PUNTLAND INFORMATION MANAGEMENT CENTER FOR WATER & LAND RESOURCES

PUNTLAND GEOSPATIAL CONFERENCE 2025

THEME:

"Shaping a Sustainable Future with the Power of Geospatial Insights"

22-23 JUNE 2025

MARTISOOR HOTEL

Garowe, Puntland, Somalia

PUNTLAND INFORMATION MANAGEMENT CENTER FOR WATER & LAND RESOURCES

PUNTLAND GEOSPATIAL CONFERENCE 2025

Conference Report

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ABOUT THE CONFERENCE

The 1st Puntland Geospatial Conference 2025 was successfully held to respond to the region's growing need for data-driven, evidence-based solutions to challenges such as land degradation, climate risks, and urban expansion. In an age where geospatial technologies are transforming planning and decision-making worldwide, the conference provided a timely platform to explore their application in Puntland. Organized by the Information Management Center (IMC), the event brought together government institutions, academia, development partners, and the private sector to exchange insights, showcase innovations, and strengthen a collaborative geospatial ecosystem aimed at supporting Puntland's sustainable and resilient development.

FACTS

170
Delegates

25+
Organizations

3
Sponsers & Partners

5
Universities

20+
Speakers

Food and Agriculture Organization of the United Nations

WFP World Food Programme

SWALIM

EXHIBITION OF GEOSPATIAL TECHNOLOGIES AND PUBLICATIONS

GEOSPATIAL TECHNOLOGIES (UAV DRONES, RTK)

- Demonstrated uses of UAV drones for high-resolution aerial imagery, enabling efficient mapping of land and water resources.
- Highlighted the role of drones in watershed mapping, flood assessment, and infrastructure planning.
- Emphasized cost-effective and time-saving benefits of modern geospatial tech for environmental monitoring and planning.
- Explained the important of RTK (Real-Time Kinematic) and spatial accuracy in field data collection and topographic surveys.

PUBLICATIONS

1. Nugal-Gibin and Karkar Watershed Studies

- Provided information on watershed boundaries, flow patterns, existing Water sources and Climate variabilities in both watersheds.
- Exhibited land cover and land use of Nugal-gibin & Karkar watersheds
- Highlighted land degradation and Identified 24 gully erosions sites in both watersheds
- Suggestions and recommendations for sustainable Land and water resource management and disaster risk reduction.

2. Jibagale Land Cover Mapping

- Presented detailed land cover classification systems using LCCS 3, identifying changes in vegetation, land use, and land degradation.
- Provided the percentage of each land cover classes and bad lands.

3. Cadadheero Prosopis Mapping

- Mapped the spread of the invasive Prosopis juliflora species over Cadadheero valley.
- Provided possible solutions of managing juliflora species

4. Puntland Strategic Water Sources Report

- Identified and assessed the distribution of Strategic Water Sources across Puntland's regions.
- Provided detailed information on the functionality, depth, usage, Electrical conductivity, and yield of these water sources.
- Exhibited the four major basins and aquifer systems in Puntland.
- Offered a recommendation for the management of water sources infrastructures including harvesting, and maintenances & monitoring.

DAY ONE SPEAKERS

Date: 22 June 2025

Mr. Abdinur Ali Jama

IMC Director General

"The Puntland Geospatial Conference marks a historic milestone as the first event of its kind in Somalia, aimed at advancing the understanding and use of modern geospatial technologies. In his opening remarks, the director reflected on the country's past challenges decades without reliable data, modern tools, or functioning institutions highlighting the critical need for data driven planning. He emphasized the foundational role of the Information Management Center for Water and Land resources (IMC), officially launched in December 2021, as a government mandated body responsible for water, land, and climate data. The IMC has since produced regular reports and studies using geospatial tools, shifting reliance away from international organizations and building local capacity. With a clear five year strategy focused on data accessibility, innovation, and the adoption of AI, the center aims to eliminate the excuse of data scarcity in decision making. The director called for legal frameworks such as drone regulations and stronger integration of geospatial systems into national development. He praised the President of Puntland for his continuous support and concluded with three key goals for the conference: to raise public awareness of geospatial technologies, to encourage legislative contributions, and to establish the IMC as the central reference point for geospatial data in Puntland and beyond."

Gamal Abdullahi Ali

IMC Land Resource Expert

Jamal Abdullahi, in his presentation at the conference, highlighted the transformative journey of the Information Management Center for Water and Land Resources in Puntland, outlining its mandate as the central hub for geospatial data management and its evolution into a vital institution for resilience, planning, and evidence based decision making. He detailed the center's milestones ranging from foundational phases to its current role as a functional data provider and aspiring center of excellence while showcasing key achievements such as land degradation mapping, climate reporting, and capacity building. Emphasizing a commitment to inclusivity, with a female majority workforce, and strong regional collaborations, he also acknowledged ongoing challenges, including financial constraints and data gaps, affirming that with continued support, IMC is well-positioned to drive sustainable development across Puntland.

The IMC Strategic Plan 2025–2029 sets a bold direction for transforming Puntland's data landscape into an integrated, real-time, and resilient information system. Our goal is to strengthen institutional capacity, modernize digital infrastructure, and embed data-driven governance across sectors. Through strategic pillars focused on disaster preparedness, indigenous knowledge integration, community engagement, and financial sustainability, we aim to turn data into meaningful action. This plan positions IMC not just as a data center, but as a national driver of smart governance, early warning, and climate resilience ensuring that Puntland's future decisions are informed, inclusive, and sustainable.

Dr Abdiriaq Bogcad

IMC Strategic Plan Expert

Farah Abdisamad

FAO Area Manager

It is an honor to join you today at the Puntland Geospatial Conference, organized by the IMC and the Government of Puntland. This event reflects growing recognition of the IMC's establishment, which FAO and the EU proudly supported from the start and continue to back. We commend the Government of Puntland for its strong leadership and commitment to building a data-driven institution that promotes sustainable development. FAO is proud to see the IMC taking ownership of work we previously supported for decades. As the IMC evolves into a fully operational, evidence-based center, we reaffirm our continued support. I applaud the remarkable efforts of the IMC team, led by Director Abdinur, and thank the oversight ministries, especially Chairman Mr. Daud, as well as all partners and participants. We wish the IMC continued success in its vital mission for Puntland's development.

Geospatial data is essential for informed and timely decision-making, especially in fragile contexts like Puntland where land and water are vital to livelihoods. Through the SWALIM program, FAO has helped build one of Somalia's most robust geospatial systems, supporting flood monitoring, land cover mapping, and climate impact analysis. The establishment of the IMC, with strong government support, demonstrates a shift toward national ownership and sustainable data management. Today, geospatial analysis enables better anticipation of climate shocks, more targeted government interventions, and improved coordination among development actors. ***The focus is not on producing more maps, but on generating actionable insights that guide decisions on where to invest, when to act, and how to prevent future crises.*** *Moving forward, priorities include integrating geospatial tools with AI, strengthening local capacity, and ensuring data leads to real-world impact. FAO SWALIM remains committed to supporting this effort and embedding geospatial systems into Somalia's national development and planning processes.*

Ugo Leonardi

FAO-SWALIM Technical Advisor

"It is an honor to participate in the Geospatial Conference of Puntland. The progress made by the Information Management Center is truly remarkable. As a strong supporter of both the Statistics Agency and the IMC, I commend their ability to provide reliable, locally relevant data especially in our mother tongue. Geospatial technologies are essential for tracking environmental changes and guiding evidence-based decisions in disaster response, infrastructure, and development. Today's event reflects Puntland's growing commitment to data driven planning. On behalf of Save the Children, I acknowledge that IMC has filled a critical gap previously addressed by external organizations. We now use Puntland's data to inform our projects, including climate and environmental interventions. By month's end, Save the Children will formalize this partnership through an MoU with IMC to support data access, staff capacity building, and community learning. We wish this conference continued success."

Geospatial data plays a vital role in government decision making, particularly for key ministries and security agencies. Unlike traditional ground level surveys, we now have the tools to assess land conditions from above through drones, satellites, and remote sensing to monitor degradation, gully erosion, and invasive species. I commend the IMC for leading this pioneering initiative in Somalia. As a Parliament member, I pledge full support for any legal frameworks proposed by IMC and partner ministries. It is time for all ministries to contribute to the sustainability of IMC, ensuring a dedicated budget for research and implementation. This center is essential for identifying risks and planning for urban development, disaster response, and national security.

H.E. Said Salad Mohamed

Vice minister of Energy, Mineral and Water

After expressing his appreciation, He stated the importance of the center and mentioned that they will establish close collaboration with it, describing the center as the "state treasury of data," since it consolidates all information from across Puntland.

He noted that the work already done by the center has made many things easier, such as identifying accessible water points, suitable water locations, and the impacts of droughts.

He welcomed the idea of working together with the center in the area of mineral resources, particularly in conducting resource mapping to support international investors in identifying locations where resources are available.

This will make it easier to monitor investor activities and guide them to the exact locations where they can find the specific minerals they need, such as tin. They will operate within those defined areas. I strongly encourage close cooperation with the center and wholeheartedly support your work.

The Deputy Minister of Agriculture and Irrigation (MoAI), Commended the work carried out by the Center, especially its support to productive sectors, including the ministry of agriculture.

He noted that most development projects are short term and stressed the urgent need to establish food security systems for the population and highlighted that Somalia is among the most vulnerable countries to climate change impacts and food insecurity.

He finally concluded by stating that the Ministry will closely collaborate with the Center to address agricultural challenges and will make use of geospatial technology in doing so.

H.E. Abdikadir Jama Ali

State Minister of Agriculture and Irrigation

H.E. Omar Abdisamad

Minister of Livestock and Animal Husbandry

The Ministry of Livestock acknowledged the center's valuable contributions and emphasized their strong need for reliable livestock data. While past estimates—such as Somalia's 58 million and Puntland's 22 million livestock in 2002 exist, their accuracy is uncertain, especially after multiple droughts and fluctuating rainfall affecting herd sizes. The ministry is considering a livestock census and sees the center as a crucial partner to map livestock distribution across regions. This data would also improve responses during disease outbreaks and vaccination campaigns, helping target mobile livestock more effectively than relying on administrative boundaries. The ministry expressed a clear interest in close collaboration with the center, committing to strengthen cooperation and resource sharing. Additionally, they praised the skills of the young professionals involved, highlighting their importance and value.

Minister Mohamed Abdirahman praised the Information Management Center (IMC) for clearly explaining the importance of geospatial information. He highlighted that the IMC was established under a government legal framework approved by government councils and Parliament in August 2021. He stressed the need for close collaboration between the IMC and line ministries, with integration into ministerial structures to prevent fragmentation. The legal framework mandates this cooperation, with key articles specifying ministry involvement, joint strategy development, and regular meetings hosted by ministries. Since its creation, Minister Bisinle has held the chairmanship, and meetings with involved ministries are planned soon. He recommended quarterly meetings of the Inter-Ministerial Coordination Committee (IMCC) to address important issues, including financial sustainability. Finally, he expressed gratitude to FAO-SWALIM for their ongoing support in capacity building, training, and funding, and reaffirmed commitment to collective advocacy for broad stakeholder support of the IMC.

H.E. Mohamed Abdirahman

Minister of Environment, Range and Climate Change

H.E. Ubah Abdirashid

Minister of Humanitarian Affairs and Disaster Management

Ubah Abdirashid commended the meeting's focus on the critical role of geospatial tools for sustainable land use, risk anticipation, and informed decision-making. She praised the IMC's work, highlighting the shift from reliance on foreign agencies to a locally owned government institution under the Ministry of Humanitarian Affairs. She noted that her ministry depends on IMC data for risk preparedness and planning, and although they operate an independent early warning system, integration with IMC's system is essential for sustainability and effectiveness. She called for reinstating the chairmanship due to a recent lapse in initiative and stressed the importance of ensuring IMC's sustainability through strengthened capacity and coordinated budget support from the six relevant ministries.

Minister Bisinle expressed appreciation for the progress of the Information Management Center (IMC), praising FAO and SWALIM for their crucial support in training, funding, and equipping the Center to operate independently, while emphasizing the need for gradual government ownership. Highlighting recent concerns about drone use, he recommended developing clear regulations to govern drones in Puntland. Minister Bisinle confirmed that the IMC has matured, and readiness to provide training and build skilled professionals.

He announced the readiness to hand over the chairmanship of the Inter-Ministerial Coordination Committee (IMCC), underscoring that the IMC operates as an independent institution per presidential decree, with ministries providing political guidance but not daily management. He stressed the importance of data access for ministries and integration of databases to unify information. Finally, he called for continued support for the IMC, including completing its legal framework, and thanked the Member of Parliament for backing legislative efforts.

H.E. Daud Omar

Minister of Planning Economic Development and International Cooperation

KEYNOTE SPEAKER

H.E Ilyas Osman Lugatoor
Vice President of Puntland

The Vice President of Puntland expressed his appreciation to all participants and commended the conference as a groundbreaking event—the first of its kind in Somalia. He praised the Information Management Center for Water and Land resourcecs (IMC) for its rapid progress in developing technical capacity and acquiring essential equipment. Emphasizing IMC's legal mandate as the official government body for data management in Puntland, he encouraged national and international partners to establish formal collaborations with the Center under the Ministry of Planning's oversight.

He affirmed the government's commitment to strengthening the IMC, noting its active engagement with six ministries and pledging increased budgetary support. The Vice President also stressed the need for clear legal frameworks to regulate drone operations and recommended including the Ministry of Civil Aviation on IMC's governing board. He concluded by underscoring IMC's role as the central data repository for all Puntland ministries and the importance of ensuring access and coordination across government institutions."

PRESENTATIONS

Ugo Leonardi

Technical Advisor- FAO SWALIM

Presentation one

Harnessing Geospatial Technologies for Community Resilience and Natural Resource Management in Somalia: The SWALIM Experience

Abdirisaq Adan Shire
GIS Specialist MOPEDIC

Presentation two

Geo-Referenced Infrastructure Mapping for Enhanced Evidence-Based Development Planning in Puntland

PANEL DISCUSSION

Opportunities of Geospatial Applications in Puntland/Somalia

Iman Salad
IMC GIS/RS Expert

" For geospatial data to be effective in disaster preparedness and early warning, timely collection, processing, and dissemination of information, particularly by institutions like the IMC is essential to enable rapid response and decision-making."

"Currently, Puntland lacks dedicated university programs for geospatial studies. To address this gap, partnerships between local universities and institutions like the IMC can be formed to introduce specialized training, academic courses, and practical fieldwork, fostering local geospatial expertise. At the same time, emerging technologies such as artificial intelligence (AI), drones, and cloud computing offer powerful tools to enhance geospatial data collection and analysis. These technologies not only improve the speed and accuracy of data gathering but also strengthen storage and processing capabilities, enabling more effective decision-making in areas like urban planning, disaster management, and infrastructure development."

Abdulahi Faandhe
FAO-SWALIM

Dr. Abdirisak Bogcad
IMC Consultant

"To advance geospatial capabilities in Puntland, it is essential to establish credible and accountable institutions with real authority over geospatial technologies, beyond symbolic roles. Clear policies, regulations, and laws must be developed to govern the collection, classification, management, and sharing of geospatial data—clearly distinguishing between public and private data to balance accessibility with security. The government should lead in securing and managing this data to reduce dependence on NGOs and external actors. Strengthening technical education in universities is also critical for building specialized skills aligned with geospatial technology and sustainable development goals. Additionally, encouraging private sector investment in geospatial services and innovation can stimulate progress and generate economic opportunities."

Key Takeaways/Findings/Recommendations

- Establishing a robust governance framework for geospatial technologies in Puntland requires the creation of credible and accountable institutions. These institutions must be backed by clear policies, regulations, and laws to ensure the security, accessibility, and proper classification of data, distinguishing between public and private information.

- The government should lead in managing and securing national geospatial data, reducing dependence on NGOs or external entities. In addition, there is a need to strengthen technical education within existing universities to build local expertise that supports sustainable development initiatives. The private sector also plays a critical role by investing in geospatial technologies and services.

- Effective disaster preparedness and early warning systems depend on timely dissemination of geospatial information collected by institutions such as the IMC (Information Management Center). Ensuring rapid and coordinated information sharing is essential for mitigating risks.

- There is currently no dedicated university program for geospatial studies in Puntland. However, collaboration between local universities and institutions like the IMC can address this gap by offering specialized training, courses, and fieldwork opportunities to cultivate a new generation of geospatial professionals.

- Emerging technologies—including artificial intelligence (AI), drones, and cloud computing can significantly enhance geospatial capabilities in Puntland by improving data collection efficiency, accuracy, and speed, while enabling better analysis and decision-making for various applications.

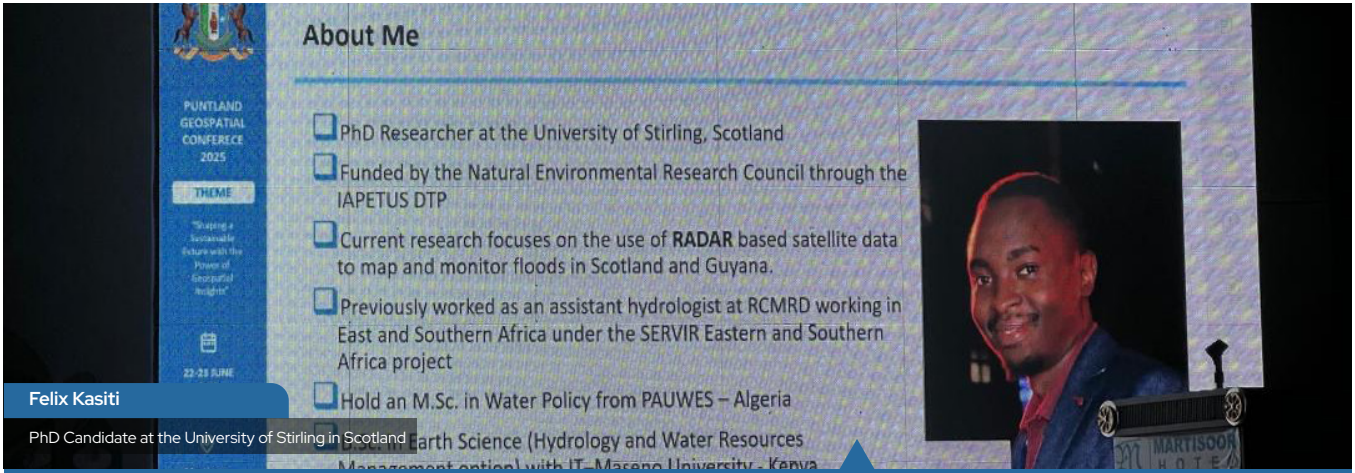
PRESENTATIONS

Mohamed Adam Mohamed
WFP VAM Unit

Presentation three

Geospatial Applications in WFP Humanitarian and Development Assistance Programmes

PRESENTATIONS

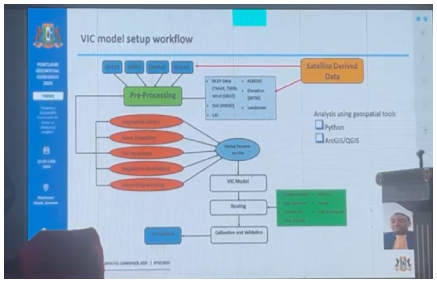


Felix Kasiti

PhD Candidate at the University of Stirling in Scotland

Presentation four

Harnessing GIS and Remote Sensing for Effective Water Management and Disaster Response



DAY ONE CLOSING

Eng. Mohamud Hassan, Member of Puntland Parliament

"Today marks a significant milestone in Puntland's path toward data-driven governance and climate resilience. The discussions and presentations have highlighted the vital role of geospatial technologies in shaping informed policies, guiding development, and managing risks. I commend the Information Management Center (IMC) for its leadership and dedication in advancing this important agenda. As a representative of the Puntland Parliament, I assure you that we will fully support the IMC—not only in principle, but in practice. We are committed to facilitating and passing the policies and legal frameworks necessary to strengthen the Center's mandate and long-term sustainability. The IMC is not just a technical institution; it is a national asset that must be supported across all levels of government. Thank you all for your participation and continued dedication."

DAY TWO
GEOSPATIAL TRAINING

Date: 23 June 2025

The second day of the training focused on delivering foundational and practical knowledge in geospatial technologies, particularly Geographic Information Systems (GIS), Remote Sensing (RS), and the Global Positioning System (GPS). The sessions were designed to introduce participants to key geospatial concepts, demonstrate real-world applications, and provide hands-on experience with GIS tools.

General Orientation and Key Activities

- Introduction to geospatial science and its historical development.
- Explanation of GIS and remote sensing principles.
- Practical demonstrations using GIS software.
- Overview of GPS technology and its integration with GIS.
- Case studies of geospatial applications across various sectors.

On Day Two of the training (23 June 2025), participants were introduced to key geospatial technologies—GIS, Remote Sensing (RS), and GPS—through six main areas: an overview of geospatial data and tools; GIS history, components, and applications; data types and sources; GIS software (ArcGIS, QGIS, etc.); principles of remote sensing; and GPS functionality. The day concluded with a practical session where participants created complete map layouts, demonstrating their understanding of GIS tools and mapping skills.

Hands-on Practical Session

The day concluded with a practical GIS mapping session. Participants were guided step-by-step in creating a complete map layout using GIS software. Each participant successfully produced a map layout, demonstrating their understanding of GIS tools, symbology, and cartographic design.

SOCIAL MEDIA ENGAGEMENT

IMC - Puntland
22 Jun ·

Waxaa si rasmi ah u soo gabagaboobay Shirweynaha Juqraafi Goobeed ee Puntland oo ka dhacay Martisoor Hotel Garoowe.... See more

Shareeco Yasin Shareeco
18 Jun ·

Waxaan noo harsan 3 Maalmood oo Kaliya!

Shirweynaha Juqraafi goobeed ee Puntland 2025 (Puntland Geo-Spatial Conference 2025): wuxuu si rasmi ah u furmi doonaa 22–23 June, isagoo ka dhici doona Martisoor Hotel, Garoowe, Puntland.

Halkudhigga: "Qaabaynta Mustaqbal waara , iyadoo la adeegsanayo awoodda Xogaha Juqraafi goobeed".

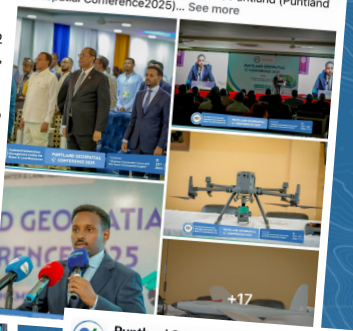
#imcpuntland #pgc2025

FAO in Somalia
@FAOSomalia

Puntland's first Geospatial Conference, held on 22 June 2025, gathered the Vice President, ministers, partners & private sector. Hosted by @imc_puntland with support from @EU_in_Somalia & @FAOSWALIM. A milestone fo #DataDrivenDevelopment & #DigitalTransformation

Mohamed Salh
22 Jun ·

MadaxweyneKuxigeenkaPuntland, Ilyaas Lugatoor ayaa daahfuray Shirka Juqraafi Goobeed ee Puntland (Puntland Geospatial Conference2025)... See more



Puntland State House
@Plstatehouse

1/6 Madaxweyne Ku-xigeenka Dowladda Puntland @HELugatoor ayaa furay Shirweyne lagu soo bandhigayo xogta dhulka Puntland, sida biyaha , dhirta, deegaanka iyo isbedelka cimilada oo ay soo diyaarisay Hay'adda maamulka xogaha Biyaha iyo Kheyraadka dhulka Puntland ee @imc_puntland

3:23 PM · 22/06/25 · **836** Views

Milgo Media
22 Jun ·

Madaxweyne Kuxigeenka Dowladda Puntland H.E Ilyaas Cismaan Lugatoor ayaa daahfuray Shirka Juqraafi Goobeed ee Puntland (Puntland Geospatial Co... See more

Gole TV
22 Jun ·

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Puntland State TV
22 Jun ·

Hadal Jeedinta iyo furitaanka shirka :
H.E Ilyaas Cismaan Lugatoor - Madaxweyne Kuxigeenka Dowladda Puntland.... See more

Farah Osman + 21 1 comment

CONCLUSION

The 1st Puntland Geospatial Conference 2025 marked a historic milestone in advancing data-driven governance and resilience in Puntland.

The conference successfully brought together government institutions, development partners, Local NGO's, UN agencies, academia, and the private sector to explore the transformative role of geospatial technologies. It showcased practical applications such as Unmanned Aerial Vehicles (UAVs), and real-time mapping in disaster preparedness, natural resource management, and climate adaptation. The event highlighted the vital role of the Information Management Center (IMC) as the central hub for geospatial data in Puntland, affirming its importance in supporting evidence-based decision-making, and institutional capacity-building.

Key outcomes included a clear consensus on the need for robust governance frameworks, legal regulations (e.g., drone usage), stronger partnerships with universities, and integration of geospatial systems across ministries. Stakeholders committed to strengthening IMC's sustainability, bridging capacity gaps, and reducing dependence on external actors. The two-day conference and training enhanced participants' technical knowledge in GIS, remote sensing, and GPS, ensuring long-term benefits for Puntland's development agenda.

Finally, it's been agreed the conference to be held annually to enhance public understanding of geospatial applications across various sectors.

RECOMMENDATIONS

1. **Strengthen Legal and Policy Frameworks:** The conference stated to develop and enforce laws governing the collection, use, and information sharing, including UAV regulations, to ensure data security and accessibility.
2. **Institutional Sustainability:** The conference underscored the need to allocate a dedicated government budget to support IMC operations to smoothly perform its thematic studies and use of geosptial technologies.
3. **Technical Capacity building:** The conference emphasized the role of IMC in offering accredited techincal trainings on land, water and geospatial programs.
4. **Promote Private Sector Engagement:** encourage private sector investment in geospatial services and technology innovation, creating new economic opportunities, to enhance service delivery and data sharing.

CONTACT

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