

# MONITORING SERVICE

WATERBODIES ACROSS AFRICA

EARTH OBSERVATION



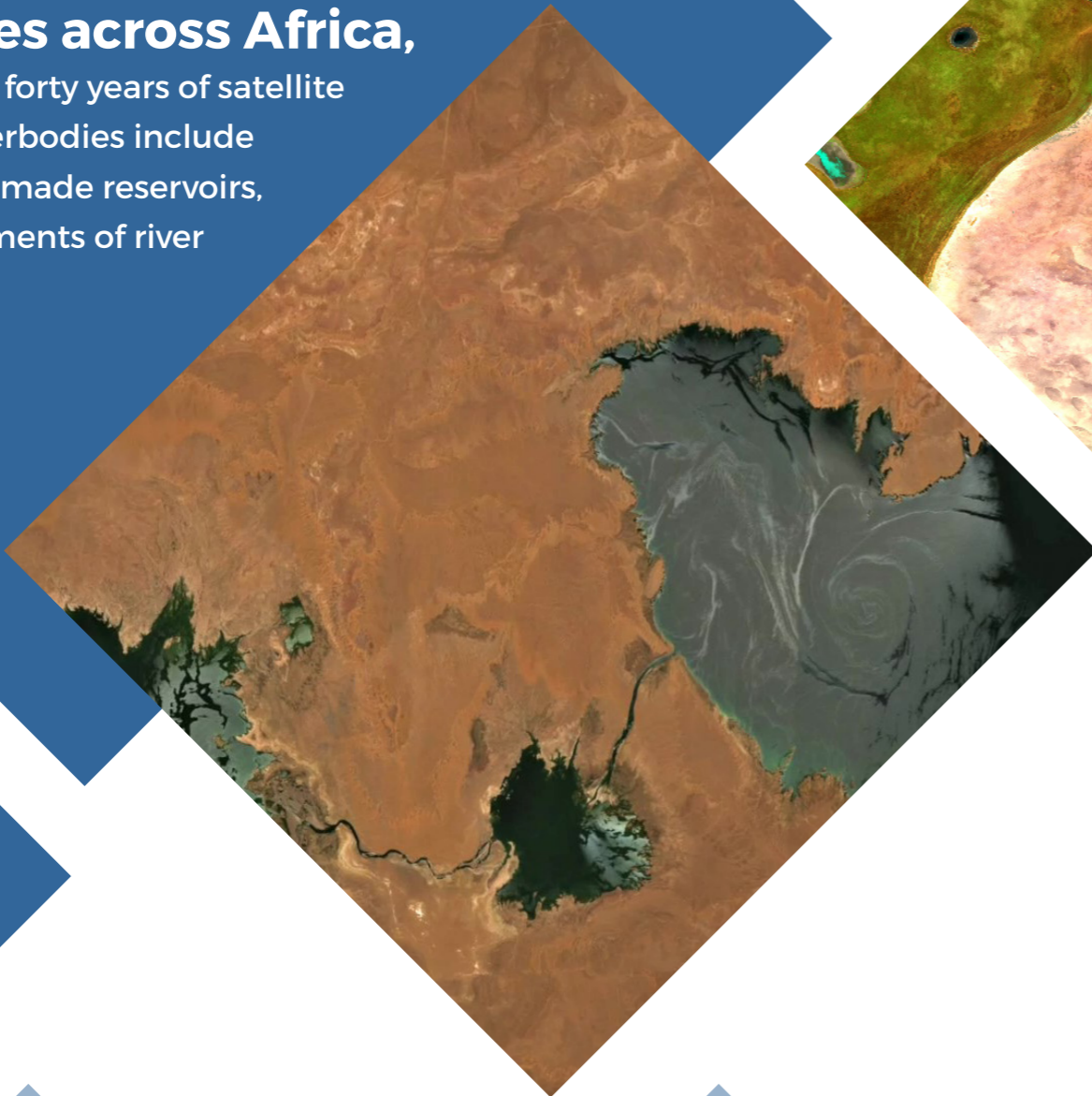
WATERBODIES



**Digital Earth**  
AFRICA

# Digital Earth Africa's innovative Waterbodies Monitoring Service identifies more than 700,000 unique water bodies across Africa,

incorporating over forty years of satellite observations. Waterbodies include lakes, ponds, man-made reservoirs, wetlands and segments of river systems.



## Waterbodies Monitoring Service unique capabilities

The Digital Earth Africa Waterbodies Monitoring Service has pushed the boundaries of how satellite Earth observation data can be packaged, accessed, and analysed to assess and monitor surface water across the entire African continent.

A world-first service developed in - and for - the entire African continent.

Waterbodies statistics for every African country, updated weekly with the most recent satellite measurements.

Information on the presence or absence of surface water, as well as actual surface extent, along with the wet surface area, as a time series for each individual waterbody.

The introduction of an API enables direct integration of these data to create customised queries around waterbody status, historical wet surface area, and changes related to these.

The Waterbodies Monitoring Service maps persistent and seasonal waterbodies and the changes in the surface area of water in each of these over time, and is updated on a weekly basis.

The Waterbodies Monitoring Service is groundbreaking in terms of accessibility, interoperability and transparency.



## Applicability

The Waterbodies Monitoring Service's full potential lies in its application. This includes providing detailed understanding of surface water availability, dry season access to water, changes in water body sizes over time, and an understanding of potential flood risks. Using the Waterbodies Monitoring Service, enables:

- Identification and analysis of persistent and seasonal waterbodies
- Insights into the severity and spatial distribution of drought
- Changes in water availability over time

## Interoperability

An API that has been introduced into the Waterbodies Monitoring Service provides enhanced integration capabilities for service providers and product developers.

For example, a user could request data on all waterbodies in a particular area, as well as the wet surface area time series for each of those waterbodies.

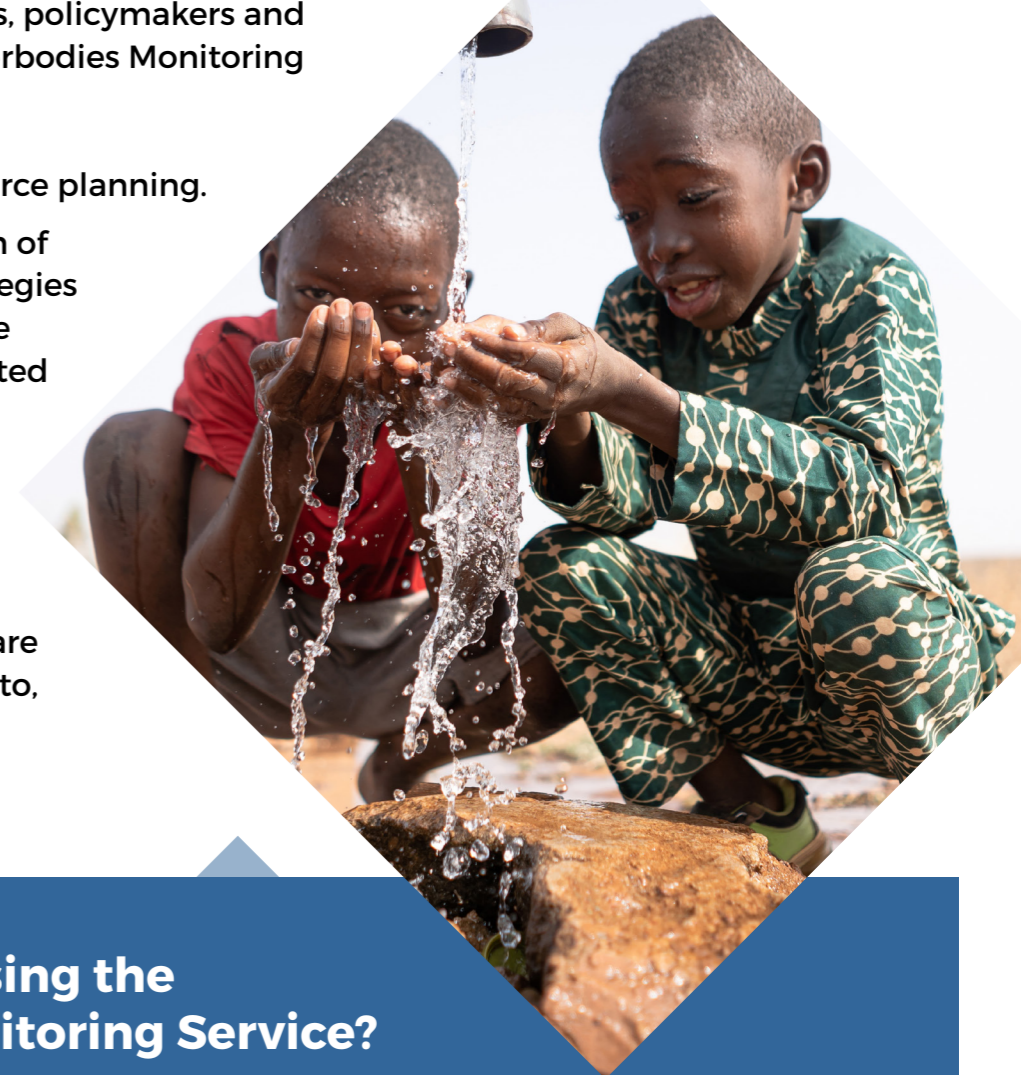
From this, powerful and highly customised summaries can be created to allow the close monitoring of an individual waterbody, or to understand trends and the latest status of a collection of waterbodies.

The Waterbodies Monitoring Service is accessible via the Digital Earth Africa [interactive maps platform](#) and the [sandbox analytical environment](#).

## A needs-based solution

The Waterbodies Monitoring Service has been developed based on user-defined needs and co-designed with Digital Earth Africa users. The result is a robust service that addresses current gaps in existing waterbodies datasets and ensures increased interoperability for users. Aimed at African governments, policymakers and private sector actors, the Waterbodies Monitoring Service enables:

- Insightful spatial and resource planning.
- Development and adoption of critical risk mitigation strategies related to changing climate patterns and both anticipated and unanticipated environmental events.
- Proactive management of Africa's settlements, cities, communities, and livelihood activities which are dependent on, or adjacent to, waterbodies.



## Who should be using the Waterbodies Monitoring Service?

Decision-makers involved in the management of waterbodies, natural environments, and human settlements. These include:

- Government departments, including ministries of water and environment, agriculture and forestry; statistical agencies/departments of national statistics; stakeholders driving activities around the blue economy and mining.
- African space agencies.
- Regional water regulatory authorities, including river basin authorities.
- International intergovernmental agencies.
- African private sector, including start-ups and entrepreneurs.

## About Digital Earth Africa

Developed by – and for – Africans, Digital Earth Africa is a free user-friendly platform for accessing satellite imagery specific to the African continent. It used extensively by African governments, interregional institutions, academia and the private sector.

Partnering with key institutions and organisations across the continent, Digital Earth Africa is committed to building communities of knowledge that drive the take up and routine application of EO data as a means to sustain and safeguard the continent's abundant resources while balancing the needs of all Africa's communities.

Digital Earth Africa draws on four decades of satellite imagery to address critical challenges facing the African continent.

By packaging earth observation (EO) data into accessible and free data sets, policy- and decision-makers can track changes across the continent in unprecedented detail.

This enables better decision making for areas that include flooding, drought, soil and coastal erosion, agriculture, forest cover, land use and land cover change, water availability and quality, and changes to human settlements.



## Digital Earth AFRICA



**Australian Government**

THE LEONA M. AND HARRY B.

**HELMSLEY**

CHARITABLE TRUST

Digital Earth Africa is made possible through funding by the Leona M. and Harry B. Helmsley Charitable Trust (“the Trust”), and the Australian Department of Foreign Affairs and Trade.

The Trust aspires to improve lives by supporting exceptional efforts in the United States and around the world in health and select place-based initiatives.

Since beginning active grant making in 2008, the Trust has committed more than \$2.5 billion for a wide range of charitable purposes. Helmsley's Vulnerable Children in sub-Saharan Africa Program, which began in 2013, invests in evidence-based interventions that provide at-risk children with greater access to education, improved food and nutrition, and clean water and sanitation.

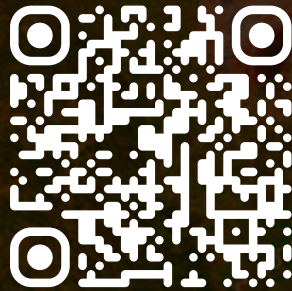
The program's initial grant making efforts have supported initiatives in Kenya, Ghana, Burkina Faso, Angola and Ethiopia.

For more information on the Trust and its programs, visit [helmsleytrust.org](https://helmsleytrust.org).



# Digital Earth AFRICA

FIND OUT MORE HERE:



To find out how the Waterbodies Monitoring Service could assist your department, organisation, municipality or community, please reach out to us at [communications@digitalearthafrica.org](mailto:communications@digitalearthafrica.org)