WFP and Climate Data
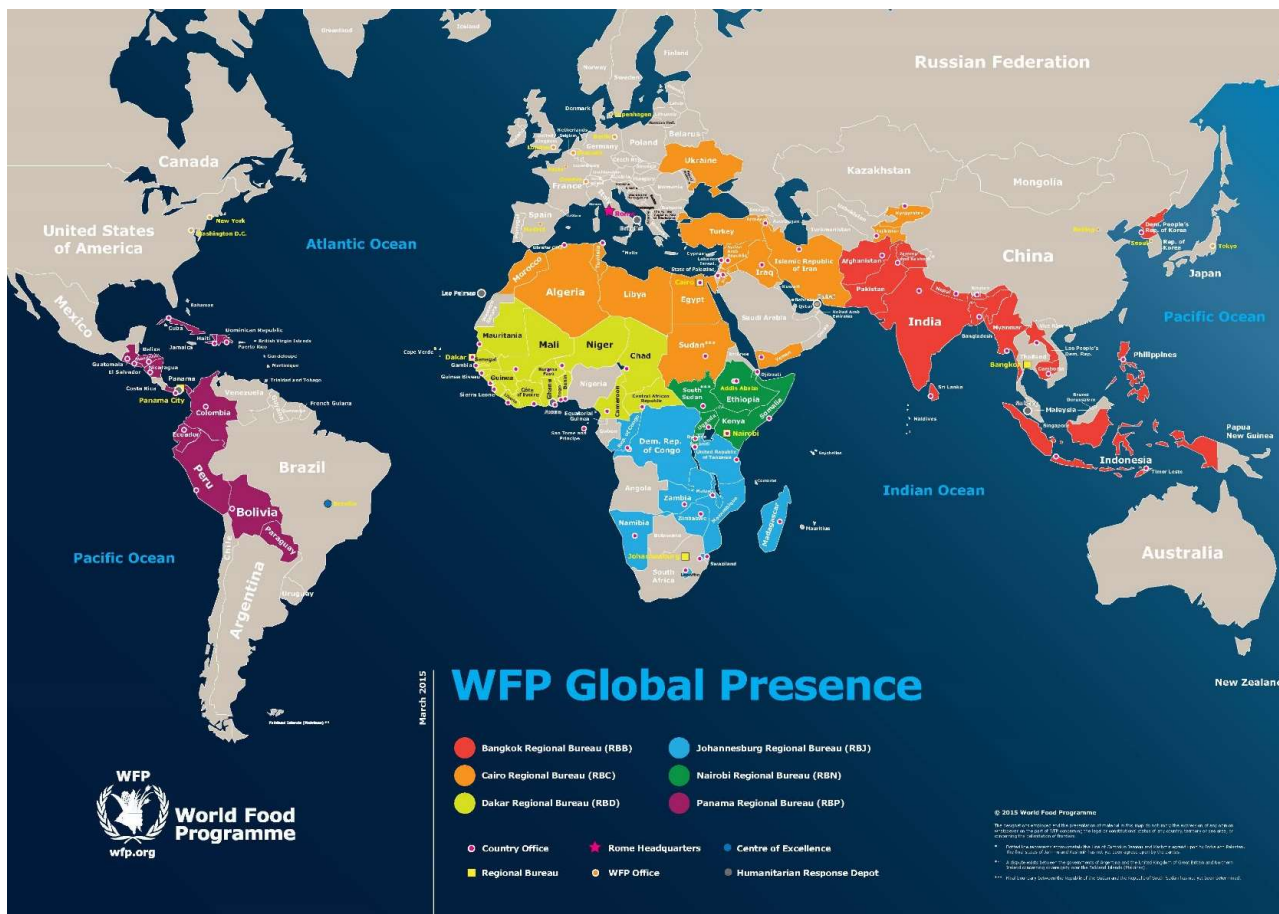
WFP Overview

WFP works in 80 countries in order to:

Provide timely and appropriate humanitarian assistance to save lives and protect livelihoods of the poor and vulnerable households against shocks and food emergencies

75 million beneficiaries (2013) in 78 countries. 5.1m MT requirements (USD5.7bn).

Some of the top 10 countries by beneficiary numbers (2013):

Afghanistan, DPRK, Niger, Pakistan, Ethiopia, Syria, South Sudan, Sudan, DRC, Somalia

About 56% of WFP beneficiaries are in SSAfrica.

Food Assistance Modalities

General Distribution

Nutritional Assistance

School Feeding

Market Programming

Food for Assets

Analysis and Trends Service - OSZA

OSZA, the Analysis and Trends Service is the main analytical service within WFP, providing support to CO, RBs, and other divisions and services in HQ:

- Markets and Economics: Market price monitoring, market assessments
- Assessments: Food Security household assessments of varying nature (CFSVA, EFSA, FSMS)
- mVAM: Food Security assessments by means of mobile phones
- Geospatial & IM: Mapping, Climate and EO analysis, Early Warning
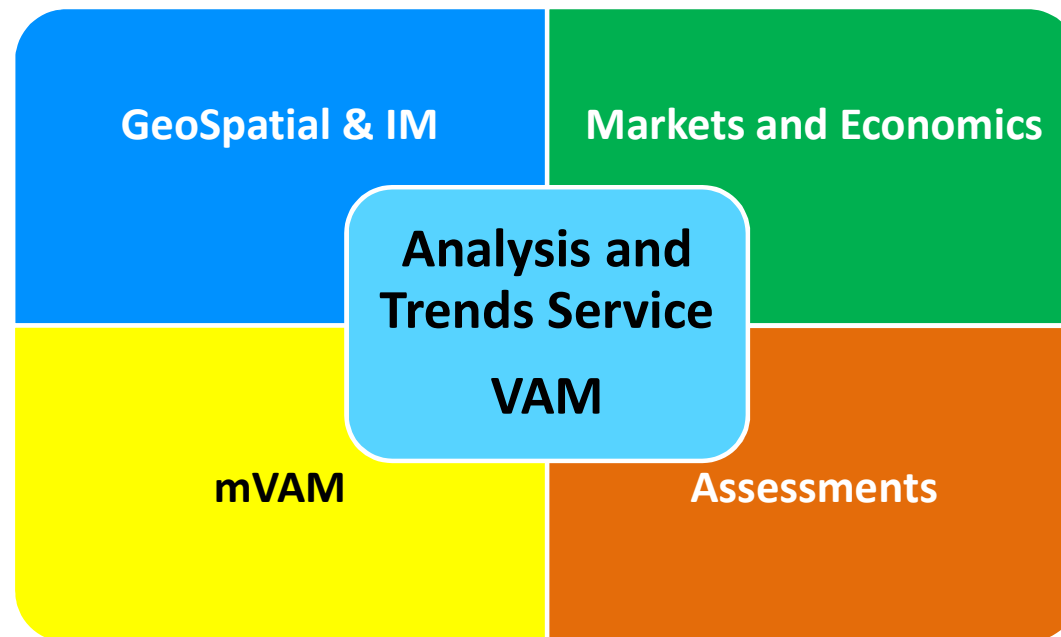
What we do with Climate Data

Climate Data Sets

Early Warning

Climate Analysis

Program Support
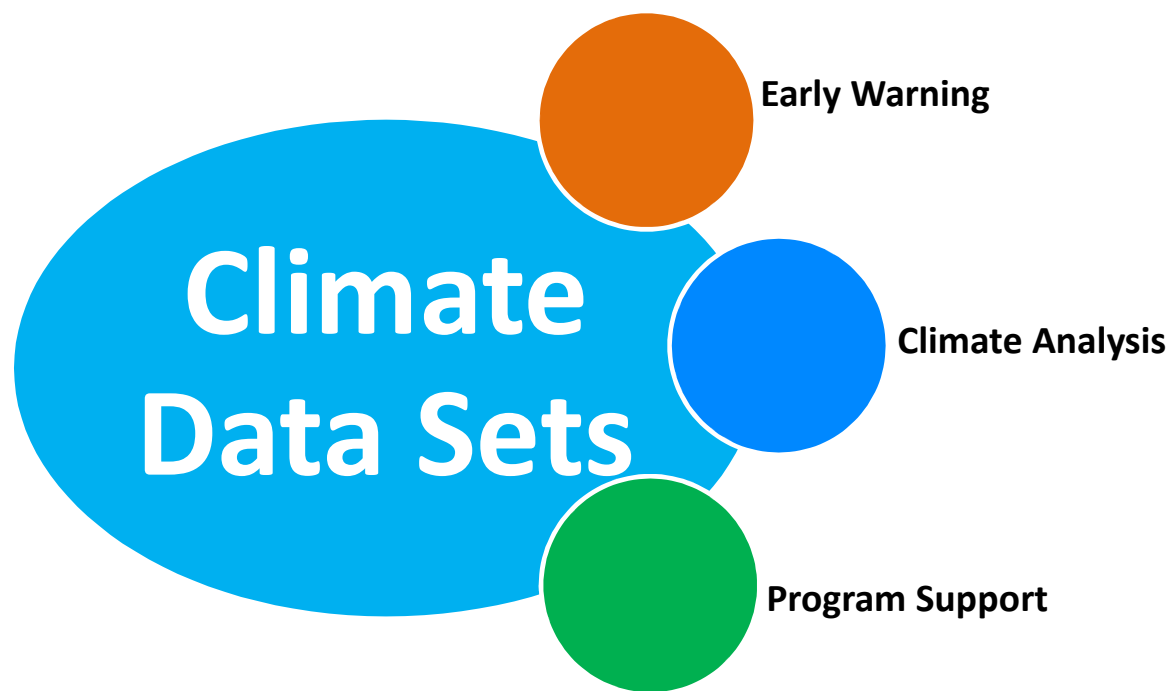
Data Sets, Analytics and Information have a large commonality across different WFP applications

Why Climate Data

Climate shocks are a major driver of food insecurity in the world and cause the majority of WFP beneficiaries.

- 50% of WFP operations responding to climate causes
- 80% of the food insecure live in disaster exposed areas
- 20% of malnutrition cases have drought as their root cause
- In Niger, a child born in a drought year has double the chance of growing up stunted

Climate and Remote Sensing datasets have become a fundamental input to WFP work:

- Early Warning of food security shocks
- Planning of WFP interventions (ICA, Integrated Contextual Analysis)
- Disaster Risk Management (Index Insurance)

Climate Analysis: Program Support

In the past 5-7 years, a number of initiatives, tools and projects were developed that require Climate analysis for their implementation and deployment.

ICA

Identify priority areas of intervention and appropriate programme strategies.

Through integrated analysis of trends in climate shocks, food security, market access, land degradation.

C-ADAPT

Climate/FS analysis to evaluate climate impacts on food insecure populations

Identify best practices / innovations to inform policy / implement programmes supporting adaptation and resilience to CC

R4

Building resilience of food-insecure smallholders through integrated risk management. WFP/OxfamUSA..
Identify priority areas of intervention and appropriate programme strategies.

CSAP, Climate Services Adaptation Program (WFP part of, under GFCS)

Provision of tailored weather and climate information to FFA/P4P beneficiaries, to inform decisions on which/when crops to plant and/or livestock migration
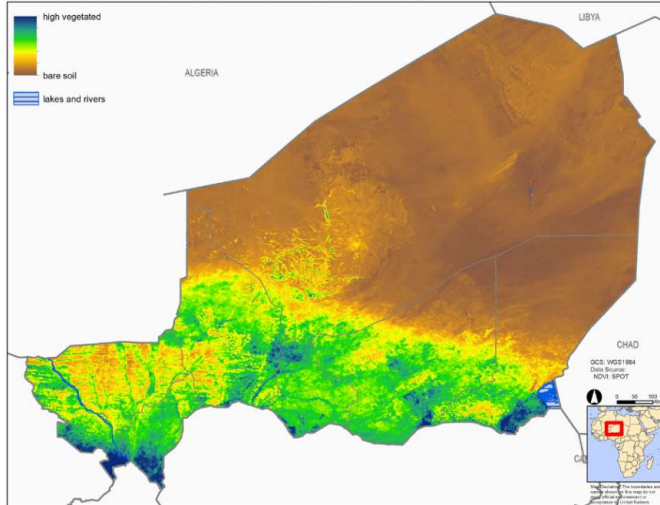
FoodSECuRE

A funding facility to trigger action prior to occurrence of climate shocks

Provide predictable multi-year financing for post-disaster resilience building at scale
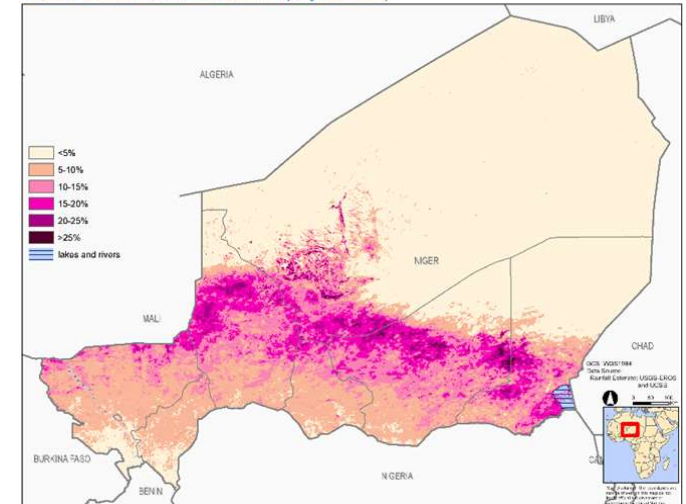
LEAP, WRMF, ARC, ...

Climate Analysis: Main Outputs

NIGER - VEGETATION MAX DEVELOPMENT (1999-2013)
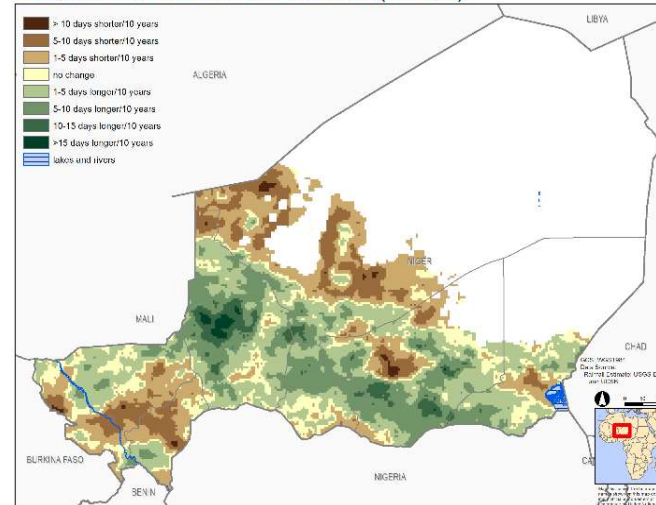
Averages
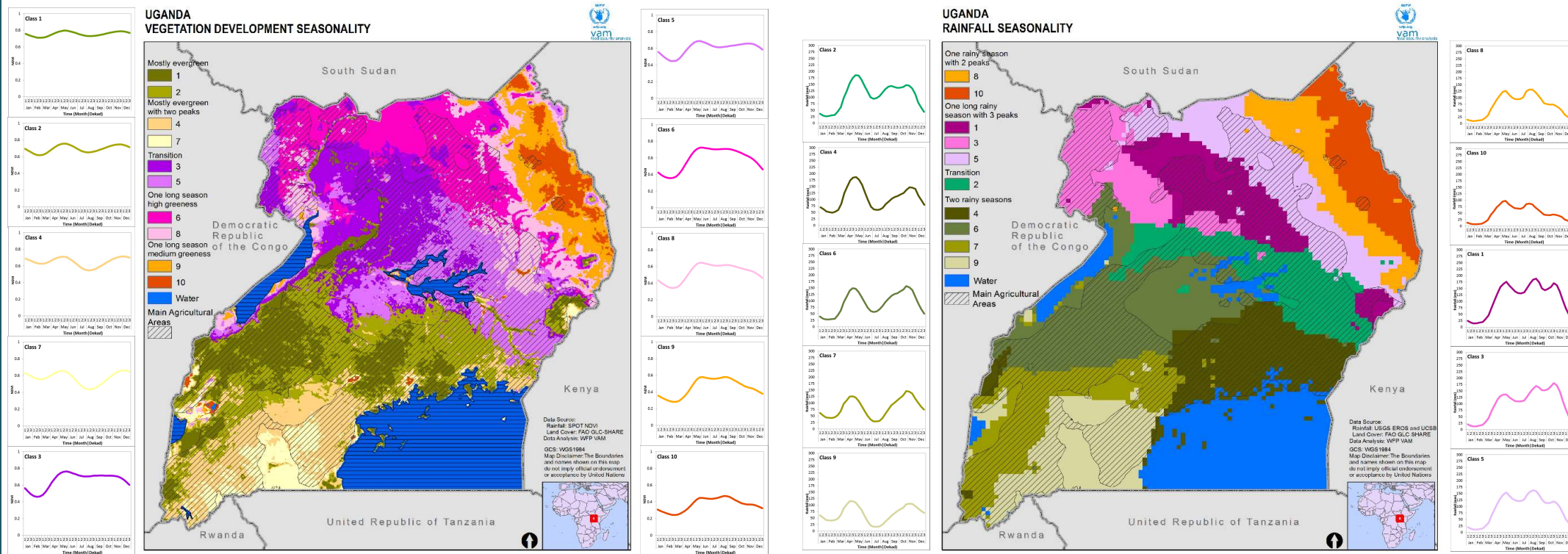

NIGER - VEGETATION VARIABILITY (15 years data)

Inter annual variability

NIGER - LENGTH OF GROWING SEASON - Trend (1994-2013)
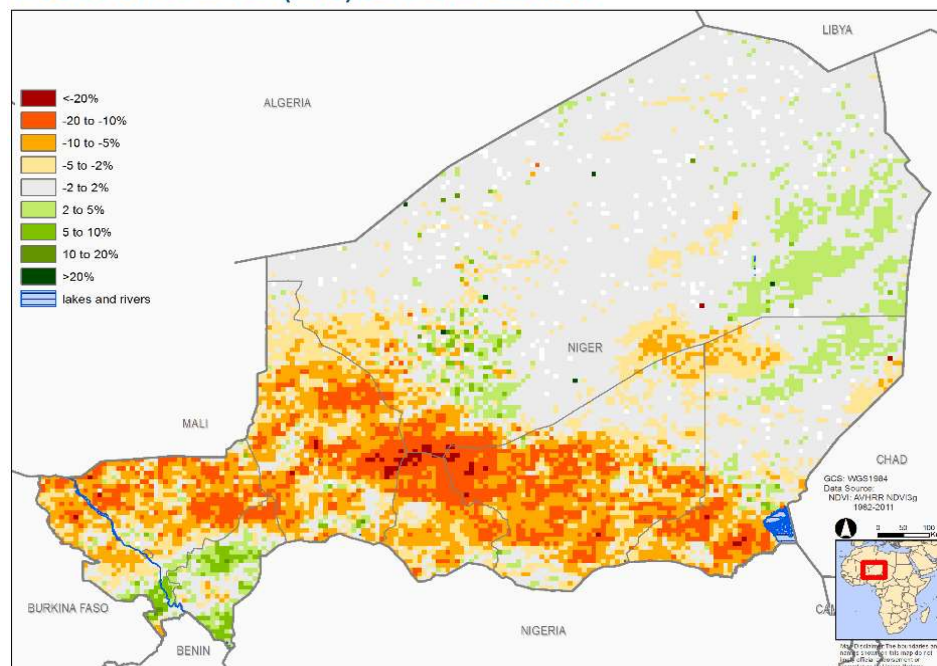
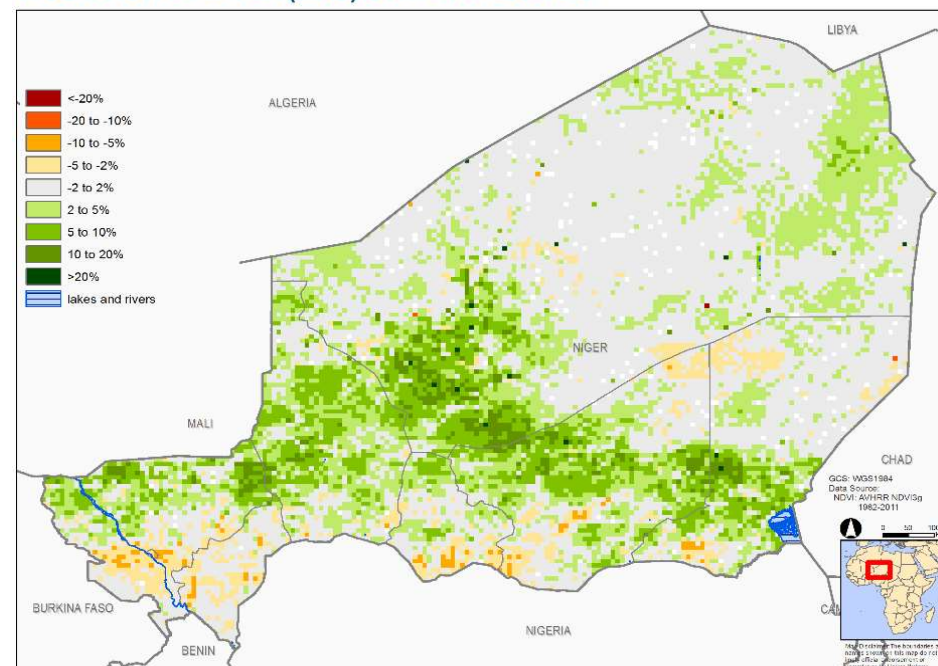Temporal Trends

Climate Analysis: Seasonal Patterns

Mapping of Seasonal Rainfall and Vegetation Patterns
Based on long term average data

Climate Analysis: ENSO influences

NIGER - NDVI VARIATION (JJAS) EL-NINO vs NEUTRAL

NIGER - NDVI VARIATION (JJAS) LA-NINA vs NEUTRAL

$$ENSO\ Anomaly = \frac{NDVI_{El\ Nino} - NDVI_{neutral}}{NDVI_{neutral}}$$

Approach:

- JFMA and JJAS aggregations of NDVI and RFE
- Average on El Nino, Neutral, La Nina groupings
- ENSO anomalies (i) El Nino-Neutral and (ii) La Nina-Neutral

Identify sign and location of largest impacts on these indicators.

El Nino forecasts plus historical evidence as a package for Procurement Division
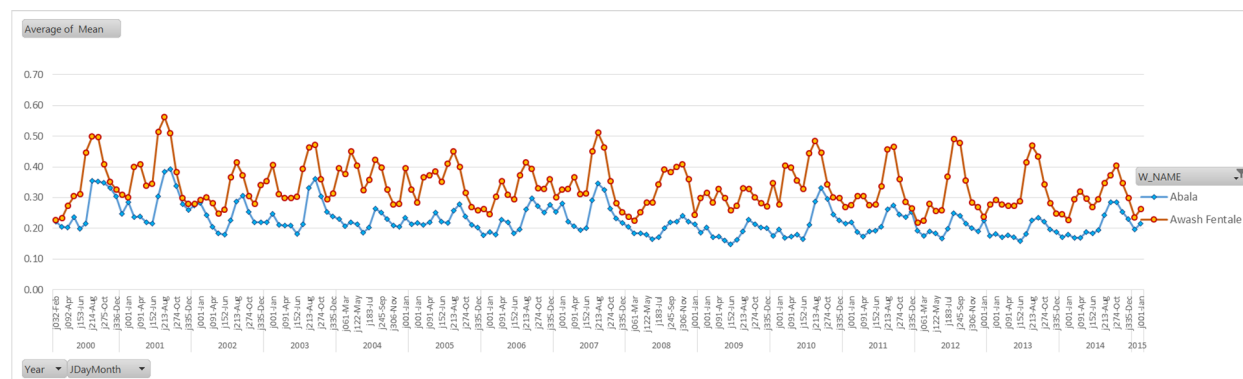
Climate Analysis: Ad-Hoc / On Request

Ad-hoc analytical pieces:

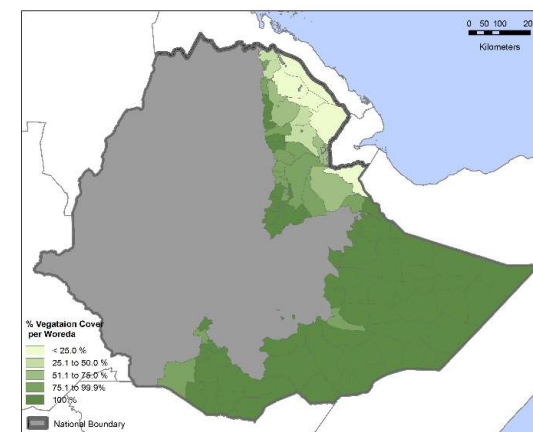Service to Country offices or Regional Bureaus

Syria-Turkish border: Cross Border Contrast in Vegetation Conditions, 29 August 2012

Woreda NDVI time series for Livestock Insurance Scheme
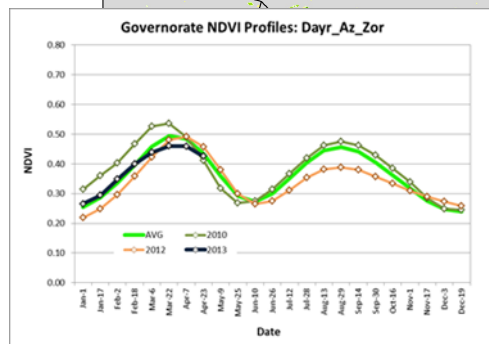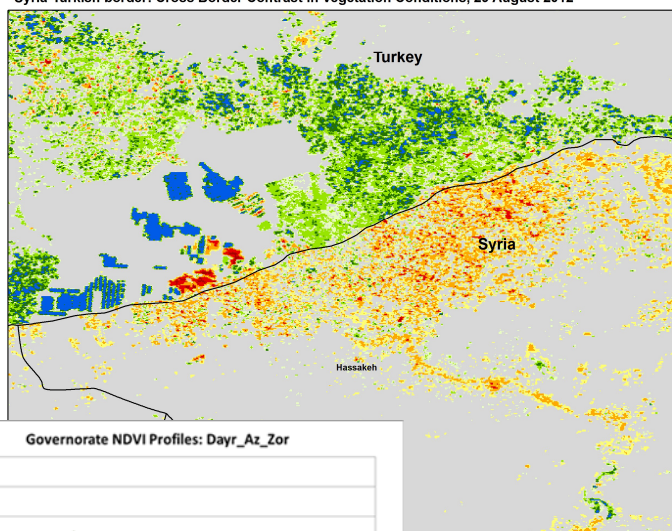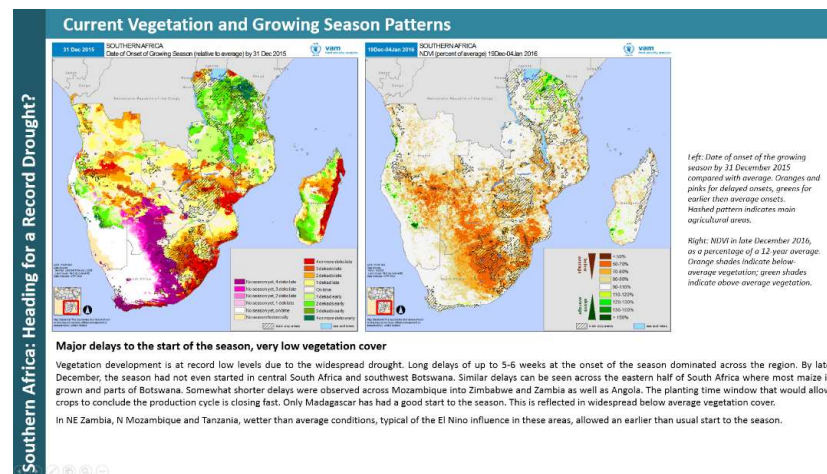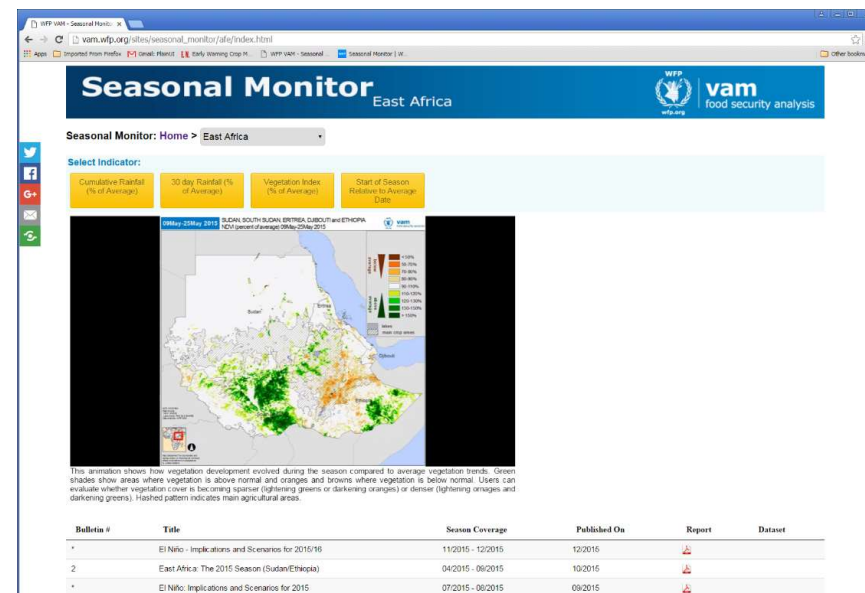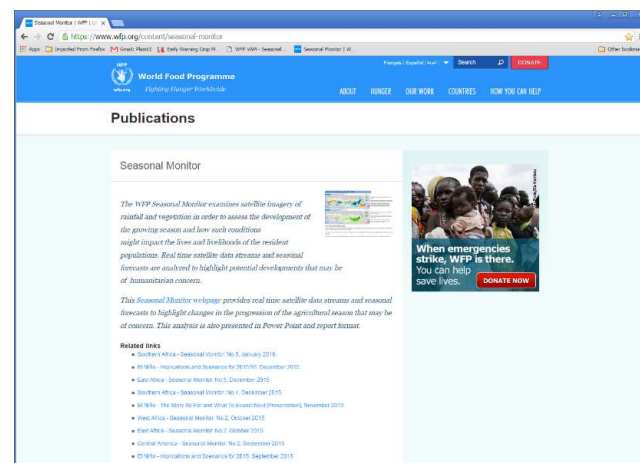
Collapse of Irrigated Agriculture in Syria

EO seldom used on its own: Land Cover, household survey data, market prices, macro economics, …

Early Warning: Seasonal Monitor

Visible output: timeline narrative diagnostics of seasonal events

Website:
Dissemination maps, reports and animations

Early Warning: The DataViz Portal
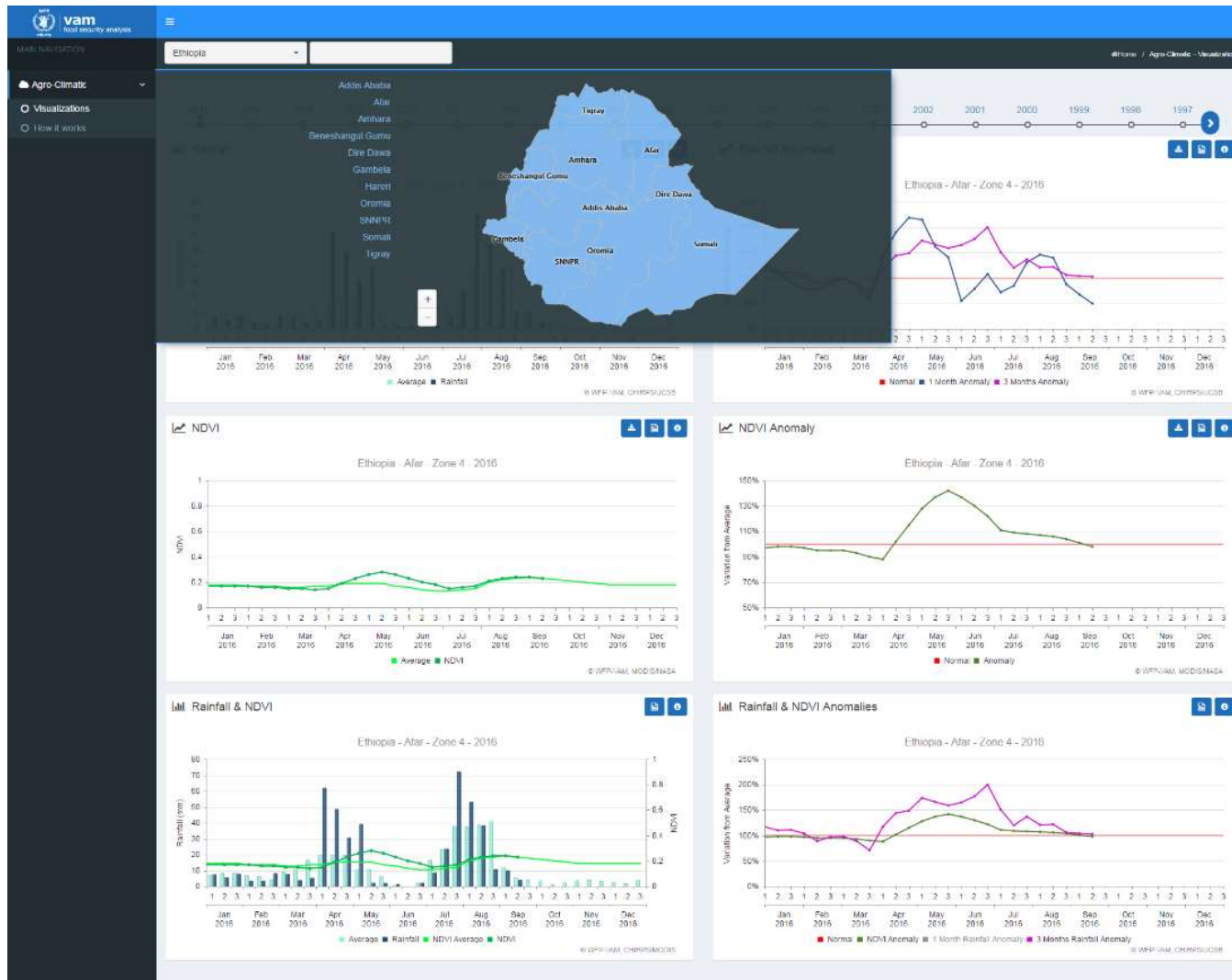
For the selected Admin level, 6 charts displayed:

- Rainfall (current, average)
- Vegetation (current, average)
- Joint Rainfall and Vegetation
- Rainfall anomaly (1 and 3 month)
- NDVI anomaly
- Joint Rainfall and NDVI anomaly

Map driven or list selection of Admin divisions

Slide charts across 3 years of data

Answering the points and….

Answering the points

Current use of climatological information based on observations,

No use of observation data whatsoever - we rely on Earth Observation gridded datasets. CHIRPS which we use for rainfall inputs, contains a lot of raingauge data blended in

Which time scales (from monthly to decadal) are more critical in your activity?

Monthly, 3 monthly Forecasts. Yearly would be nice but don't think the science is there

Current use of climate predictions in different time scales (from monthly up to decadal).

For reporting and highlighting of situations of concern for food security of vulnerable populations, taking in to account current food security context, cereal stocks, previous season performance to prepare informed scenarios for senior management

Answering the points

Are you (your sector) familiarized with the use and exploitation of probabilistic forecasts?

We (WFP-VAM) yes.

Wider WFP also not, but can and do refer to us.

Sector (humanitarian) maybe not (difficult to get a picture, Red Cross good, others doubtful).

What is the main reason hampering the use of climate predictions in your sector? (not enough information, lack of skill, difficult access to data, etc)

Lack of know how, information not necessarily well tailored (terciles not popular, probability of exceeding median/average or probability of given extremes better understand)

…..and WFP needs

Climate/Weather forecast are essential for WFP activities (Early Warning, Procurement, Climate Programmes, etc.)

….. but we cannot circulate imprecise and/or contradictory information

What do the community of forecasters suggest or is planning to do?

Thank You