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# FAMINE EARLY WARNING SYSTEMS NETWORK TECHNOLOGY SUPPORT CONTRACT (FEWS NET TSC)

FISCAL YEAR 2015 ANNUAL WORK PLAN

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## **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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## SECTION I: INTRODUCTION TO FEWS NET TSC

### A. BACKGROUND

The USAID-funded FEWS NET (Famine Early Warning Systems Network) activity has traditionally relied upon its own personnel based in food insecure countries, and their official partners in-country, to collect and assess the information and data needed to identify and monitor levels of food security in vulnerable populations, reporting on conditions in 36 countries from 22 field offices around the world. This data collection method depends on a proximity to, or direct contact with, the hungry populations from which the information and data will be collected. The scope and the amount of the data that FEWS NET can theoretically collect is therefore constrained by the resources available from its FEWS NET Implementation Team (FIT) members (USAID, NASA, NOAA, USDA, USGS, and a private-sector contractor) and other official and unofficial partners.

Given the nature of changing global food security issues and stresses (e.g., global food price crisis, global financial crisis), for which the incidence, geographic spread, and severity is expanding, food insecurity needs to be monitored and assessed in many more potential locations, and even within areas that have traditionally been considered as food secure. As the ever changing and expanding food security threats emerge, FEWS NET needs to efficiently and effectively collect the amount and type of data and information needed to locate and identify emerging cases of severe food insecurity, and to monitor existing cases.

The FEWS NET Technology Support Contract (FEWS NET TSC) was designed to address the changing needs of food security monitoring. The project, working closely with FIT members, has expanded the US Government's ability to understand and respond to food security crises.

### B. PROGRAM DESCRIPTION AND APPROACH

The aim of FEWS NET TSC is to assist USAID's FEWS NET activity to identify and implement new technologies to enhance team collaboration, and broaden data collection, analysis and dissemination methods. Further, the project supports the FEWS NET implementation team in improving intra-team early warning collaboration, analysis, and dissemination capabilities, and in expanding a FEWS NET activity-wide ability to gather new and greater quantities of food security information and data, through the application and use of new information technologies for early warning.

The FEWS NET TSC has three main deliverables: (1) Technology consultation; (2) Tool development; and (3) Piloting and rollout of technology and tools for improved data collection, analysis and early warning.

**Technology consultation:** The TSC project team stays current on new information technologies and their potential use in humanitarian applications. The activity researches and answers technology questions related to FIT's requirements. The project team identifies new technologies that present opportunities to provide USAID and FIT members with new information use capabilities.

**Tool development:** Generally, the identification of the initiatives undertaken by the project are based upon: a) the TSC Contractor's understanding of the work processes and products of individual FIT members, and of the team as a whole, and b) USAID's and the FIT's understanding of the opportunities that new technologies may offer to increase the effectiveness of their work, and/or the relevance and amount of data they may help to collect. TSC Contractor efforts are expected to be pivotal inputs in both cases.

The TSC activity remains informed about a wide-range of new technologies and derived tools and methods that represent technological opportunities to enhance the FIT's abilities. Technologies researched by the project include the use of mobile phones for rapid surveys and monitoring, the use of web-based tools for population estimation ([www.populationexplorer.com](http://www.populationexplorer.com)) and the development of a data warehouse, allowing FEWS NET country and home office staff to upload, maintain and analyze data on a close to real time basis.

The project has recently expanded tool development to include methodological development, including methods for resilience measurement, methods for cost survey creation for price analysis and early warning, and new approaches to livelihood zone development using national statistics and remote sensing data. These initiatives may allow the FEWS NET activity to more quickly and more cost effectively answer critical questions regarding vulnerability and food insecurity.

**Tool development, testing and evaluation:** Tools identified as potential technologies for the FEWS NET project are developed, tested and evaluated. These include a population estimation tool, using the US Government's Landscan dataset, to estimate populations anywhere on earth down to the 1km<sup>2</sup>. Population Explorer ([www.populationexplorer.com](http://www.populationexplorer.com)) was rolled out the first year of the TSC project and has helped both FIT and non-FIT actors better understand population demographics in vulnerable locations across the world. For example, the tool was used extensively to help plan the humanitarian response to Haiti's earthquake in 2010. The TSC developed FEWS NET's data warehouse, which is currently being rolled-out to FEWS NET country offices, with the intent to upload all of FEWS NET's historic data by the end of this phase of the project.

Another area where tools and methods have been tested are in highly food insecure environments where the traditional FEWS NET model cannot be applied. The TSC has been successful in testing and rolling out new methods for food security monitoring that include extended questionnaires, panel surveys and remote sensing. These activities started as test cases but have evolved into full stand-alone monitoring efforts.

## SECTION 2: VISION, STRATEGY AND PROCESS

### A. OVERVIEW

Because the TSC project is research-oriented and meant to advance technologies and approaches for possible adoption by FEWS NET, the project's work plans are based on tool development implementation deliverables. For Fiscal Year (FY) 2014, the TSC proposed work activities include on-going and new activities identified as being important for the next phase of the project.

### B. CONTINUATION OF ALREADY-FUNDED AND APPROVED ACTIVITIES

The work activities include the following:

1. **FEWS NET Data Warehouse (FDW):** The FDW will create a web-based tool for data entry and quality control to ensure data integrity and a series of time-saving functionality to enable FEWS NET analysts to meet critical analytical needs
2. **Remote Monitoring:** The TSC will implement an expansion of its remote monitoring activities, including a revision to the overall approach to data analysis and reporting to better meet requests for greater context and relevance in its information products
3. **Population Explorer:** The TSC will roll out and conduct training of the new beta version of Population Explorer for FEWS NET HQ
5. **New Technologies:** The TSC project will continue to research and develop technology briefing papers and test new techniques and methods that may be advantageous to the FEWS NET project. While there is not a complete list of new technologies to be explored at the outset of 2015, the TSC knows it will focus on potentially useful initiatives

## SECTION 3: ACTIVITY TIMELINES

The following table provides activity timelines for project management and on-going proposed activities for FY 2015:

Activity	O	N	D	J	F	M	A	M	J	J	A	S
	c	o	e	a	e	a	p	a	u	u	u	e
	t	v	c	n	b	r	r	y	n	l	g	p
<b>Climate Resilience Study</b>												
<b>Market Resilience Study (to be proposed)</b>												
<b>FDW2 Development</b>												
<b>FDW3 Development</b>												
<b>FEWS NET Data Portal (ongoing participation in discussions)</b>												
<b>Remote Monitoring</b>												
<b>Follow up on Bonnard Price Analysis Paper</b>												
<ul style="list-style-type: none"> <li>Final edit and work plan</li> </ul>												
<ul style="list-style-type: none"> <li>Developing market price analysis tools (price anomalies, price indices, market shed maps, price projections, temporal price interpolations)</li> </ul>												
<b>Integration of tools into FDW</b>												
<b>Follow up on Farrow Market Mapping Paper</b>												
<ul style="list-style-type: none"> <li>Final edit</li> </ul>												
<ul style="list-style-type: none"> <li>IFPR/UCSB review of Farrow paper</li> </ul>												
<b>L2 Mapping Concept Note</b>												
<b>Remote Monitoring Methodology Development</b>												
<b>ACF Concept Note</b>												

<b>Population Explorer</b>														
<ul style="list-style-type: none"> <li>Using PopEx in IPC chronic analysis (Kenya and/or Burundi)</li> <li>Overhaul online documentation</li> </ul>														
<b>Network Development (TBD)</b>														
<ul style="list-style-type: none"> <li>Transfer FDW technology to Kenya, others</li> </ul>														
<b>ICT (TBD)</b>														
<ul style="list-style-type: none"> <li>ICT conference participation</li> </ul>														
<ul style="list-style-type: none"> <li>ICT4EW Strategy Paper</li> </ul>														