



MINISTRY OF WATER, SANITATION
AND IRRIGATION



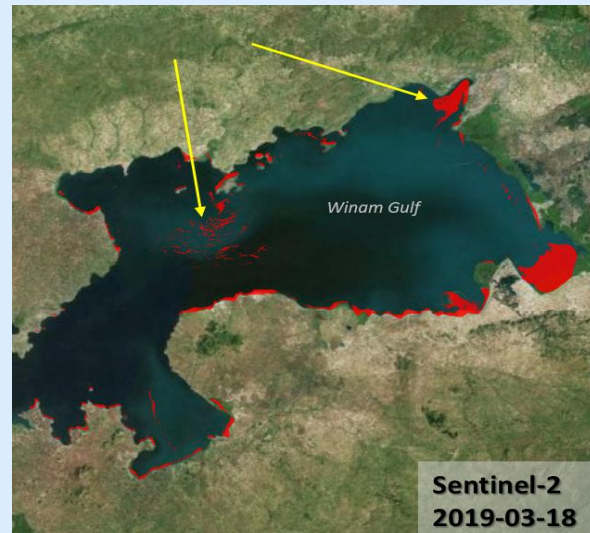
KENYA WATER INSTITUTE
(KEWI)

CALL FOR PRESENTATIONS AND EXHIBITIONS IN A GIS AND EARTH OBSERVATION SYMPOSIUM

- DATES:** 24th and 25th June 2021
- VENUE:** KENYA WATER INSTITUTE (KEWI), Main Campus, Ole Shapara Avenue, South C, Nairobi
- SYMPOSIUM THEME:** Supporting Water Service Provision and Water Resources Management through Utilization of GIS and Earth Observation Technologies

GIS and Earth Observation provide a spatial platform to monitor, assess and provide information to resource managers and different stakeholders through maps and other graphical outputs that can show trends that could otherwise not be detected using other data analysis methods. GIS and Earth Observation Technologies are used to gather vital information about water for planning, decision-making, water and environmental quality assessment, protection of property and aquatic life. Water resources management and water service provision have numerous data acquisition and utilisation challenges.

The need to address the challenges affecting the water sector requires the utilization of large-scale spatial data sets at short temporal intervals. This requires heavy investment in terms of finance, time and human capital. For these reasons, organizations worldwide are resulting to the use of satellite imagery to make inferences about issues related to a large geographical extent. Earth Observation's data from numerous satellite missions orbiting the earth comes in handy to alleviate some of these challenges through remote sensing principles. GIS skills also come in to assist in data management for the water infrastructure and customer information. Even though progress has been made in the use of GIS and Earth Observation technologies and innovations in the water sector there are still gaps such as low uptake of these technologies by the Sector Institutions in acquisition and utilisation of spatial data to support research and decision making.



Mapping of Water Hyacinth at Lake Victoria from Space





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Although the government of Kenya invests a lot in research, efforts need to be put in place to cut costs resulting from expenses of insitu data collection by providing alternative reliable and cost-effective means.

With this regard, the Kenya Water Institute and Ministry of Water, Sanitation and Irrigation in partnership with other Water Sector Institutions invite you to a symposium on the **24th and 25th of June 2021** at KEWI main campus, Ole Shapara Avenue, South C, Nairobi.

The purpose of this symposium is to bring together different stakeholders in the Water Industry to showcase their application of GIS and Earth Observation as a decision-making tool, share ideas, identify opportunities yet to be exploited and gaps in the uptake of GIS and Earth Observation Technologies in the water sector.

Categorization of Stakeholder in the Water Sector Adopting GIS and Earth Observation Technologies

The symposium will bring forth interest in the Water Sector with Sector stakeholders learning more on how GIS and Earth Observation Technologies can be used to:

- Solve location-based problems
- Analyze and model bulk data
- Simulate scenarios
- Visualize findings for effective communication
- Support innovations
- Support research and training

Our stakeholders of interest will be:

- Researchers and academia
- Policy and Decision-makers
- Software Developers
- Data providers, Managers, Users
- GIS and Earth Observation users and
- Water Resources and Water Services Provision Industry

This symposium will also foster partnerships within the sector stakeholders aimed at fostering research and development, leveraging digital tools, reinforcing capacity and enhancing data accessibility.

After the symposium, the organizers will publish a symposium magazine which will be available for





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download form KEWI website (www.kewi.or.ke).



Guidelines for Submission of Presentations:

The stakeholders are invited to participate in the symposium through

- Posters
- Oral presentations and
- Exhibitions

All requests for presentations and exhibitions will be made using a form (<https://ee.humanitarianresponse.info/x/W9I9DYAK>) which is also available at <https://kewi.or.ke/index.php/gis-symposium/>. There is no limit to the number of presentations an individual or an organisation can make but for each presentation, separate form is required. Presenters are requested to indicate the sub-theme they wish to align their presentation to from the list of sub-themes below.

Conference sub-themes

Sub-Theme	Topics
1. Innovations and Technologies in GIS & EO 	<ul style="list-style-type: none"> • Embracing innovations and technologies in GIS& EO for the Water Sector • Evolution of GIS Innovations and technologies in resource mapping • Adopting new trends and approaches in the management of Non-Revenue Water • Developing Workflows and Model building in GIS • Improving Data and spatial visualizations for enhanced resource mapping • Forecasting and monitoring of floods and torrents for disaster management and preparedness • Disseminating GIS & EO information via suitable media platforms • Emerging plug-ins, workflows and software for GIS & EO • Adopting automation, telemetry and Machine learning for the water sector
2. Water Utility and Infrastructure Mapping 	<ul style="list-style-type: none"> • Embracing water supply and sanitation service levels coverage Mapping • Improving methods of mapping water and sanitation infrastructure • Strengthening service reliability through climate-resilient development • Utilizing mobile mapping for improved field data collection process • Application of GIS in management of NRW (Non – Revenue Water)
3. GIS in Governance and Resource Management	<ul style="list-style-type: none"> • Developing mapping policies, Institutions and Regulations to enhance uptake of GIS & EO • The Role of Non-State Actors in GIS & EO • Role of GIS in planning, management and development of water resources • Utilization of GIS in support of information management during COVID-19 pandemic





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<p>4. Satellite Meteorology and Global Climate</p>	<ul style="list-style-type: none"> • Monitoring climate variability and impact on water resources • Space and Atmospheric Science • Early Warning System and disaster simulations • The use of GIS and remote sensing for supporting environment management • Geospatial and environmental analysis • Opportunities and limitations in environmental resource mapping • Derivation of water cycle variable from space • GIS as a tool to support rain Water Harvesting
<p>5. Application of GIS &EO tools in supporting Water Resources Assessment</p>	<ul style="list-style-type: none"> • Integration of thematic maps through GIS for identification of groundwater potential zones • Exploiting enterprise opportunities in GIS &EO
<p>6. Capacity Development in GIS & EO</p>	<ul style="list-style-type: none"> • Training and Technical Capacity development in GIS &EO • Building capacity for resource mapping in Kenya
<p>7. Use of cloud facilities and big data in the EO of water.</p>	<ul style="list-style-type: none"> • Use of time series of satellite data for the monitoring of surface waters • Supporting agricultural water management • Cloud-based workflows • Use of the Copernicus services of European Space Agency (ESA) • Use of Google Earth Engine for developing applications.





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Important Dates:

Activity	Due Date
Deadline for submission of request to make oral	27 th May 2021
Deadline for submission of request to exhibit	27 th May 2021
Notification of Acceptance	1 st June 2021

SYMPOSIUM REGISTRATION FEE

SYMPOSIUM ITEM	DESCRIPTION	RATE
Delegates	Individuals	Kshs 4,000.00 Per Person
	Students	Kshs 1,000.00 Per Student
	Institutional (Maximum of 3 participants)	Kshs 7,000.00
	Institutional (Maximum of 10 participants)	Kshs 15,000.00
	Institutional (Above 10 participants)	Kshs 20,000.00
Exhibitions	4m ² Booth	Kshs 5,000.00 Per Booth
	6m ² Booth	Kshs 8,000.00 Per Booth
	8m ² Booth	Kshs 12,000.00 Per Booth
Convener Sessions	1 Hour Session	Kshs 15,000.00 Per Session
	2 Hour Session	Kshs 30,000.00 Per Session

All enquiries for the symposium to be directed to gisymposium@kewi.or.ke or through a call to 0722477771 More details about the conference are available on <https://kewi.or.ke/index.php/gis-symposium/>

