



FAMINE EARLY WARNING SYSTEMS NETWORK

FEWS NET TEAM ANNUAL MEETING

Fiscal Year 2020 April 24, 2020

Submission Date: May 1, 2020

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FAMINE EARLY WARNING SYSTEMS NETWORK

FEWS NET Annual Team Meeting

Fiscal Year 2020

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AGENDA

Purpose: A business meeting for all FEWS NET implementing partners to review the status of contracts and agreements, and to share highlights of ongoing technical work.

5 min	Welcoming remarks	P. Lee, B. Bacon
10 min	Introductions	J. Verdin
10 min	Summary recap of awards to date	J. Verdin
5 min	Remarks on the Pillar 1 EW Task Order	S. Wilson
15 min	Highlights of Pillar 1 EW activities	L. Glaeser
5 min	Remarks on the Pillar 2 Hub Task Order	R. Williams
15 min	Highlights of Pillar 2 TO activities	F. Riely
10 min	Break	
5 min	Remarks on Science Team activities	A. McNally
5 min	Highlights of USGS activities	J. Rowland
5 min	Highlights of UCSB activities	G. Husak
5 min	Highlights of NOAA/CPC activities	W. Thiaw
5 min	Highlights of NOAA/PSD activities	A. Hoell
5 min	Highlights of NASA activities	K. Slinski
5 min	Highlights of USDA activities	J. Williams
5 min	Remarks on Pillar 3	J. Verdin, P. Steffen
30 min	Open discussion – Q&A	All
5 min	Review of post-meeting actions	J. Verdin
Adjourn		

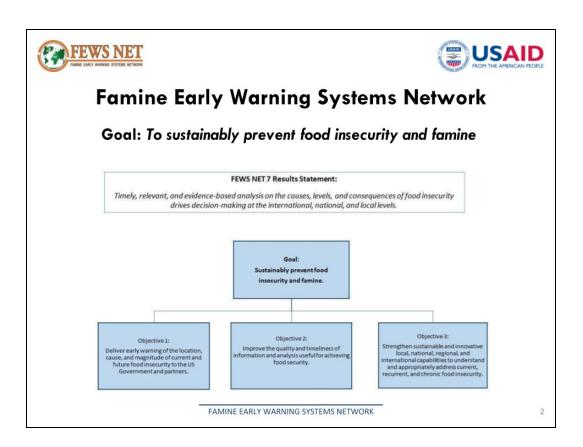
WELCOMING REMARKS

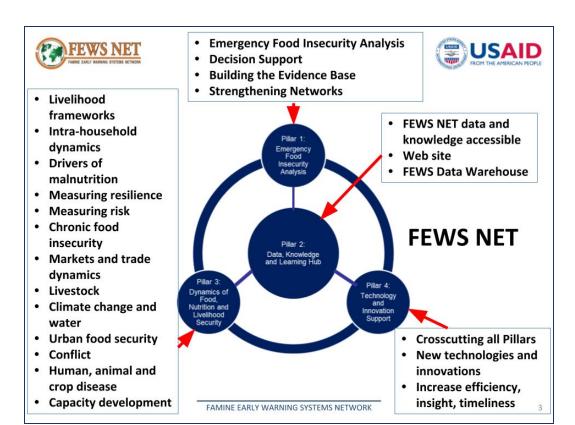
Patrice Lee, Contract Officer, opens the meeting. Brian Bacon, Division Chief, Technical, Learning and Planning Division of Office of Food for Peace introduces the meeting noting this is the 35th year of Famine Early Warning under the FEWS NET banner. The FEWS NET project has provided decades of global leadership in the intersections of food security and international development. Bacon expressed his gratitude to all that are working under the stressful conditions posed by the global COVID-19 pandemic. He also acknowledged the team's dedication, which is particularly significant right now as the world faces immediate and anticipated impacts on food security as a result of the pandemic.

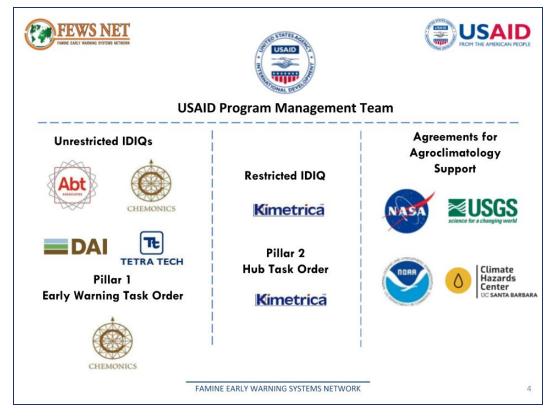
INTRODUCTIONS

Jim Verdin, FEWS NET IDIQ Contract Officer's Representative, asked all participants to introduce themselves. See <u>Annex I</u> for a complete list of names and associations of participants.

SUMMARY RECAP OF AWARDS TO DATE











Unrestricted IDIQ Contracts

- Cover Pillars 1, 3, and 4
- Awarded in April 2019 to four holders
- Task Order 1 covers Pillar 1 services
 - Emergency Food Insecurity Monitoring & Reporting
 - RFTOP issued April 2019
 - Award in September 2019 to Chemonics
 - Period of performance began October 2019

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Restricted IDIQ Contract

- Covers Pillar 2
- Awarded in May 2019 to Kimetrica
- Task Order 1 covers Pillar 2 services
 - FEWS NET Learning & Data Hub
 - Award in June 2019
 - Period of performance began June 2019

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U.S. Geological Survey

- Agroclimatology Support
- Inter-Agency Agreement FY19 FY21
 - Core services: remote sensing, modeling, web services, software tools, capacity building
 - Reprocessing with new NOAA ET product
 - Machine Learning (with UCSB)
 - Extended Outlooks for crop conditions (with UCSB)

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USAID FROM THE AMERICAN PEOPLE

National Oceanic and Atmospheric Administration

- Agroclimatology Support
- Inter-Agency Agreements 6/16-4/21 and 5/21-9/22
 - Core services: Weekly Weather Hazards, Monthly Seasonal Forecast Review, satellite rainfall, ET modeling, seasonal predictability research
 - Extended Outlook long-lead predictions
 - Expedited thermal IR image processing

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National Aeronautics and Space Administration

- Agroclimatology Support
- Inter-Agency Agreement FY18-FY22
 - Core services: Land surface modeling, NDVI continuity, Crop Monitor for EW (UMD)
 - Agroclimatology Advisor
 - Afghanistan streamflow
 - Extended Outlooks for crop conditions (with UMD)

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UCSB Climate Hazards Center

- Agroclimatology Support
- Cooperative Agreement 4/19 5/24
 - Core services: CHIRPS rainfall, regional scientists, modeling and forecasting yield, CHIRTS temperature, capacity building
 - Machine Learning (with USGS)
 - Extended Outlooks for crop conditions (with USGS)

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REMARKS ON THE PILLAR 1 EARLY WARNING TASK ORDER



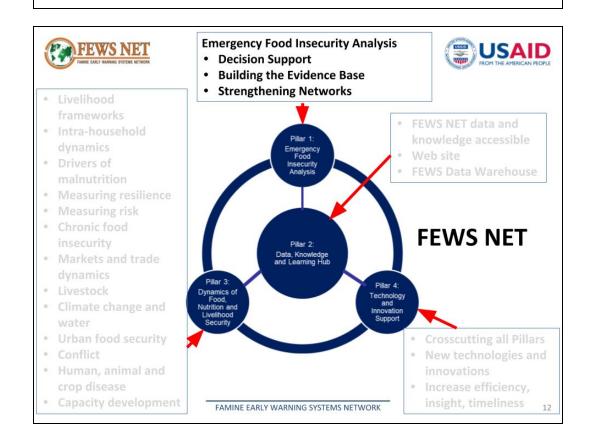


Famine Early Warning Systems Network

FEWS NET Annual Meeting

Pillar 1 Task Order 1: Emergency Food Insecurity Analysis

24 April 2020



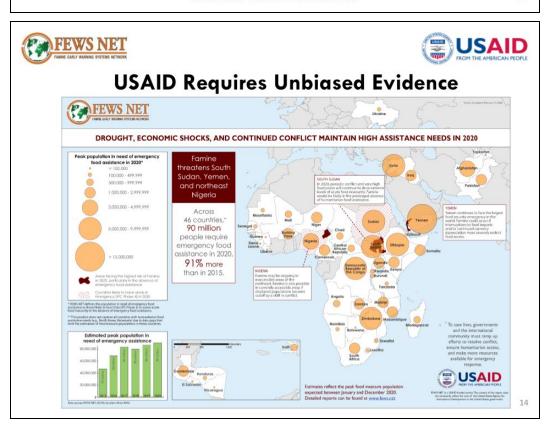


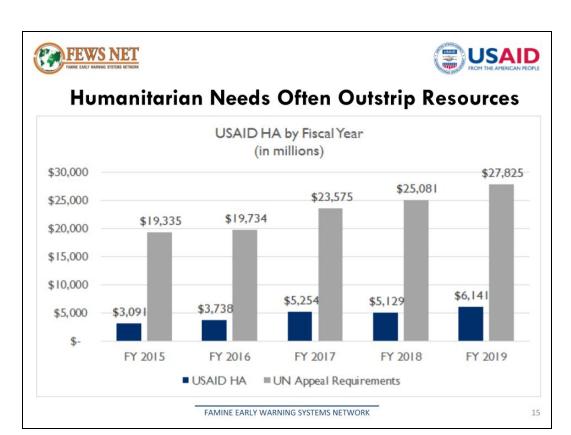


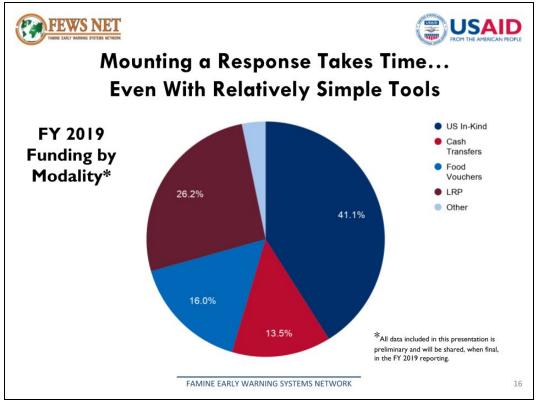
Why Invest in Famine Early Warning?

- USAID Requires Unbiased Evidence
- Humanitarian Needs Often Outstrip Resources
- Mounting a Response Takes Time

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HIGHLIGHTS OF PILLAR 1 EW ACTIVITIES





FEWS NET Early Warning Team

Pillar 1 Task Order 1 Implementation Highlights
24 April 2020





Early Warning Team highlights: Operational startup

- Base period implementation: 15 October 2019 through 14 October 2021
- Initiation of presence country activities in Burundi, Cameroon; Rest of World regional office in the Middle East
- Startup administration
 - Staff transition/on-boarding
 - Lease renewals/office selection
 - Service provider engagement
 - MOU reviews, renewals

	Technical Staff	Operations Start	Data Galicetors	TOTAL
East Africa	28	28	146	202
Couthern Africa	14	18	24	56
West Africa	19	23	29	71
Rest of World	7	7	16	30
LAC	10	10	9	29
Home Office	21	3	0	24
LATOT	99	89	224	412

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Early Warning Team highlights: Technical startup

- Objective: Provide timely, accurate, transparent early warning of current and future acute food insecurity worldwide
 - Activity Area 1: Build the evidence base
 - Activity Area 2: Carry out acute food insecurity analysis and decision support
 - Activity Area 3: Strengthen networks



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Early Warning Team highlights: Technical startup

Work plan - Illustrative core routine activities

- Collect/collate data and information (enumerators, monitors, assessments, remote sensing)
- Undertake sectoral and integrated analyses; produce reports, briefings, etc.
- Collaborate with partners



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Early Warning Team highlights: Technical startup

Work plan - Illustrative special activities

- · Global Dashboard for Hotspot Identification pilot
- · Off-own-farm income monitoring pilot
- Pivoting to meet increasing data, information, and decision support demands given COVID-19



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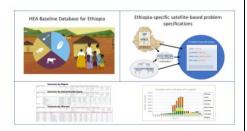


Early Warning Team highlights: Technical startup

Work plan - Special activities

Global Dashboard for Hotspot Identification

- Effort to enhance systematized use of remote sensing, price trend analysis, and livelihoods data for continuous monitoring
- Continues to improve early warning quality by:
 - Creating a clearer evidence base for projections
 - Enhancing cross-sectoral information integration



· Augmenting triangulation to minimize Type I/Type II errors

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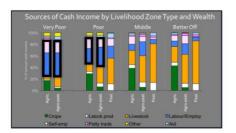


Early Warning Team highlights: Technical startup

Work plan - Special activities

Off-own-farm income monitoring

 Effort to establish sentinel site monitoring systems in select geographies in East, Southern, and West Africa where livelihoods data indicate poor households generate most of their income from sources off their own farms



- · Continues to improve early warning quality by:
 - Testing approaches to appropriately capture a key income source for poor, rural households

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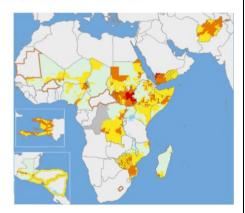


Early Warning Team highlights: COVID-19

Work plan - Special activities

COVID-19 adjustments

- Pivoting to telework status across team
- Engaging in key planned capacity strengthening activities virtually
- Adjusting methods, focus, and staff tasks fluidly
- Mapping partner activities to capture changes
- Enhancing tracking of rapidly-evolving conditions
- Integrating analyses into high-frequency decision support



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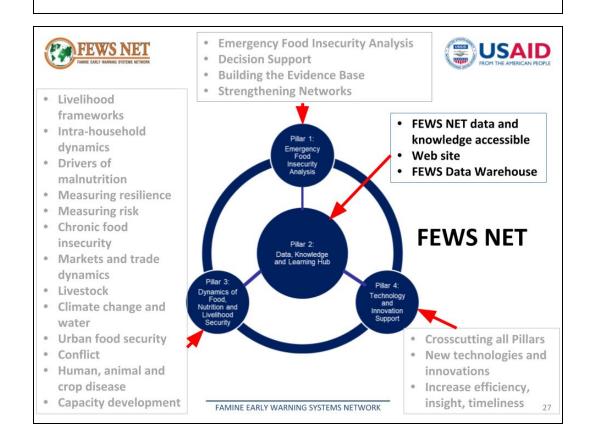
REMARKS ON THE PILLAR 2 HUB TASK ORDER





FEWS NET Annual Meeting Pillar 2 - Task Order 2

"The HUB"







Conceptual Roots

"There are basically two "camps" of thought on the current Sahelian food security crisis: one of which finds the current food security and malnutrition situation acute, widespread and severe in its dimensions, and another, which identifies it as less of an acute crisis, and more of a chronic problem.... In the former camp, international humanitarian response agencies, WFP and FAO, are generally represented, while in the latter, FEWS NET is generally noted."

August, 2012, Reflections from a Joint Multiple-Agency (FAO, FEWS NET, WFP) Examination of the Sahel Food Security Crisis.

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The Hub

- Provides management and technical expertise to centrally store and manage FEWS NET data and analysis, and ensure that FEWS NET data and knowledge are captured and disseminated among FEWS NET team members, as well as to the broader global community and;
- Facilitates working as a team cooperating and coordinating activities with all FEWS NET Team and Partners ...more important now than ever!

Thank You

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HIGHLIGHTS OF PILLAR 2 TO ACTIVITIES





FEWS NET Learning and Data Hub

Frank Riely Annual FEWS NET IDIQ Meeting April 24, 2020



FEWS NET Learning and Data Hub

- The specific objective of the Hub TO is to "manage, share and facilitate the application of FEWS NET data, information, and knowledge to help achieve FEWS NET's overall goal" to sustainably prevent food insecurity and famine (TO, p. 10)
- Work in collaboration with the project's other pillars, the science team, and the USAID management team.



Hub Principal Activities

- Make FEWS NET food security-related data and knowledge products more accessible for FEWS NET 7 Team members;
- Make FEWS NET data and knowledge accessible for users and uses outside of the FEWS NET 7 team;
- Manage and improve the FEWS NET website;
- Manage and improve the FEWS NET Data Warehouse; and
- Make FEWS NET data activities consistent with USAID and USG standards.



Hub Approach

- Treat data as a product
- Promote greater efficiency within the FEWS NET team
- Advocate for tools that improve USAID data access and control
- Share data and approaches with organizations outside of the project
- Collaborative approach to setting priorities within an Agile project management structure



Major Hub Work Flows

The Hub is responsible for managing FEWS NET's major data and information platforms.

- Data Management Platform
- Web Platform
- Knowledge and Learning Platform



Data Platform Accomplishments

- Enabling FEWS NET-wide adoption of Google Suite applications
- · Improvement of system reliability and speed
- · Data dashboards and visualizations
- All-purpose system monitoring
- · Ad hoc data capability



Web Platform Accomplishments

- Taking operational control of the website
- System security and integrity enhancements
- Restructured AWS infrastructure
- Code release protocols
- Annual website revision plan



K&L Platform Accomplishments

- Operational control of FN6 handover materials
- · Dependencies tracking system
- Support collaborative and consultative processes
- Greater use and sharing of existing knowledge and learning products
- · Monthly team-wide consultations

REMARKS ON SCIENCE TEAM ACTIVITIES

The team of Principal Investigators (PIs) has a unique ability to contextualize their research in the larger food security community. They are particularly skilled at communicating how their research impacts the forecasting and reporting activities of the broader FEWS NET team. The PIs introduced a new initiative on extended outlooks where NOAA will be pushing the boundaries on rainfall and temperature forecasting, NASA will be transferring that work into variables relevant for agriculture and water resources and UCSB and USGS will be synthesizing this information and working with the regional scientists to implement new forecasts. The UMD team will be working on the mapping and communications aspects through their crop monitor as well. With that overview, the specific teams presented their work below.

HIGHLIGHTS OF USGS ACTIVITIES





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FEWS NET Annual Meeting – USGS Activites

FEWS NET Annual Meeting
24 April 2020 | Washington DC / Sioux Falls SD / virtually everywhere



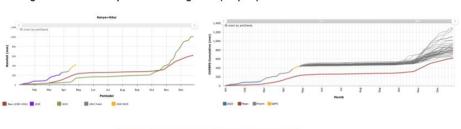




Current Highlights (ongoing technical work)

- Release of ETa v5:
 - Improved input radiation parameterization (to better define max/min LST as related to max/min ET)

 □ reduce overestimation impact of cloudiness (e.g., much better absolute ET values for coastal Somalia)
 - Higher-resolution temperature dataset
 □ improved coastline and island representation (previously, coarse resolution left part of Puerto Rico missing)
- Incorporation of CHIRPS-prelim and CHIRPS-GEFS into
 - · EWX time series
 - · Agro-climate analysis monitoring tool (step 4)



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Current Highlights (ongoing technical work)

- New EWX updates
 - · Add monthly soil moisture with time series (NASA FLDAS)
 - · Add runoff/capita with time series (NASA FLDAS)
 - · Add South America window (CHIRPS, NDVI, [ETa])
- FEWS NET Foundational Training
 - · Supported agro-climatology session in early April
 - Will support more detailed training for DSG analysts
 - Update materials and guidance (partner effort)



- Water point viewer
 - Added bulk data downloads (status report)
 - · Will add "seasonal dry" classification

Waterpoint Download Form	
Country	
Burkina Faso	*
Start Date 6	
01-01-2000	
End Date	
DD-MM-YYYY	

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Current Highlights (ongoing technical work)

- Conversion from shorter-term RFE/GDAS to longer-term CHIRPS/RefET (in collaboration with UCSB CHC)
 - · Water point processing
 - Africa WRSI processing
- Continue to provide input to the GFSS annual Global Agency Performance Narrative (for FEWS and Resilience Activities)

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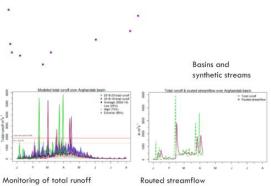
Afghanistan: developed runoff / streamflow graphs for all basins

Accomplished

- Daily monitoring of total surface runoff over Afghanistan
- Daily monitoring of GDAS temperature by basin
- HyMAP streamflow model implementation for streamflow simulation in Afghanistan.

Proposed

- Retrospective simulation of streamflow in Afghanistan
- Streamflow frequency analysis in determining I flood danger levels across Afghanistan
- Operational monitoring of streamflow



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Knowledge Base (KB) products recent updates

- New Product Type CHIRTS Temperature dataset (seasonal and annual average, CV, trend/decade, historical annual anomalies, and monthly average); geographic coverage – all 81 countries and 6 regions
- New regions added Central America and South Central Asia (Rainfall, Temperature, NDVI, and ETa)
- New seasonal NDVI products (in addition to annual products) based on growing seasons in all KB countries/regions
- New updated NDVI products for South America countries
- Minor product improvements addition of a cloud mask for all NDVI products to address long-duration cloud contamination of NDVI imagery that causes reduced NDVI values

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Integrated Phase Classification

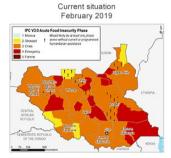
IPC Processing Using Python and GIS

Developed processing tools for automated tabular and shapefile joins, updating and mapping using ArcGIS and Python. Remapped historical IPC attribute tables (2011-present); transferred data, scripts, and methodology for country and regional outputs.



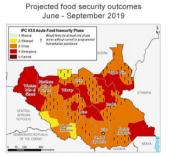
- ✓ Python scripts for historical processing of IPC phase data
- ✓ Country and Regional IPC processing for data aggregation
- ✓ Transferred documentation for reanalysis and update capabilities







Projected food security outcomes



2019 example, https://fews.net/IPC

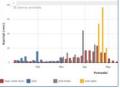




GeoEngine: EWX Map & Time Series Engine

	GeoEngine4	GeoEngine5
Standards	WMS but all image collections not related	WMS with Time Support (WMS-T)
Processing Performance (CHIRPS & Admin2)	Days	Hours
Performance	300,000 WMS layers 3 hours for service start	100 WMS-T layers 10 min. service start
Processing Tracking	Server logfiles	Web interface
Database	Standard Database	GIS enabled support Time series support





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FEWS NET Assistance for GeoEngine5



www.fews.net website

- Currently uses GeoEngine4 web service
 - Need to upgrade to GeoEngine5 web service
- USGS providing technical assistance and building additional web service tools



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Early Warning eXplorer (EWX)

- Support for WMS with Time (WMS-T)
- Display of cursor Lat/Long location
- Simplified codebase
- Simpler to build and deploy
- Faster loading

Faster Loading	EWX 2.6	EWX 2.7
Number of Requests on Load	237	74
Size of All Requests	538 KB	115 KB
Time to Load All Requests	1.12 min	7.5 secs



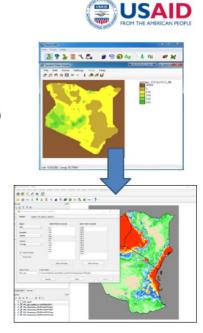
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GeoCLIM

- Conversion from Windows (Visual Basic .Net) application to a QGIS plugin
- QGIS Plugin benefits
 - Open Source
 - QGIS provides full suite of GIS tools which reduces code to build / maintain
 - Supports OGC standards
- Release soon for testing by regional field scientists



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HIGHLIGHTS OF UCSB ACTIVITIES





CHC Early Estimates

Combines CHIRPS, CHIRPS-Prelim, and CHIRPS-GEFS forecast to characterize the season

Rainfall, anomaly, % of average, SPI, Rank, and Seasonal Probabilities

https://chc.ucsb.edu/monitoring/early-estimates

https://chc.ucsb.edu/monitoring/early -estimates/seasonal







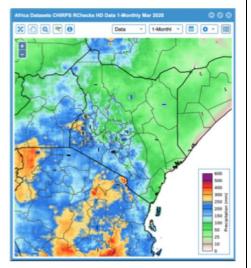
Climate Hazards Center

Data production (CHIRPS, CHIRPS-GEFS)

Regional Field Scientists

Seasonal monitoring

Research and product development







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HIGHLIGHTS OF NOAA/CPC ACTIVITIES

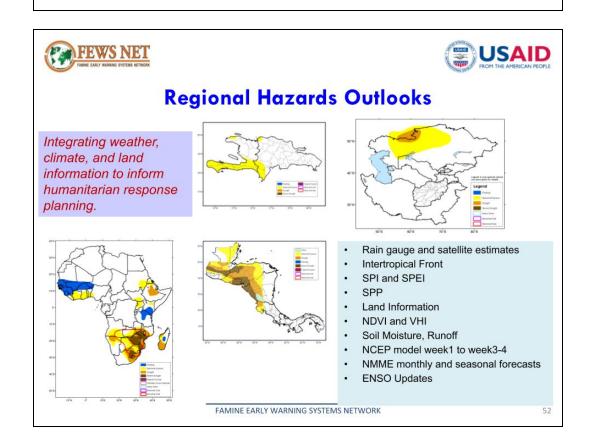




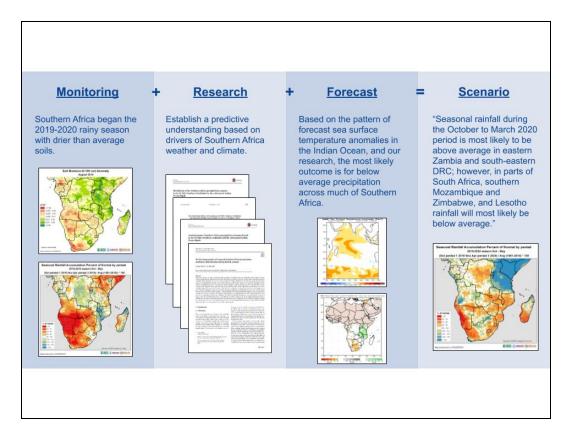
CPC Update

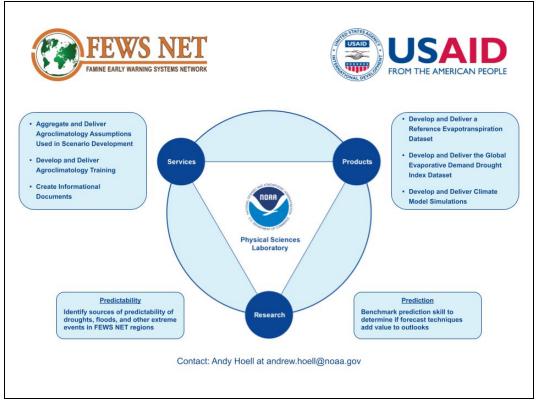
Wassila M. Thiaw NOAA's Climate Prediction Center

CPC FEWS NET Team Alima Diawara Miliaritiana Robjhon Steven Fuhrman Vadlamani Kumar

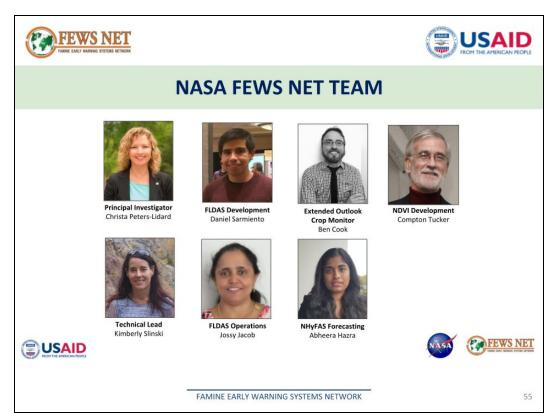


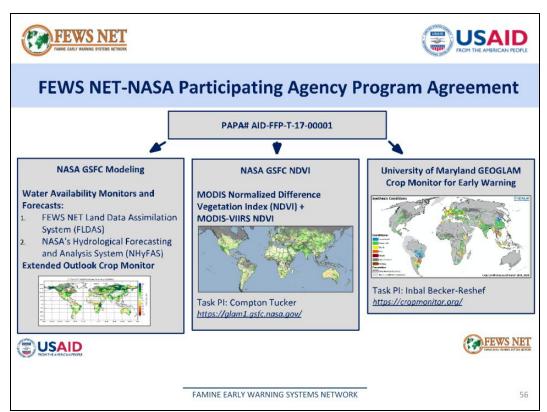
HIGHLIGHTS OF NOAA/PSD ACTIVITIES

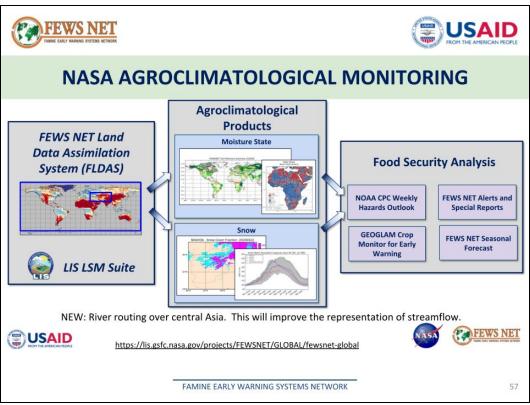


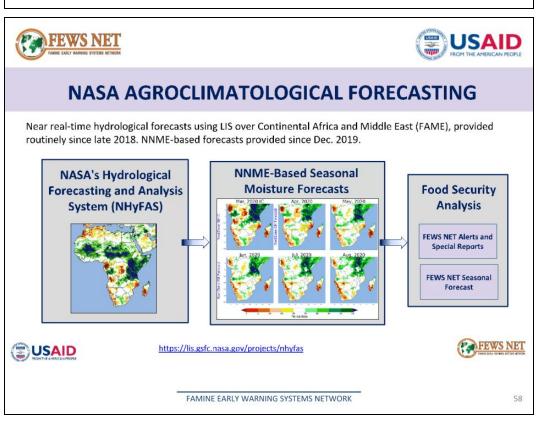


HIGHLIGHTS OF NASA ACTIVITIES













NEW: Extended Outlook for Crop Monitoring

Objective:

 Exploring the optimal use of projections of terrestrial water storage, precipitation, temperature, and/or other meteorological variables to provide long-lead, multi-seasonal forecasts of a range of terrestrial variables relevant to crop condition and yield assessment.

New Staff:

Ben Cook, NASA Goddard Institute for Space Studies

This project is a cross-collaboration with NOAA, UMD, and CHC.

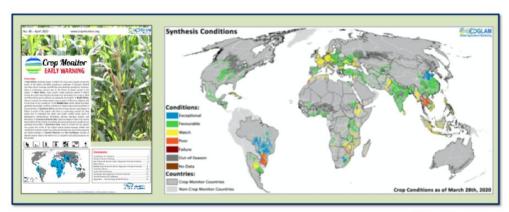




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UMD GEOGLAM Crop Monitor for Early Warning









HIGHLIGHTS OF USDA ACTIVITIES

Junko Williams, US Department of Agriculture, Food and Agriculture Service (USDA/FAS) Participating Agency Service Agreement (PASA) Manager, briefed the meeting on the history of USAID's relationship with FEWS NET that spans three decades and a series of agency service agreements. The most recent agreement was instituted in 2017, with USAID providing overall management. The 2017 agreement also covers technical assistance from FAS, including the Southern and East Africa crop assessment projects run by Curt Reynolds at USDA.

REMARKS ON PILLAR 3

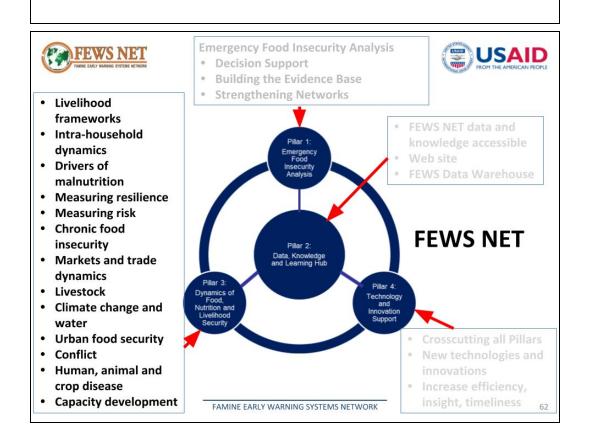




FEWS NET Annual Meeting

Pillar 3
Analysis of Food, Nutrition and Livelihood Dynamics

24 April 2020



At this time, there are no task orders in Pillar 3 (P3). However, it is a key part of FEWS NET's new structure and functions. Phil Steffen, USAID FFP Program Manager, who joined the team in late January 2020 and is a returning FEWS NET alum, will take the lead on moving P3 forward. Steffen reviewed the nature of P3, which will look at the dynamics of food, nutrition, and livelihoods security. P3 analyses will deepen understanding of underlying causes of food insecurity that will support the team's development of appropriate responses. The aim of P3 is to help the entirety of USAID beyond FFP to strengthen all its food security programming. Verdin added that the FEWS NET management team at USAID are spreading the word across the agency to make use of this mechanism when the task order begins.

OPEN DISCUSSION - Q&A

Greg Husak opened with a question on how merging of FFP and OFDA may impact the focus of FEWS NET and are there any anticipated changes in focus on FEWS NET? Jim Verdin replied that P3's extensive list of topics suggests that the portion of the new Bureau for Humanitarian Affairs (BHA) that originates from OFDA may want to use P3 to address aspects of disaster responses that fall under their responsibility. Brian Bacon is working to integrate these two offices within the new bureau. Bacon is in active discussion with OFDA to make FEWS NET as relevant as possible to the evolving needs within BHA. FEWS NET will be housed in the new Office of Technical and Learning Quality. FEWS NET will be prominent in this new structure and within the new bureau. He anticipates P3 work will support BHA's new mandate with tools and analysis that FEWS NET will undertake. OFDA itself is a large consumer of FEWS NET products and services traditionally, and this is expected to grow as we integrate sectoral dimensions of OFDA's portfolio which has not been part of FFP in the past.

Patrice Lee inquired if the presentations will be made available. Frank Reily responded that the full report will be available within a week, including slides from the day's sessions.

SUMMARY OF KEY DECISIONS AND FOLLOW-UP ACTIONS

After all participants presented, the key decision from the meeting is to have a follow-up meeting in 2021 as specified in the IDIQ. The Hub will produce the minutes from this meeting for future reference.

ANNEX I

PARTICIPANTS LIST

Patrice Lee USAID OAA Contract Officer
Lucillyn Susi USAID OAA Contract Specialist
Katherine Cooper USAID OAA Contract Specialist

Brian Bacon USAID FFP Division Chief, Technical, Learning & Planning

Jim Verdin USAID FFP COR, IDIQs

Shannon Wilson USAID FFP COR, Pillar 1 Early Warning Task Order

Romaine Williams USAID FFP COR, Pillar 2 Hub Task Order Kevin Coffey USAID FFP Alt COR, Pillar 2 Hub Task Order

Phil Steffen USAID FFP Program Manager
Dan Houston USAID FFP Program Manager

Amy McNally USAID FFP Activity Manager, Agroclimatology

Abi Swain USAID FFP Program Specialist Felix Lee Chemonics IDIQ Contract Manager

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