



AFRIGEO INITIATIVE

By
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ABOUT AFRIGEO

AfriGEO is an initiative of the African community in GEO aimed at providing a coordination framework and platform for Africa's participation in GEO. In addition, it is a:

- Pan African initiative to raise awareness and develop capacity on EO for governments, research organizations and the commercial sector;
- Framework for strengthening partnerships and collaborations within Africa;
- Gateway into Africa for international partners; and
- Support mechanism for the implementation of GEO objectives and programmes in Africa.

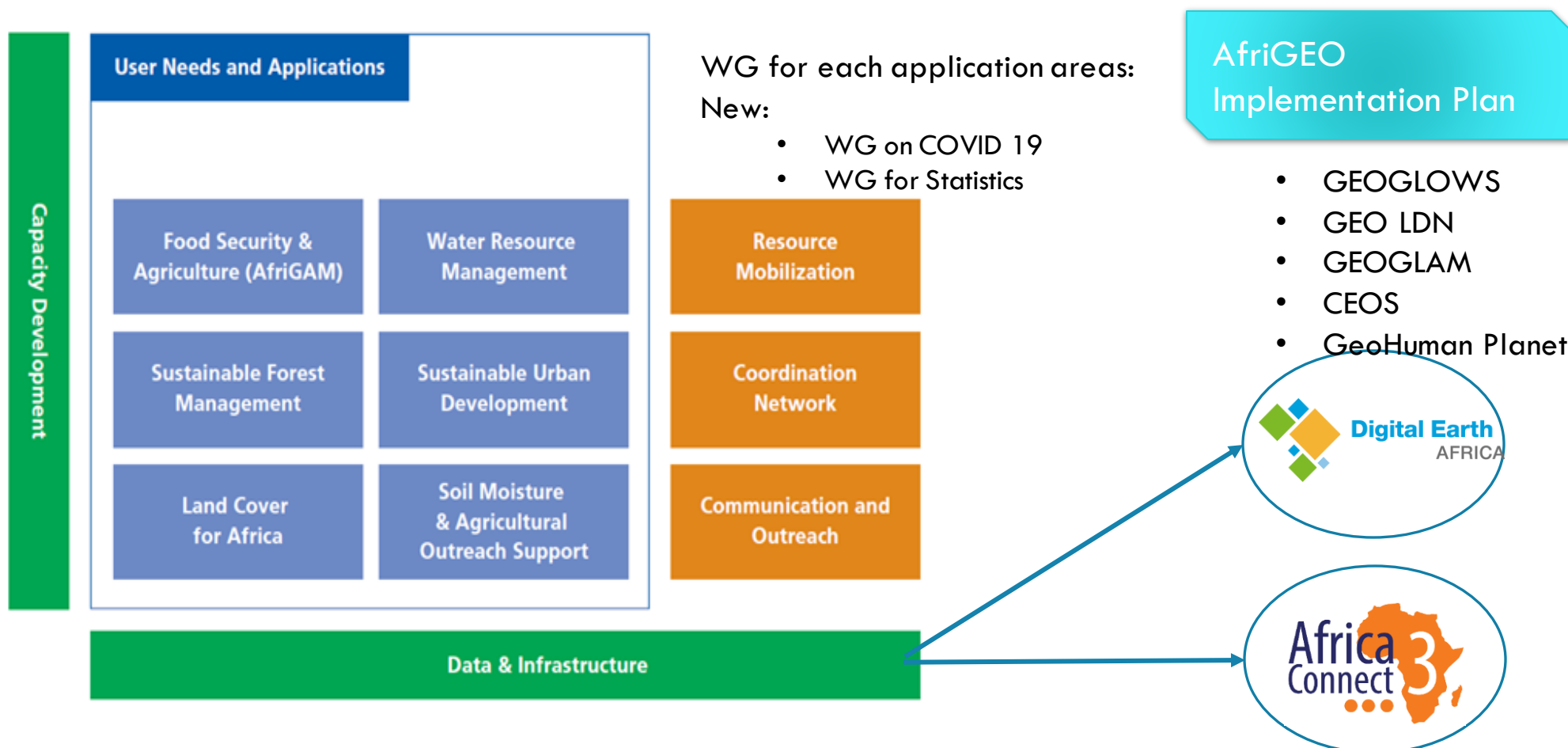
AFRIGEO OBJECTIVES

- Strengthen connection with the current GEO Principals in national government agencies in Africa, participating organizations and enlarge the GEO partnership in the Regional Economic Communities (RECs): ECOWAS (Economic Community of West African States), AMU(Arab Maghreb Union) , COMESA (Common Market for Eastern and Southern Africa), CENSAD (Community for Sahel Saharan States) , EAC (East African Community), ECCAS (Economic Community for Central African States), IGAD (Intergovernmental Authority on Development), SADC(Southern African Development Community) and with the African Union;
- Increase uptake of EO in Africa through the promotion of long-term Human Capital Development programmes;
- Facilitate and drive programmes towards achieving the Global, RECs and Africa wide goals and objectives i.e. **Africa Agenda 2063, Vision 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement**;
- Support international collaboration by connecting national and regional institutions and programmes with GEO and other Regional GEOs;
- Foster creation of synergies to reduce duplication of efforts across Africa;
- Liaise with the GEO secretariat to ensure synergic and streamlined operations;
- Advocate for the uptake of EO in decision making and raise awareness on benefits of Earth observations for the continent;
- Develop a strategy of access and dissemination of Earth observation data and information throughout Africa and
- Ensure communication, outreach, awareness, user engagement, and mobilization of resources.

A map of the African continent with country borders outlined in white. Countries are colored in two shades: a dark blue and a light grey. The blue countries include Egypt, Sudan, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Rwanda, Burundi, Tanzania, Mozambique, Zimbabwe, Botswana, Namibia, South Africa, Lesotho, Swaziland, Mauritius, and Madagascar. The grey countries include Libya, Tunisia, Algeria, Morocco, Mauritania, Mali, Niger, Chad, Nigeria, Cameroon, Gabon, Congo, DRC, Angola, Zambia, Malawi, and Mozambique.

- | | |
|-----------------------------|----------------------------|
| 1. Algeria | 16. Mauritius |
| 2. Burkina Faso | 17. Morocco |
| 3. Cameroon | 18. Niger |
| 4. Central African Republic | 19. Nigeria |
| 5. Republic of the Congo | 20. Rwanda |
| 6. Cote d'Ivoire | 21. Senegal |
| 7. Egypt | 22. Republic of Seychelles |
| 8. Ethiopia | 23. Sierra Leone |
| 9. Gabon | 24. Somalia |
| 10. Ghana | 25. South Africa |
| 11. Guinea | 26. Sudan |
| 12. Guinea-Bissau | 27. Tunisia |
| 13. Kenya | 28. Uganda |
| 14. Madagascar | 29. Zimbabwe |
| 15. Mali | 30. Namibia |

SIX (6) ACTION AREAS THAT SUPPORT WORK PROGRAMME IMPLEMENTATION:



OUR BEST PRACTICES

- Use cases
- Needs based implementation
- Communities of Practice/Working Groups
- Collaborations
- Value addition
- Alignment with National/Regional Priorities
- Continuous engagement (Steering Committee, WG)
- Youth, Women and Indigenous Communities Engagement
- Regional GEO Exchanges



Statistics WG Workshop, Pretoria



DE Africa Launch, RCMRD



AfriGEO Symposia

LINKAGES WITH GEO MEMBER STATES

a) Nigeria

GEO, AfriGEO secretariat held a meeting in October with Minister of State for Environment, Ms. Sharon Ikeazor and her delegation. The Minister had expressed interest in understanding how the country can best benefit from GEO and AfriGEO. Some of the key activities highlighted in this meeting included: GFOI, GEO BON

b) Rwanda

In October 2020, we held a meeting with the Rwanda GEO correspondence, Mr. Alexis Rutagengwa and his delegation together with the AfriGEO secretariat and the GEO secretariat. Rwanda being one of the recent entrants into the GEO community wanted to best understand how GEO can support their recently launched space agency.

c) Uganda

In February 2021, we held a meeting with the Ministry of Science and Technology, Ministry of Lands and Housing and staff members from RCMRD and the AfriGEO Secretariat to discuss how we can collaborate to support the Uganda Space agency activities.

KAMPALA INSPIRE HACKATHON

The goal of the Kampala INSPIRE Hackathon 2020 was to build and strengthen relationships between several EU projects and African communities that started in 2019 with the Nairobi INSPIRE hackathon. RCMRD/AfriGEO was engaged as a co-organizer with Lilian Ndungu as the contact person and mentor for the Desert Locust challenge as well as contributing to the Smart Afrihub and EO4Agri challenge.



Desert locust crisis : FAO in Emergencies

DE AFRICA

Key Outputs

A sustained capability hosted in Africa and governed by African stakeholders

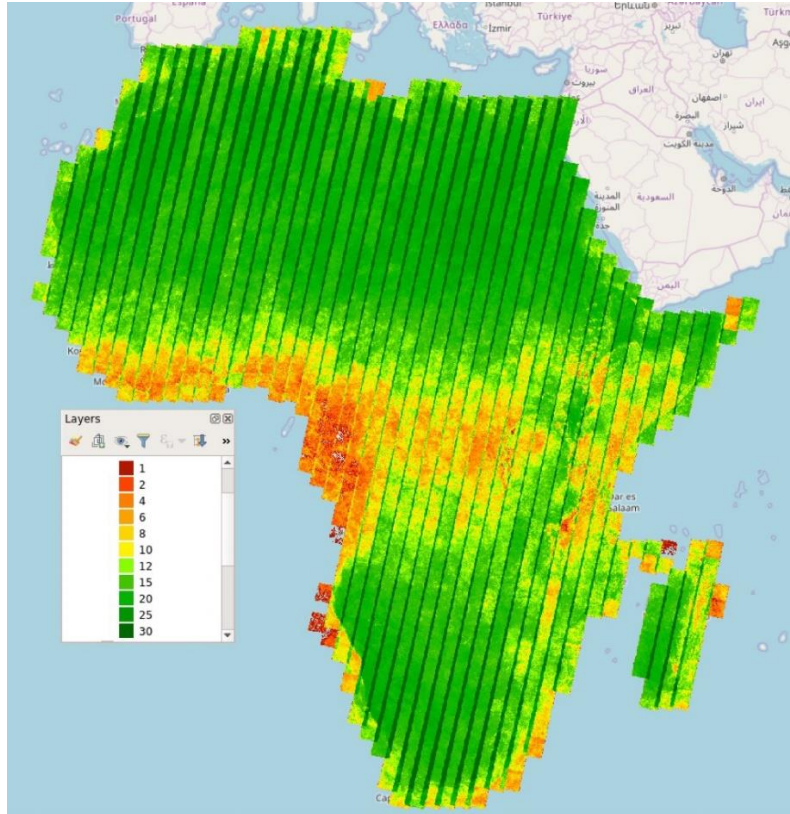
An operational, continental system producing regular, decision-ready products that are free and open to all sectors:

A continental network of human capability to maintain the services, develop new products, and to adopt and apply the products to better inform decisions

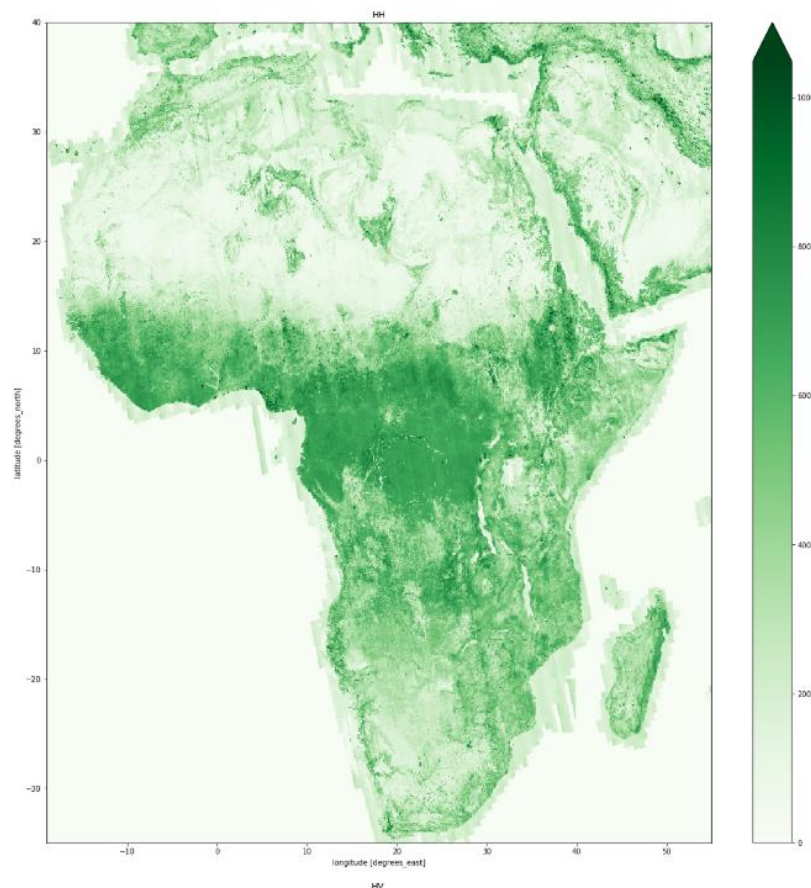
A nascent ecosystem of innovation, producing new and unforeseen services and rapid growth in the impact of satellite information for Africans

Alignment of effort across programs seeking to use satellite images to produce valued information in Africa

- **DE AFRICA:** Satellite products: datasets of measurements taken by satellites
Derived products: datasets created by applying algorithms to satellite products

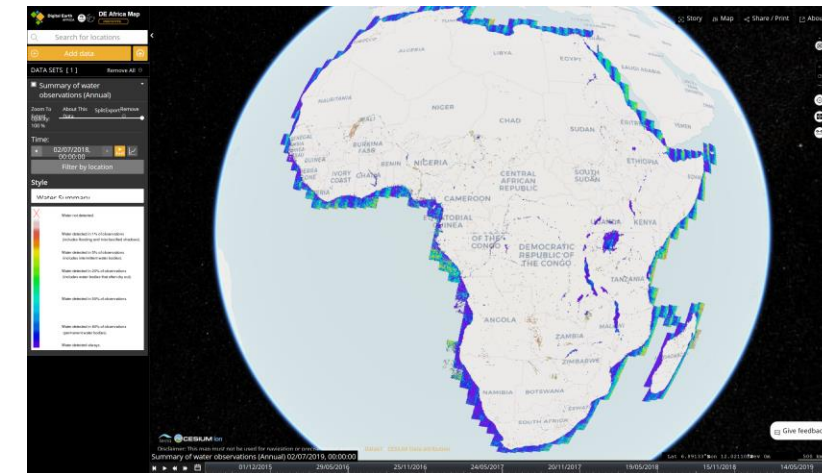


DE Africa
Landsat-8, clear observations, 2018, for Africa



DE Africa – ALOS radar dataset

DE Africa – WOfS product (Water Observation from Space)



Uses

- Mapping water Courses
- Coastal Changes
- Ephemeral water bodies
- **Flood event mapping**

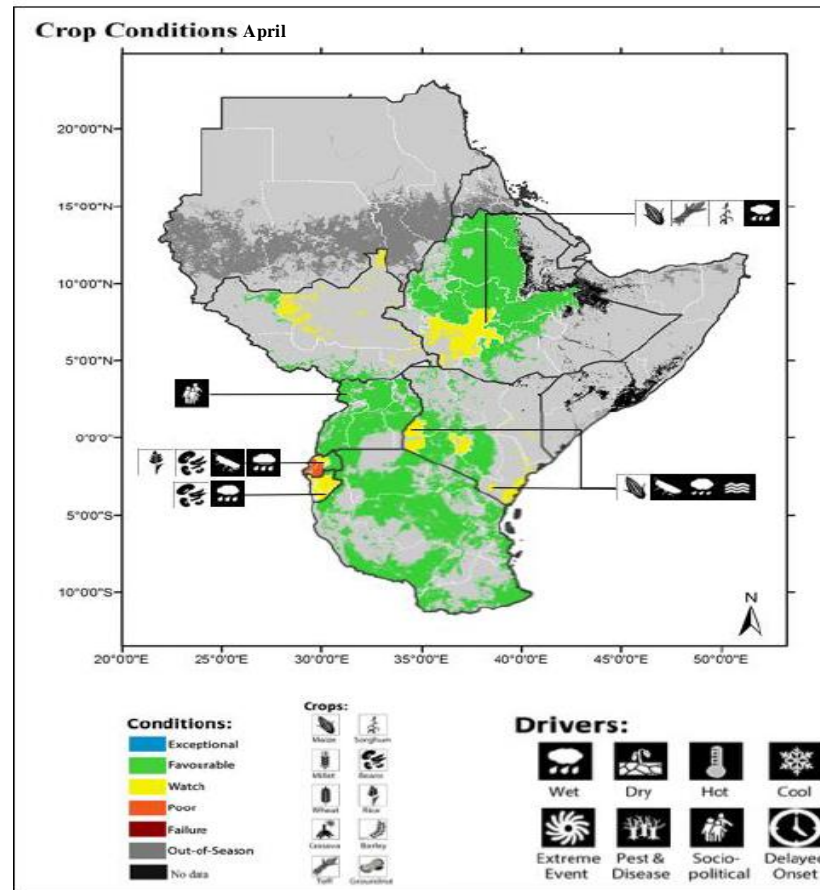


REGIONAL AND NATIONAL CROP MONITORS

<http://www.kilimo.go.ke/index.php/2018/06/26/kenya-national-crop-monitor-for-may-2018/>

<http://pekko.geog.umd.edu/usda/apps/>

Regional Crop Conditions



Republic of Kenya
Ministry of Agriculture, Livestock and Fisheries

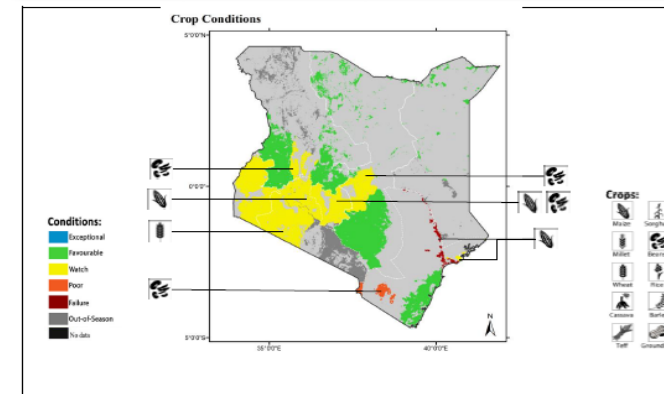
May 2018 Issue 1

CROP CONDITIONS BULLETIN: May 2018

National Synthesis

SUMMARY

Despite good rainfall distribution, flooding, invasion by pests and diseases and too much rainfall that affected farm operations rendered crop conditions in parts of the country under watch. Beans were especially affected by the extremely wet conditions. Crop failure may be experienced in Taita Taveta (beans) and Tana river (maize) due to flooding. However, the heavy rains resulted in favourable conditions for maize production in the lower Eastern, Western and North Rift regions. Fall army worm (FAW) is a threat affecting many maize farmers. The government is working with stakeholders to undertake various intervention measures.



Crop conditions map showing regional crop conditions information in Kenya as at 23rd May 2018. Crop Monitor map is based on a combination of several variable including remotely sensed data, ground observations, field reports, national and regional experts. Crops with conditions that are other than favorable are labeled on the map with their driver.

OUTLOOK (KMD/SDA)

Good crop performance is expected to continue over most parts of Kenya. The situation is particularly likely to be better in the agriculturally high-potential areas of Western, North Rift and Nyanza regions and Nandi Hills, where near-average to above-average rainfall is forecast and also expected to continue into June-July-August period. Parts of Western Kenya are likely to experience high rainfall amounts which might lead to localized flooding and associated impacts.

Contents

National Synthesis.....	1
Assessment by Region.....	2
Assessment by Crop.....	3
Climate outlook.....	5
Market information.....	6
Definitions	8
Partnerships.....	8

DISASTER RISK REDUCTION IN WEST AFRICA – A CASE OF WILDFIRE OUTBREAK

MOBILE ALERT APPLICATION

- Wildfire outbreaks in West Africa are a huge challenge in the continent.
- There's Limited capacity for forecasting these fires
- Earth Observation Research and Innovation Centre (EORIC) of the University of Energy and Natural Resources and a contributor to the AFRIGEO has been working on the development of early warning systems for wildfires.
- Centre further developed their early warning systems into an integrated Advanced Virtual Fire System (AVFS)
- The test website is <http://api.avfs.xtellixapp.com/> and the short code is *920*49# (only working within Ghana)
- AVFS was piloted with a session of farmers in Ghana. The system allows farmers and the public to send SMS to their phone and obtain vital information on the weather and wildfire outbreaks.

GEOGLOWS

GEOGloWS ECMWF Streamflow Service, European Centre for Medium-range Weather Forecasting (ECMWF), is downscaled and routed to the streams using the Routing Application for Parallel computation of Discharge (RAPID)

- It's very useful for forecasting and providing information for areas with limited data on stream flows globally (up to 15 days)
- Some Key Regional Implementers include the SERVIR hubs





EO AFRICA
R&D Facility



EO AFRICA RESEARCH AND DEVELOPMENT FACILITY

The R&D Facility is established by a consortium led by the ITC Faculty of the University of Twente, the Netherlands. The R&D Facility will implement the following main activities within the Thematic areas of Water and Agriculture (*research could potentially cover the water related disasters aspects and drought risks*):

- Issue and support Research Calls for African-European collaborative R&D “tandems” of scientists
- Establish a digital Innovation Laboratory for EO application development in the cloud, fostering an open-source EO development community
- Run the English-French bi-lingual EO AFRICA Space Academy offering EO training courses
- Open a Digital Space Campus for Africa offering online EO learning/training as part of the EO AFRICA Space Academy

REQUESTS

Looking for More partners to support AfriGEO on DRR activities through either:

- Data access
 - Joint Implementation
 - Training and Capacity Buildings
 - Webinars
-
- Participation in the 5th AfriGEO Symposium 17th -19th November, 2021 to be held Virtual- If you are working on any of the GEO priority actions areas in Africa: Paris Agreement, DRR or SDG's, this is your opportunity to engage with the AfriGEO community to create synergies and collaborations. Registration will be open by the coming two weeks



Thank You!

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