasing risks of political stability.

Recommended early actions

Crops
- Support ongoing cash programmes.
- Distribute seeds to compensate for reduced harvest.

Livestock
- Conduct preventative animal health campaigns to keep animals strong and more resistant to hunger-related diseases.
- Conduct activities to mitigate distress sales and prevent fluctuations of livestock prices.
Palestine

Conflict could exacerbate an already dire food security situation

**1.3 million** people
food insecure

**53 percent** of Palestinians
in the Gaza Strip live in poverty

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**Risk overview**

- Over the past few months, the Gaza Strip has witnessed an escalation of violence along the perimeter fence with Israel. These events have marked the most serious surge of violence since the 2014 conflict. Efforts by the UN and neighbouring Egypt prevented a wider-scale conflict against the backdrop of ongoing negotiations for a long-term ceasefire.
- On 10 July, Israel tightened its longstanding blockade on the Gaza Strip following the launch of flaming kites into southern Israel, worsening the already desperate humanitarian situation. Measures included import restrictions of mainly food and medicine, suspension of commercial goods and reduction of the fishing zone from six to three nautical miles from Gaza’s coast. The entry of fuel and cooking gas was also suspended in July for more than a week, and again since 2 August, deepening the impact on farmers who only receive electricity for a few hours a day. This has increased the cost of planting in the Gaza Strip, leading to a decline of planted areas by 40–50 percent in some areas.
- On 15 August, Israel reversed some restrictions as the launching of incendiary kites halted, allowing for the export of goods and restoring the permissible fishing zones back to six-nine nautical miles from the coast in some areas.
- As a result of the temporary export ban, farmers lost a total of USD 250 000 in revenues from agricultural exports and sales to West Bank markets, equivalent to paying approximately 42 000 daily wages to agricultural workers. Farmers also incurred additional costs for the refrigeration of crops prohibited from exiting the area. The ban undermined Gazan farmers’ reliability as suppliers of agricultural products to external markets.
- According to WFP, 22.5 percent of Palestinian households (about 1.3 million people) in the West Bank and Gaza Strip are food insecure. The Household Expenditure and Consumption Survey findings released by the Palestinian Central Bureau of Statistics in May show a significant increase in poverty rates in the Gaza Strip, from 38.8 percent in 2011 (the previous time poverty was measured) to 53 percent by the end of 2017 – equivalent to more than 1 million people.
- The primary cause of food insecurity in the Gaza Strip is the lack of economic access to food resulting from alarmingly high unemployment and consequently high poverty rates. Unemployment levels in the Gaza Strip reached a record 53.7 percent during the second quarter of 2018 (78 percent for females and 71 percent for youth). WFP and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) have recently increased food assistance. WFP’s monitoring in April showed an increase in people’s negative coping strategies.
The possible exacerbation of ongoing tensions, together with continued restrictions to the movement of goods, calls for early actions to anticipate and prevent potential deterioration of the food security situation in the West Bank and Gaza Strip.

**Potential impact**

- The ongoing tension between Israel and Hamas could possibly escalate into a new full-scale confrontation. This, combined with potentially restricted humanitarian access, could have a detrimental impact on the already dire food security situation in the Gaza strip as well as in the West Bank. Agriculture is a mainstay in the Palestinian economy. A full-blown conflict could result in large-scale damage to the sector.

- The continuation of humanitarian assistance is currently at risk due to a severe funding shortage. At the end of July, only 24 percent of the 2018 Humanitarian Response Plan (HRP) requirements had been funded, below the global average of 36 percent. In addition, 24 percent of the food security cluster and only 9 percent of the agricultural livelihoods component under the food security cluster of the HRP was funded. The situation is likely to worsen significantly following the United States’ decision on 31 August to cut its entire contribution to UNRWA’s budget and other forms of assistance to Palestinians. Lack of funding could result in the collapse of essential services in the Gaza Strip including hospitals, water and sewage treatment facilities.

**Recommended early actions**

**Advocacy**

- Advocate for improving movement of goods into and out of West Bank and Gaza Strip, including import of agricultural inputs and export of agricultural produce.

**Crops**

- Distribute critical production inputs (seedlings and fertilizers) as well as solar energy systems to vulnerable farmers in the Gaza strip by November in order to enable the continuation of irrigation water pumping and post-harvest operations.

**Livestock**

- Provide solar energy systems for poultry and dairy farms to vulnerable livestock-owning households in the Gaza strip starting from December.
Venezuela (Bolivarian Republic of)

Food security is likely to deteriorate further, exacerbating the migration crisis

- According to the International Monetary Fund (IMF), Venezuela remains in a deep economic and social crisis. The estimated 18 percent reduction of the GDP in 2018 is mainly due to a significant decrease in oil production and of international prices since 2016. The projected inflation is expected to rise to 1 million percent by the end of 2018. The collapse in economic activities, hyperinflation and increasing deterioration in the provision of public goods (healthcare, electricity, water, transportation and security) as well as shortages of food at subsidized prices have resulted in large migration flows, which will lead to intensifying spillover effects in neighbouring countries.
- The Government launched an Economic Recovery Programme in August 2018, which includes a monetary reconversion, regulating prices, rising of gas prices to international level supported by national subsidies, increasing wages by 200 percent and implementing a tax reform.
- The IMF stated that it is willing to work with the Government of Venezuela in a constructive manner as long as the Government is prepared to fulfill its commitment with the Fund.
- The influx of Venezuelan migrants in the region continues unabated. An estimated 2.3 million Venezuelans had fled the crisis-wrecked country as of June. In August 2018, the UN High Commissioner for Refugees, Filippo Grandi, and the Director General of the International Organization for Migration (IOM), William Lacy Swing, appealed for greater support from the international community to the countries and communities in the region receiving a growing number of refugees and migrants from Venezuela.
- According to IOM, population outflows from Venezuela have considerably increased over the last two years, with an estimated 1.6 million Venezuelans abroad in 2017 compared with 700 000 in 2015. Of these, approximately 1.3 million Venezuelan nationals are in South America (885 000), North America (308 000), Central America (78 000) and the Caribbean (21 000). In response, international organizations have prepared an Action Plan to meet the main priorities of governments in assisting Venezuelan nationals.

Potential impact

- It is too early to measure the impact of the Economic Recovery Programme. The increasing social expenditure in a context of economic crisis could be a challenge for the Government of Venezuela, taking into account low oil prices and international pressure. This is likely to result in an intensification of the migration trend.
- The migration crisis is likely to continue impacting food security and nutrition, and straining the provision of public services in neighbouring countries.
The increasing food insecurity and the exacerbation of the migration crisis in border areas could be mitigated by targeted early actions aiming at boosting local food production.

**Recommended early actions**

**Crops**
- Provide support for the production of agro-ecological bio-inputs (organic fertilizers, bio-controllers).
- Support local production and storage of good quality seeds.
- Support the establishment of vegetable gardens for household consumption.
- Promote livelihood diversification and good agro-ecological practices to improve resilience against agro-climatic and socio-economic risks.

**Livestock**
- Strengthen small livestock and poultry production for household consumption.

**Water and energy**
- Promote the rational management and use of irrigation water and energy.

**Assessment**
- Strengthen monitoring and information systems on food security and nutrition, and on disaster risk reduction.
Democratic People’s Republic of Korea

Heatwave followed by flash floods has the potential to reduce crop yields, which could exacerbate food insecurity

- From mid-July to mid-August, a heatwave in the Democratic People’s Republic of Korea has brought on temperatures of more than 40°C across the country, coupled with significantly below-average rainfall. The Government has declared a state of emergency on 2 August due to the unusually hot weather. This was quickly followed by heavy rains and flash floods in late August, which further inflicted damage on crops and infrastructure. The worst-affected provinces were South and North Hwanghae and South and North Hamgyong.

- The UN Democratic People’s Republic of Korea Needs and Priorities document released in March 2018 reported widespread chronic food insecurity, early childhood malnutrition and nutrition insecurity in the country.

- According to the 2017 Global Hunger Index that measures and tracks hunger worldwide, the Democratic People’s Republic of Korea scored 28.2, falling in the ‘serious’ range, which estimates that 10.3 million people, or 41 percent of the total population, are undernourished.

- Provisional estimates provided by the National Coordinating Committee indicate that more than 98,800 ha of cropland were affected by dry weather conditions as of early August. This includes more than 24,600 ha of rice paddy and 74,200 ha of other food crops, including maize and potatoes. The estimated total area affected represents 8 percent of the average area cultivated during the main season. Any drop in production could further aggravate food insecurity.

- In North and South Hwanghae provinces, heavy rains and flash floods has further compounded the impacts of the recent heatwave. More than 670 mm of rain fell in both provinces in late August, which displaced more than 10,600 people and resulted in 76 deaths. During this period, more than half of the country’s annual rainfall was recorded in just 24 hours. Thousands of houses in North and South Hwanghae provinces were damaged or completely destroyed by floodwaters, with people reportedly losing all their personal belongings. Public buildings and infrastructure such as railways, roads and bridges were also destroyed, leaving many areas inaccessible.

- More than 11,700 ha of agricultural land was destroyed in the two provinces. A recent Joint Assessment Report on the Food Security and Agriculture Sector led by the UN reported extensive damage of maize, rice, soybean and vegetable crops. Maize was reported as the worst-affected crop due to the heatwave. Kitchen gardens were also destroyed with significant losses of dried and preserved food stocks, such as chilies and kimchi.

- The situation is further exacerbated by the impact of ongoing international sanctions. Since September 2017, the UN Security Council unanimously approved Resolution 2375 and 2371, which imposes a range of financial and trade restrictions on the country that have made the entry of aid and supplies to the country difficult.
Potential impact

- Climatic events are of particular concern due to their timing. In the Democratic People’s Republic of Korea, the main growing season of cereals is from May to September, with July to August being a key period for crop development. Any threat to food security will have a serious impact on an already vulnerable population. A similar dry spell in 2017 caused a 7.2 percent drop in overall food production at a vital point during the harvest cycle. Sources have further warned that yield levels are expected to be lower than the 2017 output.
- Households directly affected by the climatic events will likely lack sufficient food over the next several months. There is a risk that these households could become food insecure and dependent on the public distribution system. With no surplus to sell or barter, their access to food is compromised.
- Main agricultural infrastructure and machinery such as mills, drying sheds and storage facilities have been damaged by floods, which will affect crop harvests that withstood the two climatic events. Crop production losses are expected due to delays and limitations in harvest transportation, processing and storage. This is of particular concern for maize production.

Recommended early actions

Crops
- Distribute seeds, fertilizers, two-wheel tractors, plastic sheeting, knap-sack sprayers and ready-to-install greenhouses to vulnerable households in flood-affected areas of North and South Hwanghae provinces by December.

Livestock
- Distribute piglets, medicines and building materials to vulnerable households in flood-affected areas of North and South Hwanghae provinces by October.

The combination of drought and flash floods may have significant impacts on food security in the affected areas. Targeted early actions are recommended to mitigate the effects of consecutive hazards and preserve the livelihoods of the most vulnerable.
Cameroon

Deterioration of food security is likely in rural areas along with possible tensions due to upcoming elections.

- Cameroon continues to experience a humanitarian crisis in its Southwest and Northwest regions. The crisis escalated in early October 2017, when secessionists of both regions declared their independence and where many people marched in support of the declaration, igniting tensions and violence between government forces and secessionists.
- Since November 2017, the socio-political situation in the regions triggered insecurity and armed violence, resulting in more than 346,000 IDPs and many others to flee to neighbouring Nigeria for fear of death.
- Prior to the crisis, most of the population in the two affected regions relied on agriculture and small-scale trade. Threats of attacks continue to have a negative impact on trade, livelihoods and markets, and access to land. According to GIEWS, despite favourable weather conditions, agricultural activities have been severely affected by the civil unrest with subsequent input shortages and depletion of households’ productive assets, including livestock. Most of the families who have fled the insecurity found themselves in an extremely vulnerable position due to the disruption of their activities and are resorting to negative coping mechanisms, including reducing the number of meals to one a day as well as adult consumption in order to feed the children. In addition, restrictions on movements, poor infrastructures, and checkpoints continue to hinder access to land and markets.
- Furthermore, the tense socio-political context has put on hold many economic activities, with 41 percent of businesses in Anglophone regions that reported a decrease in turnover since the onset of the crisis, negatively affecting the job market.
- The crisis has impacted children’s education, with at least 40 schools affected and an estimated 42,500 school-aged children with limited access to education for the past two years. Furthermore, reports indicate that several attacks by non-state armed groups have also targeted schools, leading to the death of at least two teachers, further disrupting the educational system.

Risk overview

- 346,000 IDPs
- 41 percent of businesses reported a decrease in turnover
- 42,500 school-aged children affected

- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec
Further intensification of violence in Cameroon’s Anglophone regions could lead to a deterioration of the food security situation.

**Potential impact**

- Increased insecurity and violence in the Southwest and Northwest regions are likely to induce further displacement, causing more causalities as violence from both sides continues.
- The crisis is likely to have a broader political impact, particularly in the run-up to the Presidential elections planned for October 2018. The main opposition party Social Democratic Front has an Anglophone leadership. However, according to the International Crisis Group, some of its prominent figures threatened to resign from Parliament in protest against the Government’s handling of the crisis. A political impasse at the national level is likely to exacerbate tensions in the Northwest and Southwest regions. This not only would contribute to further destabilizing Cameroon, but would also affect the country’s capacity to deal with the Boko Haram insurgency in the Far North.

**Recommended early actions**

**Crops**
- Set up off-season market gardening plots, for carrot, lettuce, pepper and tomato production, linked with training on nutrition and cash transfers to improve the food security and nutrition of vulnerable populations.

**Livestock**
- Set up small broiler and layer production units linked with cash transfers to improve the livelihoods of displaced people.
After nine years since the Boko Haram insurgency began in northeastern Nigeria, the humanitarian crisis in the Lake Chad Basin remains one of the most severe in the world, resulting in high levels of food insecurity and malnutrition, economic and social hardship and livelihood losses to millions of vulnerable people. To date, persistent conflict and insecurity (particularly in the northeastern and southeastern parts of Borno State in Nigeria) have displaced around 2.4 million people and have caused over 11 million people to be dependent on humanitarian assistance for their survival.

According to GIEWS, agricultural activities in the region continue to be disrupted by civil unrest and recent attacks by Boko Haram. As a result, there are concerns over the performance of the 2018 agricultural season.

A deterioration of the food security was reported between March‒May and June‒August 2018 (excluding Cameroon). According to the Cadre Harmonisé (March 2018), the number of people food insecure in the affected areas has increased from 2.6 to 3.3 million people. In Cameroon’s Far North region, about 1.5 million people were classified as moderately or severely food insecure as of December 2017.

Further compounding the humanitarian situation is the ongoing cholera outbreak affecting the region, comprising areas of Cameroon, Chad, the Niger and Nigeria. Over 24,000 suspected cholera cases and 302 deaths have been reported in the Lake Chad Basin as of 15 August 2018 in Nigeria, the Niger and Cameroon. Nigeria was the first country to be impacted by the outbreak and is the most affected to date, with over 22,000 suspected cases and 255 deaths. Since the spread of the outbreak to the Niger on 5 July, an estimated 2,013 suspected cases, including 37 deaths, were reported, according to the World Health Organization. In Cameroon, two regions out of the ten are affected by an active cholera epidemic. In Chad, a cholera outbreak was reported during last year’s rainy season in the eastern part of the country (Salamat and Sila regions).

The ongoing outbreak has been assessed as comparable to that of 2010 which directly affected 63,000 people and resulted in 2,610 deaths.
Without agriculture and livestock support over the following months in the Lake Chad Basin, many vulnerable IDPs, returnees and host communities will resort to negative coping mechanisms. Priority activities until the end of the year should be focused on supporting vulnerable farmers to cope with the ongoing dry season.

**Potential impact**

- Despite a slight improvement since the beginning of the year, insecurity and conflict are likely to continue disrupting livelihood activities and limiting trade opportunities. Food access will continue to be limited by any resurgence of violence, a possible below-average harvest and restricted livelihood opportunities.
- According to the United Nations Children’s Fund, the cholera outbreak is likely to spread to Kano, Katsina, Kaduna States in Nigeria, to the Zinder Axe and/or the Niamey Axe in the Niger, while in Cameroon, urban areas of Douala and Yaounde are at high risk of large outbreaks.
- The ongoing rainy season (July–September), cross-border movement and high levels of malnutrition in the region also increase the likelihood of further spread.

**Recommended early actions**

**Assessment**
- Strengthen the early warning system for the prevention of pest-related crises.

**Crops**
- Distribute critical agricultural inputs for vegetable production during the dry season (vegetable seeds, fertilizer, and water pumps and boreholes for irrigation) to returnees and IDPs with access to land.
- Support planning and preparation for the next main rainy season.

**Livestock**
- Support the re-establishment of access to seasonal grazing areas, where security allows.
- Conduct livestock vaccination campaigns benefiting vulnerable pastoralists and nomadic herders.
- Provide emergency animal feed to vulnerable pastoralists and nomadic herders.
- Promote destocking as a coping strategy, where relevant and applicable.
- Distribute small ruminants to generate income opportunities and strengthen food security among vulnerable agropastoralist communities.

**Cash**
- Implement cash transfer schemes to improve access to agricultural inputs and reinforce the purchasing power of vulnerable returnees and IDPs.
At the beginning of August 2018, the Ministry of Agriculture and Rural Affairs in China confirmed the first African swine fever (ASF) outbreak in the country, which occurred in Liaoning Province. ASF is a viral disease affecting pigs and wild boars with up to 100 percent fatality. Ever since the first report of the disease, several outbreaks have been reported in the country. The outbreak in China displays the same ASF virus genotype currently affecting Eastern Europe and some countries of the European Union.

Domestic value chain of swine in China is very dynamic, with 1.7–2.1 million live animals transported across provincial borders every week. Swine markets in infected provinces are now closed, and movement of live animals and pork products from infected provinces is prohibited.

The detection in August represents the first time the disease has ever been reported so far eastward in the Asian context. Pork is an important part of the diet in China, Korean Peninsula and in Southeast Asia. Shortages of pork meat, resulting from ASF expansion and impact, will have the potential to affect the national economy as well as food security.

If ASF continues to spread in China, it will likely have a bigger impact on feed ingredients (i.e. soybeans, corn) by influencing immediate demand.

Export markets will also remain closed or severely restricted until the disease is contained, and animals and derived products are certified as ASF-free.

This is the first time the disease started in northeast China with subsequent spread in the country. If ASF is transmitted into neighbouring countries, where biosecurity in swine production is low, and compensation to farmers for depopulation of swine unreliable, this is likely to have serious impacts on already fragile rural livelihoods and food security. One of the outbreaks was detected not far from the border with the Democratic People's Republic of Korea. If introduced in the country, the disease would highly likely impact food security. Other neighbouring countries are also considered a high risk of ASF incursion, particularly in southeast Asia, as well as Mongolia.

The swine sector plays a key role as a source of animal protein. Pigs are a crucial food source due to their fast growth, efficient feed conversion, quick turnover and high reproduction.
**Recommended early actions**

**Planning**
- Ensure that sustainable outbreak control strategies are in place. The strategies need to be developed in consultation with the private sector (pig production and allied industries, such as transport and feed operators) who should be actively involved in disease management options.
- Carry out preparedness activities (e.g. contingency planning, standard operating procedures and secured financial support) based on the principles of early warning, detection and notification, early reaction and coordination.

**Livestock**
- Strengthen surveillance and monitor transport of live pigs as well as pork products.
- Apply strict biosecurity measures, frequently clean and disinfect farms, transport vehicles, and improved husbandry practices and production systems.
- Conduct awareness raising and training activities targeting all stakeholders, from veterinarians to farmers, intermediaries and other value chain actors.
- Ensure that farm registries, animal identification and censuses are carried out and updated to enable the location of animals in the event of outbreaks and animal health interventions.
- Advocate for the prohibition of swill feeding.

**Communication**
- Communicate to the public in order to allay food safety concerns and consumption disruption.
- Ensure good communication and coordination with swine-producing commercial sector and swine farmers to strengthen cooperation in ASF prevention, detection and control.
- Awareness of hunters and field biologists to report events of dead wild boars.

**Food waste disposal**
- Strengthen proper disposal of food waste (food services, airports, seaports), which may contain uncooked pork products.

There is no vaccine nor treatment against African swine fever, therefore animal disease containment in its broadest sense should be prioritized.
**Risk overview**

- Avian influenza viruses can cause severe disease with high mortality in poultry, known as highly pathogenic avian influenza (HPAI). Wild birds are a reservoir for both high and low pathogenic avian influenza (LPAI) viruses and generally do not show any clinical signs of infections.
- Many different strains of avian influenza virus have emerged since H5N1 HPAI was first detected as a zoonotic threat in 1996. Zoonotic strains are those that have the capacity to infect humans who may die from the disease.
- The Northern hemisphere autumn-winter season (October to March) is usually associated with an increased risk of avian influenza incursions and worldwide outbreaks, especially in Northern Africa, Asia, Europe and the Middle East.
- This peak of avian influenza activity can be attributed to several factors, including wild bird migration providing opportunity for long distance spread (e.g. intercontinental spread of H5N8 HPAI in 2014–15 and 2016–17) and lower temperatures favouring virus survival in the environment.
- Festivities such as New Year celebrations generate a high demand for poultry meat and other products (especially in Asia), challenging veterinary controls and increasing transmission risk as well as human exposure.

**Potential impact**

- Economic impact of poultry outbreaks is significant due to high poultry mortalities, production losses and costs due to culling of in-contact flocks, a policy implemented to stop further spread. Movement restrictions and closure of export markets add to the economic burden. In countries with strong veterinary capacity and well-regulated poultry production and marketing systems, it is possible to eliminate incursions through rapid identification of infected birds and stamping out. However, some countries may not be well prepared, hence not having the capacity to respond in a timely manner.
- Some HPAI virus strains have shown to cause disease and mortality also in wild bird species. This can significantly impact protected wild bird populations which may already be on the list of endangered species and biodiversity.
- Should an avian influenza virus become capable of spreading easily between humans, a pandemic could unfold with disastrous consequences. Fortunately, this has not occurred in the past 50 years. It is therefore of utmost importance to readily globally monitor the virus through both active and passive surveillance.
Animal disease containment in its broadest sense should be prioritized by governments and supported by budget allocations and legislation. Countries should prepare for the upcoming avian influenza high activity season (October 2018 to March 2019).

**Recommended early actions**

- Assess levels of national preparedness, notably (but not exclusively) the status of contingency plans, field and diagnostic capacities as well as material and equipment for rapid response such as disinfectants and personal protective equipment sets.
- Ensure means for laboratory testing are in place to detect the currently circulating avian influenza viruses.
- Increase surveillance efforts in poultry and monitor wild bird mortalities.
- Provide mechanisms for reporting sick or dead birds (hotlines, collection points).
- Raise awareness of the general population, poultry producers or marketers and hunters about HPAI, precautionary measures as well as reporting mechanisms for sick or dead birds.
- Revise and/or enhance biosecurity measures implemented in farms and markets.
- Initiate resource mobilization for increased preparedness, communication and, in case of virus incursion, response activities.
- Participate in a regional approach by coordinating activities and sharing information with other countries in the region.
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