

Early Warning Early Action Systems

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A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things. This document is one of a series of reports from the Food Security Portal on best practices for emerging topics in agriculture and food security policy.

Introduction

According to the [2018 Global Report on Food Crises](#), an estimated 124 million people worldwide face crisis-level or worse food insecurity, largely as a result of conflict and political instability or extreme weather events.

To respond appropriately to such food crises, policymakers need reliable, timely information regarding food production and availability, food prices, and hunger levels. A number of early warning early action (EWEA) systems, such as those found in the Food Security Portal's [Early Warning Hub](#), have been established to collect, analyze, and disseminate such information at global and national levels. By providing up-to-date information, these systems can help policymakers avoid potentially harmful policy reactions, such as food export bans, and reduce the risk of market volatility. But these systems can also go beyond just responding to crises. With timely data and information, policymakers may be able to anticipate food security crises, thus taking early action in order to mitigate the severity of their effects.

Existing EWEA Systems

Existing food security and agricultural early warning systems include FAO's [Global Information and Early Warning System \(GIEWS\)](#), USAID's [Famine Early Warning Systems Network \(FEWS NET\)](#), the [MARS Crop Yield Forecasting System \(MCYFS\)](#), the [U.S. Department of Agriculture-Foreign Agricultural Service \(USDA-FAS\)](#), which monitors commodity prices, food security, and trade, the [World Food Programme Seasonal Monitor](#), and FAO's [Early Warning Early Action \(EWEA\) system](#), among others. These systems provide regular updates of food prices, food production and supply levels, harvest forecasts, weather forecasts, and food assistance needs, as well as targeted alerts regarding ongoing or anticipated food security crises at national and regional levels.

These existing systems rely on many of the same types of data, including crop calendars and meteorological data. Technological advancements, like high-resolution satellite imagery and remote sensing technology, have helped to improve the collection and accuracy of these and other food security-related data. However, early warning systems also rely on more traditional types of data, including household surveys and census data. A [recent review of eight agricultural early warning systems](#) found these disparate sources can sometimes result in inconsistent or

invalidated data, making it difficult for policymakers and experts to assess local crop and food security conditions accurately. Thus, continued improvements in the collection and harmonization of key data are needed, as is increased data sharing across systems, agencies, and countries.

The case of Ethiopia showcases the potential for improved collaboration among early warning systems to contribute positively to disaster relief response and social safety net programs. The Government of Ethiopia has established a variety of early warning tools and systems, including the Livelihoods, Early Assessment and Protection (LEAP) tool and the Livelihood Impact Analysis Sheet (LIAS). These tools feed into Ethiopia's Productive Safety Net Programme (PSNP), which has been recognized as a particularly effective and well-targeted social safety net program. Since 2008, the PSNP has included a drought response mechanism, which allows for the rapid scale-up of the program to include new beneficiaries who have been pushed into transitory food insecurity as a result of drought. During the 2011 drought in the Horn of Africa, the program supported an additional 3.1 million beneficiaries for three months; in addition, thanks to its connection to the country's early warning systems, the program was able to respond to the drought within two months, compared to responses from humanitarian appeals, which took up to eight months. As a result of this rapid response, Ethiopia suffered comparatively less severe drought impacts than its neighboring countries, according to the World Bank.

By combining data taken from various early warning systems, including crop yield reduction estimates and estimated beneficiary numbers, policymakers and experts can gain a more accurate estimate of food insecurity stemming from drought and other extreme weather events. This can then lead to enhanced timeliness of government and humanitarian response which, as seen in the case of Ethiopia in 2011, is key in reducing harmful welfare impacts.

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