



Advancing UN-IGIF Implementation

Global UN-IGIF Assessment Survey

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United Nations – Global Geospatial Knowledge and Innovation Centre

Agenda Outline

- I. Background and Considerations
- II. 2023 UN-IGIF Survey
- III. 2025 UN-IGIF Survey
- IV. Demo

GLOBAL DEVELOPMENT FRAMEWORKS

GLOBAL GEOSPATIAL FRAMEWORKS

2030 AGENDA FOR SUSTAINABLE DEVELOPMENT



INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (UN-IGIF)

Paris Agreement on
Climate Change

Sendai Framework for
Disaster Risk Reduction
2015-2030

Strategic Framework on
Geospatial Information &
Services for Disasters

Global Statistical
Geospatial Framework

Framework for Effective
Land Administration

Operational Framework for
Integrated Marine Geospatial
Information Management

ABAS Declaration for Resilient Prosperity

Addis Ababa Action Agenda

Habitat III New Urban Agenda

*Our Ocean, Our Future:
Call for Action*

Global Fundamental Geospatial Data Themes

Global Geodetic Reference Frame

National Institutional Arrangements in Geospatial Information Management

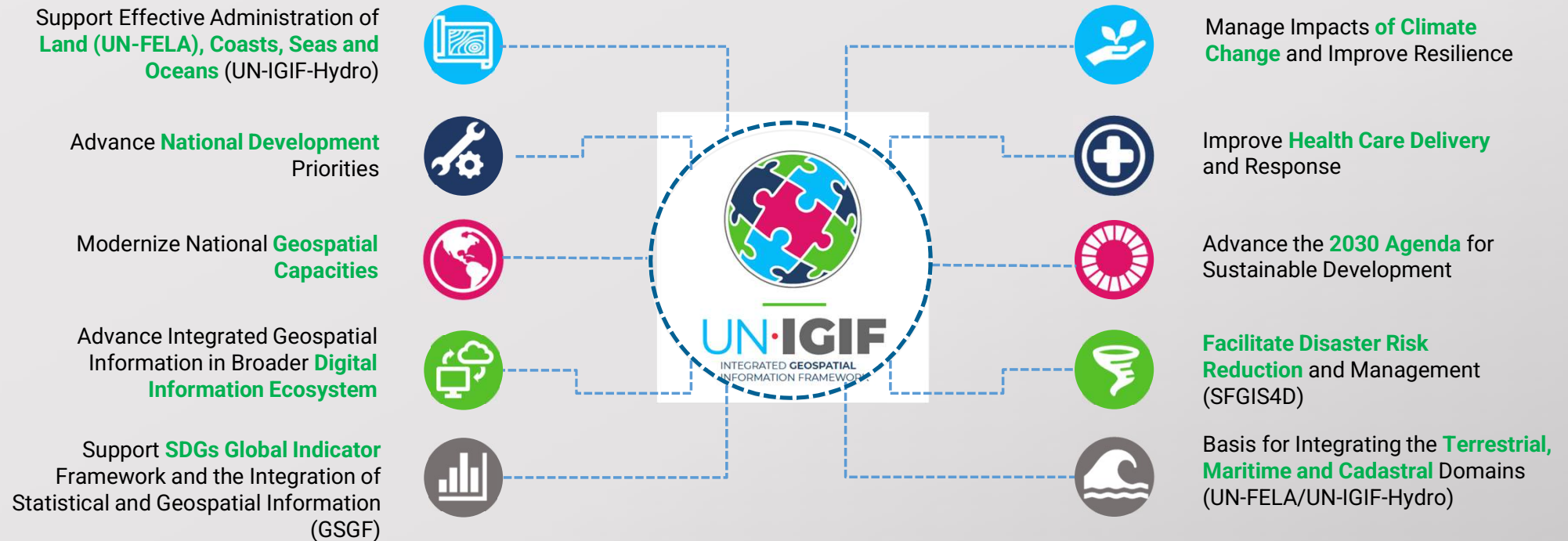
Compendium on Licensing of Geospatial Information

Statement of Shared Guiding Principles for Geospatial Information Management

Future trends in Geospatial Information Management

Geospatial information for sustainable development

United Nations Integrated Geospatial Information Framework (UN-IGIF)



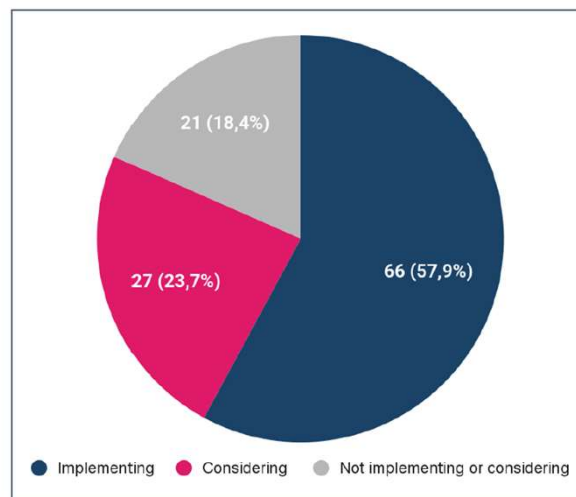
UN-IGIF provides an overarching paradigm to **further strengthen** nationally integrated geospatial information management, not only for Member States that were in the **early stages of adopting** spatial data infrastructures but also for those that had **already successfully implemented** spatial data infrastructure capabilities.



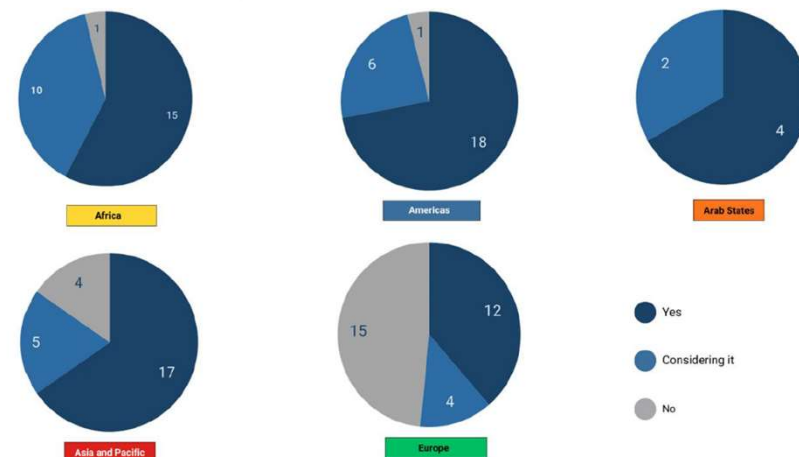
UN-IGIF adoption and implementation

Current Status

GGIM Survey (2023)
A total of 114 UN-GGIM
Member States



Are you using or implementing the UN-IGIF?



Guidance Materials

- ✓ Comprehensive Implementation Guide
- ✓ Good practice templates
- ✓ Technical standards
- ✓ Capacity building resources

Institutional Support

- ✓ HLG-IGIF & UNGGKIC
- ✓ Regional Committees & Networks
- ✓ International partnerships
- ✓ Country-level customization

Key Success Factors

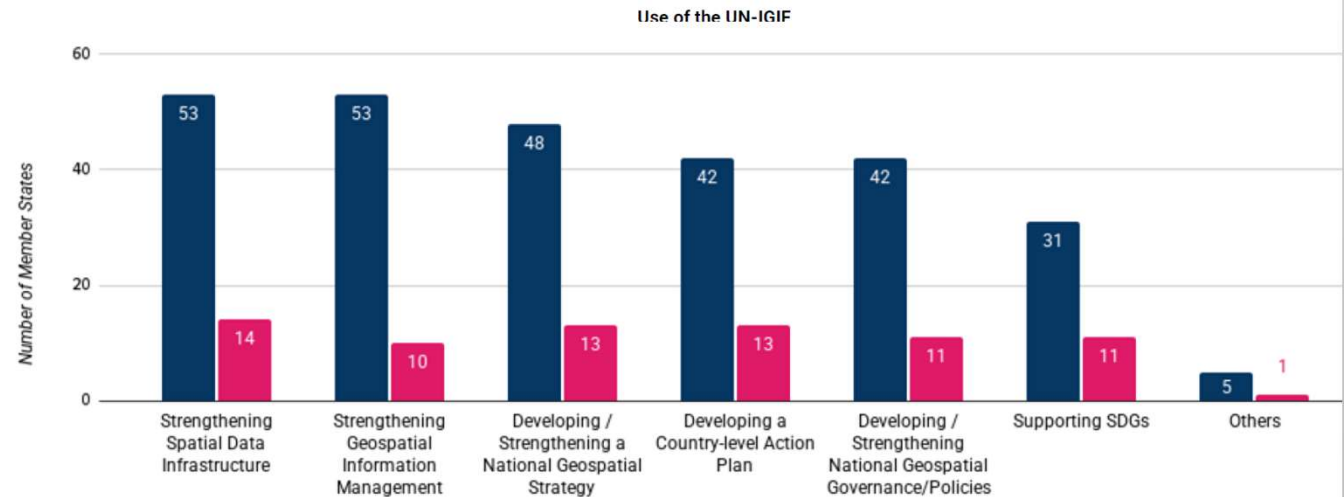
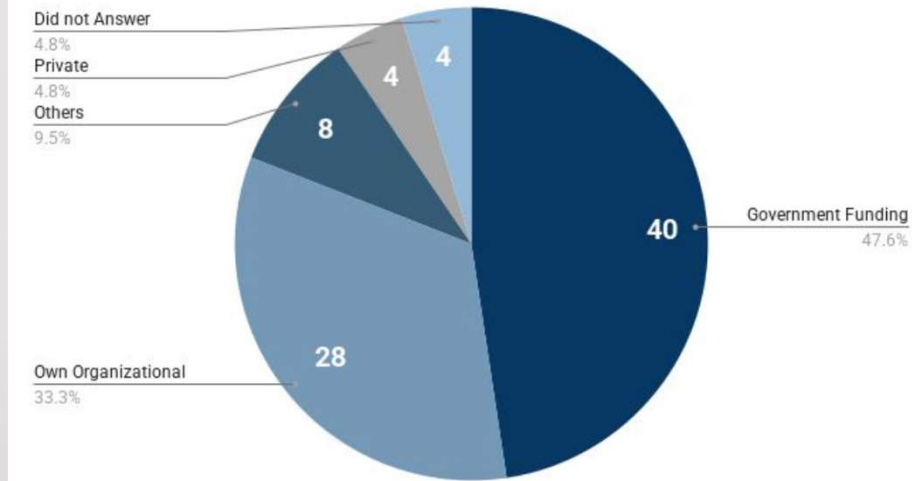
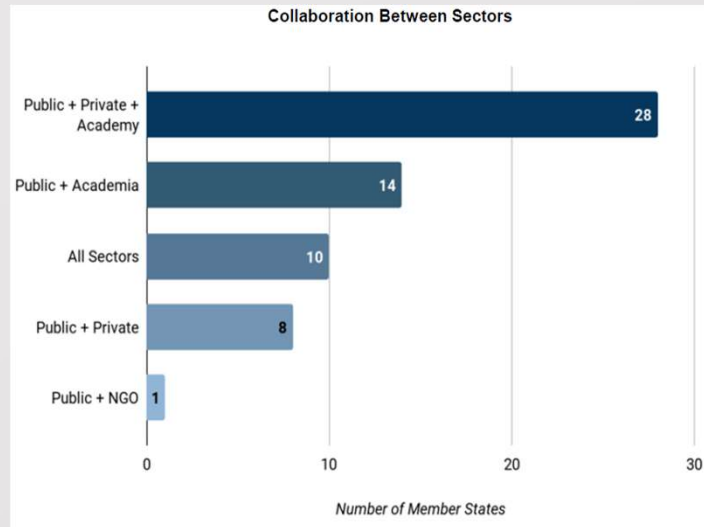
Executive Support: High-level government commitment
Phased Implementation: Gradual, manageable rollout
Multi-stakeholder Engagement: Inclusive planning processes
International Cooperation: Learn from global best practices
Sustainable Financing: Long-term funding mechanisms

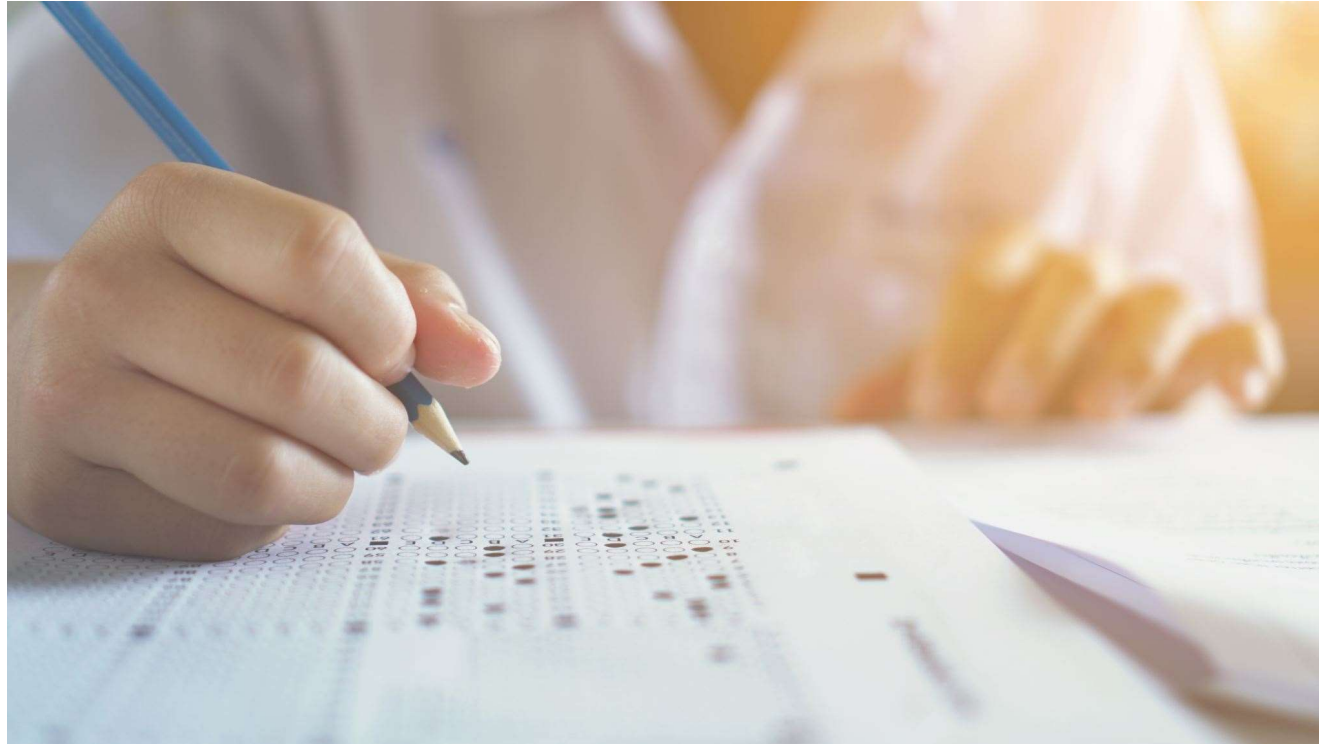
UN-IGIF adoption and implementation

Current Status

GGIM Survey (2023)

- Participation
- Use of UN-IGIF
- Funding





Global UN-IGIF Assessment Survey

UNIGIF Annual Survey - Need and Importance

1. **UN-IGIF** directly supports the achievement of the **SDGs**, critical enabler for monitoring progress and guiding national priorities.
2. Success of UN-IGIF implementation depends on ability **to understand progress, identify challenges, and share solutions.**
3. Annual survey provides the foundation for this understanding, **enabling more effective coordination, targeted support, and accelerated progress toward shared objectives of strengthening geospatial information capabilities worldwide.**

Global/GGIM

- Regular assessment of progress toward UN-IGIF objectives
- Regular reporting opportunities to member states and partners
- Advocacy efforts by demonstrating implementation progress and impact

UN-GGIC

- Helps UNGGIC plans/assess progress against established goals/Actions
- Identifies challenges for interventions, successful practices to be scaled
- Supports internal planning and resource allocation decisions

Member States

- Offers countries benchmarking opportunities against regional and global peers
- Identifies areas where national strategies may need adjustment or additional focus
- Provides evidence for support request/capacity buildings/needs

Knowledge Sharing and Learning

- Best Practice Identification
- Peer Learning Networks

Accountability and Transparency

- Progress Monitoring
- Stakeholder Engagement

Strategic Planning Resource Mobilization

- Gap Analysis
- Resource Optimization

Impact Measurement Communication

- Outcome Documentation
- Success Story Development

UNIGIF Annual Survey - Content Structure

Part 1: Profiling/awareness

- Country/Region
- One focal person per country
- Data aggregation to region level
- Areas of IGIF Usage
- IGIF adoption/awareness

Part 2: IGIF Implementation

Level of implementation

Initial

- 9 strategic pathways implementation
- Progress/Challenges
- Support & Resources

Advanced

- CAP development
- Challenges /Needs
- Collaboration

Part 3: Outcomes/benefits

- Benefits Realized
- SDG alignment
- Future priorities
- Cooperation

Cooperation & Stakeholder Engagement

UNIGIF Annual Survey - Comparative Analysis and Knowledge Products

- Incorporate lessons learned
- Refine questions and analytical approaches
- Develop enhanced visualization and reporting
- Create automated analysis tools



Conduct a comprehensive analysis of year-over-year trends



Develop specialized reports for different stakeholder groups



Create interactive dashboards for progress monitoring



Produce case studies on significant progress or innovative approaches

Cooperation & Stakeholder Engagement

UNIGIF Annual Survey - Activities& timeline

1. Design and Development

- Finalize survey and questionnaire design
- Establish data collection and analysis protocols
- Develop online survey
- **Create multi-language versions**

2. Stakeholder Engagement

- Conduct outreach to national focal points
- Establish partnerships with regional committees
- Organize regional briefing sessions
- Develop COMM materials and guidance documents

3. Pilot Implementation

- Launch pilot survey (selected countries)
- Test data collection processes and analytical frameworks
- Gather feedback on survey design and implementation approach
- Refine methodology based on pilot

4. Full Launch and Initial Analysis

- Launch first annual survey globally
- Implement a comprehensive outreach and follow-up strategy
- Conduct initial data analysis and report
- Present findings at the 16th GGIM session and relevant international forums/UNGKIC Workplan

Jul – Aug 2025

Sep – Oct 2025

Nov – Dec 2025

Jan– Apr 2026

Heading	Questions
1. Country Profile	1.1 - Which country do you represent?
	1.2 - What type of organization do you represent?
	1.3 - Please specify which Government organization do you represent?
	1.4 - Please specify which private sector do you represent?
	1.5 - Please specify which international organization do you represent?
	1.6 - Please specify which academia and/or research organization do you represent?
	1.7 - What is your role in geospatial information management?
2. Awareness and Adoption	2.1 - Have you heard of the United Nations-Integrated Geospatial Information Framework?
	2.2 - If yes, how familiar is your organization with the UN-IGIF framework?
	2.3 - Is your organization using any other framework to manage geospatial information?
	2.4 - If yes, could you please specify?
	2.5 - Has your country/organization formally adopted or committed to implementing UN-IGIF?
	2.6 - Are you considering using or implementing it soon?
	2.7 - What types or areas of support would be most helpful to your country in implementing UN-IGIF?
	2.8 - If no, could you please explain why?
	2.9 - Which agency/institution is leading the UN-IGIF efforts?
	2.10 - Are there any co-leads?
	2.11 - If yes please specify.
	2.12 - What challenges and benefits were observed in full implementation?
	2.13 - When did the process start?
	2.14 - What national document is serving as a country action plan to implement IGIF principles?
	2.15 - When was your country's action plan formally adopted?
	2.16 - Is this document public?
	2.17 - Could you upload or share the URL?
	2.18 - In what areas of collaboration would your country be most interested in engaging?
	2.19 - How effective and user-friendly have the UN IGIF guidelines been?
	2.20 - What additional support or resources would help sustain or scale implementation?
	2.21 - Which public sector entities are engaging in the implementation?
	2.22 - Which private sector entities are engaging?
	2.23 - Which NGOs and civil society entities are engaging?
	2.24 - Which academic and research organizations are engaging?
	2.25 - Are there other development partners supporting implementation?



Heading		Questions
3. IGIF Implementation	SP1: Governance and Institutions	3.1.1 - Is there a designated institution or authority leading the national geospatial governance efforts?
		3.1.2 - Are there mechanisms for inter-agency coordination and collaboration on geospatial information?
		3.1.3 - Are there legal and policy frameworks supporting geospatial information governance?
		3.1.4 - At what stage is your country in implementing Strategic Pathway 1?
		3.1.5 - What are the main governance challenges you face?
	SP2: Policy and Legal Frameworks	3.2.1 - What is the current level of development of IGIF-aligned policy, legal, and regulatory frameworks?
		3.2.2 - Has your country adopted a national policy framework specifically addressing geospatial information management?
		3.2.3 - If yes, specify the legal instruments and year of adoption.
		3.2.4 - What are the main challenges faced in developing or implementing geospatial policy and legal frameworks?
	SP3: Financial Arrangements	3.3.1 - What is the current level of financing mechanisms to sustain IGIF implementation?
		3.3.2 - Does your country have a dedicated financial strategy or funding model for geospatial information management?
		3.3.3 - Has your country identified long-term funding sources for geospatial initiatives?
		3.3.4 - What are the main sources of funding currently used?
		3.3.5 - What are the main financial challenges your country faces?
	SP4: Data Management	3.4.1 - At what stage is your country in ensuring the availability, accessibility, quality, and interoperability of geospatial data?
		3.4.2 - How comprehensive and current are the fundamental geospatial datasets available at the national level?
		3.4.3 - To what extent are data sharing policies, platforms, and interoperability standards in place?
		3.4.4 - What mechanisms exist to ensure long-term sustainability of national datasets?
		3.4.5 - What are the main national-level challenges to improving data availability, quality, and accessibility?
	SP5: Innovation	3.5.1 - What is the current level of development of innovation, technology, and research supporting IGIF implementation?
		3.5.2 - What types of innovation are being used or promoted in your geospatial domain?
		3.5.3 - What are the main challenges to fostering innovation in geospatial information management?
		3.5.4 - To what extent are innovation practices integrated into national geospatial strategies or programs?
		3.5.5 - Are there partnerships in place to support innovation?
	SP6: Technical Standards	3.6.1 - What is the current level of implementation of technical and data standards supporting IGIF in your country?
		3.6.2 - What is the status of data and technology interoperability across agencies and stakeholders?
		3.6.3 - What are the main challenges in implementing geospatial standards in your organization or country?
	SP7: Partnerships	3.7.1 - What is the current level of implementation of multi-stakeholder partnerships supporting IGIF in your country?
		3.7.2 - What types of partnerships currently exist to support geospatial information management?
		3.7.3 - What are the main challenges your country faces in establishing and sustaining effective partnerships?
	SP8: Capacity and Education	3.8.1 - What is the current level of implementation of IGIF-related capacity building and skills development programs?
		3.8.2 - To what extent are geospatial education programs integrated into national academic and vocational training curricula?
		3.8.3 - How effective are mechanisms for retaining trained geospatial professionals?
		3.8.4 - How well are capacity-building efforts aligned with national priorities and IGIF implementation plans?
		3.8.5 - What are the main challenges faced in advancing geospatial education and capacity development?
3.8.6 - What are the main capacity development needs?		
3.8.7 - How effectively are partnerships with academia, training institutions, or the private sector contributing to capacity development?		
SP9: Communication and Engagement	3.9.1 - What is the current level of implementation of IGIF-related communication, outreach, and advocacy in your country?	
	3.9.2 - Has your country established communication platforms or tools to share geospatial information and promote IGIF initiatives?	
	3.9.3 - How effectively are stakeholders being engaged in geospatial information initiatives?	
	3.9.4 - To what extent is geospatial information being promoted to decision-makers and the public?	
	3.9.5 - What are the main challenges your country or organization faces in strengthening communication and engagement?	
4. Support and Resources		4.1 - What types of support or resources would be most helpful to strengthen your country's progress in implementing UN-IGIF?
		4.2 - Have you received support from UN-GGIM or GGGIC?
		4.3 - If yes, please specify.
		4.4 - What resources or tools would facilitate better implementation?
Outcomes, Benefits and Future Priorities	5.1 - Benefits Realized	5.1.1 - What benefits does your country see from UN-IGIF implementation?
		5.1.2 - How has IGIF improved geospatial data management and use?
		5.1.3 - What impact has IGIF had on decision-making processes?
	5.2 - Future Priorities	5.2.1 - What are your country's priorities for the next 2–3 years?
		5.2.2 - How will you measure success in UN-IGIF implementation?
		5.2.3 - What would accelerate progress in your context?
	5.3 - SDG Alignment	5.3.1 - How does UN-IGIF implementation support SDG monitoring and reporting?
		5.3.2 - Which SDGs benefit most from improved geospatial information?

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**DIGITAL
& SPACE**
MINISTRY

Enhancing Geospatial Information Management arrangements Accelerating the Implementation of the SDGs

Sub-regional Workshop on UN-IGIF for the Central Asia, South Asia and Neighboring Countries

UN-IGIF in Action

Real-World Implementation Examples & Case Studies



Implementations & Benefits



UN-IGIF in Action

Challenges and Future perspectives

Common Implementation Challenges:

- **Funding Constraints:** Limited budgets for technology and capacity building
- **Institutional Silos:** Lack of coordination between agencies
- **Technical Capacity:** Shortage of skilled geospatial professionals
- **Data Quality:** Inconsistent or outdated spatial data
- **Political Will:** Need for sustained leadership commitment

Future Outlook and Emerging Trends

Emerging Technologies:

- **Artificial Intelligence:** Automated feature extraction and analysis
- **Earth Observation:** Increased satellite data availability
- **Cloud Computing:** Scalable geospatial processing
- **Internet of Things:** Real-time sensor integration
- **Digital Twins:** Comprehensive city and regional modeling



UN-IGIF in Action

Key takeaways

Scalable Solutions: It works for countries of all sizes and development levels

Measurable Impact: Quantifiable improvements in governance and service delivery (significant return for investment)

Sustainable Development: Direct contribution to SDG achievement

Global Collaboration: Shared learning accelerates progress

The evidence is clear

UN-IGIF implementation **delivers tangible benefits for countries and their citizens**. The framework provides a proven pathway for leveraging geospatial information to address complex challenges and build more resilient, sustainable societies.

Let's continue and support the UN-IGIF journey today.

Building the Foundation for Sustainable Development

Leave No One Behind!

For Policymakers: Proven pathway to harness geospatial information for **evidence-based governance** and achieving national development goals

For Implementers: Practical guidance, standards, and tools to build robust, interoperable geospatial systems

For Partners: Strategic investment opportunity in fundamental digital infrastructure with lasting impact

Challenges Identified

1. Lack of (or insufficient) **governance** - legal/policy frameworks for interagency collaboration
2. Unconvinced **buy-in** from highest-level decision makers (cabinet)
3. Lack of qualified GIS professionals, enhancing **geospatial skillset** (#1 for BDI)
4. Lack of data **standard and infrastructure**
5. Sustaining **financial** investment either from national or private sectors in geospatial programs
6. Limited global and regional **coordination** and participation for policy alignment
7. Sustaining **institutional memory** – free from political changes in the country (related to #1)



Scoping Geospatial Leadership Development



Background

- A follow up survey on **Global Survey on the Use and Implementation of the UN-IGIF**, launched in 2023 by HLG-Capacity Development WG
- Embed lesson learned and improve structure
- Eliminate possible errors and duplications (one per CNTY, no cross answer)



9 Strategic Pathways

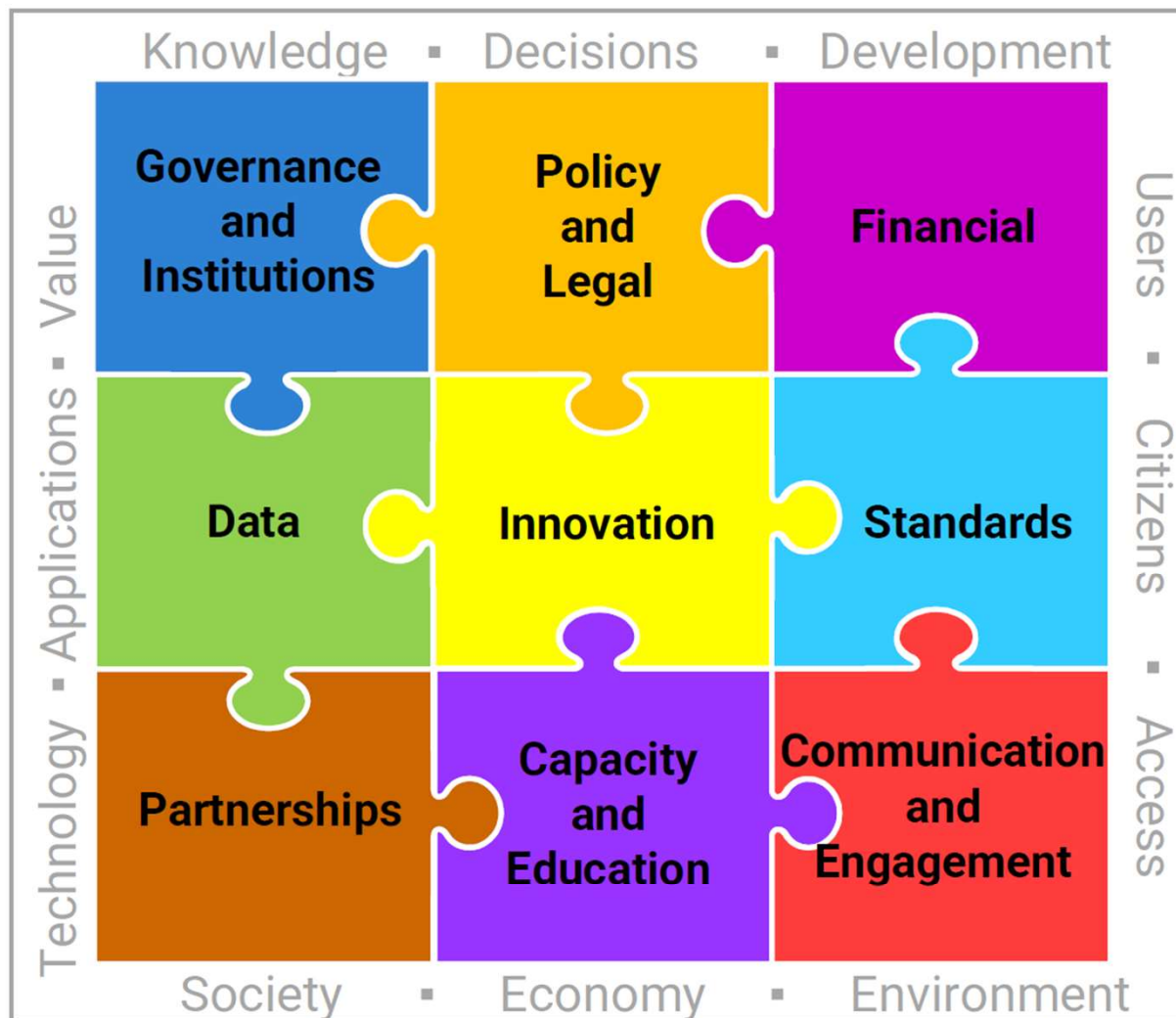
Governance



Technology



People



Anchored by 9 Strategic Pathways, the IGIF is a mechanism for articulating and demonstrating national leadership in geospatial information, and the capacity to take positive steps. The Strategic Pathways 'implement' the IGIF through actions.



UN-GGIM

United Nations Secretariat for the
Committee of Experts on Global Geospatial Information Management

Positioning geospatial information to effectively address local to global challenges

ggim.un.org

Key Challenges & Learning Outcomes

- **Top Challenges**

- Lack of **strategic leadership & governance**
- **Low awareness of emerging tech** (GeoAI, Digital Twins)
- Underuse in sustainability & SDG efforts
- Weak analytical & decision-making capacity
- Ethics & cybersecurity gaps
- Widening **skills gap** & poor project execution

- **Essential Questions**

- How can leaders integrate innovation, policy & governance?
- What skills & tools are needed for future-ready leadership?
- How do we link geospatial solutions to real-world outcomes?

- **Learning Focus**

- Lead with strategy, ethics & innovation
- Apply **geospatial insights** to SDGs & problem-solving
- **Upskill** for tech fluency, project impact & secure data governance

- **Final Thought**

- *Geospatial knowledge is no longer niche - it's essential. Leadership in this realm requires vision, action, and the courage to innovate beyond boundaries.*



Challenges for Leaders & Skills Gaps	Questions to Address Challenges and Skills Gap	Learning Outcomes
Lack of Strategic Leadership in Geospatial Initiatives	Integration of innovation, policy, and governance into geospatial decision-making Existence of frameworks for leading geospatial transformation Transition of geospatial professionals into leadership roles	Develop Strategic Geospatial Leadership Skills. Gain the ability to lead geospatial initiatives within organizations, integrating innovation, policy, and governance.
Limited Understanding of Emerging Geospatial Trends	Latest trends in GeoAI, Digital Twins, and machine-actionable data Keep pace with rapid advancements in technology Role of cloud computing and AI in next-generation geospatial applications	Understand Emerging Geospatial Trends Build knowledge on GeoAI, Digital Twins, on-demand geospatial ecosystems, and machine-actionable data.
Underestimation of Geospatial Role in Sustainability and SDGs	Effective application of geospatial intelligence to SDG initiatives key challenges in leveraging geospatial data for climate resilience and sustainability Align work with global sustainability goals	Strengthen the ability to align geospatial intelligence with sustainability initiatives. Develop actionable strategies to apply geospatial data in SDG-driven policies.

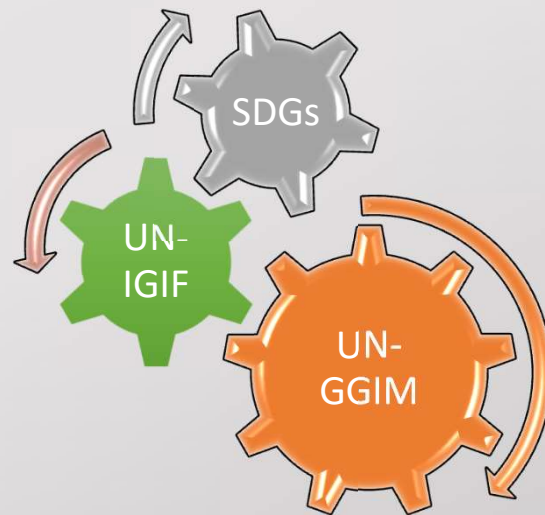
Challenges for Leaders & Skills Gaps	Questions to Address Challenges and Skills Gap	Learning Outcomes
Weak Decision-Making and Analytical Capabilities	Effective use of geospatial insights for real-world problem-solving Methodologies improve analytical capabilities vs complex geospatial challenges Role of leaders in ensuring data accuracy and reliability in decision-making	Enhance Decision-Making and Problem-Solving & Strengthen analytical skills to leverage geospatial insights in complex decision-making processes.
Limited Awareness of Ethical and Cybersecurity Issues	Cybersecurity risks impact geospatial intelligence Ethical considerations for addressing data governance Improve transparency and trust in geospatial data usage	Improve Ethical and Secure Data Management & Understand cybersecurity, ethics, and responsible geospatial data governance.
Challenges in Addressing the Geospatial Skills Gap	Strategies to strengthen national geospatial programs and public digital infrastructure leadership training for narrowing technical skills gap in the geospatial sector Policies and initiatives to support workforce development	Bridge the Geospatial Skills Gap & Learn how to apply technical and leadership skills to strengthen national geospatial programs and digital public infrastructure.
Lack of Practical Implementation of Geospatial Projects	Key steps in developing and executing successful geospatial projects Assurance of work-based geospatial projects deliver real-world impact Design frameworks to measure project success	Implement Practical Work-Based Projects & Develop and execute impactful projects that translate course learnings into real-world applications.



UN-GGKIC

Established by an agreement between the United Nations and the Government of the People's Republic of China on 20 May 2022

Develop and promote the required **knowledge, innovation, and leadership** to strengthen the adoption of geospatial information to support the **implementation of national development priorities and the SDGs**, leveraging the **United Nations Integrated Geospatial Information Framework (UNIGIF)**



United Nations – Global Geospatial Knowledge and Innovation Centre

UN-GGKIC and Strategic Goals

1. **Developing leadership and collaboration:** Support countries in advancing, integrating, managing, and using geospatial information resources, leveraging the UN-IGIF for social, economic, and environmental benefits.
2. **Addressing National Priorities:** Accelerate the achievement of national to global development goals by developing strategies, policies, and national geospatial information capacity in countries through the implementation and knowledge-sharing of the UN-IGIF.
3. **Progressing Geospatial Knowledge:** Enhance the country-level implementation of the UN-IGIF, including resources and stakeholder relationships, for efficient and effective collaboration with partners, and to maximize impacts for countries.
4. **Enabling Innovation and Technological Advancement:** Deploy country-led and integrated data hubs to assist countries in developing geospatial resources and innovative capacities for sub-national, national, regional, and global monitoring and reporting on national priorities and the SDGs within reliable, secure, and scalable platforms.
5. **Enhancing Communication and Awareness:** Promote the value and usefulness of geospatial information and share geospatial knowledge and innovation for the benefit of society, the economy, and the environment.

