Global analysis of food and nutrition security situation in food crisis hotspots

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Global analysis of food and nutrition security situation in food crisis hotspots

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**Abstract**

**Title:** Global analysis of food and nutrition security situation in food crisis hotspots

This report provides a global overview of the food insecurity situation due to different crises and natural disasters, to support the programming of the Pro-resilience Action (PRO-ACT) funding mechanism, a component of the Global Public Goods and Challenges (GPGC) thematic programme of the European Union. The analysis covers the period January 2015 to January 2016, which has been marked by food crises in several countries because of extreme weather events due the El Niño phenomenon, conflict and political crises. In a number of countries, in particular in West Africa, food insecurity remains a major concern because of chronic vulnerability despite good crop production in 2015.
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<tbody>
<tr>
<td>ACTED</td>
<td>Agency for Technical Cooperation and Development</td>
</tr>
<tr>
<td>CAADP</td>
<td>Comprehensive Africa Agriculture Development Programme</td>
</tr>
<tr>
<td>CADC</td>
<td>Central American Dry Corridor</td>
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<td>CAR</td>
<td>Central African Republic</td>
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<tr>
<td>CDR</td>
<td>Crude Death Rate</td>
</tr>
<tr>
<td>CFSS</td>
<td>Comprehensive Food Security Survey</td>
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<tr>
<td>CFSAM</td>
<td>Crop and Food Security Assessment Mission</td>
</tr>
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<td>CFSME</td>
<td>Comprehensive Food Security Monitoring Exercise</td>
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<td>CFSVA</td>
<td>Comprehensive Food Security and Vulnerability Assessment</td>
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<tr>
<td>CH</td>
<td>Cadre Harmonisé</td>
</tr>
<tr>
<td>CILSS</td>
<td>Comité permanent Inter-Etats de Lutte contre la Sècheresse dans le Sahel (Permanent Interstate Committee for Drought Control in the Sahel)</td>
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<tr>
<td>DG DEVCO</td>
<td>Directorate-General for International Cooperation and Development - EuropeAid</td>
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<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
</tr>
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<td>DPRK</td>
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<td>ECDC</td>
<td>European Centre for Disease Prevention and Control</td>
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<td>EC-JRC</td>
<td>European Commission - Joint Research Centre</td>
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<td>ECMWF</td>
<td>European Centre for Medium-Range Weather Forecasts</td>
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<td>EFSA</td>
<td>Emergency Food Security Assessment</td>
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<td>EMDHS</td>
<td>Ethiopia Mini Demographic and Health Survey</td>
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<td>EPHS</td>
<td>Eritrea Population and Health Survey</td>
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<td>EU</td>
<td>European Union</td>
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<td>EVD</td>
<td>Ebola Virus Disease</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>FCS</td>
<td>Food Consumption Score</td>
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<td>FEWS NET</td>
<td>Famine Early Warning System NETwork</td>
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<td>FSNAU</td>
<td>Food Security and Nutrition Analysis Unit (Somalia)</td>
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<td>FSNMS</td>
<td>Food Security and Nutrition Monitoring Survey</td>
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<tr>
<td>FSSA</td>
<td>Food Security and Sustainable Agriculture</td>
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<tr>
<td>GAM</td>
<td>Global Acute Malnutrition</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
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<td>GIEWS</td>
<td>Global Information and Early Warning Systems</td>
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<td>GNAIP</td>
<td>Gambia National Agricultural Investment Plan</td>
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<tr>
<td>GPGC</td>
<td>Global Public Goods and Challenges Programme</td>
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<tr>
<td>GTP</td>
<td>Growth and Transformation Plan</td>
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<td>Abbreviation</td>
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<tr>
<td>HABP</td>
<td>Household Asset Building Programme</td>
</tr>
<tr>
<td>HNO</td>
<td>Humanitarian Needs Overview</td>
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<tr>
<td>IDPs</td>
<td>Internally Displaced Peoples</td>
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<td>IGC</td>
<td>International Growth Centre</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IPC</td>
<td>Integrated Food Security Phase Classification</td>
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<td>MAM</td>
<td>Moderate Acute Malnutrition</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MICS</td>
<td>Multiple Indicator Cluster Surveys</td>
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<td>MIRA</td>
<td>Multi-Cluster/Sector Initial Rapid Assessment</td>
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<tr>
<td>NDVI</td>
<td>Normalized Differentiated Vegetation Index</td>
</tr>
<tr>
<td>NEPAD</td>
<td>New Partnership for Africa’s Development</td>
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<tr>
<td>OCHA</td>
<td>United Nations Office for the Coordination of Humanitarian Affairs</td>
</tr>
<tr>
<td>PSNP</td>
<td>Productive Safety Net Programme</td>
</tr>
<tr>
<td>RRM</td>
<td>Rapid Response Mechanism</td>
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<tr>
<td>SAF</td>
<td>Sudanese Armed Forces</td>
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<tr>
<td>SAM</td>
<td>Severe Acute Malnutrition</td>
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<tr>
<td>SHARE</td>
<td>Supporting the Horn of Africa’s Resilience</td>
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<tr>
<td>SLA-AW</td>
<td>Sudan Liberation Army - Abdul Wahid</td>
</tr>
<tr>
<td>SLA-MM</td>
<td>Sudan Liberation Army - Minni Minnawi</td>
</tr>
<tr>
<td>SLDHS</td>
<td>Sierra Leone Demographic and Health Survey</td>
</tr>
<tr>
<td>SMART</td>
<td>Standardized Monitoring &amp; Assessment of Relief and Transition</td>
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<tr>
<td>SMS</td>
<td>Security Monitoring Survey</td>
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<tr>
<td>SNNPR</td>
<td>Southern Nations, Nationalities and Peoples’ Region</td>
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<tr>
<td>SPLM-N</td>
<td>Sudanese People’s Liberation Movement - North</td>
</tr>
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<td>SSHHS</td>
<td>South Sudan Household Health Survey</td>
</tr>
<tr>
<td>U5DR</td>
<td>Under-Five Death Rate</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNCHR</td>
<td>United Nations High Commissioner for Refugees</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations International Children's Emergency Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VDCs</td>
<td>Village Development Committees</td>
</tr>
<tr>
<td>WASH</td>
<td>Water, Sanitation and Hygiene</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
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</table>
Executive summary

This report provides a global overview of the food insecurity situation in global food crisis hotspots due to different crises and natural disasters, to support the programming of the Pro-resilience Action (PRO-ACT) 2016 funding mechanism, a component of the Global Public Goods and Challenges (GPGC) thematic programme of the European Union. The needs assessment consists of estimating the number of food-insecure people in countries that have been affected by a food crisis in 2015 based mainly on publicly released reports. The table below summarises the available data as in January 2016 in 70 countries analysed for this report. In a few cases (Democratic Republic of the Congo, Nigeria and Cameroon), the numbers only relate to particular areas within the country, and are therefore not representative of the national level. Great efforts have been made to harmonise the approaches across countries. However, as the input from the data sources may differ significantly across countries, the final figures may not correctly represent the current situation in the field.

<table>
<thead>
<tr>
<th>Country</th>
<th>Population in food crisis (IPC(^1) Phase 3 or higher)</th>
<th>Population in stressed situation (IPC(^1) Phase 2)</th>
<th>Total food-insecure population (IPC(^1) Phase 2 or higher)</th>
<th>Dominant risk factor in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>2.500 7.7</td>
<td>7.800 24.0</td>
<td>10.300 31.6</td>
<td>Conflict</td>
</tr>
<tr>
<td>Angola</td>
<td>1.169 6.0</td>
<td>0.252 1.3</td>
<td>1.421 7.2</td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1.200 0.7</td>
<td>30.592 18.0</td>
<td>31.792 18.7</td>
<td>Socioeconomic</td>
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<tr>
<td>Benin</td>
<td>0.115 1.1</td>
<td>1.703 16.3</td>
<td>1.818 17.4</td>
<td>Socioeconomic</td>
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<tr>
<td>Bolivia</td>
<td>0.300 2.8</td>
<td>0.700 6.5</td>
<td>1.000 9.3</td>
<td>Drought - El Niño</td>
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<tr>
<td>Burkina Faso</td>
<td>0.126 0.7</td>
<td>1.640 8.7</td>
<td>1.765 9.3</td>
<td>Socioeconomic</td>
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<tr>
<td>Burundi</td>
<td>0.460 4.3</td>
<td>3.540 33.0</td>
<td>4.000 37.2</td>
<td>Conflict</td>
</tr>
<tr>
<td>Cameroon(^*)</td>
<td>0.329 5.0</td>
<td>1.186 18.0</td>
<td>1.515 23.0</td>
<td>Conflict and Refugees</td>
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<tr>
<td>Cape Verde</td>
<td>0.012 2.1</td>
<td>0.063 11.5</td>
<td>0.074 13.6</td>
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<tr>
<td>Central African Republic</td>
<td>1.538 28.5</td>
<td>0.780 14.5</td>
<td>2.318 43.0</td>
<td>Conflict</td>
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<td>Chad</td>
<td>0.461 4.0</td>
<td>2.366 20.3</td>
<td>2.827 24.3</td>
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<td>Colombia</td>
<td>0.086 1.8</td>
<td>0.437 9.2</td>
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<td>Côte d'Ivoire</td>
<td>0.218 0.9</td>
<td>2.023 8.7</td>
<td>2.241 9.6</td>
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<td>Cuba</td>
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<td>Drought - El Niño</td>
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<td>Democratic Republic of Congo(^*)</td>
<td>4.456 9.4</td>
<td>6.500 13.7</td>
<td>10.956 23.1</td>
<td>Conflict</td>
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<tr>
<td>Djibouti</td>
<td>0.227 27.5</td>
<td>0.082 9.8</td>
<td>0.309 37.3</td>
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<td>DPRK</td>
<td>4.747 19.0</td>
<td>5.996 24.0</td>
<td>10.743 43.0</td>
<td>Drought - El Niño</td>
</tr>
</tbody>
</table>

\(^1\) The reference to the IPC Phase is indicative of the food insecurity severity. IPC Phase descriptions can be found here: http://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC-Manual-2-Interactive.pdf. Many of the countries included in the table do not conduct IPC analyses. When IPC analyses are available, the numbers are used. When IPC analyses are not available, the numbers of people in each column of the table are derived from the available information, taking into account the IPC Phase descriptions and thresholds defined in the IPC reference table for food security indicators.
<table>
<thead>
<tr>
<th>Country</th>
<th>Population in food crisis (IPC Phase 3 or higher)</th>
<th>Population in stressed situation (IPC 1 Phase 2)</th>
<th>Total food-insecure population (IPC 1 Phase 2 or higher)</th>
<th>Dominant risk factor in 2015</th>
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<tbody>
<tr>
<td></td>
<td>Number (million)</td>
<td>% of total population</td>
<td>Number (million)</td>
<td>% of total population</td>
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<td>Egypt</td>
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<td>Ethiopia</td>
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<td>10.3</td>
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<td>0.0</td>
<td>1.600</td>
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<td>Country</td>
<td>Population in food crisis (IPC Phase 3 or higher)</td>
<td>Population in stressed situation (IPC 1 Phase 2)</td>
<td>Total food-insecure population (IPC 1 Phase 2 or higher)</td>
<td>Dominant risk factor in 2015</td>
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<td>-------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td></td>
<td>Number (million) % of total population</td>
<td>Number (million) % of total population</td>
<td>Number (million) % of total population</td>
<td></td>
</tr>
<tr>
<td>Senegal</td>
<td>0.031 % 0.2</td>
<td>1.558 % 11.1</td>
<td>1.589 % 11.4</td>
<td>Socioeconomic</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>0.421 % 7.2</td>
<td>1.571 % 26.7</td>
<td>1.991 % 33.9</td>
<td>Ebola</td>
</tr>
<tr>
<td>Somalia</td>
<td>0.855 % 8.1</td>
<td>2.300 % 21.7</td>
<td>3.155 % 29.7</td>
<td>Conflict</td>
</tr>
<tr>
<td>South Africa</td>
<td>13.500 % 25.2</td>
<td>13.500 % 25.2</td>
<td>13.500 % 25.2</td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>South Sudan</td>
<td>2.835 % 23.5</td>
<td>4.135 % 34.3</td>
<td>6.970 % 57.9</td>
<td>Conflict</td>
</tr>
<tr>
<td>Sudan</td>
<td>4.000 % 10.5</td>
<td>12.480 % 32.7</td>
<td>16.480 % 43.2</td>
<td>Conflict</td>
</tr>
<tr>
<td>Swaziland</td>
<td>0.201 % 14.0</td>
<td>8.700 % 51.0</td>
<td></td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Syria</td>
<td>6.300 % 36.9</td>
<td>2.400 % 14.1</td>
<td></td>
<td>Conflict</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>0.659 % 8.0</td>
<td>2.300 % 28.1</td>
<td>2.959 % 36.1</td>
<td>Socioeconomic</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0.424 % 0.8</td>
<td>0.424 % 0.8</td>
<td></td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Timor Leste</td>
<td>0.220 % 17.9</td>
<td>0.272 % 22.1</td>
<td>0.492 % 40.0</td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Togo</td>
<td>0.066 % 0.9</td>
<td>1.140 % 15.1</td>
<td>1.206 % 16.0</td>
<td>Socioeconomic</td>
</tr>
<tr>
<td>Uganda</td>
<td>0.295 % 0.8</td>
<td>0.470 % 1.3</td>
<td>0.765 % 2.1</td>
<td>Socioeconomic</td>
</tr>
<tr>
<td>Vanuatu</td>
<td>0.166 % 61.0</td>
<td>0.166 % 61.0</td>
<td></td>
<td>Floods - El Niño</td>
</tr>
<tr>
<td>Venezuela</td>
<td></td>
<td></td>
<td></td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Yemen</td>
<td>7.600 % 25.6</td>
<td>6.800 % 22.9</td>
<td>14.400 % 48.4</td>
<td>Conflict</td>
</tr>
<tr>
<td>Zambia</td>
<td>0.799 % 5.3</td>
<td>0.799 % 5.3</td>
<td></td>
<td>Drought - El Niño</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>2.800 % 19.7</td>
<td>2.800 % 19.7</td>
<td></td>
<td>Drought - El Niño</td>
</tr>
</tbody>
</table>

*: Not representative of the national level
1 Background

In 2012, the EU made a policy commitment2 to focus interventions on building the resilience of vulnerable communities by better targeting the root causes of food insecurity both in the geographical and thematic instruments of the new Multi-annual Financial Framework. This includes component 3 “Supporting the poor and food insecure to react to crises and strengthen resilience” of the Food Security and Sustainable Agriculture (FSSA) thematic instrument under the Global Public Goods and Challenges Programme (GPGC). This FSSA resilience-building thematic mechanism aims to ensure the complementarity of instruments for high-impact aid. It has an indicative budget of €525 million over the 2014-2020 period. The specific actions and the list of countries that would receive support are decided every year based on the following criteria: i) evidenced-based needs assessment (number of food-insecure people); ii) nature of the food and nutrition crisis; iii) capacity and complementarity of instruments; iv) other factors of vulnerability, including political considerations.

This report addresses the two first criteria (needs assessment and nature of the crises) in the framework of the 2016 financial programming of the Pro-resilience Action (PRO-ACT). The principle is to evaluate the number of people who were in a food insecurity situation in the previous year (2015 for this exercise), i.e. in Phase 2 and above of the Integrated Food Security Phase Classification (IPC), and to identify as far as possible the main causes of food insecurity in selected countries. The PRO-ACT interventions complement the humanitarian interventions of the previous year to help the community rebuild their livelihoods and improve their resilience to future shocks.

The needs assessment is conducted in two phases: (i) identification of the main areas of concern (countries and regions) based on a rapid review of known crises; and (ii) detailed analysis of each selected country. The needs assessment is global and aims to include all countries that have been affected by a food crisis in 2015. The origin of the food crisis may be a particular shock or disaster such as an earthquake, cyclone, drought, etc. and/or protracted crises, namely prolonged armed conflicts. Countries that are chronically vulnerable to food crises and have large populations of food-insecure people are included. A total of 70 countries were identified, estimating the number of food-insecure populations classified (wherever possible) according to two categories of IPC phases. Twenty countries were then further analysed, and a detailed narrative on their situations is provided in this report. They are countries with discrepancies in their assessments from different sources and countries with complex situations that combine several risk factors, for instance countries with a very low socioeconomic development that are also subject to violent conflicts. The following countries

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were eventually selected for the detailed analysis: Somalia, Ethiopia, Eritrea, Sudan and South Sudan in the Horn of Africa; Gambia, Guinea, Liberia and Sierra Leone in West Africa; the Central African Republic (CAR); Yemen and the Democratic People’s Republic of Korea (DPRK) in Asia; Haiti and the countries of the Central American Dry Corridor (Guatemala, Honduras, Nicaragua); and Papua New Guinea. The types of crises affecting each of those countries are described in the respective sections. In addition, a dedicated section summarises the impacts of the 2015 El Niño episode on food security in countries most affected and of interest to EU Food Security programmes. The number of countries that were analysed increased from circa 40 for the previous analysis in January 2015 to 70 in this edition of the report (January 2016), mainly because of the impact of El Niño.

2 Methodology

The IPC Phase descriptions (Table 1) are used as a guide to classify populations according to their severity of food insecurity. When IPC or Cadre Harmonisé analyses were available, the numbers were taken directly from these reports. In a few IPC analyses, the breakdown of food-insecure populations into the different phases was not available. For these, we estimated the share of each phase based on the classification map and the population of each administrative unit represented on the map. Where IPC or Cadre Harmonisé analyses are not available, the numbers of people in each IPC Phase were derived from the available information, taking into account the IPC Phase descriptions and thresholds defined in the IPC reference table for food security indicators. It is always difficult to combine data from several non-standardised sources. The final estimates provided in this report try to make best use of all the information that was available at the time of writing, i.e. end of January 2016. Sources and ancillary data (satellite imagery, meteorological data, food price data, etc.) are triangulated wherever conflicting assessments were reported.

Regarding the food security assessment, this situation analysis mainly used information from IPC Acute analyses, FEWS NET, SADC VAC, FAO, WFP and JRC food security outlook and bulletins, and from the CILSS Cadre Harmonisé reports. Compared to the previous report (Nkunzimana et al., 2015), this report benefited from important contributions by the FAO and the WFP which provided a lot of data and reviewed the first manuscript. Several EU delegations also contributed to the data collection with reports from national institutions. Therefore, the assessment has a broad basis in terms of data and information collection.
Table 1: IPC Phase descriptions

<table>
<thead>
<tr>
<th>Phase Name</th>
<th>Phase description</th>
<th>Priority response objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Household (HH) group is able to meet essential food and non-food needs without engaging in atypical, unsustainable strategies to access food and income, including any reliance on humanitarian assistance.</td>
<td>Resilience building and disaster risk reduction</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Even with humanitarian assistance, HH group has minimally adequate food consumption but is able to afford some essential non-food expenditures without engaging in irreversible coping strategies.</td>
<td>Disaster risk reduction, protection of livelihoods</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Even with humanitarian assistance, HH group has food consumption gaps with high or higher than usual acute malnutrition; OR HH group is marginally able to meet minimum food needs only with accelerated depletion of assets that will lead to food consumption gaps.</td>
<td>Protect livelihoods, reduce food consumption gaps and reduce acute malnutrition</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Even with humanitarian assistance, HH group has large food consumption gaps resulting in very high levels of acute malnutrition and excess mortality OR HH group has extreme loss of livelihood assets that will lead to large food consumption gaps in the short term.</td>
<td>Urgent Action required Save lives and livelihoods</td>
</tr>
<tr>
<td>Phase 5</td>
<td>Even with humanitarian assistance, HH group has an extreme lack of food and/or basic needs even with full employment of coping strategies. Starvation, death and destitution are evident.</td>
<td>Prevent widespread death and total collapse of livelihoods</td>
</tr>
</tbody>
</table>


The nutrition assessment focuses on the nutritional status of children under five years of age. It is common to focus on this group as it is among the most vulnerable and represents a critical development period during which undernutrition might have long-term consequences. We are aware that a complete assessment of nutrition should include an analysis of other nutrition indicators such as biochemical markers or clinical variables, and target other vulnerable groups such as women of reproductive age. However, in order to provide a consistent snapshot of the 20 countries studied, we decided to focus the analysis on the indicators of the nutritional status of preschool-age children.
Unless stated otherwise, stunting or chronic malnutrition is identified as occurring when the ‘height for age’ Z score is more than two standard deviations (SDs) below that of the WHO Standards reference population; and wasting or global acute malnutrition (GAM), moderate acute malnutrition (MAM), and severe acute malnutrition (SAM) are identified as occurring when the ‘weight for height’ Z scores are more than 2, between 2 and 3, and more than 3 SDs below those of the reference population, respectively. The current international thresholds used for classifying the status of nutrition at population level are presented in table 2.

Table 2: Thresholds for classifying the status of nutrition in a population

<table>
<thead>
<tr>
<th>Stunting</th>
<th>Wasting</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20%: Acceptable</td>
<td>&lt; 5%: Acceptable</td>
</tr>
<tr>
<td>20-30%: Poor</td>
<td>5-10%: Poor</td>
</tr>
<tr>
<td>30-40%: Serious</td>
<td>10-15%: Serious</td>
</tr>
<tr>
<td>&gt;40%: Critical</td>
<td>&gt;15%: Critical</td>
</tr>
</tbody>
</table>

Although the latest data available for some of the countries are not recent and cannot be used as a reference for the current situation, we considered it to be pertinent to include them in order to highlight areas that are particularly vulnerable to nutrition crises.

The country sections are grouped by geographic area since food insecurity factors are often similar across neighbouring countries, and in order to respect the usual geographic grouping in European Commission (EC) projects. Countries affected by armed conflicts, the Ebola virus crisis and by the 2015 El Niño phenomenon were grouped thematically. The reference period for the analysis is from January 2015 to December 2015. However, some situations may have roots in events that occurred in previous years. Reference to such events is made wherever relevant, and the expected evolution in 2016 is discussed.
3 Global overview of food crises

At the end of 2015, several food crises were triggered by extreme climate events due to the El Niño phenomenon. Severe droughts affected several countries in the Horn of Africa, southern Africa, eastern and southern Asia, South America, Central America and the Caribbean. During the 2015 summer period, drier-than-average conditions were also recorded in the Pacific Islands. Heavy rains and floods affected some areas of Southeast Asia and the Pacific Islands. The impact of the drought due to El Niño is forecast to continue throughout 2016, particularly in Southern Africa and in Southern and Central America. Countries of the Central American Dry Corridor (Honduras, Guatemala, Nicaragua, El Salvador) and Haiti and Cuba are among those most affected by drought in Central America and the Caribbean. A large part of southern Africa was hit by a severe drought at the beginning of the 2015-2016 crop season, which led to a state of emergency in several provinces of South Africa, in Zimbabwe and Lesotho. Malawi, Angola and Namibia were also badly affected, as were the southern parts of Mozambique and Madagascar.

In addition to climate events, armed conflicts continue to put tens of millions of people into food crises. New food crisis hotspots emerged because of the intensification of armed conflicts in the Middle East, namely in Syria and in neighbouring countries where displaced people struggle to access sufficient food. The escalation of the conflict in Yemen has dramatically exacerbated food insecurity in the country, which was already very fragile. The situation remains of high concern in countries affected by prolonged armed conflicts such as Somalia, Sudan, South Sudan, the Central African Republic (CAR), the Democratic Republic of the Congo (DRC) and Afghanistan (Figure 1). Internally displaced persons and refugees who have fled to neighbouring countries are among the most affected. Although the 2015 crop season was generally good in most of West Africa, a large part of the population remains food insecure due to structural vulnerabilities. The number of food-insecure people remains high, and was added to by the populations affected by the conflict in northern Nigeria and in the area around Lake Chad. The situation in Sierra Leone, Liberia and Guinea, the three countries that were most affected by the Ebola epidemic, has improved compared to last year (January 2015).

The hotspots of severe food crises (IPC Phase 3 or higher) that emerge are mainly in Africa - in the Horn of Africa (Ethiopia, Somalia, Sudan and South Sudan), Central Africa (CAR and DRC), Zimbabwe, Malawi, Lesotho and Angola in southern Africa, and Sierra Leone, Nigeria and Niger in West Africa (Figure 2). Eritrea does not appear on the map because of a lack of data on the actual number of people affected by the food crisis, although the crop assessment based on satellite imagery indicates a significant reduction in crop production for the main agricultural season in 2015.
Other hotspots are the conflict-affected countries in the Middle East (Syria, Iraq, Afghanistan and Yemen), the Pacific Islands (Papua New Guinea, Vanuatu and Timor Leste), Central America and the Caribbean, as well as the Democratic People’s Republic of Korea (DPRK).

Figure 1: Food-insecure population (IPC Phase 2 or higher) as in January 2016, absolute numbers (top) and as a percentage of the reference population (bottom). The reference population is the total population of the country except for Nigeria, DRC and Cameroon, for which the percentages are based on the provinces that were covered by the food security assessment reports available.
Figure 2: Population in food crisis (IPC Phase 3 or higher) as per January 2016, absolute numbers (top) and as a percentage of the reference population (bottom). The reference population is the total population of the country except for Nigeria, the DRC and Cameroon, for which the percentages are based on the provinces that were covered by the food security assessment reports available.
4 Horn of Africa

Food and nutrition security in the Horn of Africa are threatened by one of the strongest El Niño weather phenomena ever seen in the past 20 years. Over 15 million people in the region are food insecure, including about two million internally displaced persons (IDPs) and 1.7 million refugees. Among them, about 10.2 million and 3.2 million people are in need of emergency food assistance in Ethiopia and Somalia, respectively. Drier-than-average conditions are also affecting food security in Sudan, Eritrea, Somalia and eastern South Sudan. The March to September rains were the lowest (in 50 years in central and eastern Ethiopia. The situation in Eritrea might be critical because the main crop season (July-September) was badly affected by a drought that hit the most productive regions (EC-JRC report, October 2015).

Localised floods have been reported in parts of Ethiopia (OCHA, 26 October 2015). In contrast to the beginning of the year, the rains were generally favourable during the period from October to December 2015 for the main cropping areas of the region (GEOGLAM, February 2016). Moisture stress was still observed in marginal agricultural areas in south-eastern Kenya, parts of southern Somalia and parts of northern Tanzania.

Since 2011, the EU has pledged over €1 billion in humanitarian aid to the region: €108.5 million in 2013, €104 million in 2014 and, so far, €93 million in 2015. This funding aimed primarily to provide food assistance, health, nutrition, clean water, sanitation and shelter to affected populations (ECHO Factsheet).

4.1 Somalia

Somalia has been frequently described using terms such as ‘state failure’, ‘anarchy’, and ‘warlord economy’. Over the past two decades, violent conflicts have occurred all over the country, with the most recent conflict outbreaks occurring in the central and southern parts and, in particular, in the Bay and Hiiraan regions. Those regions, in which the Islamist Al Shabab militia has been active, are also where food insecurity reportedly has been most acute after the intense and destructive droughts of 2011 (IFPRI 2014).

4.1.1 Food security situation

According to the October 2015 reports of the Food Security and Nutrition Analysis Unit (FSNAU) and Global Information and Early Warning System (GIEWS), about 855 000 people were in Crisis and Emergency (IPC Phases 3 and 4) through December 2015. Internally displaced persons (IDPs)
constitute 68% of the total number of people in Crisis and Emergency, followed by rural (25%) and urban (7%) populations. Furthermore, approximately 2.3 million additional people were classified as Stressed (IPC Phase 2) through December 2015. The most food-insecure people are in the Middle Shabelle region and agropastoral areas in the Awdal, Hiraan, and Middle Juba regions.

According to FEWS NET (November 2015 report), food security is expected to improve between January and March 2016 as a result of increased livestock production and the anticipated above-average Deyr (secondary rainy season) harvest in January/February 2016. Moreover, some pastoral areas in southern and northern regions are expected to improve to Minimal (IPC Phase 1). Nevertheless, a majority of the country remains Stressed (IPC Phase 2). Riverine areas in Middle Shabelle are also expected to remain in Crisis (IPC Phase 3) through December, as heavy rainfall, driven in part by the ongoing El Niño phenomenon, led to flooding that delayed planting, destroyed crops, and prevented households from accessing markets. Agropastoral areas in Awdal and Woqooyi Galbeed will likely have had below-average Gu/Karan (first rainy season) long-cycle crop production in November/December as a result of a drier-than-usual April to July. These areas are expected to remain in Crisis (IPC Phase 3), even after the harvest. Although the Guban Pastoral livelihood zone received atypical, moderate rainfall in October and November, which increased pasture and water availability, poor households in this region will remain in Crisis (IPC Phase 3) through to March, but only with humanitarian assistance. This is due to very dry conditions in 2014 and 2015, which resulted in low livestock production, reduced incomes due to low livestock values, and unusual livestock losses during the drought in 2015, likely in part due to the ongoing El Niño phenomenon.

Normalized Difference Vegetation Index (NDVI) anomalies (Figure 3) are close to average apart from some areas in the North (Awdal) and some areas of concern in the rain-fed maize agro-pastoral livelihood zone of lower Shabelle, the Sorghum High potential of Shabelle regions and some pockets in pastoral areas of Gedo, and Lower and Middle Juba (in the South) which show signs of stressed vegetation.
4.1.2 Nutrition security situation

An estimated 214,650 children under the age of five in Somalia are suffering from acute malnutrition, 39,650 (18.5%) of whom are severely malnourished. As more children become malnourished through the end of the year, the number of acutely and severely malnourished children is expected to increase, respectively, to 343,440 and 63,440 (based on incidence).

The nutrition survey conducted by FSNAU during the Gu season of 2015 indicated a median GAM rate of 13.6% and a median SAM rate of 2.3% at national level, with prevalence exceeding the emergency threshold of 15% in livelihoods of the South Central Region (North and South Gedo, Mataban, Beletweyene, Coastal Deeh and Cowpea Belt districts).

Critical levels of GAM prevalence (≥15%) were also recorded in two out of six urban areas surveyed during 2015 Gu (18.4% in Bari and 15.7% in Nugal) while Serious GAM prevalence (above 10%) was noted in urban Mogadishu (10.5%) and Alert (5-9.9%) in urban Sool and urban Kismayo.
The overall stunting rate in Somalia was 12%, although there were major differences between zones: 15% in southern and central areas, and 1% in the North-East.

Out of 13 IDP settlements surveyed during 2015 Gu season, five showed Critical levels of GAM: Dhobley, Baidoa, Dolow Garowe and Galkayo. It is of concern that acute malnutrition levels in three of these IDP settlements (Dolow, Garowe and Galkayo) have remained at Critical levels over the past two years. The nutrition situation among Dollow IDPs has also deteriorated since December 2014 with an increase in the levels of GAM, a near doubling of the Crude Death Rate (CDR) as well as increases in the Under Five Death Rate (U5DR) and morbidity levels.

![Figure 4: Nutrition situation in Somalia in July 2015](image)

The livelihoods and populations identified by FSNAU as priorities (hotspots) for nutrition programming are the most affected IDPs (Dollow, Baidoa, Dhobley, Garowe, Galkayo), as well as the Belwotweyne and Mataban districts, urban Bari and the Coastal Deeh and Cowpea Belt livelihood zones.
The nutrition situation in the drought affected areas of Northwest agro pastoral and Gubal Pastoral livelihoods as observed during the Gu-season survey was expected to deteriorate from Serious to Critical levels of acute malnutrition as the drought conditions were expected to worsen until Deyr rains are fully established in October 2015. Deterioration of the nutrition situation was also expected among Bossaso IDPs in the North-East and in Bay Agro-pastoral and in Middle and Lower Shebelle livelihoods in the South (see Figure 5).

![Figure 5: Projected Nutrition Situation, August-October 2015](image)

### 4.1.3 Main factors in food and nutrition insecurity

Besides conflict and civil insecurity, food insecurity in 2015 was highly influenced by erratic rainfall in the main cropping areas of southern Somalia, including agro-pastoral areas in the Awdal, Hiraan, and Middle Juba regions. Flooding in some riverine areas of the Middle Shabelle region and agro-pastoral areas caused a decline of overall cereal production.

The high rates of acute malnutrition among children can be attributed to food insecurity, but also to suboptimal child-feeding practices, low coverage of health services, and lack of access to clean water supply, all related to water-borne diseases that further deteriorate the nutritional status.
4.2 Ethiopia

Ethiopia, the second most populous country in Africa, has achieved impressive economic growth over the past decade. However, failed spring/Belg (mid-February-May 2015) rains compounded by the El Niño weather conditions that affected summer Kiremt (June-October 2015) rains caused havoc on planting and livestock production across the country, and resulted in a severe drought. This created a major problem for agriculture, which generates about half of the country's income. Figure 6, which illustrates the NDVI from July to September 2015 (Kiremt season) compared to its respective long-term average (1999-2014), shows negative vegetation anomalies due to the dry spell. The hardest-hit areas are Afar, the Sitti (Shinile) zone of the Somali region, Southern Tigray, Eastern Amhara, East of the Southern Nations, Nationalities and People's (SNNP) region, East and West Hararge, Arsi and West Arsi; and lower Bale zones of the Oromia regions. Pastures and water resources are also unusually low in the central and eastern Oromo region, and in the northern Tigray and Amhara districts.

Dry conditions have led to poor livestock body conditions and a massive number of unusual livestock deaths in pastoral and agro-pastoral communities. For instance, according to the FAO (October 2015...
reports), El Niño-driven livestock deaths in an IDP camp in Ethiopia’s Somali region, were severe in the past six months. In northern pastoral areas, little pasture, forage, or water is available. More than 200,000 livestock have died in southern Afar and the Somali region’s Sitti zone. More than 13,000 households have lost all livestock and migrated to informal camps in the Sitti zone (FEWS NET, Ethiopia Food Security Alert, 4 December 2015). The situation in the Afar and Dire Dawa regions is of great concern, in particular in the districts of Amibara, Milesso and Shinile.

4.2.1 Food security situation

The El Niño-driven drought has greatly expanded food insecurity and malnutrition, and devastated livelihoods of the poorest and vulnerable people across the country, including those in areas such as Aris and West Arsi zones in the Oromia region that normally produce a surplus. The government of Ethiopia has recently appealed to its international partners for emergency food assistance to feed 10.2 million people and for special nutritional programmes for more than 2.1 million, including 400,000 severely malnourished children. In addition, over 8 million vulnerable and food-insecure people receive support under the Productive Safety Net Programme (PSNP). According to UN reports, the number of people in need of emergency food assistance may reach 15 million by 2016. The number of areas in need of urgent humanitarian support (hotspot priority 1: IPC Phase 3 and above) have quadrupled from 40 woredas in February to 186 woredas in December 2015, reflecting the deteriorated humanitarian context (OCHA, weekly Humanitarian Bulletin, Ethiopia, 7 December 2015).

According to OCHA (October – December reports), following drought-driven crop failure, market prices have already started to shift, with the price of food staples such as lentils 73% higher than at the same time last year (Addis Ababa, August 2015). By contrast, the price of livestock has fallen by as much as 80% (northern Somali region, August 2015). As a result of these price changes, the purchasing power of drought-affected smallholder farmers is threatened as they can buy less and less with the money that they have.

Water shortages are affecting an important part of the population in the woredas that were affected by drought in 2015. According to the Humanitarian Requirement Document (Government of Ethiopia and Partners, December 2015), the 10.2 million food-insecure people are also affected by water shortages.

The federal government of Ethiopia and the regional state authorities have started an outreach programme for the affected people, through which they have allocated US$192 million for food aid, water transport, animal feed and other assistance, and appealed for US$596 million in assistance from the international community for the remainder of 2015. International organisations, donors and NGOs pledged about US$432 million for humanitarian assistance. Moreover, in its 2nd emergency meeting on 27 November 2015, the Ethiopian Council of Ministers approved a draft bill for upgrading the Government’s Disaster Risk Management and Food Security Sector (DRMFSS) to establish a National Disaster Risk Management Commission (NDRMC), led by a Commissioner. The objectives of the NDRMC are to prevent disaster by tackling their root causes, build the capacity necessary to
reduce the impact of disasters (i.e. preparedness) and ensure the timely arrival of the necessary assistance to victims of disaster (i.e. emergency response). El Niño also brought unseasonal rains to agricultural areas of Ethiopia’s central highlands, which could increase postharvest losses. According to OCHA and FEWS NET reports (October 2015), the water level of the Wabishabelle River in the Somali region has been rising and has broken its banks in the East Imy woreda, and communities along the river bank have been engulfed by water. OCHA also warns that above-average rains could continue until early 2016. According to Disaster Prevention and Preparedness Bureau reports of the Somali region, more than a thousand households from Diray Kebele in the East Imy woreda are taking refugees in East Imy town. On the other hand, enhanced rainfall will lead to good pasture and crop development, helping to further rebuild the livelihoods of pastoralists in the southern Somali region. As a result, livestock body conditions will improve, and livestock production and productivity are likely to increase. These will increase food and income from livestock. Therefore, with of humanitarian assistance, a large majority of households in the southern Somali region will have be to meet their food and non-food needs.

4.2.2 Nutrition security situation

The number of children with Severe Acute Malnutrition (SAM) admitted into therapeutic feeding programmes at national level in 2015 was higher than that of year 2014, and as of June 2015 the admissions were increasing every month, reaching 29,722 in April 2015 (Figure 8).

![Figure 8: National admission trend for SAM in Ethiopia (2011-2015). Source: Ethiopian Emergency Nutrition Cluster](image)

The most affected regions are Oromia and the SNNPR, with Oromia accounting for 47% of the Community-Based Management of Acute Malnutrition (CMAM) admissions and SNNPR for 37%. As of June 2015, the trend of admissions was increasing in both regions (Figure 9). The most affected zones from the Oromia region are Arsi, Bale, Borana, East Hararghe, West Harargeh and West Arsi,
while the most affected zones of the SNNPR are: Hawassa Zuria, Gedeo, Gurage, hadiya, Kembata Tembaro, Segen Hizboch, Disama, Silte and Halaba Special woreda.

Figure 9: Admission trends for SNNPR and Oromia regions (2011-2015). Source: Ethiopian Emergency Nutrition Cluster Unit.

The Amhara and Somali regions are also affected by the poor Belg rains, but the number of admissions of SAM children is not as high as in previous years. In July 2015, two nutrition surveys were conducted by GOAL and Action Contre la Faim (ACF) in Gambella (Jikawo woreda) and Harer (Hundene woreda), and the situation in Jikawo was classified as Serious, with 11.7% of SAM, and Normal in Hundene. Out of 18 surveys supported by UNICEF in different woredas of the Tigray, Afar, Amhara, Oromia and SNNPR regions, only one Afar woreda reported critical values for SAM (15%), while 9 woredas of Afar, Amhara, Oromia and the SNNPR rated the malnutrition situation as Serious, with GAM values in the 10-15% range (Ethiopia Humanitarian Situation Report, June-July 2015). Malnutrition is estimated to affect 2.1 million children (Government of Ethiopia and partners, December 2015), 1.7 million of whom are moderately acutely malnourished and 0.4 million severely malnourished.

4.2.3 Main factors in food and nutrition insecurity

Drought due to the poor Belg (first rainy season) and Meher (second and main rainy season) rains caused by El Niño, followed by crop failure and animal death, are the major factors contributing to food and nutrition insecurity in the country. El Niño also caused local flooding in some parts of the country. The events result in high staple food prices, but adversely affected livestock prices. The shortage of water also compromises the correct functioning of emergency and sustainable Water, Sanitation and Hygiene (WASH) services, resulting in outbreaks of water-borne diseases that further deteriorate the nutrition situation.

The influx of refugees from South Sudan and Somalia further fuelled the food insecurity situation in the country. Since the outbreak of violence in mid-December 2013, approximately 209,000 South
Sudanese refugees have entered the country, bringing the total number of refugees and asylum seekers in Ethiopia to nearly 700,000. In addition, congestion in the Djibouti port, the main entry point for goods into landlocked Ethiopia, is also slowing the timely distribution of food aid to beneficiaries.
4.3 Eritrea

The Eritrean economy is largely dependent on agriculture, with two-thirds of the population engaged in subsistence farming and pastoralism. Domestic production meets approximately half of total food needs in good years and only about a quarter of total demand in bad years.

4.3.1 Food security situation

The country is vulnerable to food insecurity due to economic constraints, civil insecurity as well as soaring prices of imported food staples, especially cereals. Furthermore, the El Niño weather phenomena have influenced the pasture and crop production of the country. According to a JRC Technical Report (October 2015), below-average rainfall in July and the first half of August resulted in poor crop growth at the beginning of the season. Despite a slight improvement in rainfall in September, the uneven distribution during the previous months negatively affected crop development and jeopardised the main harvest of 2015. The lack of rainfall in the current Kremti season resulted in abnormal vegetation conditions (i.e. negative anomalies) in the main productive areas of the country, principally in the sub-zobas of La’ealy Gash, Malqui, Mensura, Tesseny, and Homajer in the Gash Barka zoba, Adil Kuala in the Debub zoba and Gala Nefhi in the Maekel zoba (Figure 10).

Figure 10: Monthly vegetation conditions (NDVI) compared to the historical average (1999-2014). Data source: SPOT-VEGETATION/ProbaV.
4.3.2 Nutrition security situation

In early 2015, UNICEF stated that the nutrition situation is critical in Eritrea, highlighting that without additional funding it would be unable to support the national response to the country’s continuing nutrition crisis, or to provide critical WASH services to the population in need. The results of the last Eritrea Population and Health Survey (EPHS) carried out in 2010 already showed a deterioration in the nutritional status of children in the country, with stunting rates rising from 43% in 2002 to 50% in 2010, and wasting rates remaining at emergency level (15%) (Figure 11: Trends in children’s nutritional status in Eritrea: 2002, 2010).

Moreover, UNICEF reported at mid-year that the acute malnutrition trends in children under five years of age had been increasing in all regions. According to UNICEF’s latest country report (UNICEF January-June 2015), a total of 12 234 children under five suffering from moderate acute malnutrition (MAM) and 4 098 children under five suffering from severe acute malnutrition (SAM) were treated at the end of May 2015. However, there is a scarcity of updated data on the nutrition situation of Eritrea. In order to support data generation, UNICEF, the WFP and other UN agencies recently helped the government to conduct a comprehensive nationwide food security and nutrition assessment. The results indicate that the prevalence of stunting is over 50%.

4.3.3 Main factors in food and nutrition insecurity

El Niño weather phenomena, economic constraints, soaring imported food prices and civil insecurity that constrain humanitarian interventions are the major contributing factors to food and nutrition insecurity in the country.
5 West Africa

5.1 Countries affected by Ebola in 2014 and 2015: Liberia, Guinea, Sierra Leone.

The impact of the Ebola outbreak on food security is gradually waning. The return to normal is occurring more quickly in areas that were less affected by the epidemic and more slowly in places that were worse or longer affected. However, food insecurity is still prevalent in part of the population due to structural issues and the remaining effects of the Ebola epidemic. The July –September period corresponds to the lean season in Guinea, Liberia and Sierra Leone. During this period, food security typically remains a challenge. The situation is expected to have gradually improved with the October harvest.

Liberia was declared Ebola free on 3 September 2015, but three new cases were confirmed during the week of 22 November. Sierra Leone was declared Ebola free on 7 November 2015. In Guinea, the latest positive case was found on 29 October 2015.

5.1.1 Food security situation

The food security situation seems to be improving in Liberia. Minimal food security (IPC Phase 1) is to be expected from October 2015 (FEWS NET a., 2015) if the harvest is good. This means that less than 20% of the population will suffer from food insecurity. According to the Cadre Harmonisé analysis, carried out in November 2015 (CILSS, Nov 2015), less than 1% of the population will be in Crisis (IPC Phase 3 or more) in the coming year, and around 5 to 10 % will be Stressed (IPC Phase 2).

The situation in Guinea should also have improved with the harvest around October 2015. WFP monitoring was still showing quite severe levels of food insecurity in August. However, both FEWS NET and the Cadre Harmonisé technical working group forecast that there would be Minimal food insecurity (IPC Phase 1) in the country by December 2015. A significant part of the population (around 15 to 18%) will still face Stress (IPC Phase 2) during the coming year (CILSS, Nov 2015, FEWSNET c., 2015).

Sierra Leone is making a slower recovery. While most of the country should reach Minimal levels of food insecurity (IPC Phase 1) by December 2015 thanks to the harvest, more than 20% of the population in the Moyamba, Kenema and Kailahun districts is expected to face difficulties to meet its food needs. These areas were classified as Stressed (IPC Phase 2) from October to December 2015 by FEWS NET (b., 2015). According the November 2015 Cadre Harmonisé analysis (CILSS, November
2015), between 5 and 10% of the population were in Crisis (IPC Phase 3) and around 30% of the population were in Stress (IPC Phase 2).

In all three countries, expected improvements are dependent on the harvest. In most places, various programmes to combat food insecurity, including distribution of food, subsidised sales, and cash and food for work programmes, have mitigated the impact of the Ebola epidemic on food insecurity (FEWS NET a, b, c, August 2015).

Agricultural activity and wages reached normal levels in August in Liberia and Guinea (FEWS NET, August 2015; WFP, August 2015). On the contrary, below-average agricultural demand and wages still persist in Sierra Leone according to FEWS NET b (August 2015). However, the last bans on weekly markets were lifted in August, and the situation may have returned to normal in the following months.

Some sources of income were still below their normal levels in September 2015, especially charcoal sales, hunting and trapping, petty trade, handicraft, casual labour on rubber plantations, and export of palm oil in Sierra Leone. This was also the case for other countries such as Liberia (hunting and trapping, export of palm oil) and Guinea (petty trade, craft trades, hunting, mine work and sale of livestock and poultry). Other sources of income returned to normal, with the normalisation process occurring more quickly in places less affected by the Ebola epidemic (FEWS NET, August 2015).

According to WFP monitoring, prices follow normal trends for the season in most parts of three countries (WFP, August 2015)

5.1.2 Nutrition security situation

In July 2015, a SMART survey (UNICEF, 2015) conducted in Guinea showed that the national prevalence of GAM was 8% (2% for SAM) and that rural were more affected than urban populations (8.5% and 7%, respectively). These rates are similar to national GAM levels reported before the Ebola outbreak in 2012, as recorded by the 2012 Demographic and Health Survey (DHS).
The Kankan region showed the highest rates of GAM, with a global prevalence of 9.3%, and the city of Sigui, in this same region, showed a prevalence approximating the 15% emergency rate (SMART preliminary results, July 2015). The prevalence of GAM in Kankan was, however, already very high before the Ebola outbreak (17.9% GAM reported by DHS 2012).

The latest UNICEF reports give the number of children with severe acute malnutrition that had been treated since October 2014 as 7,504 in Guinea, 19,709 in Sierra Leone and 7,737 in Liberia (UNICEF countries Situation Report on Ebola, 28 October 2015).

5.1.3 Main factors in food and nutrition insecurity

The impact of the Ebola outbreak on food security is gradually waning. In areas worst or still affected, economic activity is still below average and some income sources have not returned to their pre-Ebola levels.

The harvest is crucial to the evolution of the food security situation in the coming months. However, Guinea, Liberia and Sierra Leone also face structural issues that will maintain a significant level of food insecurity and malnutrition. This is due to several factors, including the low productivity of agriculture, insufficient infrastructures, high poverty rates and low literacy levels.
5.2 Gambia

The Gambia is a small West African state surrounded by the Republic of Senegal on all sides except along the Atlantic Ocean. The width of the country varies from 24 to 28 kilometres. The Gambia has a total land surface area of 10,689 square kilometres, of which 4,300 square kilometres (40%) are devoted to arable agriculture and related activities.

Traditionally, agriculture in the Gambia is characterised by subsistence food crop cultivation, livestock farming and semi-commercial cash crop production. The main crops are groundnuts, millet, rice, maize and sorghum. Groundnut is the main cash crop, whereas millet and rice constitute the staple foods. Agriculture in the Gambia is largely and essentially rain fed, although small areas of irrigation exist for rice and horticultural crops.

The climate is typically “Sudano-Sahelian” characterised by a short mono-modal rainy season (June to October) followed by a long dry season (November to May) which is characterised by the Harmattan Wind. Average temperatures range from 18 to 30 degrees Celsius during the dry season and 23 to 33 degrees Celsius during the rainy season. The relative humidity is about 68% along the coast and 41% inland during the dry season, and generally about 77% throughout the country during the rainy season. Average annual rainfall is about 1000 mm, but ranges from 850 mm to 2200 mm depending on the agro-ecological zone.

The Gambian Government has developed many initiatives to boost rice (which is still the main staple food crop) production in the country. Under these initiatives, Gambians have to grow what they consume and consume what they grow. There are now around 250,000 hectares of rice, thanks to an expansion programme which started in 2009. Another important strategic programme is to improve the livelihoods of farmers under the Gambia National Agricultural Investment Plan (GNAIP), which is the medium-term (2011-2015) strategic plan within the framework of the New Partnership for Africa’s Development (NEPAD) and the Comprehensive Africa Agriculture Development Programme (CAADP).

5.2.1 Food security situation

According to the November 2015 Cadre Harmonisé analysis, 54,000 persons were in Crisis (IPC Phase 3) during the October to November 2015 period in the Gambia, and 373,000 persons were in Stress (IPC Phase 2). For the projected period June to August 2016, 96,000 persons are expected to be in Crisis and 510,000 persons in Stress.
According to preliminary results of the National Agricultural Survey (Gambian Government - Planning, CILSS, FAO, WFP, FEWSNET, November 2015), the 2015-2016 harvest will be below the five-year average (about 283 853 MT production this year compared to the five-year average of 300 368 MT). It will, however, be better than last year (2014-2015), which was a bad year with about 256 898 MT production. Early millet and groundnuts performed worst in terms of production compared to the five-year average. The harvest of upland rice, late millet and maize was average. The below-average 2015-2016 crop performance is due to a heavy downpour that reduced the number of working days on the farm as most of the rains were reported to have occurred during daytime hours. Most rice fields were submerged along the swamp fields, and low tillering has been observed. This also led to a short photosynthesis period for the field crops.

Rice prices are comparable to their 2014 levels or higher, and are above the five-year average. This could pose a challenge to food access since rice is the staple food in the Gambia and is consumed in high quantities by the poor, as per 2014 data. More generally, food prices were above their five-year-average levels at least until August 2015 (latest results available at the time of the writing of the report).

Livestock conditions are good this year due to favourable water and pasture availability. No significant disease outbreaks have been observed.

5.2.2 Nutrition security situation

The preliminary results of the latest national SMART survey conducted in September-October 2015 estimated the GAM prevalence at 10.1% and SAM prevalence at 1.6%, while the stunting rate was estimated at 22.6%. These rates are similar to those found in the previous SMART survey conducted in the same season of 2012 (wasting or GAM at 9.9% and stunting at 21.2%).
5.2.3 Main factors of food and nutrition insecurity

Food insecurity in the Gambia is tightly linked to agricultural performance. Food insecurity observed during the lean season this year is largely the result of the bad harvest of the previous year (2014-2015). As the current harvest (2015-2016) is likely to be slightly below average, the food security situation will remain precarious this year. The Gambia is characterised by subsistence food crop cultivation and mostly rain-fed agriculture, which make it very vulnerable to rainfall shocks.

The factors contributing to undernutrition in the Gambia are related to high levels of morbidity, mainly due to water-borne diseases such as diarrhoea which have a great impact on malnutrition.
6 Asia and Pacific

6.1 Democratic People’s Republic of Korea

In the Democratic People’s Republic of Korea (DPRK), agriculture accounts for 21% of the GDP (2011) and remains a major provider of employment (CFSAM, 2013). However, the performance of the agricultural sector was erratic in recent years due to its vulnerability to natural hazards and the lack of marketing and technological reforms.

Before the 1990s, the DPRK had achieved relatively high levels of human development in terms of life expectancy, infant mortality, and access to health services, water and sanitation. After 1990, many socioeconomic indicators worsened due to the loss of the socialist markets and the natural disasters that occurred during the 1990s. To restore the same economic level as the one that prevailed before 1990, the DPRK government introduced economic measures that allowed the gross domestic product (GDP) to increase gradually from US$10.6 billion in 2000 to about US$12.3 billion in 2010.

The DPRK economy remains fragile despite international aid and gradual improvements in agricultural production in recent years. As agriculture is the backbone of the economy, weak resilience and susceptibility to shocks exacerbates the country’s economic vulnerability. Furthermore, the difficulties in securing the energy required to meet increasing demands of production, weak infrastructure and logistical support, imbalanced import-export policies, difficulties in introducing new technologies, and international sanctions all contribute to an unstable economy that could potentially provoke humanitarian crises.

Whilst there is a continued risk that a natural hazard or other unexpected shock could cause a new humanitarian crisis, there are still critical day-to-day needs across the food security, nutrition, health and water and sanitation sectors, which will require the support of the international community.

6.1.1 Food security situation

Food and nutrition security across the whole DPRK remains a significant challenge. According to OCHA (2015), an estimated 70% of the population (18 million people) rely on the Public Distribution System (PDS) for food, which is vulnerable to fluctuations in production. In 2015, the Government’s target was to provide 573 grammes of cereal per person per day. This figure represents an increase of around 50% compared to the 2014 average PDS ration of 383 grammes.

A lack of agricultural inputs (seeds, fertiliser and plastic sheets) remains the main challenge for food production. The data from the 2013 Crop and Food Security Assessment Mission (CFSAM) indicated
that only 16% of households in the country have acceptable food consumption standards, with serious gaps remaining between the recommended and actual nutrient intake. Of these, approximately 1.8 million people, including children, pregnant and lactating women, and the elderly, rely on regular specialised nutritious food designed to combat malnutrition (OCHA 2015).

Rainfall in the DPRK is highly seasonal. Spring is usually dry (typically 50 to 70 mm rain in March and April depending on the location), and rainfall levels increase in May followed by the beginning of the main rains in June, when the monthly average varies from 100 to 200 mm, again depending on the location (Randall Iresson, Korean Central News Agency, June 18, 2015). Rice seedlings are typically planted in irrigated seedbeds in April and, as long as there is water in the reservoirs, the seedlings can be cared for through transplantation in mid- to late June. At that point, problems arise if the rains do not materialise. Maize is planted in the fields somewhat earlier than rice, and is wholly dependent on rainfall for proper growth.

The JRC scientific report of July-August 2015 highlights a hotspot of negative NDVI anomalies in the southwest of the country, which is part of the rice bowl area. The greatest negative anomalies compared to the average are observed in the area near Jaeryong. Larger areas with negative NDVI anomalies were recorded in North Hamgyong, whereas good vegetative development was observed in Chagang, South Hamgyong and Kangwon. In August, the area near Jaeryong continued to display negative NDVI anomalies, while the surrounding area returned to average or above-average NDVI values.

During the main rainy period (July and August), rainfall was below average and some episodes of extreme rainfall were recorded in some areas, causing floods. The main crops (rice and maize) recovered in vegetative growth but they were significantly delayed in the main agricultural provinces (south and southwest). As the grain-filling and ripening phases occurred under less favourable conditions than in a normal season, yields were expected to be lower than average. In addition, an early end to the rains in the northern provinces is likely to have had a negative impact on the maturation of potatoes and other crops in the area.

OCHA reports that, although the humanitarian situation has improved slightly since 2013, the structural causes of vulnerability persist and external assistance is needed, notably in the north-eastern provinces. The food system in the DPRK remains highly vulnerable to shocks and serious shortages exist, particularly in the production of protein-rich crops.
6.1.2 Nutrition security situation

There is no updated data available on the status of nutrition in the country, but results of the 2012 National Nutrition Survey showed a chronic malnutrition rate of 28%, and an acute malnutrition rate of 4%, nationally. Regional disparities were significant, with stunting rates nearing 40% in some areas in the northeast of the country. High rates of wasting were also found in the northern counties (see Figure 14).

Moreover, a mid-term programme review conducted by the WFP in July 2014 revealed that a staggering 81% of the population do not have an acceptable diet in terms of quality and diversity. The population consumes 25% less protein and 30% less fat than the amount required for a healthy lifestyle (WFP DPR Korea Brief 01 July - 30 September 2015).

6.1.3 Main factors in food and nutrition insecurity

In the DPRK, only 17% of the total land area is suitable for arable farming, of which more than 80% is under cereals. The land area remaining for animal, legume or horticultural production is consequently very small. Dietary quality is also poor for many people, with limited consumption of foods that are rich in protein, fat and essential micronutrients. Micronutrient deficiencies are common, especially in iron, zinc, vitamin A and iodine. Since 2012, there has been an abrupt fall in soya production, an essential source of protein. This is due to the pricing structure, which encourages maize production at the expense of soya. Soya is furthermore important for soil amelioration and essential to conservation agriculture, which is crucial to the strategy for agricultural recovery.
Abnormal weather in the DPRK is always of concern, given the very fragile nature of the agricultural recovery that has been progressing for the past several years. Farm production in the past four years has been relatively stable at about five million metric tonnes grain equivalent, higher than at any time since 1994 but still below the UN estimate of the minimum requirement for basic nutrition of the population.

The causes of under-nutrition are related to food inadequacy and a serious lack of food diversity to meet the nutritional requirements for healthy growth, as well as deteriorated health and WASH services. The government system of central collection and redistribution (Public Distribution System) can be erratic, with insufficient rations that deliver a poor quality and low diversity diet. This year, despite slight increases in the production of rice and maize, there was a decrease in soybean production, one of the main sources of protein for people in the DPRK. This is a result of three consecutive years of dry conditions and poor quality seeds, and the limited production of vegetables, which has further contributed to inadequate food diversity across the country.

Moreover, although the coverage of the health system is extensive, the prevailing lack of medical supplies challenges the provision of adequate health services. Although access to clean water and improved sanitation is widespread, there is limited information on the maintenance of the piping systems and in the quality of the water piped to households.
6.2 Nepal

On 25 April 2015, a 7.8 magnitude earthquake struck Nepal, with the epicentre in the Lamjung District (northwest) of Kathmandu and south of the border with China. This has led to a considerable amount of destruction. About 9000 died and thousands more were injured. Nearly 60000 Nepalese have been displaced to 120 sites across 13 districts.

6.2.1 Food security situation

Food security has largely deteriorated following the earthquake. In May 2015, a total of 275 500 food-insecure households (1.4 million people) were identified as being in need of assistance. Whereas prior to the earthquake all Village Development Committees (VDCs) were classified as having minimal food insecurity, after the earthquake, in May 2015, 80 VDCs were classified as severely food insecure (Phase 4\(^4\)), 271 VDCs as highly food insecure, and 181 VDCs as moderately food insecure. The associated number of food-insecure people are 240000 severely food insecure, 1.1 million highly food insecure, 930000 moderately food insecure and 774000 minimally food insecure. For the period mid-July to mid-November 2015 (forecast), 10 VDCs were classified as severely food insecure (Phase 4) in Sindhupalchowk, 224 VDCs were classified as highly food insecure (Phase 3\(^4\)), 329 VDCs as moderately food insecure (Phase 2\(^4\)), and the remaining 3360 as minimally food insecure (Phase 1\(^4\)).

In terms of population, this corresponds to 28700 (Phase 4\(^4\)) persons being severely food insecure and 500300 highly food insecure (Phase 3\(^4\)).

Whereas the non-mountain areas are witnessing a reasonable improvement in their food security situation, the remote mountain areas are still facing difficulties as they are more difficult to reach by humanitarian assistance, market functioning has not resumed and food availability is still very low. These areas were also the most food insecure and malnourished before the earthquake, due to a combination of unfavourable geography, poor infrastructure and vulnerable livelihoods. Pockets of food insecurity and vulnerability do persist however, most notably in Dolakha, Sindhupalchok, Gorkha, Sindhuli and Ramechhap (NeKsaP, Februray 2016).

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\(^4\) Since 2008, the Ministry of Agricultural Development (MoAD) of Nepal, with the technical support of the WFP in Nepal and the financial support of the European Union, has been implementing food security analyses on a quarterly/trimestral basis, as part of the Nepal Food Security Monitoring System (NeKSAP). Nepal uses version 1.1 of the IPC classification, modified to adapt to the national context. The Phases described in this paragraph are thus slightly different from the IPC Phases described in other paragraphs.
6.2.2 Nutrition security situation

National surveys over the past decades have consistently discovered high levels of child undernutrition in the country, although stunting has decreased substantially in recent years (Figure 15).

![Figure 15: Child undernutrition trend in Nepal.](http://www.nnfs.gov.np/)

The Nepal Multiple Indicator Cluster Survey 2014 reported a stunting rate of 37.4% and a wasting rate of 11.3%. However, wide disparities exist across different ecological zones and sub-regions. The areas with the highest stunting rates were Bhojpur (64.3%), Udaypur (62.7%) and Solukhumbu (50.3%), and the highest levels of wasting were found in Ilam (13.3%), Sankhuwasabha (13.1%), and Saptari (12.6%).

After the April earthquake in Nepal and its aftershocks, more than 10 000 children have been identified as being acutely malnourished, 1 000 of whom suffer from severely acute malnutrition. The nutrition cluster projected in August 2015 that up to 2 500 and 21 886 children under five years of age would suffer from severe acute malnutrition and moderate acute malnutrition in the following 3 months.

6.2.3 Main factors in food and nutrition insecurity

The deterioration in food security after the earthquake is linked to the destruction of food stocks, as well as household assets (seeds, tools, etc.). Household incomes in affected areas were largely reduced. The WFP reported that income losses amounted to over 75% in several areas. Food assistance was implemented. In May 2015, 35% of households were relying on food assistance. However, even with food assistance, food consumption remained too low.
Improvements have been observed since May 2015. These are attributable to humanitarian assistance, the winter harvest (wheat and potato) and the resumption of market functioning and better road access. This applies mainly to non-mountain areas along the earthquake belt. The food security situation of households living in mountain areas affected by the earthquake is more difficult. In May 2015, markets remained largely closed and the food availability is still limited.

Further contributing factors to malnutrition are inappropriate caring practices, limited access to and consumption of appropriate foods, and high incidence of diarrheal diseases and respiratory infection episodes. However, the distribution and importance of these factors may vary across regions.
6.3 Papua New Guinea

Papua New Guinea (PNG) has a population of 7.3 million inhabitants, 85% of whom live in rural and 15% in urban areas. The highlands host 40% of the population, whose livelihoods consist mainly of subsistence sweet potato production. The rural population mainly practice subsistence agriculture. Cash crop production also exists and includes cocoa, coffee and palm oil production. 83% of the food consumed is produced in the country.

6.3.1 Food security situation

At the end of 2015, about one third of the PNG population faced food shortages. The exact number of food-insecure people and the severity of food insecurity is difficult to assess since no large scale survey has been conducted. The Government is planning to conduct a food security assessment in mid-January 2016. It is expected that the food security situation will worsen until the next harvest.

The Government of Papua New Guinea estimates that more than 2.7 million people are facing food shortages, among which 522 000 require urgent food assistance (OCHA, 7 January 2016). The estimation specifies that among the 522 000 severely food insecure, 266 000 people live in very high altitudes areas, 182 000 in the highlands or highland fringes, 46 000 in inland lowlands of western provinces, and 28 000 in small and remote islands. Oxfam and CARE estimate that three million people were affected by El Niño (Oxfam, 2015; CARE, October 2015). This number is based on the number of people affected during the previous El Niño event in 1997-1998, and takes into account the fact that the situation in 2015-2016 will be worse (CARE, October 2015). During the 1997-1998 El Niño episode, 260 000 people were found to be in a critical life-threatening situation, and 1.9 million were found to have limited quantities of food. The atypical level of food insecurity this year is mainly linked to low rainfall in 2015 (Figures 16 and 17).

The situation is particularly problematic in the highlands, which suffered frosts in addition to drought in August 2015. Torrential rains have also been recorded at the beginning of 2015. The harvest is severely diminished or has failed. Food availability is thus greatly reduced. Two provinces, Enga and the Southern Highlands, have declared a state of emergency (WFP, September 2015). The most vulnerable population group are those that are isolated and have poor market access. As they usually rely on their own production, large-scale harvest failure automatically leads to a food-security crisis. In addition, they do not have easy access to markets to buy and are difficult to reach for the distribution of food aid because of difficult physical access.

In the lowlands and islands, agriculture has been primarily affected by droughts. Food availability is thus far below average. Food prices are reported to be increasing in some markets (WFP, September 2015). In addition, the water level in rivers and water points is very low.

Pest outbreaks have also affected crops and livestock in certain areas (Oxfam, 2015).
Figure 16: Monthly rainfall anomalies (mm) compared to the past seven-year average (2008-2014). Data source: EC-JRC, based on the ECMWF model.

Figure 18: Rainfall profile. Data source: EC-JRC, based on the ECMWF model.
6.3.2 Nutrition situation

According to our knowledge, the most recent data collection at country level dates from 2010. At that time, wasting affected 14% of children under five, which is Serious according to the WHO classification, and the prevalence of severe wasting was at 7%. The stunting rate was also very high, reaching 50%. A cause for concern is the fact that these figures reflect a deterioration in the overall nutrition situation, as shown in Figure 18.

![Figure 17: Trend in malnutrition of children under five years of age in PNG. Source: Global Hunger Index report, IFPRI 2015](image)

6.3.3 Main factors in food and nutrition insecurity

The food crisis this year is linked to the exceptional weather conditions caused by the El Niño phenomenon. Drought conditions have added to the impact of frosts and floods, and have led to very poor crop development. Since more than 80% of the food consumed in PNG comes from national production, these weather shocks have led to widespread and significant food shortages.

The quantity of food consumption (calories) in PNG is typically at an acceptable level. However, the prevalence of malnutrition is quite worrying (Wilson, December 2015). This is mainly due to a very low diversity diet and poor knowledge about children’s nutrition needs. The typical diet is composed of a large share of carbohydrates, with very little fat or protein. Vegetables and meat are eaten in very small quantities (WFP, September 2015).
7 Central America and the Caribbean

7.1 Central American Dry Corridor (Guatemala, El Salvador, Nicaragua and Honduras)

The Central American Dry Corridor (CADC) is prone to recurrent disasters and is highly vulnerable due to its exposure to extreme weather events (floods and droughts) and institutional and socioeconomic weaknesses. El Niño episodes are known to cause droughts in the region.

7.1.1 Food security situation

The ongoing El Niño event has led to one of the worst droughts in the region with significantly below-average rainfall from May to September 2015 (primera season), when crops are most sensitive to water shortages. The rainfall deficit during the primera planting season has reduced seed germination and limited the flowering and development of grains. Maize and beans were most affected by the drought. While the extent of crop damages varies according to their sowing and planting times and the irregular temporal and spatial distribution of rains, the Dry Corridor is of particular concern.

The WFP has been continuously assessing the food security needs of drought-affected populations in Guatemala, El Salvador and Honduras. Based on primary data collected between May and July 2015 from affected households in Guatemala (1870 households) and key informants as well as secondary data provided by official entities, the WFP made preliminary estimates of the affected population and of those in food insecurity. The findings show that around 51% of municipalities in the Dry Corridor have been affected, mainly in Guatemala (Baja Vera-paz, El Progreso, Zacapa, Chiquimula, Jalapa y Jutiapa, Quiche, Huehuetenango, Totonicapán, San Marcos, Retalhuleu, Santa Rosa and Escuintla).

In Guatemala and Honduras, food expenditures in 70% of affected households account for over 65% of total household expenditures, reflecting extremely high levels of economic vulnerability. As reported by the WFP (September 2005), in order to maintain adequate food consumption, households resort to negative coping strategies that often impair their ability to cope with further shocks, such as the recent protracted drought or increased food prices.

The pressure on supply led to an increase in food prices. This situation, combined with reduced incomes due to limited job opportunities and the lack of food stocks for sale, increased the food insecurity status of vulnerable households, which have not still recovered from the effects of the 2014 drought and coffee rust.
According to FEWS NET estimates, in the absence of assistance around 4.5 million people in the region (mainly in Guatemala, El Salvador and Honduras) will be in Crisis (IPC Phase 3) by March 2016 (FEWS NET, 2016). That means that these people will face food consumption gaps or have to deplete crucial assets in order to obtain enough food. The IPC analysis of the “Golfo de Fonseca” region in Honduras depict a less catastrophic situation, with the areas in the Dry Corridor classified as being in Phase 2 until April 2016. Eight percent of the population (22 900 people) in the Granos Baios y Ganaderia are classified as being in IPC Phase 3.

The current forecasts anticipate a compromised primera season in 2016 due to the continuation of the El Niño conditions and their impacts on rainfall. Decreased household assets and liquidity may also jeopardise access to agricultural inputs for the 2016 primera season.

![Figure 19: Areas most affected in terms of acute food insecurity.](source: FEWS NET, Food security alert, October 2015.)

Many of the affected areas rely on a single harvest and can only recover their livelihoods with the 2016 primera harvest. The current forecast, however, predicts a below-average harvest performance of the 2016 primera due to the continuation of the El Niño conditions. Concerns over the level of livelihood coping strategies employed in response to a protracted drought could also impact household investments in future planting seasons. Continued and sustained assistance will be required for the most vulnerable households and communities until livelihoods are able to adequately recover.

### 7.1.2 Main factors in food and nutrition insecurity

The impacts of the 2014 drought continue to be felt this year, with a false early start to the 2015 wet season followed by a rainfall deficit at the beginning of the 2015 primera crop season. This situation
caused significant losses in food production. In addition, an extended mid-season dry spell led to a reduction in sown areas. If the El Niño conditions persist in early 2016, the harvest could again be low and the situation would deteriorate further.

In previous years, apart from the food insecurity situation, the high incidence of diarrhoea and respiratory infections as well as limited access to safe water were identified as contributory factors of malnutrition in the most affected areas.
7.2 Haiti

Food insecurity is chronic in Haiti. Poverty is widespread and the wealth distribution is very unequal. Population density is high, reaching 384 people per square metre according to the World Bank (http://data.worldbank.org/indicator/EN.POP.DNST). Persistent poverty and food insecurity have structural causes that include recurrent natural disasters, low levels of national food production, environmental degradation, political and social turmoil and poor basic services, including the access to rural finance and education.

7.2.1 Food security situation

OCHA estimates that 0.3 to 0.6 million people are currently affected by food insecurity, and that 820 000 are severely food insecure (OCHA, 31 Dec 2015).

An IPC Chronic analysis has been recently completed. This facilitates the assessment of the number of people who have food consumption issues on a recurrent basis even in the absence of an important shock to food security, like the below-average crop production levels of last year (2015). According to a FEWS NET IPC compatible analysis (Figure 20), 37 communes in the North West, South East and the Central Plateau were facing IPC Phase 3 (Crisis) during the period November-December 2015 (CNSA, FEWS NET, 2015). This means that more than 20% of the population in these areas are facing food consumption gaps and high or above-average acute malnutrition, or are only marginally able to meet minimum food needs by accelerating the depletion of livelihood assets, which will lead to further food consumption gaps in the future. The December 2015-January 2016 harvest was not enough to lower the proportion of people in IPC Phase 3 to less than 20%. IPC Phase 2 (Stress) was also registered in several communes during the period October to November 2015.

The September 2015 Alert published by the CNSA established that between 300 000 and 560 000 people are in Crisis (IPC Phase 3) (CNSA, September 2015). This situation is likely to worsen by May-June 2016 with the spring harvest.

According to ACF, the lean period lasted for seven months in 2015 instead of the average three months in a typical year in three communes of the North West due to harvest failure (ACF, 2015). Livestock suffers from the lack of water, and early mortality rates among small ruminants have increased. Prices are reported to be 70% higher than normal in these areas.

5 Bombardopolis, Baie de Henne, Anse rouge.
These levels of food insecurity are atypically high. Food security in Haiti has gradually worsened throughout 2015 due to the consequences of repeated dry spells on crop performance, namely during the first season (April to August) of 2014 and 2015 and the second season (August to September) of 2015. This has led to poor crop development and poor harvests, and has particularly affected the southern peninsula, the North West, the Northern Artibonite, the North-East, the South-East, North-East and West of the country (OCHA, August 2015). It is estimated that the 2015 national production is 50% lower than the long-term average (CNSA, FEWS NET, 2015). The FAO estimates the 2015 cereal production to be 353,000 tonnes, which is significantly below the five–year average (FAO, 30 December 2015). Cereal imports are forecasted to be at a record level of 698,000 tonnes. However, the current political crisis and the strong devaluation of the Gourde may jeopardise the capacity of the country to achieve this level of imports.
Poor crop development has led to reduced agricultural activity and low demand for agricultural labour. As a result, the purchasing power and food access of poor wage workers has been dramatically reduced. The labour demand for agricultural work related to the production of congo peas in the communes of Anse-à-vaux, Arnault and Aziles in Nippes has been particularly affected, as has the tuber and bean production in the mountain areas. Yields of irrigated rice, fruit and vegetables in the Artibonite valley have not been greatly affected.

Prices of locally produced crops follow seasonal trends. However, their levels are above average this year. The high prices are attributed to the low level of production this year (CNSA, FEWS NET, 2015). According to the FAO (30 December 2015), the prices of domestically produced maize meal surged in several markets in November, with monthly increases ranging from 10 to 33%, particularly in Jeremie, the main market in the South West of the country (FEWS NET, December 2015). In the capital, Port-au-Prince, and Hinche markets, important price increases were recorded for black beans. Despite the fact that the harvest of certain crops (beans, cornmeal, banana) has begun, price increases have been observed locally because of poor harvest yields in these areas (CNSA, October 2015). The price of imported food products remains stable compared to other years, except for broken rice imported from the Dominican Republic, the price of which was 30% higher in September 2015 than in September 2014. The poorest households consume this food item. On the other hand, the price of imported rice from the US fell in November 2015, reflecting its drop on the international market.

Overall, the drop in incomes due to lower-than-average activity (mainly from agricultural wage work) and above-average food prices has reduced food access and increased food insecurity, particularly for the poor households for whom agricultural wages represent an important source of income.

This deterioration in food security arises in a situation of very high chronic food insecurity. According to the IPC Chronic analysis, about 70% of the Haitian population faces chronic food insecurity (IPC Chronic Levels 2, 3 and 4).

Overall, about 15% of the population faces severe chronic food insecurity (IPC Chronic Level 4), which means that this proportion of the population suffers deficits in food consumption for more than four months each year, does not consume a diet of sufficient quality throughout the year, and is likely to have stunted children. Twenty-eight percent face moderate chronic food insecurity (IPC Chronic Level 3), which means that they have moderate food consumption deficits throughout the year or important food consumption deficits for two to four months each year, and they do not consume a diet of sufficient quality throughout the year. Their children are likely to be moderately stunted. About 31% of the population face mild chronic food insecurity (IPC Chronic Level 2), which means that they consume a sufficient quantity of food calories but do not consume a diet of sufficient quality during most of the year. Their children are not likely to be stunted (Haiti IPC Technical Working Group, 2015).
7.2.2 Nutrition situation

To our knowledge, the latest nationally representative nutrition surveys are from 2012. Wasting then affected 5% of children under five years of age, i.e. about 65,000 children in total. Stunting affected 22% of children under five, i.e. about 274,000 children (Global Nutrition Report, 2015). In 2011, 37% of women of reproductive age were anaemic. According to UNICEF, cited in the 2015 Global Nutrition Report, only 14% of six- to 23- month-old children have a minimum acceptable diet, and only 29% have acceptable dietary diversity.

7.2.3 Main factors of food and nutrition insecurity

The high number of food-insecure people observed in 2015 and expected for 2016 results from the cumulative effects of three poor harvests due to dry spells that occurred during the cropping seasons. In addition to the lower-than-average food availability, poor harvests have led to a chain of events that resulted in an increased number of food-insecure people in the country. Low agricultural activity resulted in low agricultural labour demand. Demand for labour has fallen dramatically in almost all regions except for the Artibonite valley, where irrigated rice and fruit and vegetable production still demand a reasonable level of labour. As agricultural wage income is major source of income for poor households, the decrease in agricultural labour demand has reduced their purchasing power. In addition, the low quantity of food on the market has led prices to increase above their normal levels. Overall, food access is much lower than average this year, and food insecurity has consequently increased. If the 2016 harvest is again below average because of the continuation of El Niño, the food security situation could deteriorate further.

As already mentioned, Haiti is a vulnerable country. The reasons why the poor harvests of 2014 and 2015 have resulted in a large increase in those that are food insecure are structural. Haiti has a high rate of poverty and chronic food insecurity. Structural causes of chronic food insecurity include low purchasing power, high market dependency, low agricultural productivity and income, recurrent natural disasters, environmental degradation, poor access to drinking water, poor infrastructures, and a very low level of education (Haiti IPC Technical Working Group, 2015).

Haiti remains the poorest country in the Americas and one of the poorest in the world, with a GDP per capita of US$846 in 2014 and a significant of basic services. More than 25% of the women and 20% of the men are not able to read or write (Haiti IPC Technical Working Group, 2015).

Recurrent natural disasters include severe storms, notably the magnitude 7.0 earthquake that struck Haiti on 12 January 2010, hurricanes Isaac and Sandy in 2012, flooding, landslides and drought. Six years after the 2010 earthquake, 60,000 people still live in camps (ACF, 2015).
Haiti is a food deficit country. Domestic production accounts for about 50% of the country’s food needs. Agricultural productivity is low. Environmental degradation (soil erosion, degradation of water sources, forest losses) is a major concern. Roads are in a very poor condition. At household level, physical capital endowments are low. More than 50% of the population cultivates plots of less than 0.5 ha. As a result, 60 to 80% of the food consumed come from the market (Haiti IPC Technical Working Group, 2015). Low incomes prevent poor households from accessing a diet of sufficient quality and quantity.
8 Countries with conflict areas

8.1 South Sudan

South Sudan is the theatre of a protracted civil war stemming from political and ethnic rivalries since December 2013. Tens of thousands of people have been killed and more than 1.6 million have been internally displaced. In late August 2015, a Compromise Peace Agreement was accepted by both parties. However, the deal remains fragile. Several agreements have been signed since January 2014, only to be violated shortly after signature. Currently, clashes continue despite the peace agreement. Both sides have blamed the other for violating the ceasefire. Conflict situations mainly occur in the Jonglei, Upper Nile, and Unity states.

The food security situation is greatly affected by the conflict. Moreover, inflation was very high in 2015. “The South Sudan annual Consumer Price Index (CPI) increased by 165% from January 2015. The increase was mainly driven by the high prices of food and non-alcoholic beverages” (NBS, Feb 2016). The South Sudanese Pound (SSP) has depreciated significantly. In mid-December 2015, the exchange rate moved from a fixed to a floating regime, with important impacts on local food prices.

Food insecurity in South Sudan is widespread and recurrent, following the agricultural season which is bimodal in the south-western and south-central parts of the country (known as the greenbelt zone) and unimodal in the rest of the country. The lean season usually begins between April and May, peaking from August or September. Food insecurity is mitigated in the greenbelt zone at the peak lean season due to the “green” harvest, which is the harvest of products that are not completely ripe. The first harvest in the bimodal areas occurs in October-November, while the main harvest for both seasons occurs from December to January. Although South Sudan is predominantly import dependent, harvest performance as well as the conditions of pasture and water available for livestock greatly determine the food security situation.

8.1.1 Food security situation

According to the IPC analysis, 3.1 million people were in food Crisis (IPC Phase 3) in August-September 2015, 830000 in Emergency (IPC Phase 4) and 30000 in Catastrophe (IPC Phase 5). The IPC Technical Working Group specified that even though famine was not declared in areas highly affected by conflict due to limited evidence, there was a concrete risk of famine occurring between October and December 2015 if urgent humanitarian access and assistance were not provided in the most affected areas. According to WFP food security monitoring, conducted in August 2015, about 50% of the population is food insecure (9% severely, 39% moderately). An important part of the
population has an inadequate diet, i.e. a poor or borderline Food Consumption Score (FCS). This affects between 33% of the population in Jonglei and 57% of the population in Lakes.

The areas worst affected by food insecurity are the four counties most affected by the conflict in Unity State, namely Leer, Guit, Koch and Mayendit. Other areas of concern are Jonglei and Upper Nile, the two other conflict-affected States. This year (2015), the Greater Equatoria region is witnessing a large deterioration in its food security situation; this is the first time, since the country exists, that these regions have experienced such a deterioration at this time of the year. A significant deterioration in the food security condition compared to last year in the same time period was also noted in Bahr el Ghazal. The situation in Unity, especially in Leer, Guit, Koch and Mayendit, is dire but it is difficult to properly assess the exact severity of the situation and the number of people affected due to access issues linked to insecurity.

The most affected populations are the Internally Displaced Persons (IDPs) and the host communities affected by the ongoing conflict. These households have lost their livelihoods, income and assets. They have inadequate food access due to low income, market disruption and high prices.

Figure 22: IPC classification for the period August-September 2015. Source: IPC, August 2015.
Figure 23: IPC classification for the period October-December 2015. Source: IPC, August 2015

Table 3: Proportion of the food-insecure population by State, WFP Monitoring, August 2015.

<table>
<thead>
<tr>
<th>WFP monitoring, August 2015</th>
<th>Severely food insecure (% of total population)</th>
<th>Moderately food insecure (% of total population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>9</td>
<td>39</td>
</tr>
<tr>
<td>Lakes</td>
<td>18</td>
<td>60</td>
</tr>
<tr>
<td>Upper Nile</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td>Northern Bahr el Ghazal</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>Western Bahr el Ghazal</td>
<td>17</td>
<td>36</td>
</tr>
<tr>
<td>Western Equatoria</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>Warrap</td>
<td>9</td>
<td>41</td>
</tr>
<tr>
<td>Eastern Equatoria</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Jonglei</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Central Equatoria</td>
<td>2</td>
<td>27</td>
</tr>
</tbody>
</table>

Food commodity prices have been increasing dramatically since the beginning 2015. Shortages in hard currency greatly impact the South-Sudanese economy. Moreover, transport costs have increased due to the high cost of fuel and insecurity. Insecurity also greatly disrupts trade flows. Food prices are largely above average in the country as a whole, reaching record levels in areas affected by the conflict. The terms of trade of wage against cereals, and livestock against cereals, have sharply declined compared to last year. For example, a day’s wages could buy 5 kg of sorghum in August 2014 compared to 1.9 kg in August 2015 (WFP market analysis, personal communication).
The harvest performance this year is expected to be average at the country level. Production deficits are expected in the Greater Upper Nile and Lakes states due to a reduction in the planted areas and in the agricultural activities overall, related to insecurity and displacement, and also to poor rainfall distribution. Rainfall performance has been poor in Eastern Equatoria, particularly in the Kapoeta South, Torit, Budi, and Lafon counties, so production may be below average in these areas (FEWS NET, July 2015).

### 8.1.2 Nutrition security situation

The overall nutrition situation remains Critical, with Global Acute Malnutrition (GAM) prevalence above the emergency threshold (GAM greater than 15%) in the conflict-affected states of the Greater Upper Nile (Jonglei, Unity and Upper Nile) and in states generally associated with high rates of malnutrition (Northern Bahr el Ghazal and Warrap). Notable is the deterioration in the Lakes state, with rates approaching the emergency threshold. Countrywide, GAM is found to be 13% and Severe Acute Malnutrition (SAM) is at 2.6%. Weighted malnutrition rates were only computed for the seven ‘non-conflict’ states. Jonglei, Unity and Upper Nile were excluded. The worst nutrition situation is observed in Warrap (24.2% GAM) followed by Northern Bahr el Ghazal (17.6%).

The SMART surveys conducted in the conflict states indicated that GAM rates in the majority of areas were above the emergency threshold, with the worst nutrition situation observed in Unity.
8.1.3 Main factors of food and nutrition insecurity

The main factor responsible for the large deterioration in food security this year in South Sudan is the conflict and associated displacement and insecurity. Insecurity in the Greater Upper Nile limits trade (and thus food availability and access) and the area planted, and disrupts the cropping season. The conflict has also resulted in market disruption and a strong economic downturn. Very high food prices have been recorded (up to 150% above average), especially in Greater Bahr El Ghazal. The high prices affect the urban more than the rural population. Depreciation of the South Sudanese pound has also limited imports and thus food availability. Moreover, conflict and insecurity limit and challenge humanitarian access.

Erratic rainfall patterns have added to the difficult situation. This year, rain was significantly below average in Eastern Equatoria and Jonglei. Delayed rains led farmers to replant crops in Western Equatoria and Jonglei. The October to December harvest show more favourable prospects, and should be moderate to good with respect to rainfall. The situation will, however, remain very precarious because of the conflict and due to the high prices.

Moreover, structural vulnerability prevails throughout the country, and any shock translates into rapid deterioration of the food security situation.
The high levels of acute malnutrition are attributable to inadequate food consumption, namely very poor diet diversity, poor maternal and child feeding practices, morbidity, and constrained health and nutrition service delivery. The malnutrition rates, which are above emergency thresholds in the Greater Upper Nile, are attributable to the ongoing conflict which has hindered humanitarian access, affected crop and livestock production, rendered markets non-functional, and led to major population displacements.
8.2 Sudan

Sudan is the largest nation in Africa, with a total area of 2,505,813 sq. km. The country is rich in natural resources such as crude oil. The Sudanese economy has been slow to develop due to persistent civil wars in the nation over the past three decades. The nation has, however, achieved considerable economic growth over the past few years as a result of the Sudanese government’s efforts to implement macroeconomic reforms in association with the International Monetary Fund (IMF). The civil wars were officially put to an end with the adoption of a revised constitution in 2005, but the country is still suffering from internal conflicts as well as the South Sudan border conflict.

8.2.1 Food security situation

According to the latest IPC analysis, (IPC TWG, September 2015), an estimated 3.9 million people in Sudan face Stressed (IPC Phase 2) and Crisis (IPC Phase 3) acute food insecurity. This is mainly due to internal displacement as well as below-average cumulative seasonal rainfall across most of Sudan’s main agricultural production areas (total rains ranging from 25 to 50% of the average in some areas). Most of the food-insecure populations are in the conflict-affected areas of Darfur, the South Kordofan, West Kordofan, and Blue Nile states, with additional pockets of Stressed (IPC Phase 2) populations in drought-prone areas of the Red Sea, North Kordofan, North Darfur and Kassala states (FEWS NET, July 2015). About 65% of the current food-insecure population are in Darfur and 14% in South Kordofan. Crisis (IPC Phase 3) or acute food insecurity is mainly found among internally displaced persons (IDPs) in the SPLM-N-controlled areas of South Kordofan and the IDPs in Darfur displaced in the past six months due to conflict.

According to 2015 OCHA reports, more than 3.3 million of these people are in need of humanitarian assistance. The latest update of the Ministry of Livestock (February 2016) corroborates this finding. It estimates the number of people in need of urgent interventions at 3.5 million as a result of the impact of El Niño (Ministry of Livestock, Fisheries and Rangeland, February 2016). These people are located in the West Kordofan, North Kordofan, East Darfur, North Darfur, Blue Nile, White Nile, River Nile Kassala, Gedarif, and Red Sea states. The El Niño phenomenon greatly impacted Sudan. In 2015, rains were delayed and erratic. Below-average rainfall was registered. As a consequence, areas planted have been reduced and planting has been delayed in several areas. Water availability was reduced both for livestock and human consumption. Pasture conditions were poor, and livestock conditions have deteriorated as a consequence. Competition for access to pastures could have led to increased tension between pastoralists since the beginning of 2016. The migration of livestock has started earlier than usual.
Increased sales of livestock have been observed, especially in eastern Sudan. As a consequence, the prices of livestock are far below average in eastern Sudanese markets. The incomes of herders are thus likely to be reduced, which will possibly jeopardise their access to food (Ministry of Livestock, Fisheries and Rangeland, February 2016).

FEWS NET (October 2015) also warns that conflict has also continued to displace people in the states of Darfur, South Kordofan, and the Blue Nile. In many cases, the displaced have limited access to agricultural land, labour opportunities, markets, and humanitarian assistance.

![Figure 26: Food Security outcome July 2015; Source: FEWS NET July 2015 report](image)

8.2.2 Nutrition security situation

In the latest 2015 report, OCHA declares an overall GAM burden in Sudan of two million children (OCHA Humanitarian Bulletin 26 October - 1 November 2015). As of July 2015, 80246 children with severe acute malnutrition (SAM) have been admitted to outpatient therapeutic programmes (OTPs) across the country. This compares to 76941 and 64733 SAM admissions during the same period in 2014 and 2013 respectively (Figure 27). This increase may in part be attributed to the implementation of the CMAM expansion plan, with 943 treatment facilities now serving severely malnourished children, compared to 795 in December 2014 (Sudan National SAM admission trends, Sudan Nutrition Cluster).

Moreover, among the displaced population it is estimated that 22,000 children under five and pregnant and lactating women still require nutrition assistance (Sudan Nutrition Sector Bulletin, August 2015).
8.2.3 Main factors of food and nutrition insecurity

The major factors contributing to food and nutrition insecurity in the country are internal conflict and civil insecurity as well as below-average rainfall conditions in May and July 2015 due to weather phenomena related to El Niño.
8.3 Central African Republic (CAR)

With a population of 4,525,000, the Central African Republic (CAR) is one of the poorest countries in the world. It has a Human Development Index of 0.35, which places it in 187th place out of 188 countries in the 2015 UNDP Human Development Index (UNDP, 2015). The main livelihoods in the country are food agriculture (cassava, corn, groundnuts, sorghum and millet), cash crops (coffee, citrus fruit, cotton), livestock breeding, mining (diamonds and gold), hunting, fishing and/or gathering.

8.3.1 Food security situation

The conflict has seriously affected the agricultural sector, which has fallen by 46% in 2013. In 2014, food production has been estimated at 762,689 metric tonnes, which represents a reduction of 58% comparatively to the production level before the political crisis. For the season 2014-2015, there is a deficit of around 60,000 tonnes in cereal production, despite an increase of 11% in cassava production. Compared to the non-crisis period, a drop of between 67% and 77% has been registered for livestock. In terms of fishing, a fall of 40% in the number of fish landed has been recorded, mainly due to the loss of equipment.

In the CAR, people are facing serious deterioration in food access due mainly to destroyed livelihoods, a decrease in domestic production and high food prices. This situation implies a decrease in the quantity of food intake and in diet diversification. According to the FAO (November 2015), cassava is substituting nutritious cereal and vegetable staples, and there is a sharp reduction in consumption of animal proteins. This widespread dietary deterioration raises serious concerns, as it has a direct effect on nutrition and health.
As shown on Figure 28, the national average trend in retail prices (maize, cassava, groundnut, and millet) is the same as the situation in the main market of Bangui. Food prices sharply increased from early 2014, and in August 2014 the prices of maize, millet, and groundnuts were 30-70% higher than in March-April 2014. The sharp rise in prices was mainly due to an increase in demand, following a resumption of payments to civil servants in March 2014 (which injected more cash into the economy) and at the return of many IDPs to their homes. However, prices of local production such as cassava declined by 13% between February and August 2014. This situation can be explained by an increase in production with limited movement of products, and the retention of large amounts of supplies around the surplus-producing zone of the capital, Bangui.

The 2015 IPC analysis indicates that, in December 2015, about 504,000 people were in IPC Phase 4 (Emergency) and 820,200 in IPC Phase 3 (IPC Technical Working Group, December 2015). More than 20% of the population were in IPC Phase 4 in three sous-prefectures: Kabo (Ouham), Mbrès (Nana-Gribizi) and Bambari (Ouaka). Areas with more than 20% in Phase 3 or above include six prefectures (Mambéré-Kadei, Ouham-Pendé, Ouham, Nana Gribizi, Ouaka and Vakaga), and five sous-prefectures (Abba (Nana-Mandere), Rafai (Mbomou), Zemio, Obo and Bambouti (Haut Mbomou)).

Figure 28 shows the evolution of food insecurity from April 2014 to December 2015. A peak in the population with humanitarian needs was observed in April 2014 (lean season). The situation in April 2015 showed an improvement, with about 25% less people in IPC humanitarian phase compared to April 2014. However, in December 2015 the number of people in Phase 3 and above increased compared to April 2015 (by 19.5% in rural areas and 27% in the capital). Food consumption levels remain far below requirements in several areas. The last Emergency Food Security Assessment (EFSA) and Rapid Response Mechanism (RRM) surveys reported by the IPC technical working groups indicate that only 56% of the population has an acceptable food consumption score. In addition, livelihoods have been eroded by the crisis.
According to OCHA, conflict has led to the continued internal displacement of more than 399,000 IDPs in the CAR, with 70,000 in Bangui, and approximately 460,000 have fled to neighbouring countries as refugees (as of mid-October 2015, OCHA). In November 2015, according to the IPC Technical Working Group (December 2015), the number of displaced people was 211,893. However, the situation varies between areas. While the number of displaced people has decreased in most areas, it has increased in Ouka (30%), Haut-Mbomou (28%) and Kémo (17%).

As reported by USAID (November 2015), threats to food security in the CAR include a resurgence of armed conflict, population displacement, attacks on food transporters, disrupted markets, poverty, and difficult access to food and safe water. Because of protracted conflict and displacement, agricultural
production continues to drop, and 1.3 million of people in the CAR are in need of emergency food assistance.

Due to recent attacks (September 2015) in Bambari (prefecture of Ouaka), the Agency for Technical Cooperation and Development (ACTED) conducted an evaluation of this prefecture in early in October 2015. The findings show that around 664 households (1940 persons) were displaced in addition to the already existing 5200 IDPs. IDPs had an acceptable consumption score due to WFP food distribution, but households had only a one week or less of food stock, which is atypical for the harvest period.

Until the first months of 2016, there will be a decrease in food availability due to seasonal perturbations, conflict and population displacement. According to the FAO balance sheet, during the 2015 marketing year (January - December 2015), the domestic availability was around 157000 tonnes of cereals for 232000 tonnes of food and non-food use; this means around 75000 tonnes (48%) will have to be imported.

8.3.2 Nutrition security situation

Based on the partial and preliminary results of the SMART survey in 2014, the nutrition cluster estimated that the number of children suffering acute malnutrition in 2015 will be 110683, of which 32348 will be in severe acute malnutrition.

In February 2015, a pilot IPC malnutrition analysis conducted in the prefectures of Vakaga, Bamingui-Bangoran, Nana-Gribizi and Sargha-Mbaere reported an alert situation in all of them.
8.3.3 Main factors in food and nutrition insecurity

The major factors contributing to malnutrition are poor infrastructure and insecurity, which lead to disrupted health services and limited access of humanitarian agents to malnourished populations.
8.4 Yemen

The Republic of Yemen is one of the driest, poorest and least developed countries in the world. It ranks 160th out of 188 countries on the 2015 UNDP Human Development Index. 42% of the population is poor. One fifth of Yemeni children are malnourished. The country relies on oil production for over 70% of total government revenue. However, oil production was suspended in January 2015 in the major oil-producing governorates of Shabwah and Hadramaut, and is likely to be disrupted in Ma’rib due to the ongoing political crisis (FEWS NET, January 2015). Due to the high dependency of the country on fuel and food imports (90-95% of staple food), the current war and import restrictions have negatively affected food imports and affected the functioning of the markets, transportation and distribution.

Besides this fragile economic situation, the situation in Yemen has deteriorated dramatically as fighting and violence have intensified since March 2015.

8.4.1 Food security situation

Yemen is a country in a serious food security and humanitarian crisis, due to many factors such as political instability, civil insecurity, an intensified war, and localised conflicts.

An estimated 14.4 million Yemeni were food insecure at the beginning of 2016. This represents more than half of the population (FAO, 19 January 2016). The situation gradually deteriorated throughout 2015 because of the conflict. Food availability has dramatically fallen because of fuel shortages and restrictions on imports. Food prices have soared and income opportunities are further restricted. Food access is thus a big issue for Yemeni households.

According to this IPC Analysis (June 2015), 10 out of 22 governorates analysed (Aden, AlDhale’e, Lahj, Taiz, Abyan, Sa’ada, Hajjah, Hodeida, Al Bayda and Shabwa) are facing a food insecurity Emergency (IPC Phase 4). These governorates are currently among the worst affected by the conflict. Nine governorates are classified as being in “Crisis” or IPC Phase 3 (Amran, Dhamar, Sana’a, Sana’a city, Ibb, Mareb, Rayma, Al Mahweet and Al Jawf). It is estimated that currently around 6.07 million people (23% of the population) face a food insecurity ‘Emergency’, while 6.8 million people (26%) are in ‘Crisis’. From the figures reported in the previous IPC analysis (2014),

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6 The Yemen IPC TWG convened on 25-28 May 2015 to conduct the acute food insecurity analysis for June 2015 covering the 22 governorates using the IPC Acute Food Insecurity Classification Protocols. The Yemen IPC TWG also asked the IPC Global Support Unit (GSU) to carry out a Real-Time IPC Quality Review as an added quality assurance step in the validation process of this round of the IPC Acute Food Insecurity Analysis in Yemen. It emerged that the minimum confidence level of analyses usually required for an IPC analysis was not reached due to the absence of up-to-date outcome evidence. However, due to the quality of the analysis and the need to inform about the food security situation, the IPC TWG and the IPC GSU released the analysis as an indicative IPC analysis.
the level of food insecurity has increased by 21%. Around 158,887 households are displaced, representing 1,019,762 individuals. Food shortages and poor access to markets, reduced access to healthcare and sanitation, reduced income options and disruption of livelihood opportunities are the main causes of the spiralling food insecurity. The scarcity of fuel, electricity, gas, water and other services and utilities is further exacerbating the situation.

This analysis led to the classification of the severity of food insecurity among households as poor, including women and children from among the small-scale farmers and sharecroppers, landless labourers, fishermen and IDPs. This food insecurity significantly affects children, elderly and disabled people. In addition, the remuneration of government employees has been reduced (by an estimated 30%) after austerity measures removed their monthly incentives/allowances in March 2015. This has had a huge impact, given that about 26% of the population depend on government salaries.

The food security situation has deteriorated in some governorates in 2015: Aden moved from a stressed situation (Phase 2) to an emergency situation (Phase 4), Sana’a city from Phase 2 to Phase 3, and four governorates (Taiz, Al Bayda, Al Dhale’e and Hodeidah) from Phase 3 to Phase 4. Besides the food component, there is lack of access to water and basic services in the governorates of Aden, Taiz, Lahj, Al Dhale’e and Al Bayda.
This fragile situation has been exacerbated by the passage of two cyclones in November 2015. It led to significant displacement and destruction of houses, and had a great impact on fisheries, farming and livestock.

According to the Ministry of Trade and Industry, 1400 thousand tonnes of wheat and wheat flour were imported from January to May 2015, with just over 400 thousand tonnes imported in April and May. Some 740000 tonnes of these imports were distributed to different governorates, but the amount that reached the districts outside of the governorate capitals was limited, especially in the south-eastern governorates where there was a ground war.

The south-western governorates reported a lack of availability of these basic food commodities on the market due to severe shortages due to the risks and challenges of transportation and distribution to different governorates. This situation has led to a sharp increase in the price of wheat flour, vegetal oil and red beans in some selected markets.

As reported by OCHA (November 2015), overall food imports increased by 73% from September to October 2015, and wheat prices have remained above pre-crisis levels (Figure 32). This may be attributed to increased shipping costs and limited imports of fuel used to mill grains. Commercial food imports rose to 392000 tonnes in October, which represents an increase of more than 70% in terms of the volume imported in September. Over the same period, humanitarian food imports increased by 54%, reaching 14500 tonnes.

Acute shortage of fuel and consequent high prices are disrupting most economic activities and basic services, including the transportation of goods from seaports to the other governorates and district market centres (Figure 33). In a normal situation, the country produces oil and imports around 544000 tonnes of refined fuels per month. However, due to the conflict and crisis, the country imported only 23% of the monthly requirement of fuel in March 2015, 1% in April and 18% in May. Fuel remains scarce and prices continue to be high in different parts of the country. The situation is particularly severe in areas with heavy ground fighting, such as in Aden, Abyan, Al Dhale’e, Lahj, Shabwa, Sa’ada and Taiz.

According to the WFP’s October 2015 Market Monitoring (WFP, 2015), a slight decrease in wheat prices and an increase in sorghum and millet prices were observed compared to September. Diesel prices remained largely unchanged, while the price of cooking gas fell by up to 37%. With the onset of the winter season, the prices of vegetables increased by up to 52% in some locations. The low availability of commodities in the worst conflict-affected areas resulted in an escalation of all commodities. During the first two weeks of October 2015, the national average price of petrol and
diesel rose by more than 260%, while in the most affected governorate (Taiz), the diesel and petrol prices increased by 500% and 405% respectively. In Sana’a city, the price of cooking gas increased by over 470% compared to the pre-crisis period.

Regarding food items, the prices of wheat flour are 47% higher on the national scale, and they rose by 105% in Taiz compared to the pre-crisis period. The same behaviour is observed for other food items such as beans, onions and vegetable oil, which rose by 78%, 46% and 43%, respectively. This situation led to negative coping strategies by vulnerable people who cannot afford staple foodstuffs.

Figure 32: Monthly trend in food imports and average percentage change in wheat prices.
Source: OCHA, Nov 2015.
Figure 33: Trend in wheat flour, vegetable oil and red bean prices from selected governorates in the 1st and 2nd weeks of October 2015. Source: WFP.

8.4.2 Nutrition security situation

The child malnutrition rate in Yemen is critical and deteriorating. UNICEF estimates that almost 1.3 million children under the age of five are moderately malnourished compared to 690 000 children prior to the crisis. They also estimate that 537 000 children under the age of five are at risk of SAM - a threefold increase from 160 000 in March 2015. This means that one in eight children under the age of five is at risk of severe malnutrition (OCHA, 15 October 2015).

Moreover, assessments in the Aden, Al Hudaydah and Hajjah governorates indicate that global acute malnutrition (GAM) levels are above the emergency threshold of 15%. In the coastal areas of Al Hudaydah and Hajjah, severe acute malnutrition (SAM) levels are at 8.9 and 3.8% respectively.

8.4.3 Main factors in food and nutrition insecurity

The escalating conflict in Yemen involving coalition air strikes and intensified ground fighting came at a time when there was already increased civil insecurity and political instability in the country, which has been ongoing since September 2014. The intensified conflict situation has so far affected more than 19 of the 22 governorates of Yemen.

According to the Government’s Executive Bureau for IDPs and task force on population movements (protection cluster 31 May 2015) report, over 158 887 families (over one million individuals) have been internally displaced and had their livelihoods disrupted by the escalating conflict. The direct impact and the fear of being affected by the internal ground fighting and aerial bombardment have exacerbated the displacement and caused desperate movements of people, especially in the north-western and southern governorates, where the fighting has been intense.

The country’s alarming malnutrition levels are aggravated by the limited availability of and access to food due to blocked or damaged delivery routes and restrictions on food and fuel imports. At the same time, livelihoods have been disrupted, unemployment has risen, fuel and water prices have surged and their availability remains erratic.

The World Food Programme (WFP) reports that the national monthly average cost of a partial food basket in September 2015 was over 30% more than the pre-crisis level. This price increase adds further pressure to the already weakened purchasing power of average people who are struggling with
limited coping mechanisms, such as relying on family and friends for support and eating less nutritious meals. Others have resorted to begging.

Moreover, access to health and nutrition services is increasingly difficult, as facilities in at least 10 governorates have been damaged. Medical supplies are low, some medical staff have fled to other areas in search of safety and others have left the country. UNICEF reports that 192 nutrition centres across the country had to close down due to fuel shortages and partners’ lack of access to these areas. Deteriorating sanitation conditions exacerbate the nutrition situation, further exposing children to diseases such as diarrhoea and malaria, perpetuating the vicious cycle of malnutrition (OCHA Humanitarian Bulletin, 15 October 2015).
8.5 Syria

Violence and conflict have prevailed in Syria since March 2011. As of December 2014, over 50% of the population has fled their homes, including about 7 million people who have been internally displaced. It is estimated that approximately 5000 flee Syria every day. Around 4.3 million refugees have been registered according to the UNHCR. From January to April 2015, more than 0.5 million were newly displaced (OCHA, 2015). About 2.1 million Syrians are registered in Turkey (WFP, June 2015, ERCC, November 2015), 1.1 million in Lebanon, 630 000 in Jordan, 245 000 in Iraq, 128 000 in Egypt, and 27 000 in North Africa. The UNHCR reports that, from the beginning of the Syrian crisis until October 2015, the total number of asylum applications from Syrians in Europe is 681 713.

8.5.1 Food security situation

In Syria, the 2015 Humanitarian Needs Overview (HNO) assessed that 8.7 million people were food insecure, 6.3 million severely (OCHA, November 2014). One in three households in Syria and 40% of the IDP population are food insecure (WFP, October 2015).

Crop production was adversely affected by the continuing crisis. Agricultural inputs are not always available and prices are high. Other inputs are often of unreliable quality, and irrigation systems are damaged. The availability of farm labour is reduced in its cost is high. Some crops have also been destroyed by the conflict. The areas planted with cereals, and in many cases the areas harvested, were limited due to insecurity. The estimated harvested wheat area in 2015 was the smallest since the 1960s (CFSAM report, 2015). Agricultural performance was good in 2015 thanks to good rainfall levels, both in terms of quantity and distribution. Wheat production in 2015, estimated at 2.445 million tonnes, was significantly better than the very poor harvest of 2014 and slightly better than that of 2013. However, it is not expected to lead to significant improvements in household food security outcomes. There is an estimated shortfall of about 800 000 tonnes in the country’s national wheat requirement of 4.854 million tonnes (CFSAM, 2015).

The livestock sector has suffered substantially since 2011, with reductions in terms of numbers of animals of about 30% for cattle and 40% for sheep and goats, while poultry numbers, the usual main and most affordable source of proteins of animal origin, have fallen by 50%. In 2015, the conditions of the livestock were good, according the 2015 CFSAM report.

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7 http://data.unhcr.org/syrianrefugees/regional.php
8 These are the number of registered refugees. The total number of refugees may be larger.
9 http://data.unhcr.org/syrianrefugees/asylum.php
After being relatively stable in 2014, food prices began increasing sharply in early 2015 as government subsidies were curtailed and the currency depreciated. The prices of many critical goods spiralled in 2014, such as bread (which increased by 66% in private bakeries, and by 87% in public bakeries).

The Syrian refugee population in neighbouring countries count for about 4 290 332 people according to the UNHCR (http://data.unhcr.org/syrianrefugees/regional.php).

There are about 1.1 million Syrian refugees in Lebanon. Their food security situation has deteriorated since 2013 (FAO, USAID, 2015). Seventy-five percent are food insecure (compared to 66% in 2014), among which 62% are mildly food insecure, 12% moderately food insecure and 0.4% severely food insecure.

In Jordan there are about 600 000 Syrian refugees. Jordan has the highest per capita ratio of refugees worldwide, with Syrian refugees making up about 10% of the Jordanian population. This puts pressure on economic and social services in the country. Eighty-five percent of the refugees (about 534 759 persons) live outside camps, and 15% (about 94 369 persons) live in camps. Most of these refugees are completely dependent on food aid to meet their food needs. Seventy-five percent of refugees in communities (outside camps) were food insecure in 2015, according to the Comprehensive Food Security Monitoring Exercise (CFSME) conducted by the Jordanian Ministry of Planning with the WFP and REACH. This is a drastic deterioration from 2014, when 52% of the refugees in the communities were food secure (FAO, iMMAP, USAID, 2015. RFSAN, Jordan). The food security situation of refugees living in camps is worse than of those leaving in the local communities.

Iraq is hosting about 247 352 Syrians, mainly in the Kurdistan Region. This region also hosts about one million IDPs. The food security situation of the Syrian refugees in Iraqi Kurdistan is not precisely known since, to our knowledge, no food security assessment has been conducted.

**8.5.2 Nutrition security situation**

UNICEF’s SMART survey suggests that three governorates (Hama, Hassakeh, and Deir Ezzor) appear to have GAM rates that are greater than 10%.

The pre-crisis nutrition situation in Syria (2009) was poor, with an estimated Global Acute Malnutrition (GAM) prevalence of 9.3% and stunting prevalence of 23%, indicating a poor public health situation.
A series of Rapid Nutrition Assessments (RNA) were carried between March and July 2014 amongst IDPs in 13 governorates in Syria (except Ar-Raqqa), by the Ministry of Health and UNICEF Syria. The GAM rate and SAM rate reported were 7.2%, and 2.3%, respectively, indicating a poor situation. Stunting prevalence was found to be above 20% in all governorates except for Homs, Da’ra, Tartous and As-sweida, indicating a chronically poor public nutrition situation. Micronutrient deficiencies were also recorded in Syria with the prevalence of anaemia in children of 0-59 months at 29.2% (2011), indicating a moderate public health concern (Whole of Syria nutrition Bulletin, Issue #1 January to July 2015).

As for the situation of Syrian refugees living in other countries, preliminary results of the 2014 follow-up nutrition survey conducted in Jordan among refugees living in Za’atari camp and the local community suggested that there has been an improvement in acute malnutrition since 2012. The 2014 survey findings revealed that GAM rates are at 1.2% in Za’atri camp and 0.8% in the local community, whereas in 2010 the rates were 5.8 and 5.1% respectively (Inter Agency Nutrition Assessment, 2012). However, it also showed that micronutrient deficiencies have persisted among Syrian refugees, especially those living in camps. Results showed that the prevalence of anaemia was at 48.7% among children under five years of age, and as high as 64% among children under two years of age (Jordan Nutrition Response Strategy, 2014).

Among Syrian refugees in Lebanon, the low levels of consumption of certain types of protein- and other nutrient-rich food items, and the high proportion of families who report experiencing a lack of food or money needed to buy it, raise serious concerns about the nutrition status of these populations. Even though the majority of families report that they had consumed vegetables, legumes, and nuts a few times during the week preceding the assessment, one in five families had not consumed milk or dairy products, and almost half had not consumed fruits or meat at all during the same period. Surprisingly, families in the Beqaa agricultural region consumed vegetables and other food items less than in other regions (UNRWA, 2015).

8.5.3 Main factors in food and nutrition insecurity

Four years of conflict have destroyed agricultural infrastructures, displaced farmers and disrupted the regional food and agricultural input trade. Many farmers cannot access or afford inputs, which have soared in price and degraded in quality. Livestock production is also suffering, as animal feed is scarce and costly. Veterinary services are also lacking. Many farmers have lost their assets or have abandoned their fields and animals because of the conflict.
Displaced and refugee populations do not have access to assets and face difficulties in entering the labour markets in hosting communities.
The malnutrition situation of refugees is mainly attributed to the lack of quality and diversity of diet.
9 Food insecurity implications of the 2015 El Niño event

Very strong impacts of El Niño were observed in 2015 and are expected to continue until around March 2016. The El Niño phenomenon is characterised by warmer-than-usual sea surface temperature in the Pacific. It occurs every three to seven years, and last for six to 24 months. The current El Niño started around late winter or early spring 2015, and is expected to last until at least March 2016. The El Niño phenomenon is mainly associated with droughts in some regions of the world, and cyclones, heavy rains and floods in others. Atypical and extreme weather events disturb agricultural and livestock production or destroy crops and other assets.

Globally, it seems that the agricultural production of 2015 will not be below average. Much of the 2015 wheat yield was harvested before the onset of El Niño, and was above average in Russia, Pakistan and the European Union. For other cereals (rice, maize), production is lower than average but large stocks are available. Globally, stocks will decrease but still remain at reasonable levels.

Regarding regions with food security concerns, weather anomalies related to El Niño are most marked in Southeast Asia, the Pacific Islands, the Horn of Africa, southern Africa, Central America and the Caribbean, and South America. Remarkably, the West African Sahel is not affected by the El Niño phenomenon, even though it is structurally vulnerable to drought. The impacts of the current El Niño phenomenon have been particularly high in Ethiopia (which is facing the worst drought in 30 years), Papua New Guinea (where one third of the population is affected by food shortages), Haiti and the Dry Corridor of Central America (Guatemala, Honduras, El Salvador and Nicaragua). Its impact has also been strongly felt in southern African countries.

The impact in terms of number of food-insecure people is summarised in the table below. However, the reader should be aware that the numbers in the column “people in need of assistance” are not always comparable between countries. Depending on the countries, we could access either the number of people affected by droughts or floods, the number of food insecure without the precise definition of what the food insecure definition covers, or the number of people in the different IPC Phases. In some cases, the given number of people affected only pertains to the areas affected by drought or floods and not the entire countries. The periods of the assessment may also differ. Finally, the table does not distinguish between food insecurity that is specifically linked to El Niño and food insecurity associated with other causes. Nevertheless, the table provides a good picture of the most recent and complete assessments of food insecurity in countries that experienced unusual weather patterns in 2015.
## Summary of the impact of El Niño on food security in countries prone to food insecurity

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of people requiring assistance</th>
<th>Date of the assessment</th>
<th>Main impacts of El Niño</th>
<th>Crop and food security situation summary</th>
<th>Affected regions within the country</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pacific</strong></td>
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<td></td>
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</tr>
</tbody>
</table>
| Papua New Guinea             | About 522000 people require urgent food assistance. About 2.7 to 3 million people face food shortages (1/3 of the country’s population). 1.75 million people in IPC Phase 3 or higher (Crisis or worse). | 2015                    | Drought + Frost in the beginning of 2015 | - Below-average rainfall in 2015 and expected until March 2016  
- Harvest is severely diminished or failed  
- Food availability is reduced, especially in remote mountain areas that don’t have access to markets | Highlands: Enga, Chimbu and Southern Highland provinces |
| Pacific Islands (Fiji, Vanuatu, Tonga, Solomon Islands) | 4.7 million people affected. | 2015                    | Drought and frost | - Solomon Islands: crop failure; water shortage  
Cyclones  
- Fiji: 25% decrease in sugarcane production  
- Vanuatu (cyclone Pam): water shortages and lack of sanitation | Western Highlands |
| Timor Leste                  | 220000 people affected.              | Feb-March 2016          | Drought                | - Low agricultural production  
- 50% of the areas of Timor- Leste could be food insecure by February-March 2016 |                                     |
| Mongolia                     |                                      |                        | Colder and snowier winter than usual |                                      |                                     |
| Philippines                  | 12 million people could be affected by the impact of El Niño (FAO). 65855 farmers affected by drought. | 2016                    | Below average rainfall |                                      |                                     |
|                              | 65855 farmers affected by drought.   | August 2015            | Drought                | - 85% of the country could be affected by drought by March 2016  
Cyclones  
- Typhone Koppu (US$180 million damages);  
- 144083 ha, 218000 tonnes of crops lost |                                      |
### Central America and the Caribbean

<table>
<thead>
<tr>
<th>Country</th>
<th>Affected People</th>
<th>Affected Population</th>
<th>Drought Period</th>
<th>Impact</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guatemala</td>
<td>1.5 million in need of humanitarian assistance.</td>
<td>4.2 million people affected by the drought.</td>
<td>November 2015</td>
<td>Drought</td>
<td>Reduced rains from June to September 2015 and expected until March 2016 - Very poor or failed agricultural production (80% of crops lost) Dry Corridor: Baja Vera-paz, El Progreso, Zacapa, Chiquimula, Jalapa y Jutiapa, Quiche, Huehuetenango, Totonicapán, San Marcos, Retalhuleu, Santa Rosa and Escuintla.</td>
</tr>
<tr>
<td>Honduras</td>
<td>1 350 000 affected by drought (15% of the population).</td>
<td>250 000 in immediate need of food assistance.</td>
<td>2015</td>
<td>Drought, Floods in early December in Colon and Atlantida</td>
<td>Below-average rains from June to September 2015 and expected until March 2016 - Very poor harvest or crop failure (-80% for beans, -60% for maize) - High food prices (+20% in August 2015 compared to August 2014) Dry Corridor</td>
</tr>
<tr>
<td>El Salvador</td>
<td>700 000 people food insecure and in need of food assistance (11% of the population).</td>
<td>192 000 severe acute malnutrition cases.</td>
<td>2015</td>
<td>Drought</td>
<td>Below average rains from June to September 2015 and expected until March 2016 - Very poor harvest or crop failure, namely maize Dry Corridor</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Up to 1 million people in IPC Phase 2 or higher.</td>
<td></td>
<td>Drought</td>
<td>Reduced rains from June to September 2015 and expected until March 2016 - Very poor harvest or crop failure - High food prices Dry Corridor</td>
<td></td>
</tr>
<tr>
<td>Cuba</td>
<td>No data.</td>
<td></td>
<td>December 2015</td>
<td>Drought</td>
<td>Dry spells in June-October 2015 affecting 68% of the territory - Lack of irrigation water; Dams are at 50% of...</td>
</tr>
</tbody>
</table>
Rice production expected to decrease by 26% and maize by 3% compared to 2014. Milk production expected to decrease by 17%, affecting the main nutritional programme of the government.

<table>
<thead>
<tr>
<th>Country</th>
<th>Impact on agriculture</th>
<th>Climate event</th>
<th>Affected regions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haiti</td>
<td>37 communes, about 300,000 to 560,000 people are in Crisis (IPC Phase 3). 3.5 million food insecure. 40 communes affected by drought.</td>
<td>October to December 2015 Drought</td>
<td>Nord-ouest, Sud-est, Sud, Plateau Central</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Over 1 million people in IPC Phase 3 or higher.</td>
<td>August 2015 Drought Floods</td>
<td>- Below-average rainfall in the first and second season in 2015 and is expected until March 2016. - Adds to poor harvest of 2014. - Very poor harvest (spring harvest 50% lower than usual). - Decreased income for agricultural wage workers. - High food prices</td>
</tr>
<tr>
<td>Colombia</td>
<td>Nine of Colombia’s 32 provinces are in a state of emergency due to extreme drought, high temperatures and forest fires.</td>
<td>2016 lean season Drought</td>
<td>Aipe, Villavieja and Baraya municipalities Huila</td>
</tr>
<tr>
<td>Ecuador</td>
<td>No data.</td>
<td>Forecasts to March 2016 Floods</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>No data.</td>
<td>Forecasts to March 2016 Floods Cold</td>
<td>- Increased livestock mortality</td>
</tr>
</tbody>
</table>

**Latin America**

**Horn of Africa**
<table>
<thead>
<tr>
<th>Country</th>
<th>Situation</th>
<th>Phase</th>
<th>Forecast</th>
<th>Impacts</th>
</tr>
</thead>
</table>
| Ethiopia | Between 10 and 15 million people requiring emergency food assistance, depending on the source. | November 2015 | Drought (worst drought in more than 50 years) | - Below-average rainfall from June to October 2015 expected until March 2016  
- Below-average Meher harvests in most eastern cropping areas  
- Massive livestock deaths, poor livestock body conditions and very low livestock production  
- High food prices | Pastoral southern Afar and Sitti Zone in Somali Region and in the agricultural lowlands of East and West Hararghe Zones in Oromia; Southern Tigray, Eastern Amhara, lower Bales zones of the Oromia, and eastern SNNPR, Arsi and West Arsi |
| Ethiopia | 7-8 million  
IPC Phase 4 in Pastoral southern Afar and Sitti Zone in Somali Region, and in the agricultural lowlands of East and West Hararghe Zones in Oromia. |  |  |  |
| Ethiopia | IPC Phase 3 in Tigray, Amhara, Afar, Oromia, Somali and SNNPR. |  |  |  |
| Ethiopia | 400000 severely malnourished children. |  |  |  |
| Ethiopia | Forecast: IPC Phase 4 until July 2016, with up to 18 million people in need of assistance by the end of 2016. |  |  |  |
| Eritrea | No data. | November 2015 | Drought | - Below-average rainfall in June and July 2015, delayed start of the rains  
- Below-average pasture and crop production | South East Imy Woreda and along the river bank |
<p>| Eritrea |  |  |  |  |
| Eritrea |  |  |  |  |
| Eritrea |  |  |  |  |</p>
<table>
<thead>
<tr>
<th>Region</th>
<th>Status</th>
<th>Area/Region Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudan</td>
<td>Circa 4 million people in IPC Phase 2 or higher</td>
<td>June 2015</td>
</tr>
<tr>
<td></td>
<td>Drought</td>
<td>Below-average rainfall (May to July 2015)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Darfur, South Kordofan (IPC Phase 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>West Kordofan, and Blue Nile states, Red Sea, North Kordofan, North Darfur and Kassala states (IPC Phase 2)</td>
</tr>
</tbody>
</table>
| Somalia    | IPC Phase 3+: 855 000 000  
IPC Phase 2: 2.3 million  
3.2 million food insecure | October-December 2015                                                                                                                             |
<p>|            | Floods                                                                 | 900 000 people affected by floods, 42 000 displaced                                                                                               |
|            |                                                                        | South Centre Tokar, Kassala (Riverine) North Middle Shabelle Region and agropastoral areas in Awdal, Hiraan, and Middle Juba Regions.            |</p>
<table>
<thead>
<tr>
<th>Country</th>
<th>Population at Risk</th>
<th>Affected Area(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kenya</strong></td>
<td>1.1 million</td>
<td>Awdal and Woqooyi Galbeed, Guban</td>
<td>- Severe food insecurity in 2015</td>
</tr>
<tr>
<td><strong>Southern Africa</strong></td>
<td></td>
<td></td>
<td>- Above-average short rains</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td></td>
<td></td>
<td>- Possible damage to crops and post-harvest losses.</td>
</tr>
<tr>
<td><strong>Lesotho</strong></td>
<td>650,000</td>
<td>North-western and north-eastern pastoral areas and south-eastern and coastal</td>
<td>- Livestock losses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>marginal agricultural areas</td>
<td><strong>Drought</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Localised flooding and mudslides/landslides</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Reduced planting; below-average harvest</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Below-average rainfall from October to December 2015 (worst in 35 years)</td>
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<td></td>
<td></td>
<td></td>
<td>- Poor crop development</td>
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<td></td>
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<td></td>
<td>- Decreased cereal exports will affect food security in neighbouring countries</td>
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<tr>
<td></td>
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<td>- Reduced planting; below-average harvest</td>
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<td>- Below-average rainfall from October to December 2015 (worst in 35 years)</td>
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<td></td>
<td>- Poor crop development</td>
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<td></td>
<td></td>
<td></td>
<td>- Poor pasture conditions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Large numbers of drought-related cattle deaths</td>
</tr>
</tbody>
</table>

**South Africa**

About 14 million food-insecure people, but it seems more related to structural socioeconomic problems than to El Niño impact alone.

- Below-average rainfall from October to December 2015 (worst in 35 years) and expected until March 2016
- Reduced planting; below-average harvest
- Poor pasture conditions; increased livestock mortality
- Water shortages for households
- Decreased cereal exports will affect food security in neighbouring countries

**Central and western parts**

- Below-average rainfall from October to December 2015 and expected until March 2016
- Reduced planting
- Poor crop development
- Low 2015/16 harvest expected
- Water shortages
- Poor pasture conditions
- Large numbers of drought-related cattle deaths
<table>
<thead>
<tr>
<th>Country</th>
<th>Population Affected</th>
<th>Insecurity Type</th>
<th>Start of Insecurity</th>
<th>Description</th>
<th>Area Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zimbabwe</td>
<td>2.8 million people</td>
<td>Food insecure</td>
<td>By early 2016</td>
<td>- Below-average rainfall from October to December 2015 and expected until March 2016&lt;br&gt;- Adds to poor rainfall of the 2014-2015 season&lt;br&gt;- Very reduced planting&lt;br&gt;- Reduced production (50% below previous year)&lt;br&gt;- Increased livestock mortality: 8,000 cattle have died because of drought</td>
<td>Southern areas</td>
</tr>
<tr>
<td></td>
<td>(19.7% of the</td>
<td></td>
<td></td>
<td>population)</td>
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<td></td>
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<td></td>
<td>October-December</td>
<td>About 930,000 people, 10% of the rural population, food insecure (ZimVAC).</td>
<td></td>
</tr>
<tr>
<td>Angola</td>
<td>About 1.4 million</td>
<td>Food insecure</td>
<td>November 2015</td>
<td>- Low and poorly distributed rainfall for the third year in a row&lt;br&gt;- Poor harvest in 2014-2015 season and dry spells at the beginning of the 2015-2016 season&lt;br&gt;- Below-average rainfall forecasted in the south-east for early 2016&lt;br&gt;- Food price increases, up to 40-60% in affected areas&lt;br&gt;- High rate of malnutrition in the southern provinces</td>
<td>Southern areas: Cunene, Huila, Namibe and Cuando Cubango</td>
</tr>
<tr>
<td></td>
<td>people</td>
<td></td>
<td></td>
<td>About 930,000 people, 10% of the rural population, food insecure (ZimVAC).</td>
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</tr>
<tr>
<td>Namibia</td>
<td>More than 370,000</td>
<td>Food insecure</td>
<td>November 2015</td>
<td>- Poor rainfall&lt;br&gt;- Crop production 30% lower than in 2014&lt;br&gt;- Pressure on water resources and poor pastures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>people</td>
<td></td>
<td></td>
<td>More than 370,000 people are food-insecure mainly in the pastoral and agricultural dry land areas.</td>
<td></td>
</tr>
<tr>
<td>Botswana</td>
<td>30,000 people</td>
<td>At risk of food insecurity</td>
<td>2015</td>
<td>- Dry spell from January to end of March 2015&lt;br&gt;- Poor crop condition, crop failure&lt;br&gt;- Below average food production&lt;br&gt;- Poor pasture and livestock condition</td>
<td>Eastern areas</td>
</tr>
<tr>
<td></td>
<td>at risk of food</td>
<td></td>
<td></td>
<td>30,000 people at risk of food insecurity.</td>
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<td>insecurity</td>
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<tr>
<td>Swaziland</td>
<td>201,000 people</td>
<td>Food insecure</td>
<td>Between May 2015 and April 2016</td>
<td>- Below-average rainfall from October to December 2015 and expected until March 2016&lt;br&gt;- Water shortages</td>
<td></td>
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<tr>
<td></td>
<td>face food and</td>
<td></td>
<td></td>
<td>201,000 people face food and livelihoods insecurity.</td>
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<td>livelihoods</td>
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<tr>
<td>Country</td>
<td>Affected Population</td>
<td>Affected Children</td>
<td>Affected Children%</td>
<td>Affected Region</td>
<td>From to Month</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>Malawi</td>
<td>2.8 million</td>
<td>47%</td>
<td>Malawi</td>
<td>January-March</td>
<td>Drought</td>
</tr>
<tr>
<td>Mozambique</td>
<td>IPC Phase 3+: 176 000</td>
<td>IPC Phase 2: 575 000</td>
<td>Vulnerability Assessment Group</td>
<td>November 2015</td>
<td>Drought</td>
</tr>
<tr>
<td>Zambia</td>
<td>800 000 people</td>
<td>800 000</td>
<td>Zambia</td>
<td>2015</td>
<td>Dry conditions</td>
</tr>
</tbody>
</table>
- However, current stocks can mitigate the drop in production this year
- Maize prices increased

<table>
<thead>
<tr>
<th>Country</th>
<th>Affected Population</th>
<th>Year</th>
<th>Problem</th>
<th>Description</th>
<th>Affected Areas</th>
</tr>
</thead>
</table>
| Madagascar (South) | 1.9 million people food insecure, 450000 severely food insecure | 2015 | Drought | Below-average rainfall from October to December 2015 and expected until March 2016,
- Delayed planting
- Poor crop conditions
- Reduced harvest (by 6% for rice, 10% for cassava and maize) | Southern, eastern and central areas |
10 BIBLIOGRAPHY

Horn of Africa (general)

ECHOFACTSHEET, October 2015. Horn of Africa, European Commission Humanitarian Aid and Civil Protection


Somalia


Ethiopia


Eritrea


Countries affected by Ebola in 2014 and 2015: Liberia, Guinea, Sierra Leone


CILSS, November 2015. Cadre Harmonisé for identification of areas and populations in food insecurity in Guinea, Liberia and Sierra Leone. Regional analysis of acute food insecurity.


OCHA Map nutrition situation based on SMART 2015 available at www.humanitarianresponse/info/en/operations/Guinea


Gambia


Democratic People’s Republic of Korea


WFP, 1 July-30 September 2015. DPR Korea Brief.

WFP, VAM food security analysis, 2013. Food and Nutrition Security in the Democratic People’s Republic of Korea, Pyongyang, DPRK.

Nepal


Nepal Cluster Bulletin, August 2015.

Papua New Guinea


Guatemala

FEWS NET (13 August 2014). CENTRAL AMERICA Food Security Alert.

FEWS NET (20 December 2014). CENTRAL AMERICA Food Security Alert.


Haiti


South Sudan


FEWS NET October 22, 2015. Alert: 3.9 Million People are in Need or Urgent Action to Save Livelihoods and Lives and to Prevent Famine http://www.fews.net/east-africa/south-sudan/alert/october-22-2015


IPC, October 22, 2015, Call for immediate Humanitarian Action to prevent Famine in South Sudan. 3.9 Million people are in need of urgent action to save livelihoods and lives and to prevent famine http://www.ipcinfo.org/ipcinfo-detail-forms/ipcinfo-news-detail/en/c/338892/


Sudan


OCHA Humanitarian Bulletin Sudan Issue 44 (26 October- 1 November 2015)

Sudan Nutrition Sector Bulletin, issue no 1, August 2015.

Central African Republic


Yemen


Syria

ERCC, 4 November 2015. ECHO Daily Map.
http://erccportal.jrc.ec.europa.eu/getdailymap/docId/1371
UNRWA, 2015. Lebanon, profiling the vulnerability of Palestine refugees from Syria living in Lebanon.
http://foodsecuritycluster.net/sites/default/files/VASyR%202014%20FINAL.pdf
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Supporting legislation

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