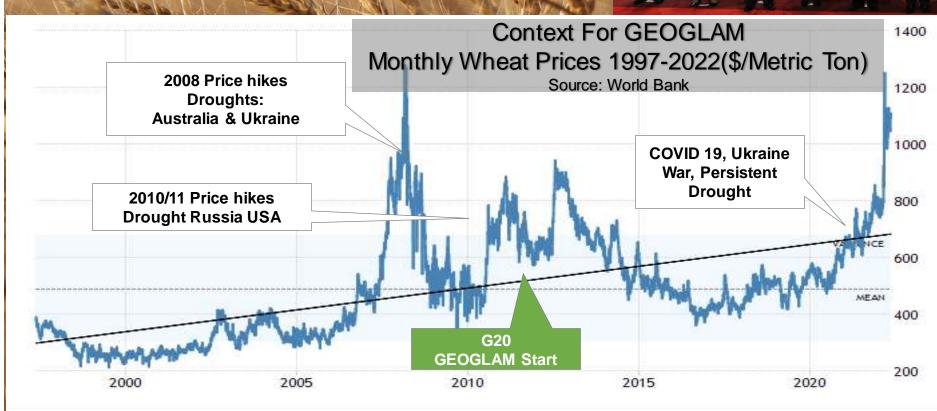
# GEOGLAM

Earth Observations for National Adaptation Plans (EO4NAPs)

> NAP Expo Gaborone, Botswana August 22 - 26, 2022



# **GEOGLAM Launched by the G20** Agriculture Ministers in 2011





### **G20 Final Declaration**

G20 FRANCE 2011

it to improve market information and transparency in order ternational markets for agricultural commodities more 'o that end, we launched:

ultural Market Information System" (AMIS) in Rome on 15, 2011, to improve information on markets ...;

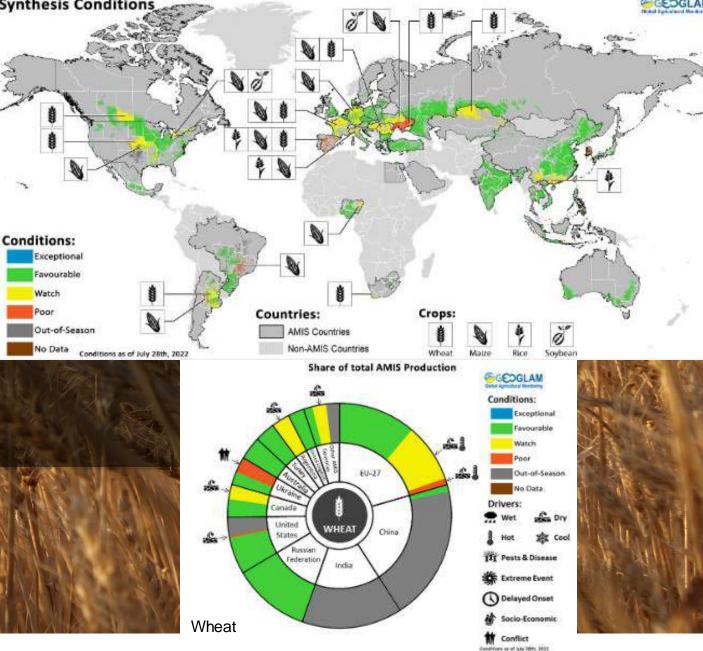
al Agricultural Geo-monitoring Initiative" (GEO-GLAM) on September 22-23, 2011. This initiative will coordinate onitoring observation systems in different regions of the der to enhance crop production projections and weather data.



# Responding to the Challenge Since 2013:

# GEOGLAM CropMonitor.org July 2022 Crop Conditions







# Expanding the Food Security Mandate 2016:

GEOGLAM CropMonitor.org Crop Monitor for Early Warning July 2022 Africa

Conditions

Out-of-Seaso

Other Countrie

Wheat Calendar

No Data
Countries:

Middle East & North Africa: End of Season Wheat Map

10

Crop Calendar : Planting - Early Vegetative

Vecetative - Reproductive Post Harve

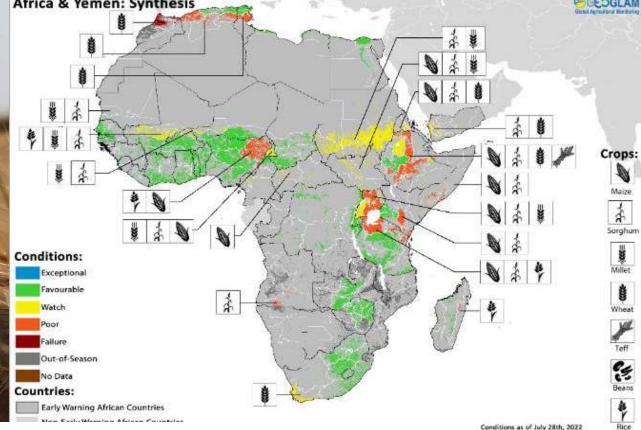
# # 25 - 25

Roanian through Harvest

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# .... and a further Expanded Mandate



UNDRR United Nations Office for Disaster Risk Reduction

**Supporting policy priorities:** 

- Climate Change Adaptation and Mitigation
- Sustainable Development Goals
- Disaster Risk Reduction/Early Warning



2 ZERO HUNGER

6 CLEAN WATER AND SANITATION

**17** PARTNERSHIPS FOR THE GOALS NO POVERTY

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3 GOOD HEALTH AND WELL-BEING



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15 LIFE ON LAND

# **GEO Supplemental NAP Guidance / Agriculture**

### Structure

### Part I: Introduction

- EO for Climate change analysis
- Essential Variables for CCA
- Institutional & Technical requirements for EO

### Part II: EO in thematic areas

 Agriculture & Food Security, Biodiversity & Ecosystems, Coastal Zones, DRR, Urban Areas, Renewable Energy, Water Resources, Forests, Public Health, Mountains

### Part III: EO in Agriculture & Food Security

- Essential Agriculture Variables (EAVs)
- National Crop monitoring system
  - Capacity co-development
- Data, tools and analytics

### TABLE 1. STEPS UNDER EACH OF THE ELEMENTS OF THE FORMULATION OF NATIONAL ADAPTATION PLANS, WHICH MAY BE UNDERTAKEN AS APPROPRIATE<sup>a</sup>

#### ELEMENT A. LAY THE GROUNDWORK AND ADDRESS GAPS

- Initiating and launching of the NAP process
- Stocktaking: identifying available information on climate change impacts, vulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP process
- 3. Addressing capacity gaps and weaknesses in undertaking the NAP process
- 4. Comprehensively and iteratively assessing development needs and climate vulnerabilities

#### **ELEMENT B. PREPARATORY ELEMENTS**

- Analysing current climate and future climate change scenarios
- Assessing climate vulnerabilities and identifying adaptation options at the sector, subnational, national and other appropriate levels
- Reviewing and appraising adaptation options
- 4. Compiling and communicating national adaptation plans
- 5. Integrating climate change adaptation into national and subnational development and sectoral planning

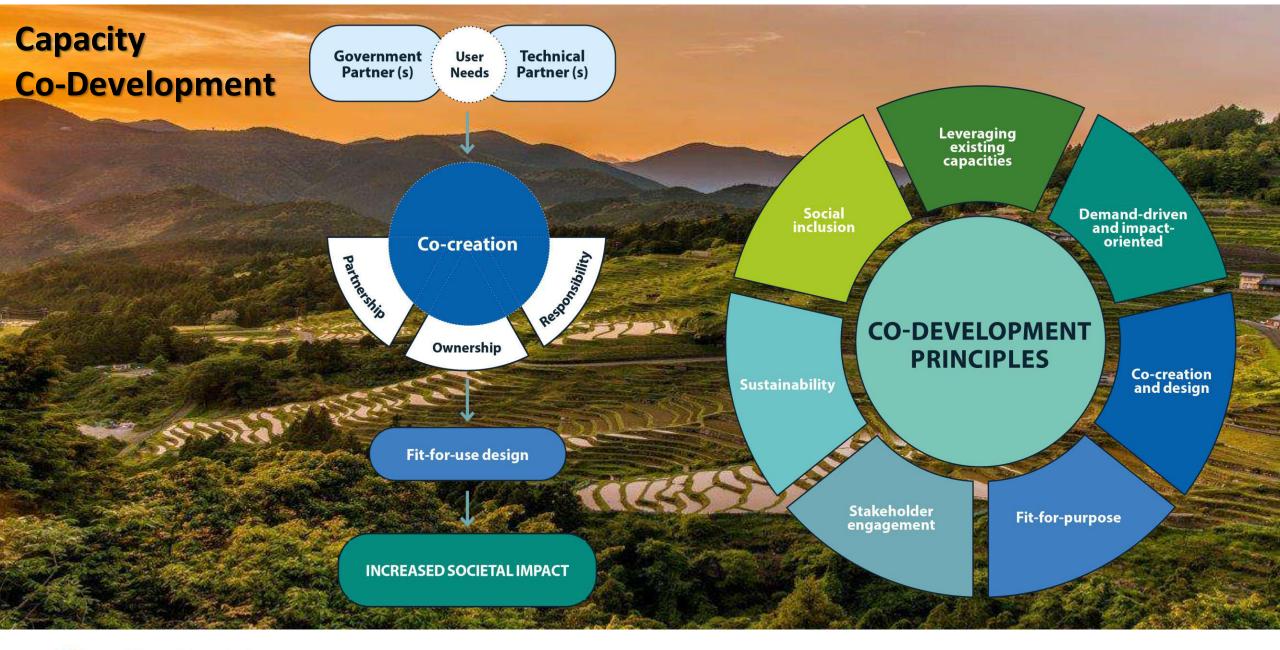
#### ELEMENT C. IMPLEMENTATION STRATEGIES

- Prioritizing climate change adaptation in national planning
- 2. Developing a (long-term) national adaptation implementation strategy
- 3. Enhancing capacity for planning and implementation of adaptation
- Promoting coordination and synergy at the regional level and with other multilateral environmental agreements

#### ELEMENT D. REPORTING, MONITORING AND REVIEW

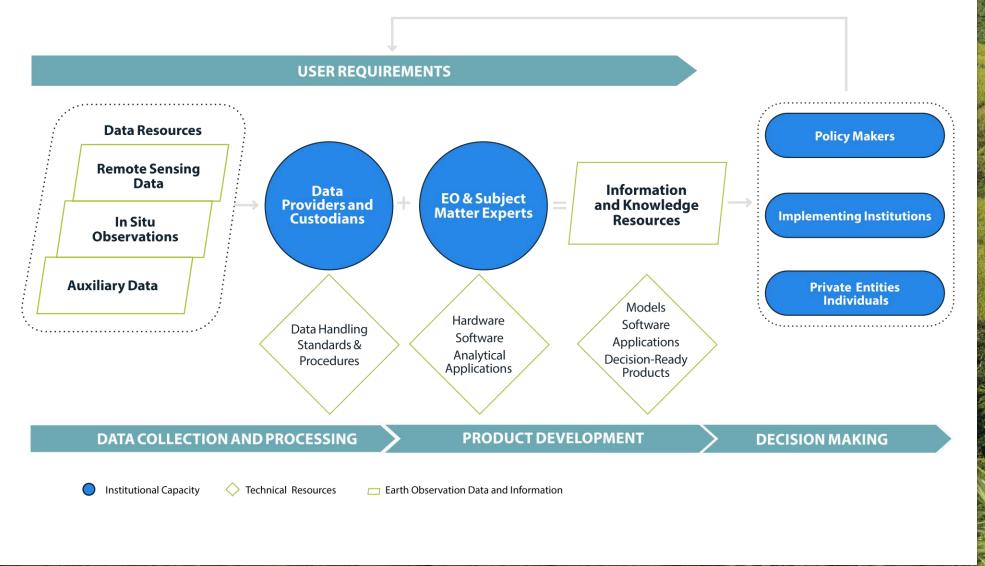
- Monitoring the NAP process
- Reviewing the NAP process to assess progress, effectiveness and gaps
- Iteratively updating the national adaptation plans
- . Outreach on the NAP process and reporting on progress and effectiveness





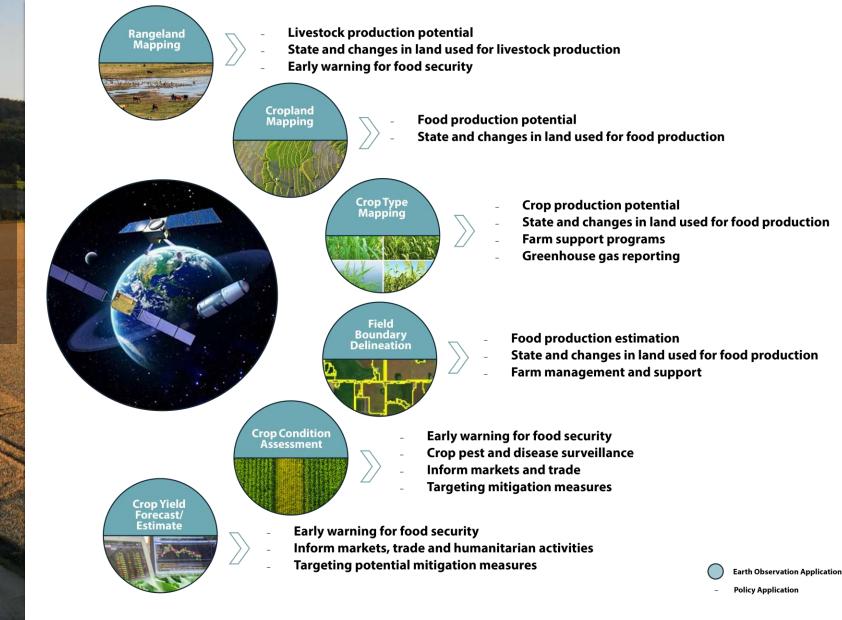


# General Earth Observation Architecture





Monitoring and measuring agriculture trends using Earth Observation





#### 1. CROP CONDITIONS ASSESSMENT

THE CROP MONITOR APPROACH **BRINGS TOGETHER INTERNATIONAL** EXPERTS FROM NATIONAL, REGIONAL AND GLOBAL MONITORING SYSTEMS.

#### 2. OPEN DISCUSSION

PARTNERS DISCUSS ISSUES AND **DISCREPANCIES IN THE COLLECTION OF** ALL CROP CONDITION ASSESSMENTS.

match is a set of an

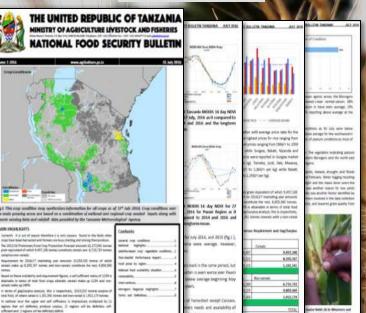


#### **3. SUMMARY REPORT**

**ONCE APPROVED, THE DRAFT IS** READIED FOR PUBLICATION IN THE CROP MONITOR FOR AMIS BULLETIN, OR CROP MONITOR FOR EARLY WARNING BULLETIN.







National Food Security Bulletin, published by the Tanzania Ministry of Agriculture Food Security, National Food Security Division



### Implementing National Crop Monitors



**Kenya Crop Conditions Bulletin** www.kilimo.go.ke

#### ment by Crop Maize Loop Rain Condition

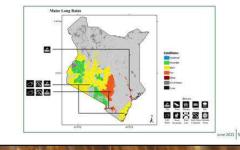
fields 10. in Measure a affected Male and His

14.172.441

ns are watch for lower eastern, Coast, parts o Central, South Rift, North Rift, Western and Nyanza regio tions are poor in Taita Taveta and a total crop failur n Kitui and Tana River Counties. The trend is worsening with the continued dry spell. Below average yields are ted in affected areas. This is because the rains have en denressed and poorly distributed over the season and railing dry conditions after the early cessation of rai Maize in lower areas of Molo, Rongai, Njoro and Subukia are showing serious moisture stress with areas of Kampi moto in Rongai experiencing total crop failure. Parts o Migori, Homabay, Kisumu and Siaya counties have condit ending towards watch. In parts of Busia as well as Tongar Kimilifi and Mt Eleon subcounties in Buneoma, condition

are tending towards watch. There is continued poor rainfall Rgure 3: Malze condition in Cheponge, Elburgon ward, Molo Sub performance leading to moisture stress and outbreak of fall Cou armyworm (FAW). Total crop failure is expected in Tana River

e to inadequate rains which were late and compounded by early cessation and as a result the crop dried below knee high stage. Some farmers in these areas did not even plant. Maize is under favourable conditions in Elgeyo Marakwet, Trans Nzoia, Nandi and Uasin Gishu where the crop stage is vegetative to reproductive. Condition is also favourable in Upper Nyanza, Parts of Western, Kericho, Kajiado and some parts of Bomet County. Maize production is favourable in Kisii and Nyamira counties as the crop was not affected by mid-season drought. Maize production is favourable in Kakamega, Vihiga and parts of Busia and Bungoma. Normal to average yields are expected in areas with prevailing Enurshia ce



### **Mozambique**

Direcção Nacional de Agricultura e Silvicultura–MASA

DEPARTAMENTO DE CULTURAS E AVISO PRÉVIO



#### Publicado em: 12/04/2019

#### **BOLETIM AGROMETEOROLÓGICO**

0 APR 2019-to-18 APR 2019 18 APR 2019-to-26 APR 20

com destaque para o norte de Tete, onde poderá atioxir, valore superiores a 50 mm (fig. i-a), com intensidade (fig3-b) Na região Norte, espera-se precipitação na ordem de 20 mm, o ndência de aumento de intensidade na faixa costeira, podeno atingir valores superiores a 70 mm na faixa costeira de Cab

22123522222222222222

Para os paises da região Austral, precipitação com valores entre 10 mm e 50 mm, podendo atingir valores superiores a 100 mm em Aneola e Zâmbia (fig3-a), cor tendência de aumento de intensidade na África do Sul (fig3-b) i redução da intensidade nos restantes países.

iegundo a estimativa de precipitação por satélite (fig.3), até o dia

Para a região Sul, espera-se precipitação infesior a 25 mm (fig3-a

com tendência de aumento de intensidade, podendo atingir valor

Para a região Centro espera-se precipitação na ordem de 20 mm

tendência de reducão d

20 de Abril de 2019, em seral, prevê-se a oco



precipitação no país

superiores a 50 mm (fig3-b).

# National Impact Stories, Food Security Africa- Uganda

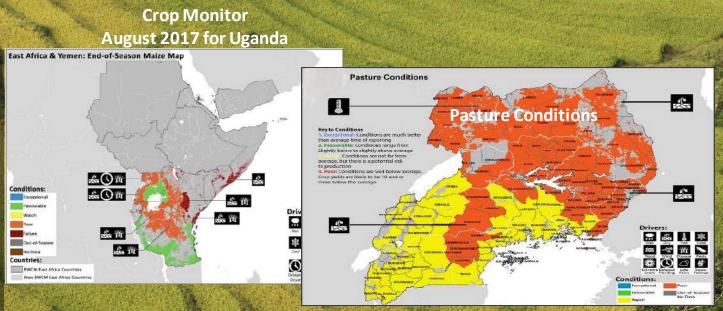
## Karamoja Uganda, 2017

GEOGLAM worked with the Ugandan Office of the Prime Minister to develop a crop monitor in 2016

- In 2017 the crop monitor provided **3 months** early warning of a likely crop failure due to drought, time to proactively **mitigate loss and damage**
- Monitoring triggered the Disaster Risk Financing (DRF) fund to scale-up public works projects in Karamoja, off-setting agricultural losses

End result: USD 2.6 million saved, 150k people helped





"In the past we always reacted to crop failure, spending billions of shillings to provide food aid in the region. 2017 was the first time we acted proactively because we had clear evidence from satellite data very early in the season"

Martin Owor, Commissioner Office of the Prime Minister (OPM)

# Impact: COVID Response

**Cina Lawson** Togolese Minister of Post, Digital Economy and Technological Innovation/

"This map provides unmatched clarity into the nature and distribution of agricultural land nationwide [and helps] **provide decisive knowledge being used to design social protection policies** aimed at improving the livelihoods of agrarian rural communities."

> @G20\_GEOGLAM www.geoglam.org

**CROP PROBABILITY** 

0.25 0.5 0.75



# ... how to follow up...

- GEOGLAM is interested in supporting countries that want to further investigate to application of Earth observations-based agriculture monitoring to support the development and implementation of their National Adaptation Plans
- Interested countries should contact the GEOGLAM Secretariat for a follow up discussion.
- Future events include a learning exchange early 2023 on the implementation of crop monitors with a focus on East Africa, and future events will be planned as dictated by demand

To register interest: Email to: geoglam@geosec.org



With Support From Department for Environment Food & Rural Affairs



Federal Ministry of Food and Agriculture Agriculture and Agric-Food Canada Agric-Food Canada Agriculture et Agroalimentaire Canada

# **Place holder for Jane's slides**

