Africa Drought Monitoring and Advisory (ADMA)

User engagement

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About Presenter

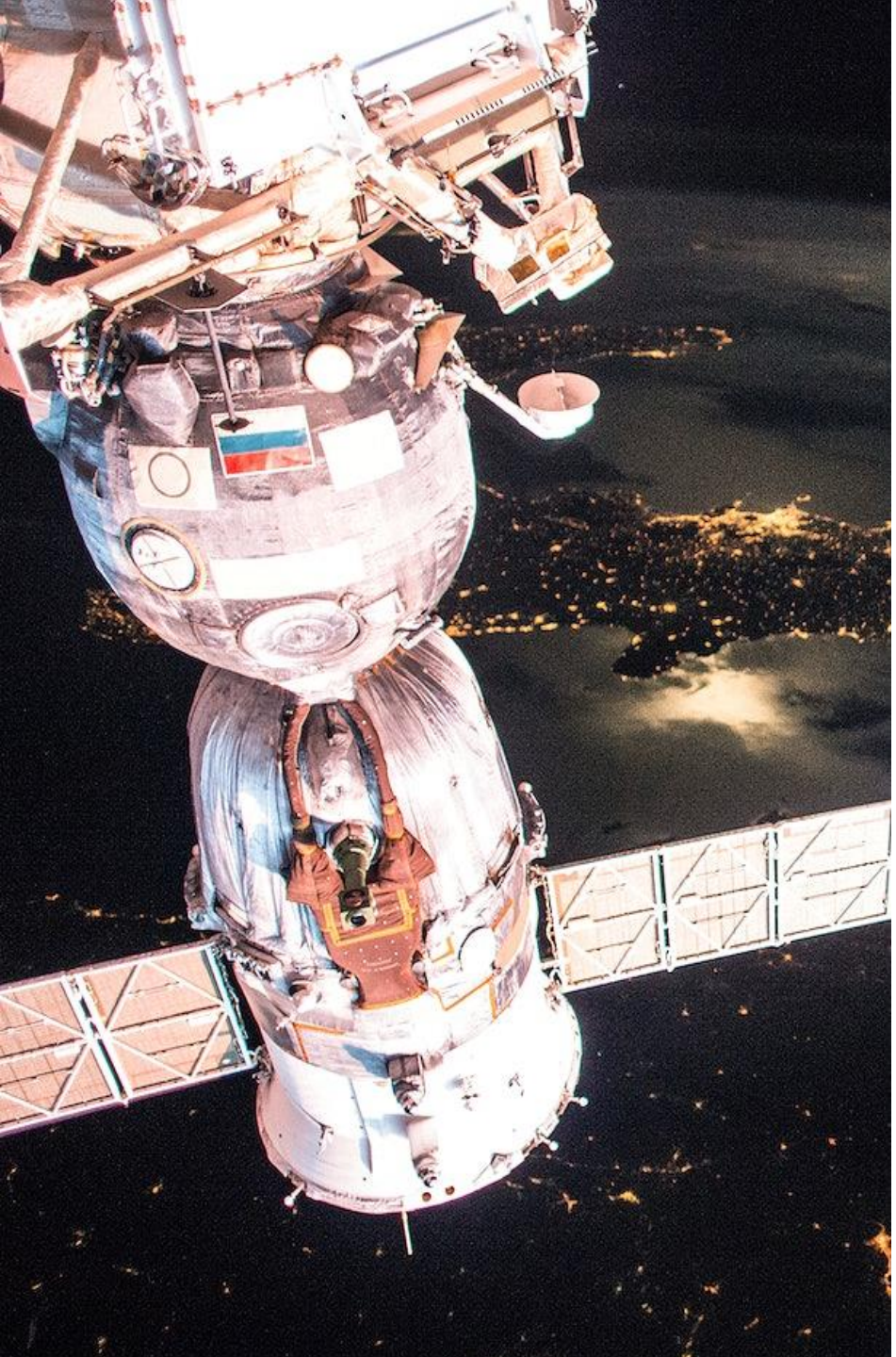
Collins Asega background is in earth sciences, focusing on climate, agriculture, and hydrology.

He has developed skills in spatial data analysis and the application of machine learning and AI in environmental contexts, such as hazard mapping, Agtech and impact-based forecasting. His work has led him to engage in projects with organizations like International Centre for humanitarian affairs (ICHA), Locate IT, PULA.

He currently applies his expertise in geo-web application development as a NORCAP déployée at the African Centre for Metrological Applications for development and spends time building technologies for the geospatial ecosystem

The team Collaborators

- Working Closely with JRC
- NORCAP Deployee’s at ACMAD and WMO Addis Ababa
- ACMAD staff
- ICPAC

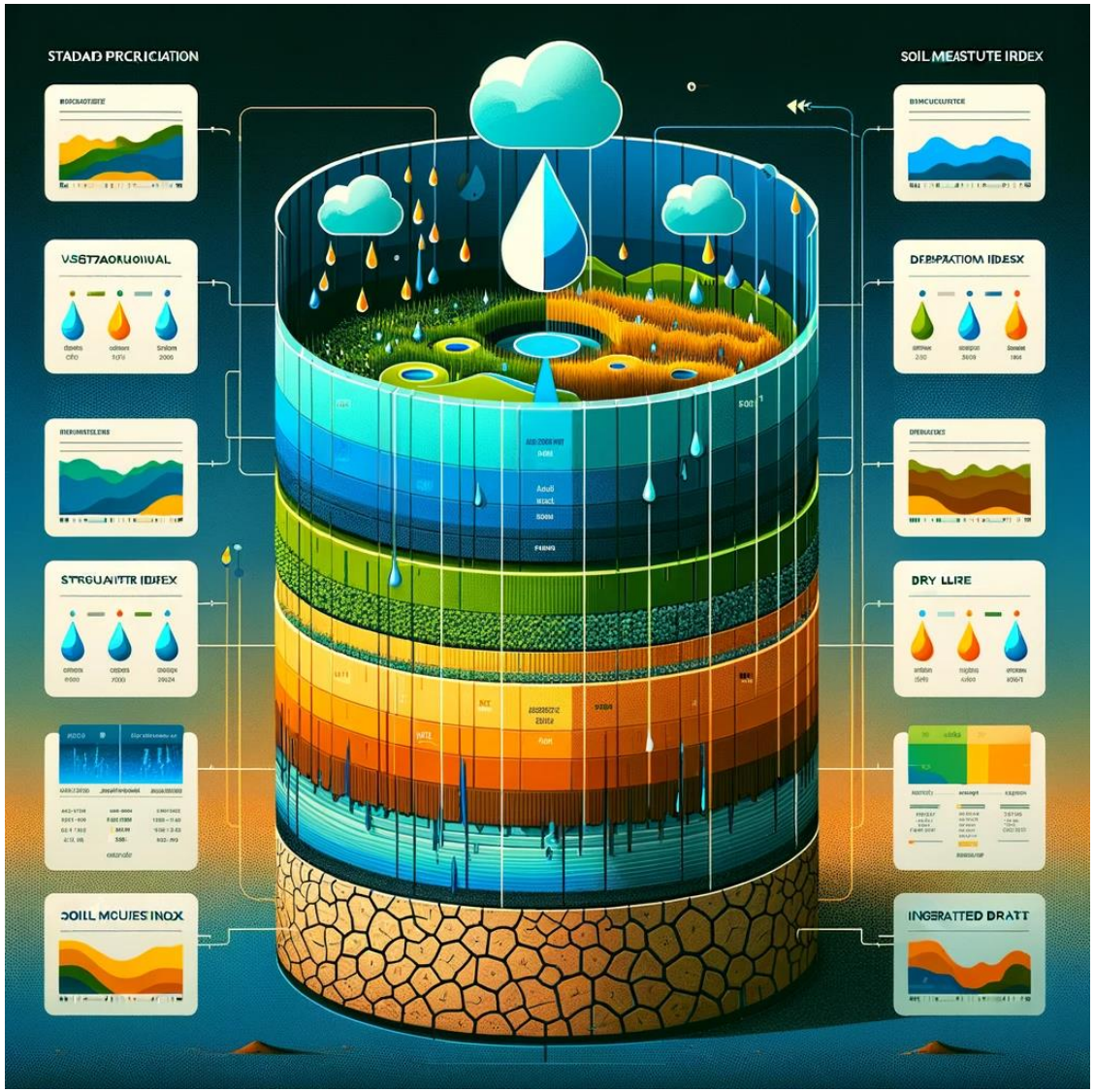


Agenda

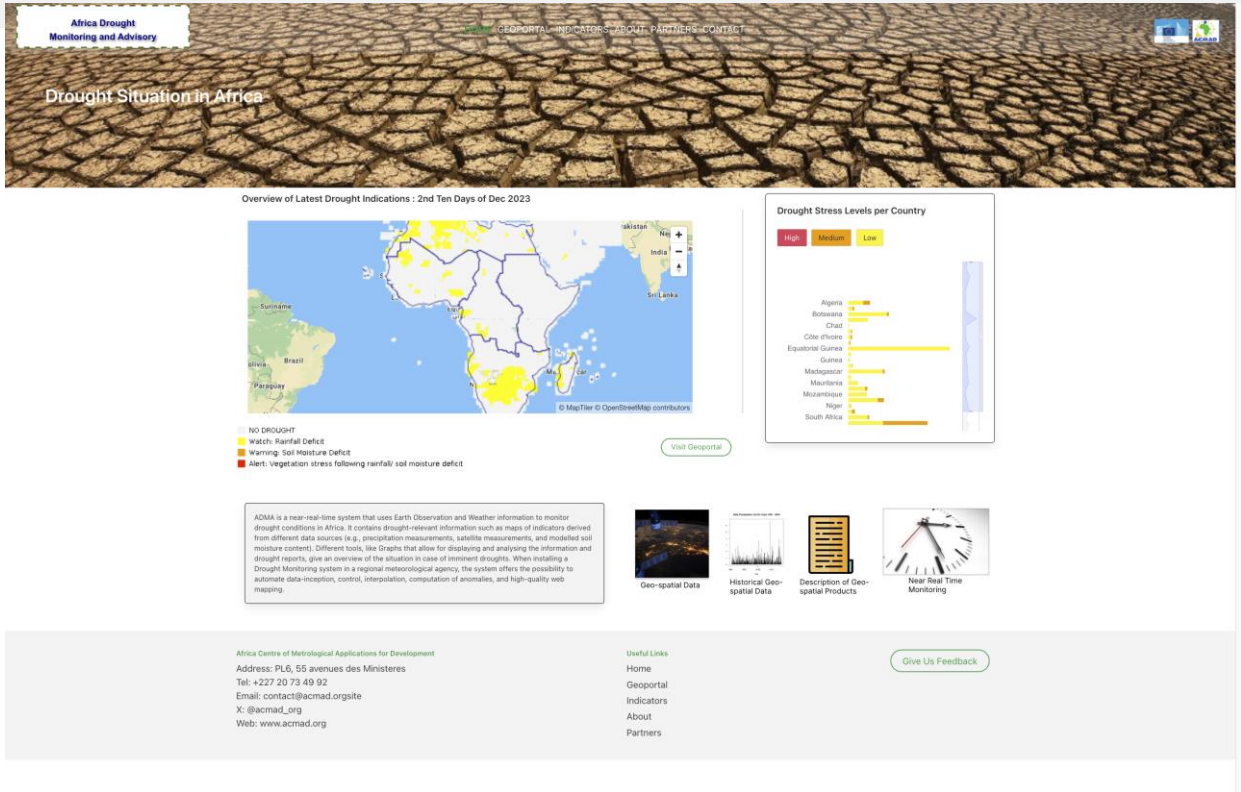
- Introduction to ADMA
- Focus on products available
- New features implemented
- Demonstration
- Future developments

Africa Drought Monitoring & Advisory system

- Collection and storing of Drought related and vegetation observed indices.
- Visualization of the products.
- Report generation



ADMA Homepage



Reach of the System

Users from 10 Countries

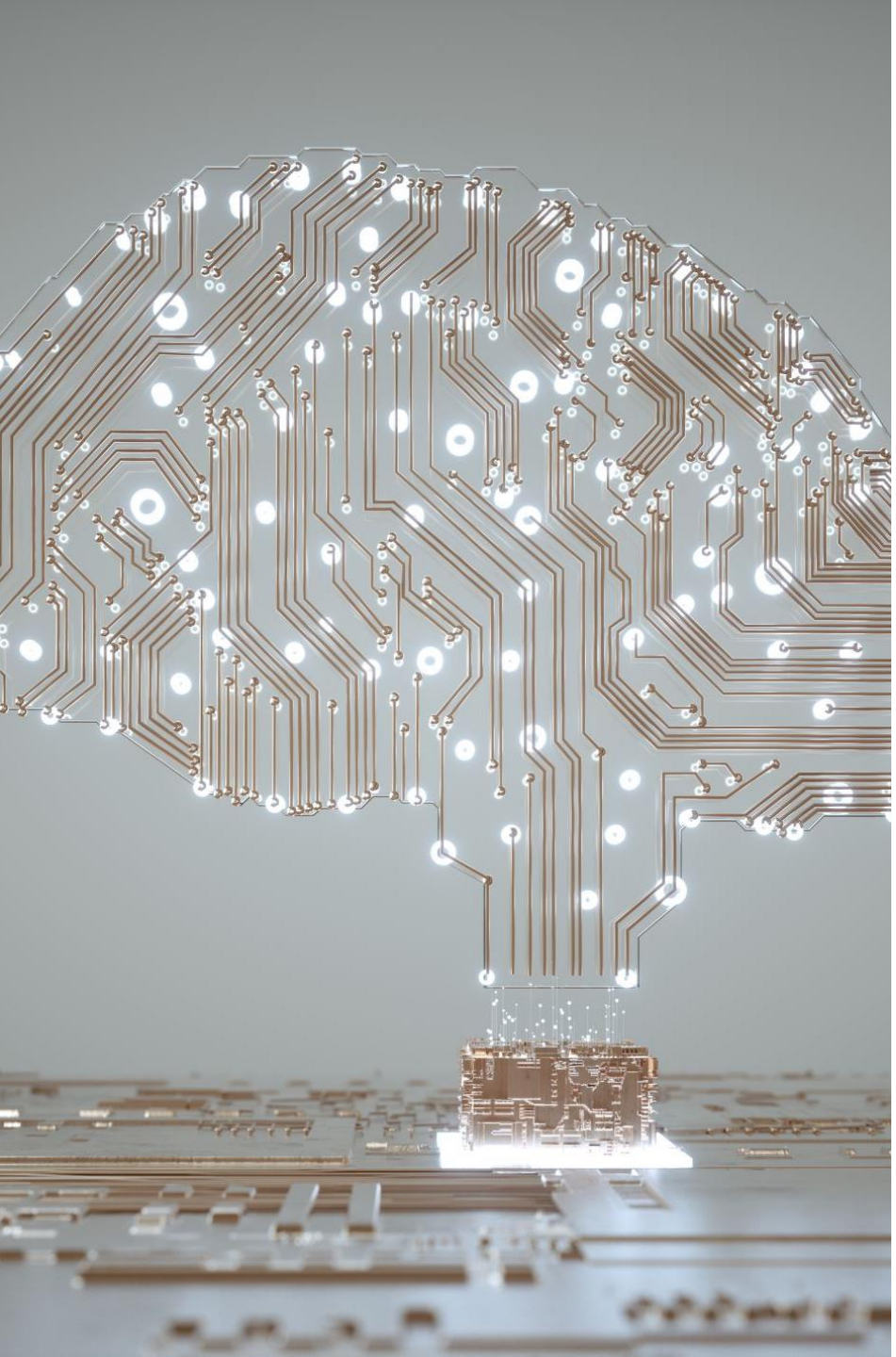
52 new users

Tools

- Graphical user interface tools
- Data integration to produce drought combined index
- Ability to download raster file (tiff format)
- Enabling tools: report generation

Products available

- Standard Precipitation Index
- Monthly precipitation
- Vegetation index (NDVI)
- Land Use
- fAPAR anomaly
- fAPAR absorbed
- Soil moisture Anomaly
- Combined drought index



Applications who needs this

- Everyone
- Climate and environment related institutions
- Agriculture departments
- Disaster planning and monitoring units
- Climate scientists and practisioners

Planning for future updates

- Integration of Forecasting products in the generation of Forecasted Drought index
- Machine Learning and AI integration in the reporting Component
- Integration of Social Economic Layers
- Wider consultations with stakeholders through user engagement
- Communication and Collaboration (subscription for Alerts)
- Continuous Learning and Adaptability

Current Future Trends

- Integration of AI and Advanced Machine Learning: Further enhancing data analysis, predictive modelling Language model for Geospatial applications, and automation in GIS applications.
- Googles Deep mind: Graph Cast AI model for faster weather prediction
- Advancements in Real-Time Data Analysis: Enabling faster decision-making and response in areas like disaster management and urban planning.

Thank you!

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