





SAVING LIVES CHANGING LIVES

Satellite data for seasonal monitoring at World Food Programme





Despite significant increases in donor funding that reflect the growing need for humanitarian responses to new emergencies and protracted crises, there is a persistent **funding gap** of around 40 percent in support of most humanitarian appeals.

As consequence there is a need of **innovative tools** to reduce losses and damages in the livelihoods of people who are faced with increasing **climate extremes.**



Droughts manifest themselves over long and variable stretches of time and also the impact of droughts is **SIOW** to reveal itself fully.

It can lead affected populations to adopt **negative** coping mechanisms and eventually put them in need of emergency **assistance**.

But, **Slow on-set** joined with the growing availability of **EO**, **climate/weather data** (historical and forecast) and increasing processing capacity, potentially allows for more sophisticated programming enabling actors to adopt a stronger focus on the **Protection** of livelihoods (which is not feasible with rapid on set events) and to **reduce** the scale of the needs.



Approach

Н

0"1

1 O N

In **collaboration** with regional or global forecasting centers

<-200mm -200..-100 -100..- 50 - 50..0 No Signal 0.. 50 50..100 100..200 > 200mm 150°E 180°E 60°W 120°E 150°W 120°W 90°W 30°W 0°F 90°E ÷., ON 5N -120° 150° F 180°E 2.00 \$ 20N





How the season has actually evolved







Monitoring Season Growing

Seasonal Monitor (1) Seasonal Monitor: Home > East Africa Select Indicator DAN SOUTH SUDAN ERITREA CUBOU (a) vam \$0-70% 70-80%

Website: Dissemination of maps and

Vam food security analysis

reports, animations

This animation shows how vegetation development evolved during the season compared to average vegetation trend shades show areas where vegetation is above normal and oranges and browns where vegetation is below normal. Users can evaluate whether vegetation cover is becoming sparser (lightening greens or darkening oranges) or denser (lightening oranges and darkening greens). Hashed pattern indicates main agricultural areas

Southern

a

Bulletin #	Title	Season Coverage	Published On	Report	Dataset
•	El Niño - Implications and Scenarios for 2015/16	11/2015 - 12/2015	12/2015	3	
2	East Africa: The 2015 Season (Sudan/Ethiopia)	04/2015 - 09/2015	10/2015	2	
	El Niño: Implications and Scenarios for 2015	07/2015 - 08/2015	09/2015	8	



Major delays to the start of the season, very low vegetation cover

Vegetation development is at record low levels due to the widespread drought. Long delays of up to 5-6 weeks at the onset of the season dominated across the region. By late December, the season had not even started in central South Africa and southwest Botswana. Similar delays can be seen across the eastern half of South Africa where most maize is grown and parts of Botswana. Somewhat shorter delays were observed across Mozambique into Zimbabwe and Zambia as well as Angola. The planting time window that would allow crops to conclude the production cycle is closing fast. Only Madagascar has had a good start to the season. This is reflected in widespread below average vegetation cover.

In NE Zambia, N Mozambique and Tanzania, wetter than average conditions, typical of the El Nino influence in these areas, allowed an earlier than usual start to the season.

Visible output: narrative diagnostics of seasonal events and forecasts



DataViz Portal: Rainfall, NDVI TSs

SOURCES http://dataviz.vam.wfp.org/ http://vam.wfp.org/sites/seasonal_monitor/



Zoom in ROI:

Identify scale of problem, nature of area affected



.... not only rainfall and NDVI!!!





Major interest is in crop type and status mapping in **food insecure** regions, in particular those with restricted or **difficult access**. Countries where **deficient** agricultural **statistics** systems deliver poor quality or no information

Results can **Clarify** major information gaps faced by FAO-WFP CFSAMs, basis for **humanitarian intervention plans**

Cropland/Crop Type Mapping



In collaboration with ESA (Sen2Agri), UC Louvain and EODC

Monitor physical **changes** linked to FFA programmes Quantifying regenerative **impact** on the local environment over time Identifying examples to **advocate** for positive impact of FFA programmes Areas with access **Constrains**



Source: Landsat-8 max-NDVI composites over the growing season (August-September)

.... use it also for advocating

















SAVING LIVES CHANGING LIVES

