KijaniSpace

Empowering Climate Smart Agriculture with Copernicus and IoT Innovations

January 2026

NEWSLETTER

Lake Victoria Basin

Top News

This project is funded by the European Union under Horizon Europe research and innovation program, project grant agreement No 101180225 • Visit: www.kijanispace.eu • Contact: contact@waziup.org

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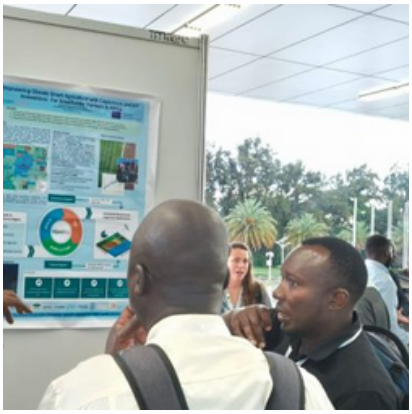

ACKNOWLEDGEMENT

Funded by the European Union

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WELCOME NOTE

Bringing Space and IoT to African Smallholder Farmers

Welcome to the first edition of the KijaniSpace newsletter!

We are excited to give you an insight into KijaniSpace, a Horizon Europe-funded project that is helping to transform agriculture across the Lake Victoria Basin. By blending Copernicus Earth Observation data with smart Internet of Things (IoT) technologies, KijaniSpace supports farmers, innovators and communities in making smarter, data-driven choices for climate-smart farming and resilient food systems.

This issue highlights our survey on the agricultural and aquacultural needs of the Lake Victoria Basin, shares stories and insights from recent workshops and ideathons in Kenya and Tanzania, provides updates on the development of our SpaceIoTBox agritech solution, and details recent events where we have been sharing knowledge and collaborating.

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Listening to Farmers & Communities of Lake Victoria Basin

The KijaniSpace team conducted a regional needs assessment with 69 farmers and fishers across Kenya, Tanzania, and Uganda to understand the practical requirements for advancing climate-smart agriculture (CSA) and aquaculture. Through interviews, surveys, and stakeholder consultations, the study explored how space-based Earth Observation (EO) and Internet of Things (IoT) technologies can strengthen resilience against climate change while improving productivity and livelihoods.

Key Findings

1. **Climate challenges:** Farmers face delayed rains, droughts, floods, and rising temperatures, conditions that directly threaten yields and water quality.
2. **Top farmer priorities**: Drought-tolerant seeds (42% in Kenya); Irrigation infrastructure (38% in Uganda); Soil fertility management (45% in Tanzania); Affordable aquaculture inputs (50%+ across all countries)
3. **Technology awareness:** Less than 20% of respondents are aware of EO or IoT tools, yet over 70% want digital advisory services, and 65% seek training on how to use them.
4. **Policy context:** All partner states have CSA strategies, but implementation is fragmented and underfunded, highlighting the need for stronger institutional coordination.
5. **Gender inclusion:** Women farmers remain underrepresented; training, finance, and digital literacy emerged as the most effective levers for equity.
6. **Youth role:** Young people are driving awareness, training, and field innovation but require greater access to finance and entrepreneurship support.
7. **Barriers to adoption:** High costs, weak infrastructure, and limited awareness are slowing technology uptake.

What These Findings Mean for KijaniSpace

The survey provides a clear roadmap for shaping KijaniSpace's tools and services. The findings guide how we design and deploy the SpaceIoTBox and related digital platforms:

- Building modular, affordable IoT kits for crop and aquaculture monitoring.
- Integrating real-time Copernicus EO data for local decision-making.
- Embedding capacity-building and digital literacy in every deployment.
- Supporting regional coordination under the Lake Victoria Basin Commission.
- Ensuring inclusive access for women and youth through co-created, user-friendly tools.

Together, these insights ensure that KijaniSpace solutions remain firmly rooted in local realities, bridging the gap between innovation and the everyday needs of Africa's farmers and fishers.

More details from the report D2.1 Requirements for Space-IoT centric Regional Development Strategy (Cordis)

Multi-Stakeholder Platform (MSP) in Action

Co-creating Climate-Smart Solutions Across the Lake Victoria Basin

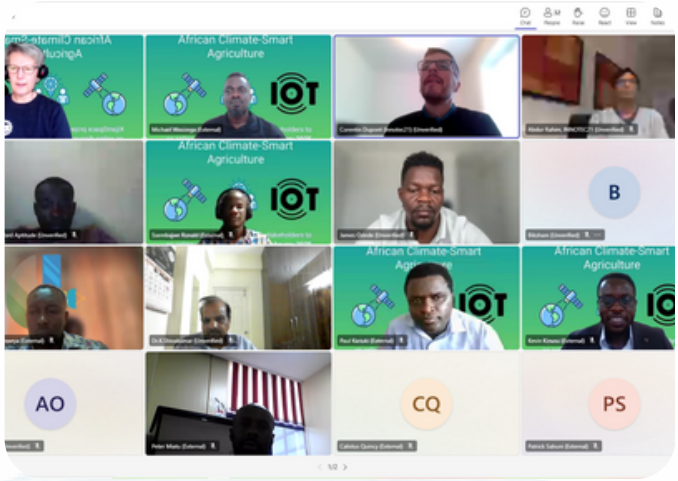
KijaniSpace builds its foundation on collaboration. To ensure that our Space–IoT solutions truly respond to regional needs, we have established a Multi-Stakeholder Platform (MSP) that brings together over 200 actors from Kenya, Tanzania, Uganda, and Europe including farmers, research institutions, start-ups, policymakers, and regional authorities.

The MSP serves as a living laboratory where technology developers, end-users, and decision-makers co-design solutions, share experiences, and align priorities for climate-smart agriculture and aquaculture. It embodies a participatory governance approach: from early needs assessments to prototype validation and policy dialogue, every step involves the people most affected by the outcomes.

What the Multi-Stakeholder Platform Does

- Fosters regional collaboration across borders in the Lake Victoria Basin.
- Bridges science and practice by connecting IoT and Earth Observation experts with local users.
- Guides co-creation of our SpaceIoTBox solution for smarter, data-driven farming and aquaculture.
- Supports knowledge exchange and capacity building, especially for youth, women, and smallholder innovators.
- Feeds policy dialogue through the Lake Victoria Basin Commission and national agencies.

Highlights from Recent MSP Activities



Online Needs Assessment Workshop Feb 13, 2025

Engaged regional experts and farmers to align technology development with on-the-ground needs.

More details here

KijaniSpace Converge 2025 Apr 7–9, Kisumu, Kenya

The first regional forum uniting stakeholders from across East Africa to co-create practical pathways for digital and climate-smart transformation.

More details here

Excursion to Tilapia fish hatchery

More details here

East Africa Stakeholder Meetings (Jun–Jul 2025, Mwanza, Tanzania)

Field visits, aquaculture case studies, and hands-on collaboration to design scalable pilot actions.ngaged regional experts and farmers to align technology development with on-the-ground needs.

Highlights from Recent MSP Activities

Field trip to a fish farm on Lake Victoria in Tanzania.

More details here

1. Tanzania launches Kijanispace
2. KijaniSpace stakeholder rally
3. KijaniSpace advances sustainable aquaculture

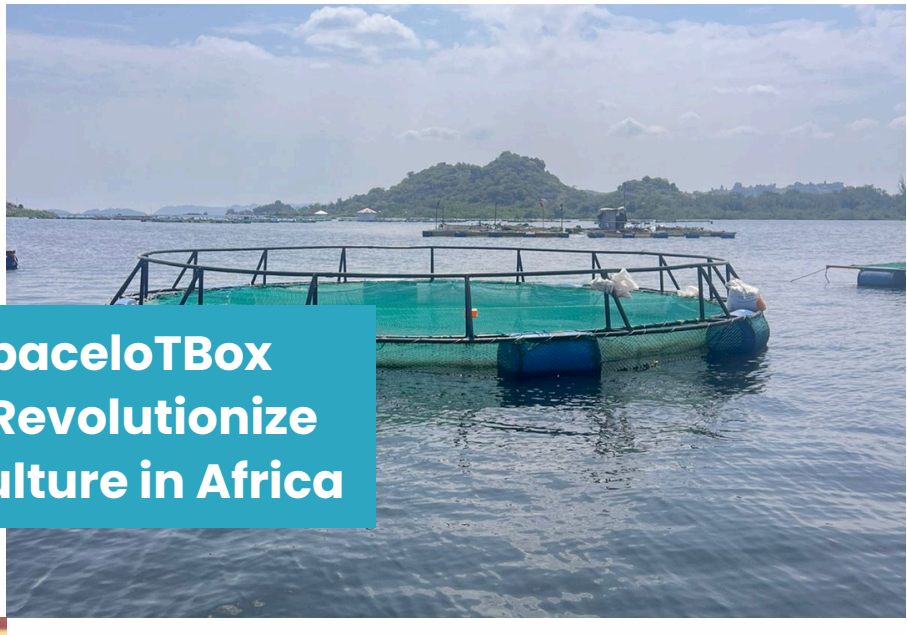
KijaniSpace Ideation Workshops Kisumu, Kenya October 2025

Workshops organised in October in Kisumu and in December 2025 in Musoma, Tanzania. The multi-country and multi-actor ideathons generated innovative ideas to integrate IoT, satellite data, and AI into sustainable agri-aqua practices.

KijaniSpace Ideation Workshops Musoma, Tanzania December 2025

More details here

Each event strengthens the shared ecosystem that anchors KijaniSpace which is a model of open innovation and local empowerment. The MSP will continue to evolve as a driver of regional strategy, innovation clusters, and joint investment in data-driven green growth.



KijaniSpace Unveils SpaceloTBox Design: A Platform to Revolutionize Climate-Smart Agriculture in Africa

The KijaniSpace project has released its design specification (Report D3.1) for the SpaceloTBox, a powerful new platform for Climate-Smart Agriculture in Africa.

The SpaceloTBox is an integrated decision support system designed to empower smallholder farmers. It uniquely combines Earth Observation (EO) data from the Copernicus programme with Internet of Things (IoT) and GeoAI technologies.

The platform's core is a unified API that provides farmers with field management zoning, local forecast downscaling, and advisory services tailored for both crop and fish farming. This initiative is a direct contributor to the EU-AU partnership and Global/AU Sustainable Development Goals, fostering climate-smart practices and green job creation across the continent.

More details from the report D3.1 Design specification of the KijaniBox (Cordis)

FROM THE FIELD / PARTICIPANTS VOICES

This chapter highlights the voices of farmers, fishers, experts, and innovators who took part in our interviews, survey activities, workshops, and ideathons. Their reflections offer a grounded view of what climate-smart agriculture and aquaculture mean in practice, where the opportunities lie, where support is still needed, and how new tools can make a difference.

These testimonies guide the development of KijaniSpace solutions, ensuring they are shaped by real experiences, local priorities, and the creativity of the region's communities.

"Great ideas came out of this [Kisumu Ideathon] workshop, we applied the design thinking approach ,for this we managed to empathize, define the problem and ideate on possible solutions to the problems as well as identifying who in the room can already start taking the next step to solutions."

Mr. Kevin Kinusu, Managing Director of ABPL and one of the organisers of the Kisumu Ideathon.

"One of the parts I enjoyed the most was the group collaboration sessions where we brainstormed on solutions to make IoT technologies more inclusive, scalable, and farmer friendly, including training, local innovation hubs, and community based data ownership."

Ms. Priscillah Aketch, Agricultural Economist and participant of the Kisumu Ideathon.

"Excited to see how these ideas evolve into real-world solutions for local farmers!"

Mr Kennedy Ada, Full Stack Developer and participant of the Kisumu Ideathon.

FROM THE FIELD / PARTICIPANTS VOICES

"We see youth and women participating in BMUs (Beach Management Units) where they cover initial costs of fingerlings and are later supported with feeds. Access to collateral-free loans through partnerships like ALIP and Equity Bank has also opened opportunities, but the outreach is still limited to a few clusters. At Aquarech, we have piloted IoT sensors to monitor oxygen and temperature levels in aquaculture systems. These tools have improved feed conversion ratios and reduced costs, but the challenge remains in maintaining them after pilot's end. Farmers appreciate their value, but sustainability is an issue."

Ms. Metrine Opiyo, Aquaculture expert, Aquarech, Kenya, autumn 2025

"The nexus between technology and climate smart agriculture presents an important catalyst for scaling agricultural practices and outputs to be more resilient, high yield and climate conscious to maintain the ecological character of the environment."

Mr. Ted Apondi,Specializing-GMT Sustainability, Nairobi, Kenya.

"CSA adoption in aquaculture here in Tanzania is still at a formative stage. While farmers are interested, the biggest challenge is capital and access to the right technologies. As a university, we have tried to demonstrate through model farms, but without financing most small-scale farmers cannot implement what they see."

Dr. Mang'era Munyoro, Head Department of Aquaculture, Mwalimu Nyerere University of Agriculture and Technology, Tanzania

DISSEMINATION & COMMUNICATION ACTIVITIES

KijaniSpace Showcased Across Continents

GeoAI CAMP, Prague

KijaniSpace project partner Plan4all was among the organisers of the GeoAI Camp, which took place in Prague, Czech Republic, in January 2025. During the event, Dr Corentin Dupont presented KijaniSpace's plans to integrate Earth observation (EO) and the Internet of Things (IoT) into a unified SpaceIoTBox.

He demonstrated how this approach could improve data-driven solutions for agriculture and environmental management.

Find more details here

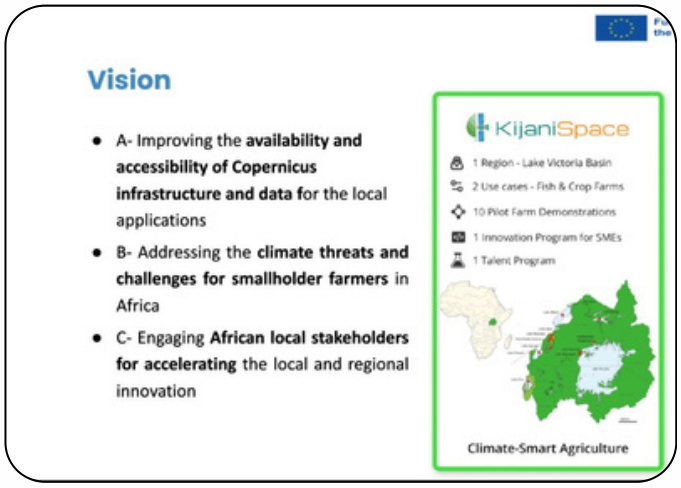
Annual Meeting of the African Great Lakes Stakeholder Network in Zambia.

Principal Research Scientists at Kenya Marine and Fisheries Institute (KMFRI), Dr Chrispine Nayamweya, showcased KijaniSpace project at the Annual Meeting of the African Great Lakes Stakeholder Network in Feb, 2025, Lusaka, Zambia.

KijaniSpace Showcased Across Continents

9th AfriGEO Symposium in Dakar, Senegal

Consortium partner M.Sc. Ssembajwe Ronald from AGAPE INNOVATIONS LIMITED presented his work, "Characterization of drivers of Rootzone Soil Humidity and Heat Extremes in East Africa for Sustainable Crop Production," at the 9th AfriGEO Symposium in Dakar, Senegal, from 6-9 October 2025. This research leverages the ERA5-Land reanalysis dataset to explore key drivers of soil moisture, providing a foundation for climate-smart agricultural strategies.



D4D Hub Private Sector Advisory Group (PSAG) and the Earth Observation & Space Working Group

In October 2025, Dr. Corentin Dupont, Technical Director of the KijaniSpace project, presented KijaniSpace during the first thematic exchange between the D4D Hub Private Sector Advisory Group (PSAG) and the Earth Observation & Space Working Group. The session, hosted under the EU's Digital for Development (D4D) Hub, brought together European and African stakeholders to discuss how Earth Observation and space data can empower local innovation ecosystems and private sector engagement.

Project Recognition: Media Spotlight and Global Partnerships

Local Impact Featured in Tanzanian Media

KijaniSpace's collaborative work and regional stakeholder events in Mwanza, Tanzania, attracted substantial attention from local and national media, amplifying the message of Climate-Smart Agriculture (CSA) across the Lake Victoria Basin.

National Daily News Feature (July 15, 2025): Tanzania's national newspaper, Daily News, published a feature story on the launch of the project. The article detailed how the 'Kijani Space' project, funded by the European Union, will provide accurate digital information via satellite systems to boost climate-smart farming and fishing. The coverage prominently featured insights from our partners, including Mr. Bakari Songwe (Regional Manager, Small Industries Development Organisation - SIDO, Mwanza), Mr. Kevin Kinusu (Director, Africa Bioenergy Program Limited, Kenya), and Mr. Ronald Ssembajwe (Manager, Agape Innovations Limited, Uganda).

The article highlighted the role of the SpaceIoTBox solution in providing vital data on water quality, dissolved oxygen levels, and optimal farming practices.

Star TV Tanzania Broadcast (July 22, 2025): The Mwanza-based station, Star TV Tanzania, broadcast a news segment summarizing the stakeholder rally held in the region. The report emphasized the coming together of experts from Uganda, Tanzania, and Kenya to design a strategic plan to improve agricultural and fish production through sustainable, data-driven approaches. The broadcast stressed the project's goal of using technology and data, funded by the European Commission, to enhance adaptation efforts and guide fishers on optimal fishing zones and strategies.

RECOGNIZED BY THE UNITED NATIONS

The KijaniSpace solution has been acknowledged on the international stage, underscoring its relevance in achieving the Sustainable Development Goals (SDGs) across the Global South.

UN South-South Galaxy Platform: In September 2025, the project was honored to be featured on the **United Nations Office for South-South Cooperation (UNOSSC)'s South-South Galaxy platform**. This platform is a global knowledge-sharing and partnership-brokering tool that uses AI to connect developing countries with effective solutions. The KijaniSpace solution, titled **"Empowering climate-smart agriculture with Copernicus and IoT innovations for smallholder farmers in Africa,"** showcases how our European-African partnership harnesses space data, IoT, and collaborative innovation to make farming more resilient, sustainable, and inclusive. By joining this platform, KijaniSpace contributes to accelerating the 2030 Agenda for Sustainable Development through effective South-South and Triangular Cooperation.

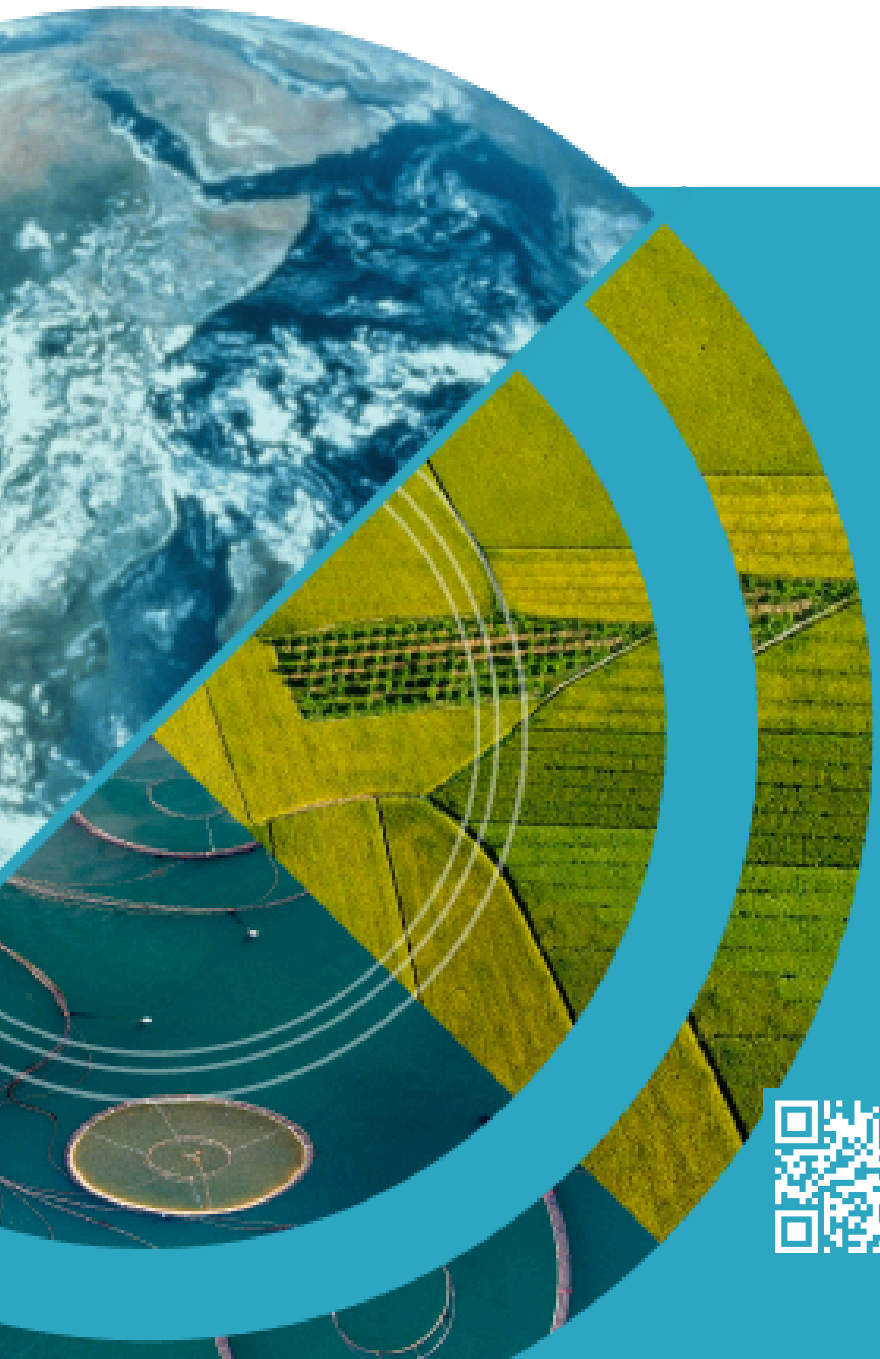
More details here

Thank you for reading! We hope that you have enjoyed the latest edition of the newsletter and thank you for following us on our journey! For more information on the project results and outcomes, please feel free to visit us on our website:

www.kijanispace.eu

www.linkedin.com/showcase/kijanispace

Sincerely yours,
KijaniSpace Team



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