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Flash Talk: The Initiative of Attainable Yield Gap in Africa

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Flash Talk: The Initiative of Attainable Yield Gap in Africa

Towards Africa's SDGs2

06 11 2023

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Outline

Background

Initiative research content

Activities implemented

Outlook

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Background-SDG2 challenges for Africa

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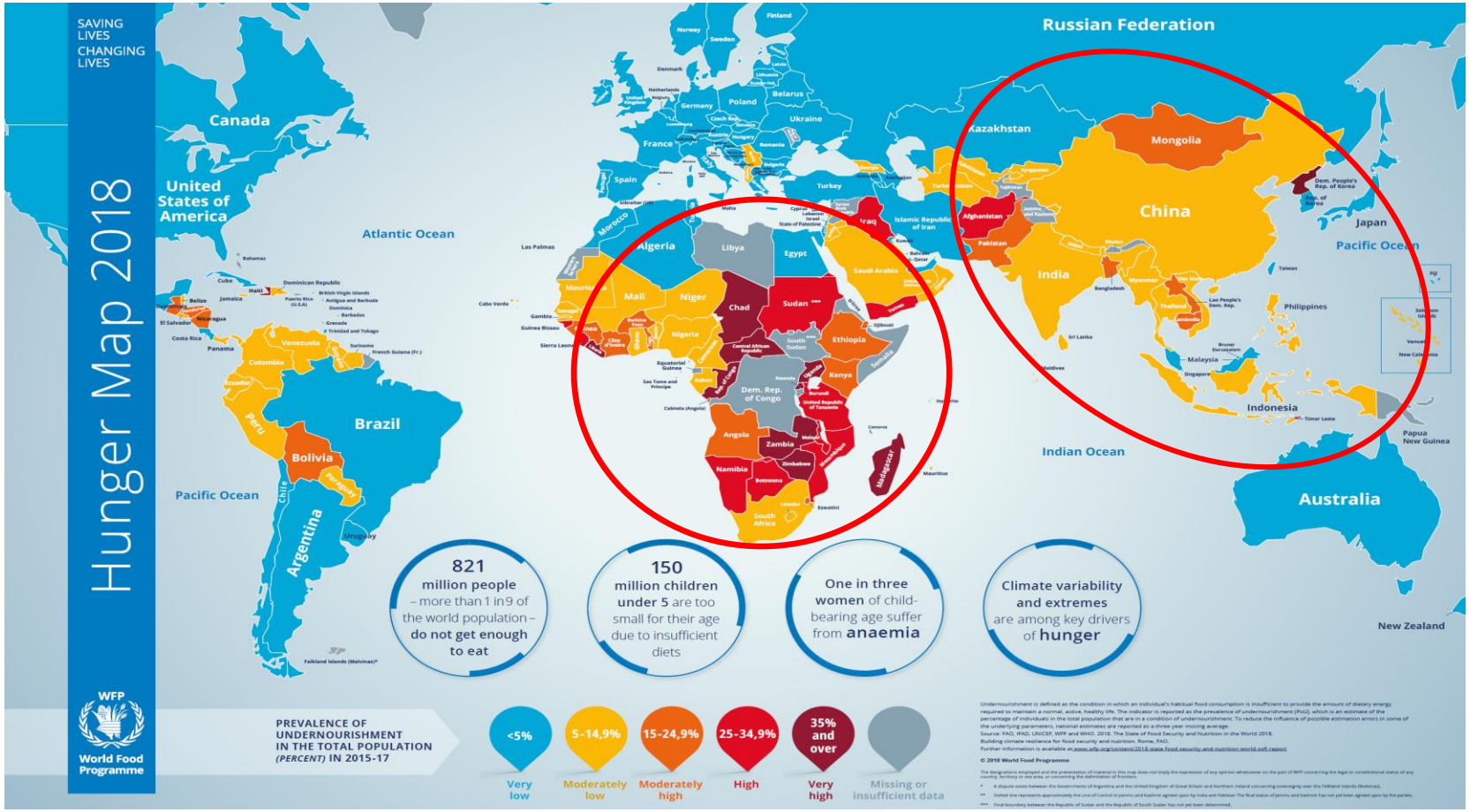
- The countries along the Asia and Africa face a huge challenge in meeting their food security goals
- Africa is the hotspot regions suffering from food shortage
- Find a potential solution to address food insecurity issue is urgent for African countries.



Source: World Food Programme

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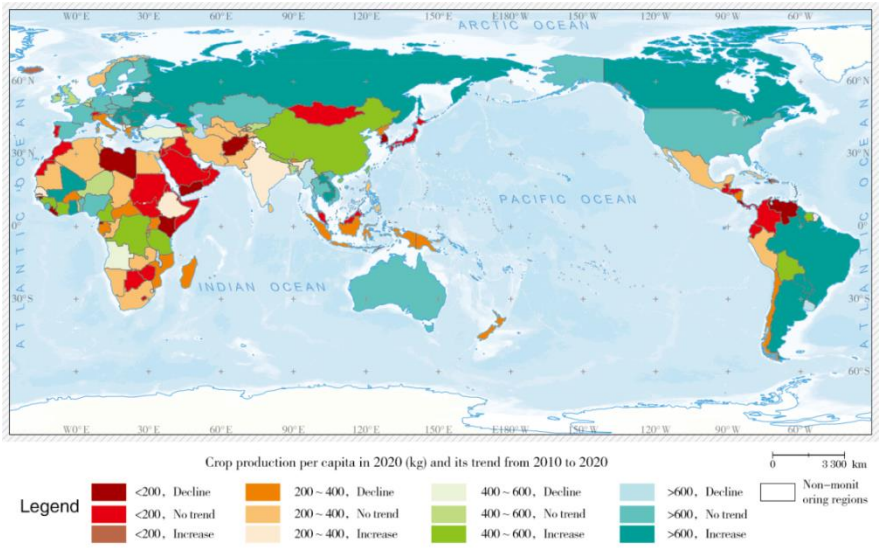
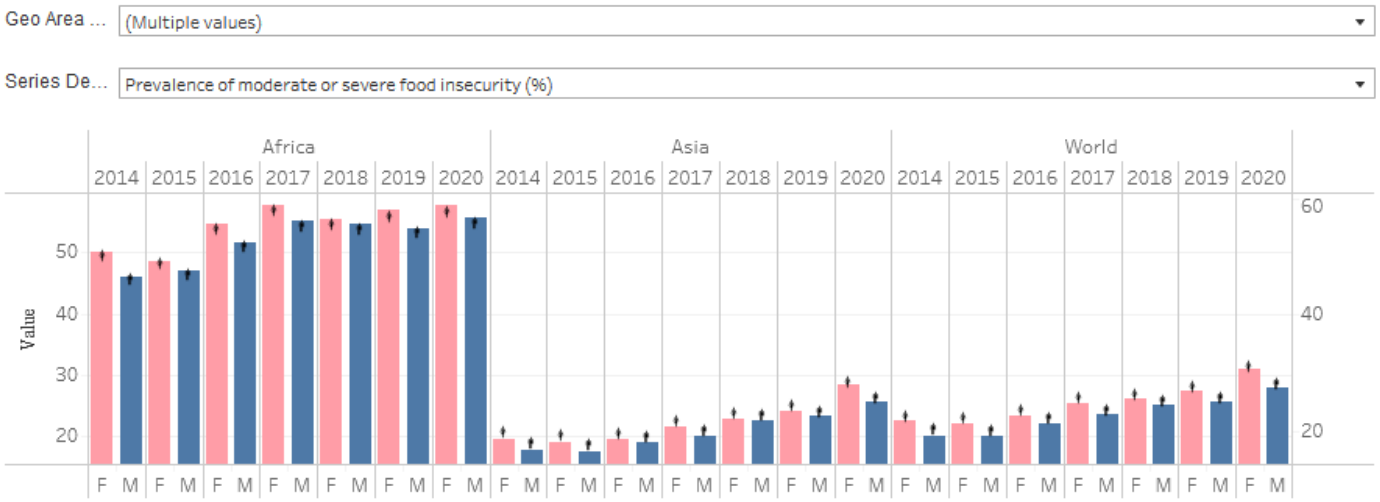
Background-Food Insecurity Issues in Africa #TheEarthTalks

- SDG2 target: By 2030, end hunger and ensure access by all people to safe, nutritious, and sufficient.
- The FAO SDG2 Indicator tracker showed that Africa has the highest proportion of moderately to severely food-insecure people.



Global Food Security Annual report, 2021



Percent of moderately or severely food-insecure

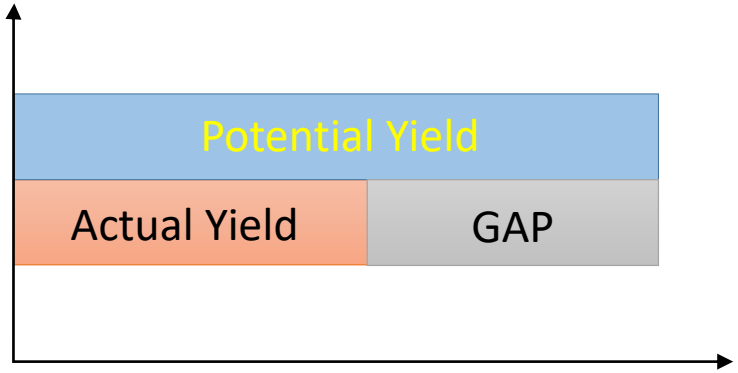
(Source: https://www.fao.org/sustainable-development-goals/indicators/2.1.2/en/)

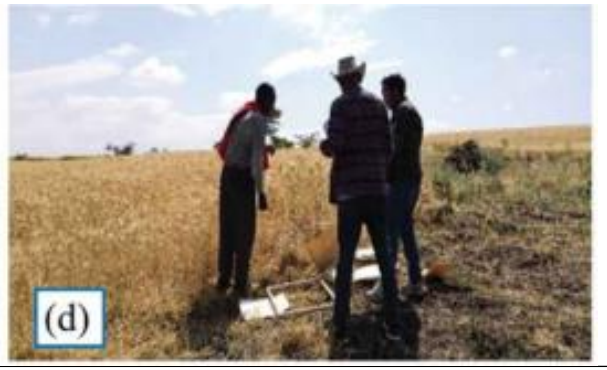
- Ways to increase crop production in Africa
  - ✓ Expand the plating area of cropland
  - ✓ Improve crop yield and reduce the yield gap between actual yield and potential yield

Research content and objective

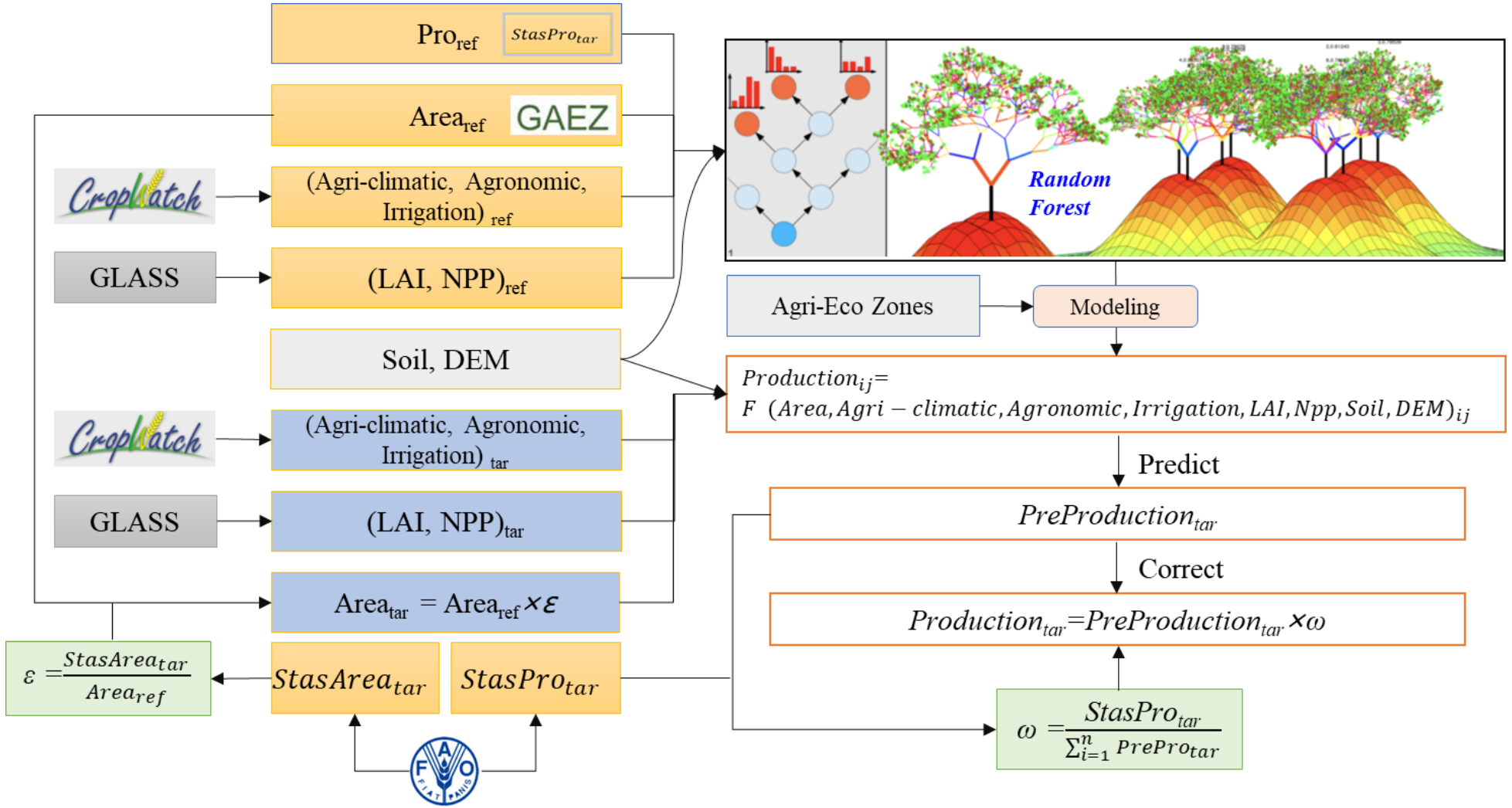
Objectives of the Achievable Yield Gap (AYG) initiative: to identify the gap between actual and potential yields that can be achieved at national and sub-regional levels, quantify the key drivers, and provide support to reduce the gap in support of achieving SDG 2 in Africa.

- Quantify the actual crop yield
- Quantify the potential crop yield
- Identify the limiting factors affecting the yield gap
- Policy recommendation to achieve SDGs2





Method: Spatial Allocation Model



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Crop Production data and Performance Assessment

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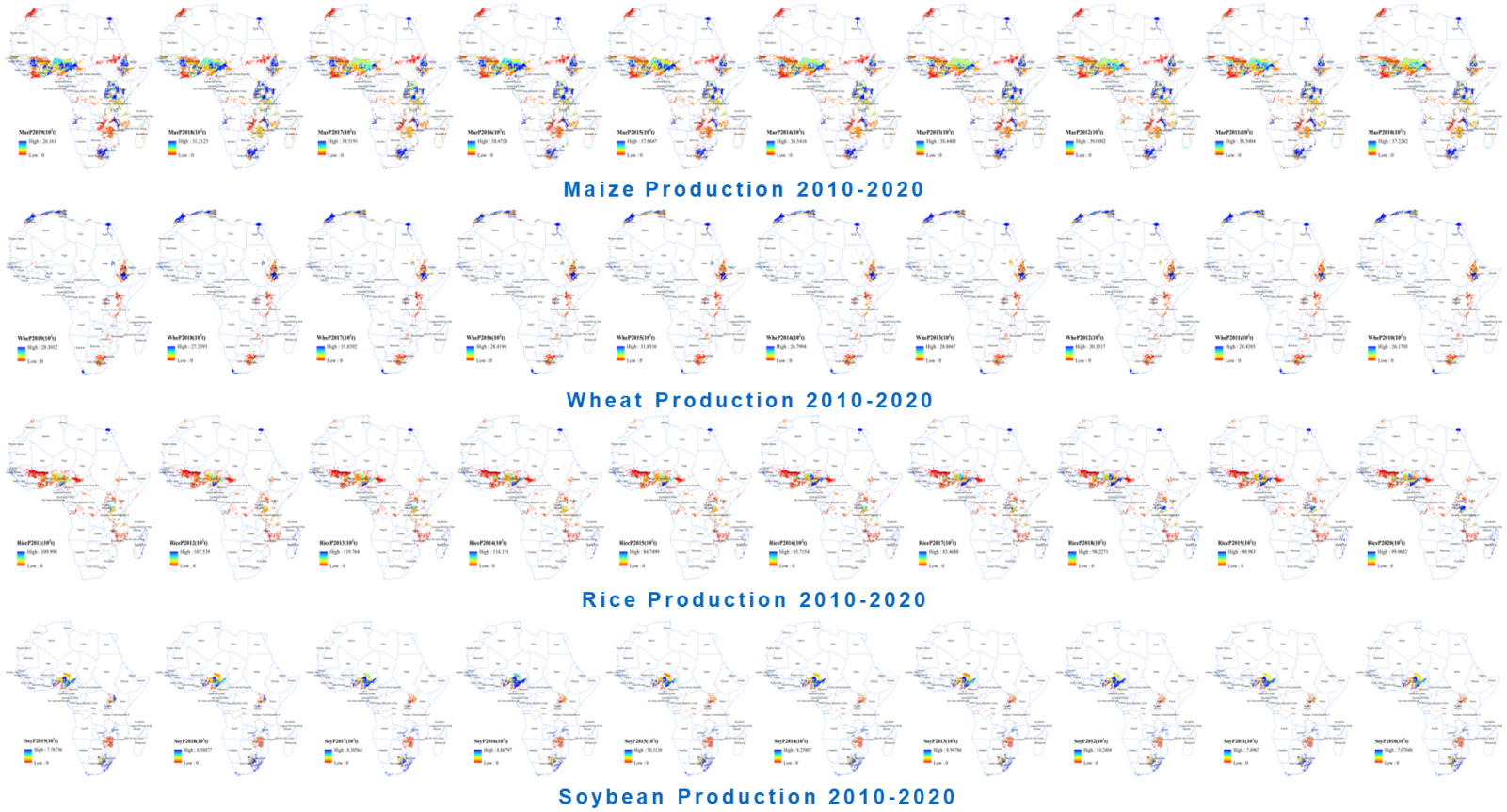
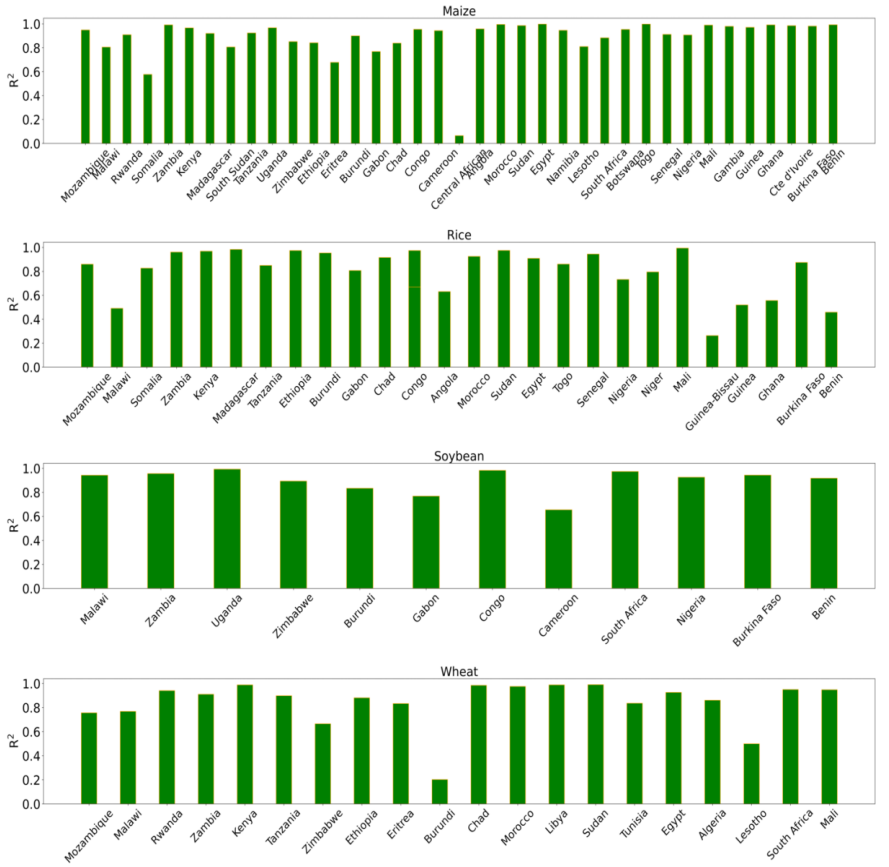


Crop Production data in Maize, Wheat, Rice, and Soybean from 2010 to 2020



Performance assessment

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Crop Production data Sharing On CropWatch and CBAS

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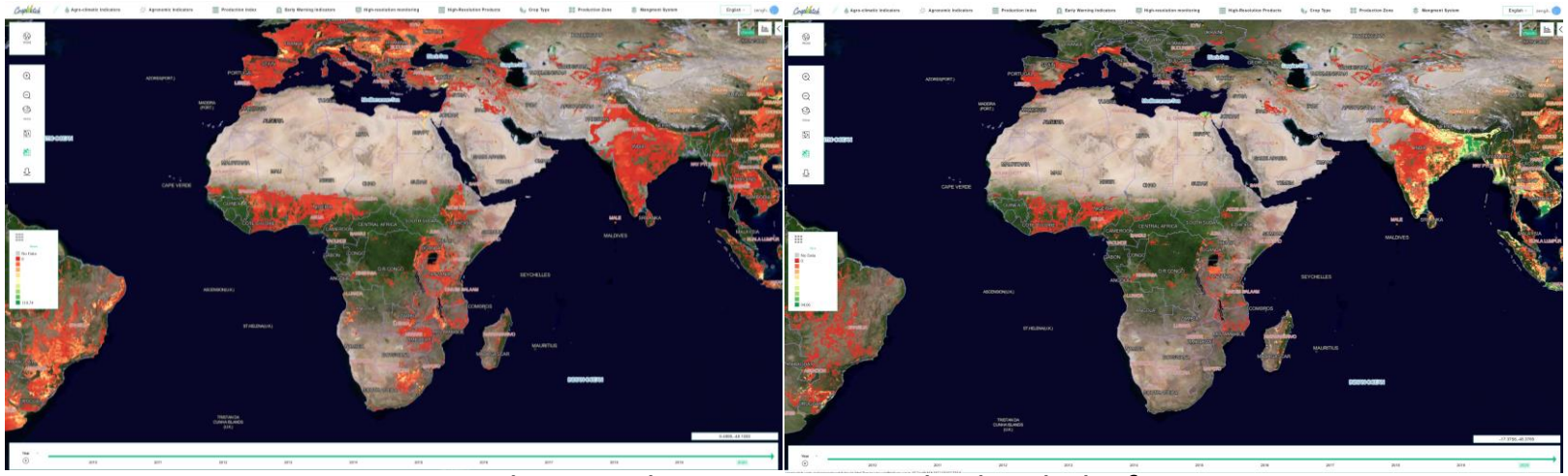
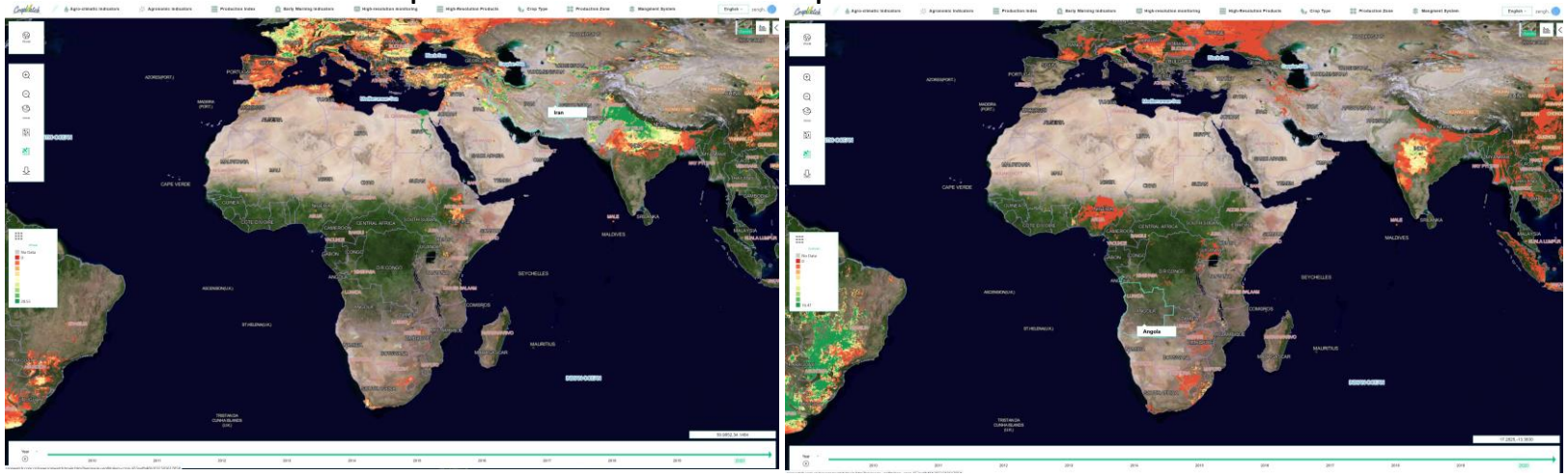
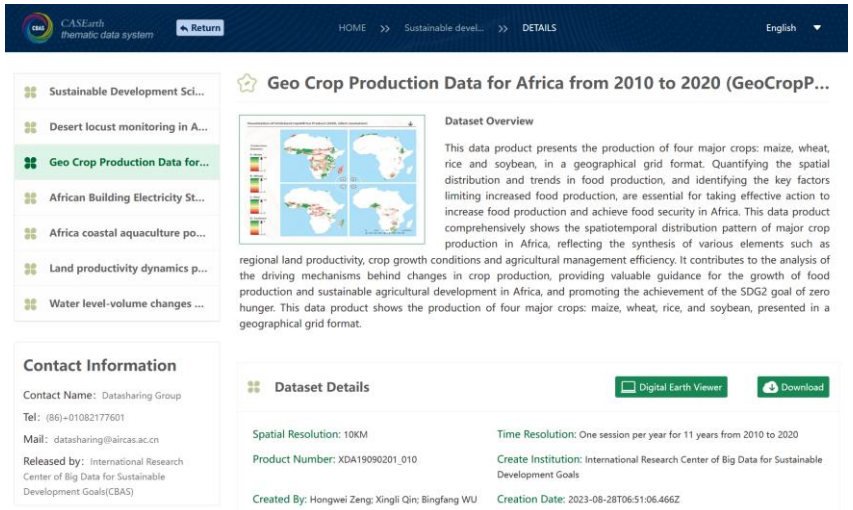


Crop Production data in CropWatch Cloud Platform





Crop Production data in CBAS platform

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Data accessing address https://essd.copernicus.org/preprints/essd-2023-346/

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Activities implemented

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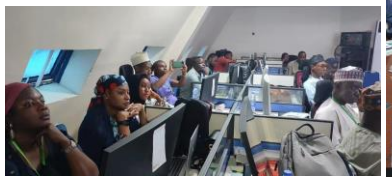
Workshop in Beijing(Oct 2023)



Workshop in NARSA of Nigeria (Aug 2023)

Workshop in Beijing(Oct 2023)

Regional Workshop in Mauritius(Aug 2023)

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Crop Production Outlook and the State of Food Security

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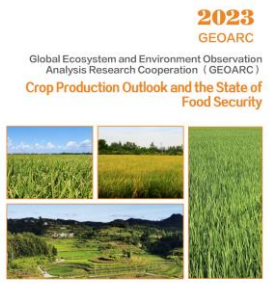
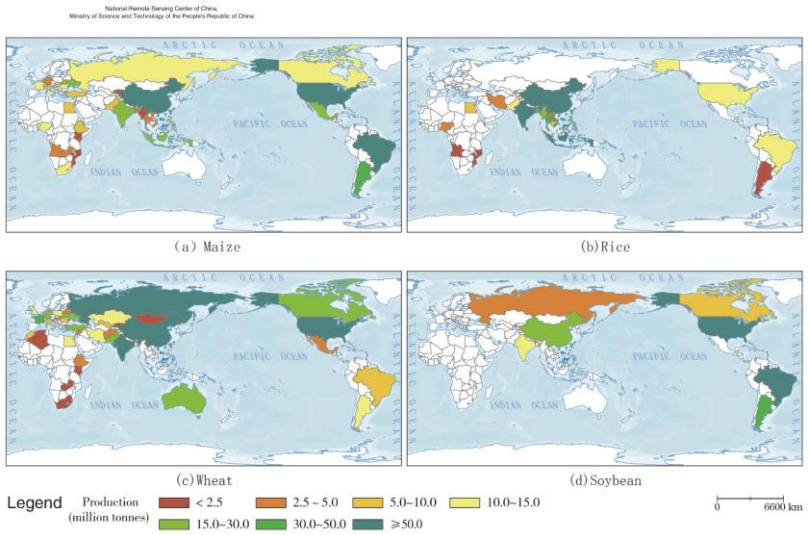
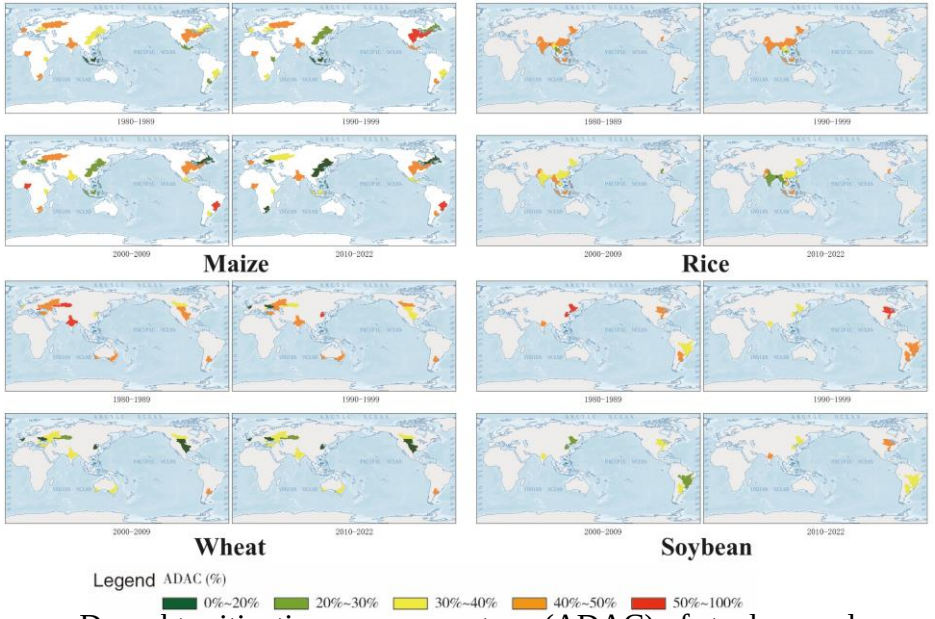


- Global staple cereal and oil crops production of 2023 is estimated to reach 2,876.96 million tonnes, up 0.6%



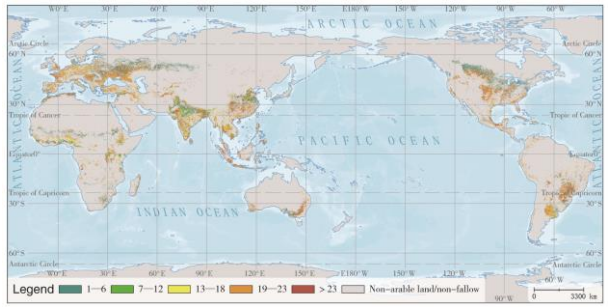
Production of staple cereal and oil crops in 47 major producing countries, 2023

- Drought mitigation capabilities in global staple cereal and oil crops major producing regions have improved significantly with measures including improved irrigation, mulching, conservation tillage, crop structure adjustment and planting drought-resistant varieties

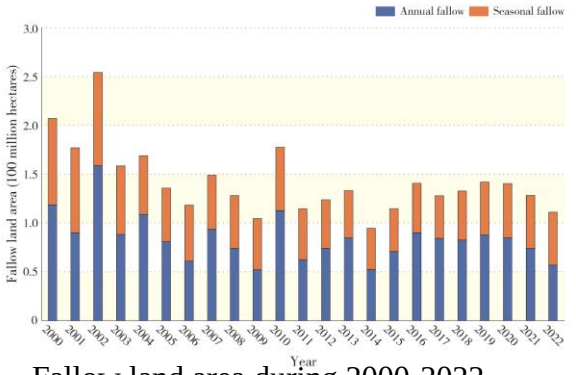


Drought mitigation area percentage (ADAC) of staple cereal and oil crops major producing regions

- Global fallow land area reduced 46.4% 2022 from 2000, indicating the global cropland utilization efficiency has steadily increased



Global frequency of fallow land from 2000 to 2022



Fallow land area during 2000-2022

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