UN-GGIM-AP
REGIONAL COMMITTEE OF UNITED NATIONS GLOBAL GEOSPATIAL INFORMATION MANAGEMENT FOR ASIA & THE PACIFIC

Working Group (WG)-4

on

Integrated Geospatial Information Framework (IGIF)

WORKING GROUP-4: IGIF

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WG 4 IGIF WORKPLAN 2024-2025

S. No.	Action Points
1.	Short term, Medium term and Long term plans and strategy to raise awareness about the IGIF and its components at regional and country levels using different means.
2.	Sharing the experiences and best practices to assist in preparation of Country level Action plans.
3.	To prepare IGIF component specific plans for understanding and implementation.
4.	Training and Capacity building actions with special focus on the requirements of small countries.
5.	Adoption and Monitoring Mechanisms.
6.	Organization of workshops, webinars, meetings for deliberations and exchanging the ideas & experiences.

OBJECTIVES

1. The WG-IGIF aims to support, coordinate, plan and extend the necessary facilitation for developing the awareness and capacity through collaboration & sharing in the Asia & Pacific member countries for implementation of the IGIF.

2. The WG will work in co-ordination with HLG-IGIF in achieving the objectives. The HLG-IGIF is making efforts to provide expertise and advice to assist countries in their implementation of the IGIF at the country level; and mobilize needed resources for implementation and to maintain the momentum and evolving refinement of the IGIF with Member States and other key stakeholders.

3. The WG will make efforts to the demonstrate the societal value and impact of the IGIF, and associated progress towards enabling the achievement of the SDGs.

WG-4: ACTIVITIES

1. Regular Discussions and Consultations,
2. Regional Seminars on IGIF,
3. Contributions to other Regional Committees,
4. Promotion of HLG-IGIF Initiatives in the region,
5. Expert Lectures, Discussions at Country level,

UN-IGIF Workshop (Bali, November 8, 2023)

Australia

China

Fiji

India

Indonesia

Iran

Japan

Mongolia

Nepal

Philippines

Rep. of Korea

Russian Fed.

Singapore

Thailand

Timor Leste

Tonga

Uzbekistan

Vietnam

18 Member Countries reported UN-IGIF Implementation

UNGGIM-AP WG ACTIVITIES ON UN-IGIF

Working Group Meeting (November 9, 2023)

- Attended by 10 member countries, Representatives from Private Sector and Academic Network
- Formulate action plans for the working group in 2024-2025

UNGGIM-AP WG ACTIVITIES ON UN-IGIF

Expert Consultation with UN-GGIM Secretariat (November 10, 2023)

Aims to engage participating geospatial leaders and experts from Member States in Asia and the Pacific, to listen, discuss, and understand key elements of their national efforts towards geospatial information management arrangements, leadership, resources and capacities through their implementation of the United Nations Integrated Geospatial Information Framework (UN-IGIF)

UNGGIM-AP WG ACTIVITIES ON UN-IGIF

Online Meeting (June, 28 2024)

- Providing update on UN-IGIF activities of Member States in Asia and the Pacific
- Arranging UN-IGIF activities for 2024 including initial agenda for the next plenary meeting
- Strengthening collaboration with UN-GGIM Private Sector Network

UNGGIM-AP WG ACTIVITIES ON UN-IGIF

Regional Seminar (November 27, 2024)

- Attended by 20+ member countries, Representatives from Private Sector and Academic Network
- IGIF Implementation Approach,
- Mobilization of Sustainable Funding,
- Sharing of the Experiences: Republic of Korea, India, Indonesia, Fiji, Singapore, UK, Academia;

UNGGIM-AP WG ACTIVITIES ON UN-IGIF

Working Group Meeting (November 28, 2024)

- Attended by 11 member countries, Representatives from Private Sector and Academic Network
- Discussed the action plan for the working group in 2024-2025
- Discussion to establish the **Virtual Technical Advisory Group**, composed of subject matter experts from interested Member States, as an interim measure to provide technical assistance to Small Island Developing States (SIDS).

UNGGIM-AP WG ON UN-IGIF:

FOCUS AREAS

The Importance of Well-Managed Geospatial Information

- Geospatial information (GI) and technology are being adopted and used much more widely and quickly today than ever before. The Indian Government's keen interest in Geospatial tools and technology, as seen with supportive regulations, public-private partnerships, and implementation in national and state-level development initiatives, is steering the industry forward.
- This push comes from the awareness about GI being much more than just a simple map. GI is a critical national information resource with demonstrable benefits for society, the economy, and the environment. GI and related location-based services benefits citizens, communities, business sectors, governments, and many other stakeholders regularly, whether with or without having its knowledge.
- This is because Geospatial data connects a place, its inhabitants, and their actions digitally. It can be used to assess the "where", "how", and "why" of past, present, and likely future scenarios. This capability can be leveraged to facilitate the integration of Government systems and services across all verticals and projects that use "location" as a unifying reference frame, including agriculture, infrastructure, land administration, water resources management, and so on.
- All of these areas are progressing by leaps and bounds today with Geospatial information as their foundation. The Integrated Geospatial Information Framework (IGIF) offers countries the means to act on these pillars cohesively so that no one is left behind.

IGIF (Integrated Geospatial Information Framework)

- The UN-IGIF adopted by the United Nations in 2018, is multi-dimensional global framework that was developed initially as a collaboration between the United Nations and the World Bank to provide a basis and reference guide for lower to middle-income countries when developing and strengthening their national and sub-national arrangements in geospatial information management and related infrastructures.
- However, as the UN-IGIF has evolved in the past five years, it has become apparent that many high-income and developed countries are also significantly benefiting from its integrative and inclusive strategic nature.

IGIF IMPORTANCE :

- Importance of geospatial information in a global digital economy and its role in contributing to national development, especially in developing countries.
- The UN-IGIF creates an enabling environment where national governments can coordinate, develop, strengthen and promote the efficient and effective use and sharing of geospatial information for policy formulation, decision-making and innovation.
- Critical to develop and contribute to a vibrant national geospatial information ecosystem that enables visible and sustainable transformational change.
- It gives the countries opportunity to know **'what is happening where'** ?

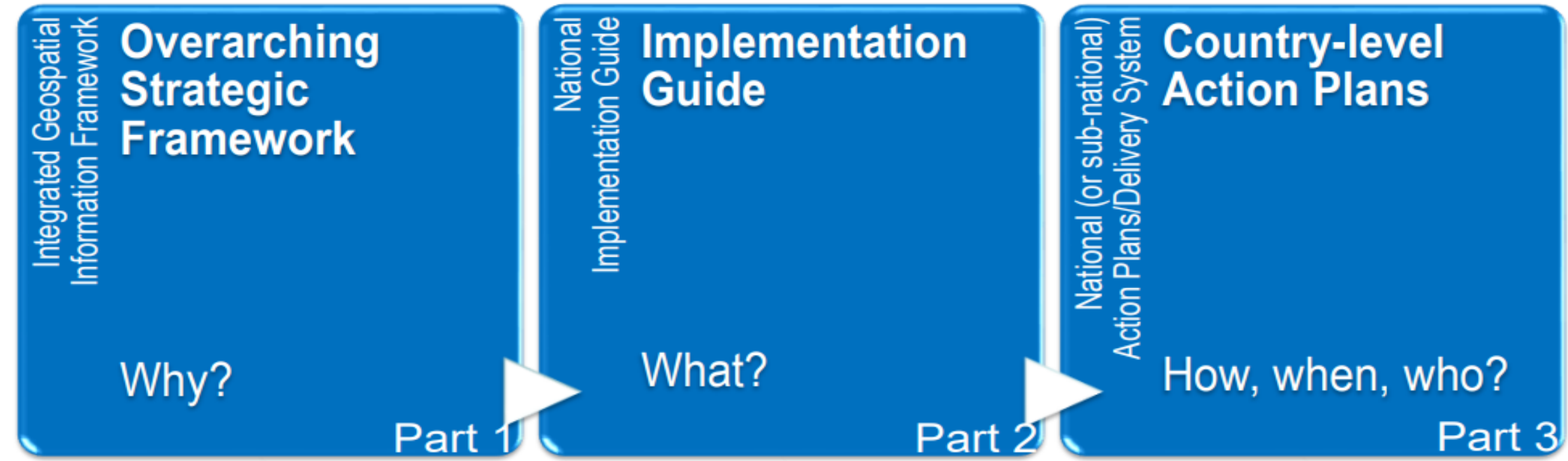
AREAS OF INFLUENCE

Nine strategic pathways anchor the UN-IGIF and support its implementation. These are organized in response to three main areas of influence:

- **Governance** is essential to achieving any nationally integrated geospatial information management capability. It includes the institutional arrangements, policy and legal requirements, and financial concerns that need to be factored into any sustainable geospatial information programme or project.

- **Technology** influences geospatial location data, innovations, the required standards and what can be achieved with the emerging geospatial data ecosystem that is able to respond to continually evolving needs, demands and uses.

- **The People** aspect is arguably the most important component as the people are the framework enablers – performing all the tasks needed for a successful UN-IGIF – often through partnerships and in collaboration with others. Having the necessary skills and knowledge is crucial to success, requiring capacity and education programmes as well as ongoing communication and engagement.



Adopted by UN-GGIM August 2018

Launched 2020, updated versions 2022

Several different toolkits for developing CAP

CRITICAL STRATEGIC PATHWAYS

While all strategic pathways are important, two pathways in particular have been identified as the most critical to achieve to ensure that countries are able to establish and sustain nationally integrated geospatial information management capabilities. These are **Strategic Pathway 1 (Governance and Institutions)** and **Strategic Pathway 9 (Communication and Engagement**).

Why is this the case?

- Firstly, because strong leadership and commitment is ultimately required. Leadership drives change and is realized through the implementation of a national geospatial strategy that clearly describes the country's strategic priorities and how geospatial information can be applied to address them. Leadership requires vision, the capacity to take positive steps, and knowing the tactics to achieve the vision. With strong leadership, anything is possible; without leadership, very little is achievable – including the implementation of the UN-IGIF.
- In a similar vein, constant and ongoing communication and engagement is required to raise awareness and advocacy to the community, businesses, professionals, decision-makers and politicians of the relevance, value proposition and benefits of integrated geospatial information management at all levels. Amid rapidly evolving technologies, changing societal norms and economic outlooks, and against a backdrop of many competing priorities and agendas, it is critical to be able to communicate the value that geospatial information brings to national development, governments and the broader community.

HLG-IGIF Working Groups

Advancing the Plan of Work

HLG-IGIF Strategic Plan – three Strategic Goals prioritized

Plan of Work

- Tasks and Activities
- Strategic Objectives
- Stakeholders/Target Audience
- Communications Methods and Channels
- Responsible Party
- Resources Required
- Deliverables
- Priority Timeframe

Goal 1: Improve Communication

Goal 3: Strengthen Capacity Development

Goal 4: Mobilize Sustainable Funding

HLG-IGIF Strategic Plan

Six Strategic Goals

Improve Communication

Promote Data Governance, Availability and Accessibility

Strengthen Capacity Development

Mobilize Sustainable Funding

Encourage Collaboration, Exchange and Sharing

Oversee Improvement and Review

UN Recommended Approach to Design and Develop Country-level Action Plan

Planning and Preparing

- Project Initiation and Pre-needs Assessment
- Stakeholder Identification and Analysis
- Plan of Action (to design and develop country-level Action Plan)

Assessing and Analyzing

- Current and Desired (or Future) Situation Assessment
- Baseline Survey
- Environmental Scanning and Analysis (for understanding national situation)
- Stakeholder Engagement Workshop
- Strategic Alignment (and Benefits) Exercise
- Vision, Mission and Goals
- Gap Analysis Matrix
- Needs Assessment and Gap Analysis Report

Designing and Developing

- Strategic Pathway Actions and Sub Tasks
- Implementation Schedule
- Budget Estimations
- Success Indicators
- Country-level Action Plan (Template)

What is the difference or alignment in SDI, NSDI and IGIF?

What is a Spatial Data Infrastructure (SDI)?

"The SDI provides a basis for spatial data *discovery, evaluation, and application* for users and providers within all levels of government, the commercial sector, the non-profit sector, academia and by citizens in general."

The SDI Cookbook - http://www.gsdi.org

"SDI is a collection of technologies, policies and institutional arrangements to facilitate availability and access to spatial data"

"SDI Implementation is based on adoption and use of standards to build the technology infrastructure, which facilitates the efficient data communication between federated databases (Inside data owner premises) and data users or applications"

SPATIAL DATA INFRASTRUCTURE (SDI) COMPONENTS

- **Policies & Institutional Arrangements**

  (Governance, Data privacy, Data security, Standards, Data sharing, Cost recovery)

- **People**

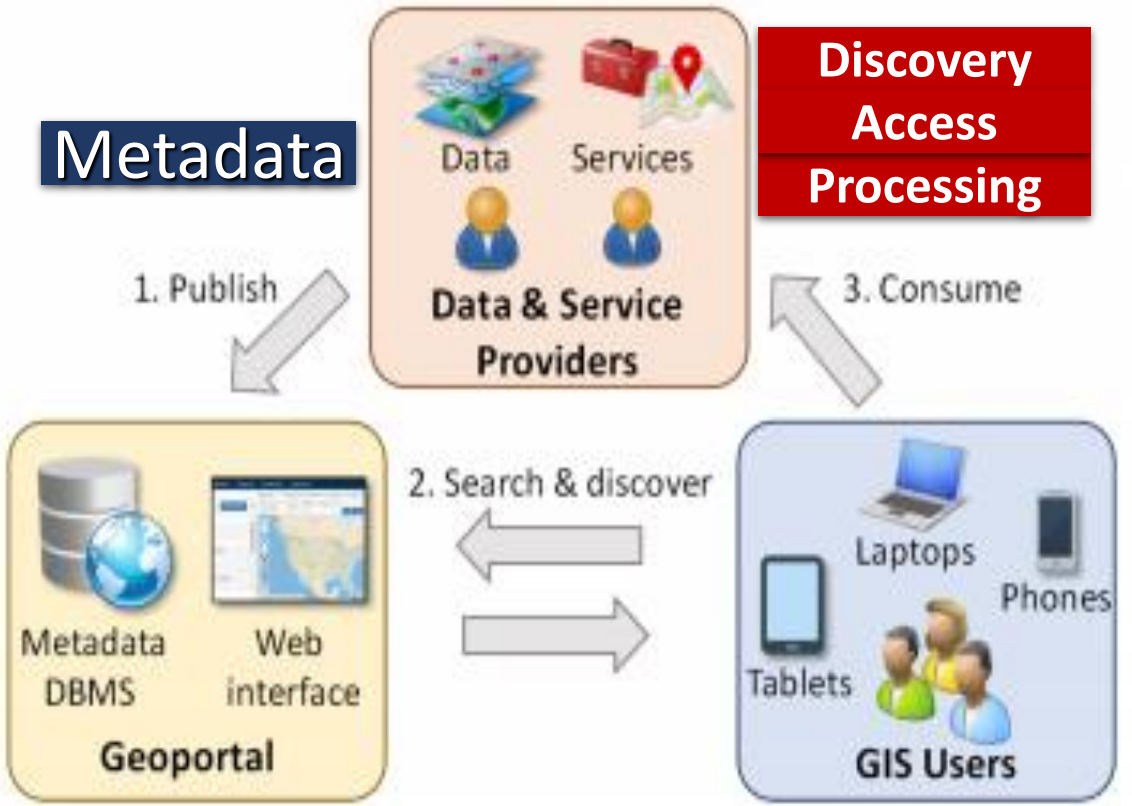
  (Training, Professional development, Cooperation, Outreach)

- **Data**

  (Core Foundation data set, Meta data, Satellite / Aerial Imagery, Thematic, Statistical, Place names)

- **Technology**

  (Hardware, Software, Networks, Databases, Web Services, APIs, Technology Standards)



WHY SPATIAL DATA INFRASTRUCTURE (SDI)?

Conventionally spatial data had been available in country in the form of Topographical Maps, Cadastral maps, Forest Maps, Geological Maps, Soil Maps, Hydrographic Charts, Aerial Photographs, Textual Datasets, Statistical datasets (Socio-Economic data), Thematic Maps, Census datasets etc.

In Print/Analog form, the information content and extent in usable form is very limited, however in Digital/GIS form the same map data offers various possibilities and flexibilities in terms of information content and extent for data usages.

Digital Technologies offers:

- easy integration
- easy storage of large volumes
- easy, quick and selective retrieval
- complex analysis

Data Infrastructure:

- Advances in ICT technologies enable large volumes of diverse data-sets to be used in conjunction.

WHY SPATIAL DATA INFRASTRUCTURE (SDI)?

1. We do not know who has what?.....**No catalogues**
2. Even if we know who has what, we do not know how we can access it .....**No Metadata**
3. Even if we can access the data we cannot use it in conjunction with one another .....**No standardization of data (**Scale, Projection, Currency, Content, Formats, Quality)
4. Even if the data gets standardized, there may be ...**Restrictive policy Regime, reluctance to share, Stored in different locations**

IMPEDIMENTS IN NSDI IMPLEMENTATION

- Institutional inertia – No Autonomy for financial/ technical intervention
- No Stakeholder Commitment in implementation
- Insufficient cross-sectoral flow of spatial data – Absence of WMS, WFS/ GML standards
- Lack of culture in spatial data sharing – policy intervention
- Data gaps in end user applications (Water, Health, Landslides, Urban Floods), inadequate integration with workflows
- Data/ service quality – Metadata, R & D, benchmark

9 Strategic Pathways

Governance

Technology

People

Knowledge ▪ Decisions ▪ Development

Value ▪ Applications ▪ Technology

Users ▪ Citizens ▪ Access

Governance and Institutions	Policy and Legal	Financial
Data	Innovation	Standards
Partnerships	Capacity and Education	Communication and Engagement

Society ▪ Economy ▪ Environment

Anchored by 9 Strategic Pathways, the Framework is a mechanism for articulating and demonstrating national leadership in geospatial information, and the capacity to take positive steps.

9 Strategic Pathways

Governance

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Institutions

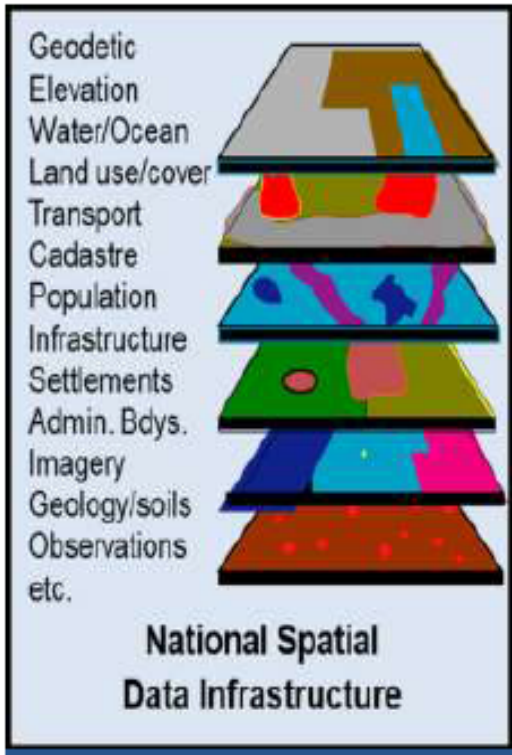
Policy

Data

Standards

Partnerships

Society ▪ Economy ▪ Environment



National Spatial Data Infrastructure

"The technology, policies, standards, human resources and related activities to acquire, process, distribute, use, maintain and preserve spatial data" (OMB 2002).

9 Strategic Pathways

Governance →

Technology →

People →

Knowledge ▪ Decisions ▪ Development

Value ▪ Applications ▪ Technology

Users ▪ Citizens ▪ Access

Governance and Institutions	Policy and Legal	Financial
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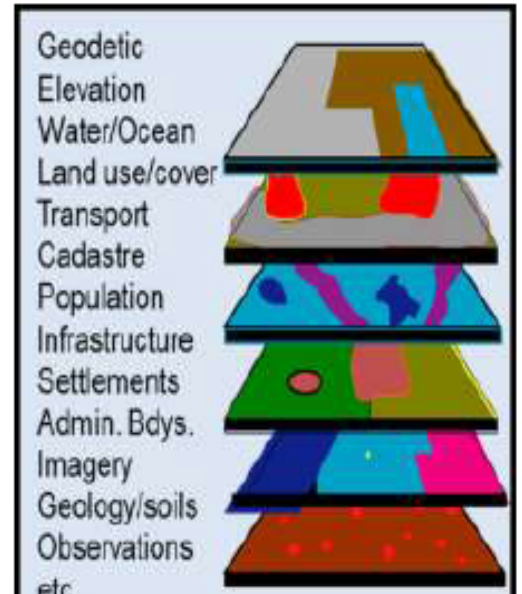
Society ▪ Economy ▪ Environment



National Spatial Data Infrastructure

The Framework will augment and build upon existing NSDI arrangements, providing a holistic, integrated national information system-of-systems approach to the data life cycle

IGIF and FELA, same thing or what?

- IGIF more general, FELA more focused framework for Land Administration
- FELA is part of IGIF!
- UN-GGIM has developed some frameworks
  - IGIF
  - FELA
  - Global Statistics Geospatial Framework
  - Policy and Legal Frameworks for Geospatial Information Management
  - Operational Framework for Integrated Marine Geospatial Information Management (UN-IGIF-Hydro)

Figure 11. Uses of the UN-IGIF for Member States Not Developing a Country-level Action Plan

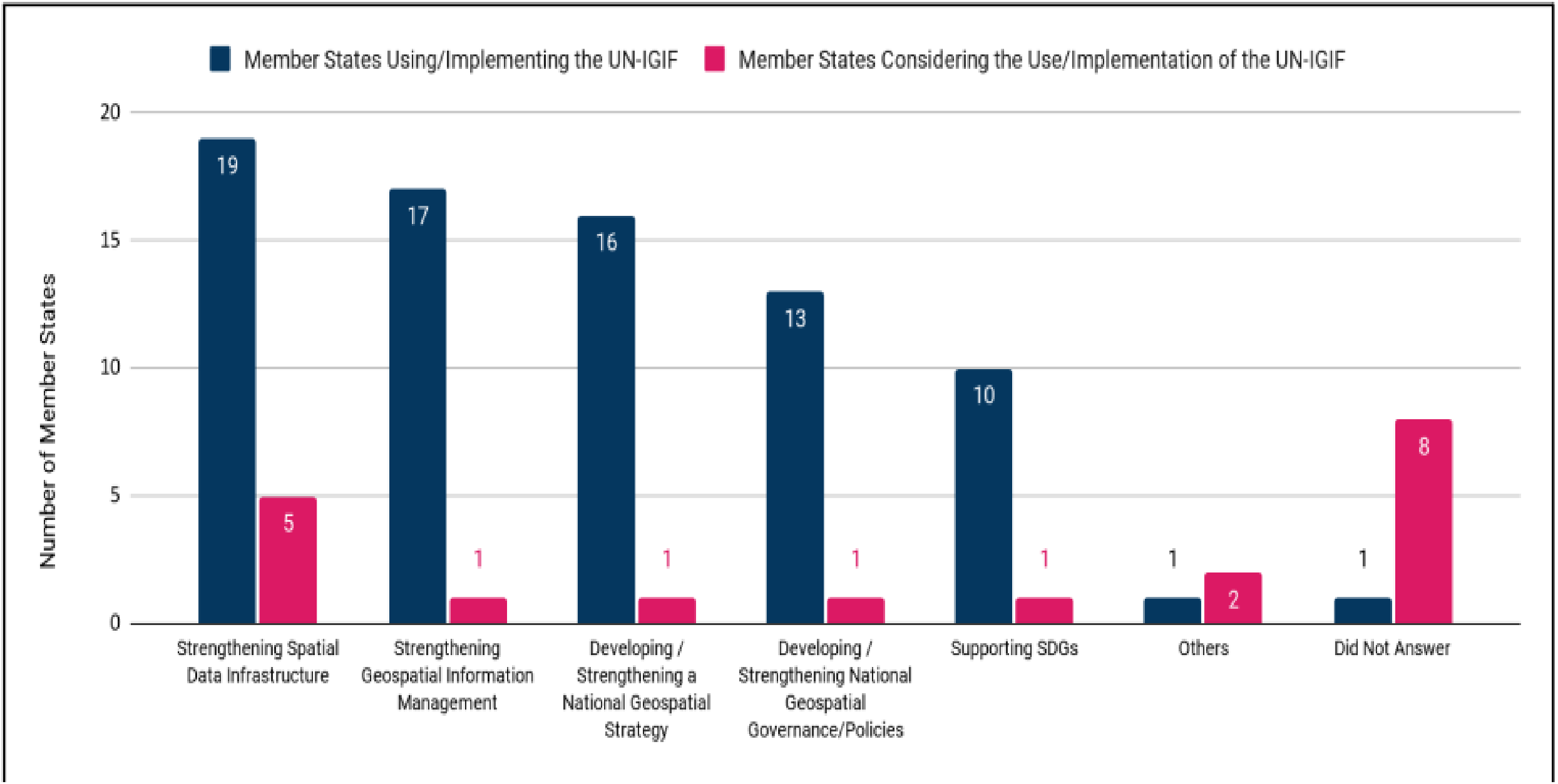
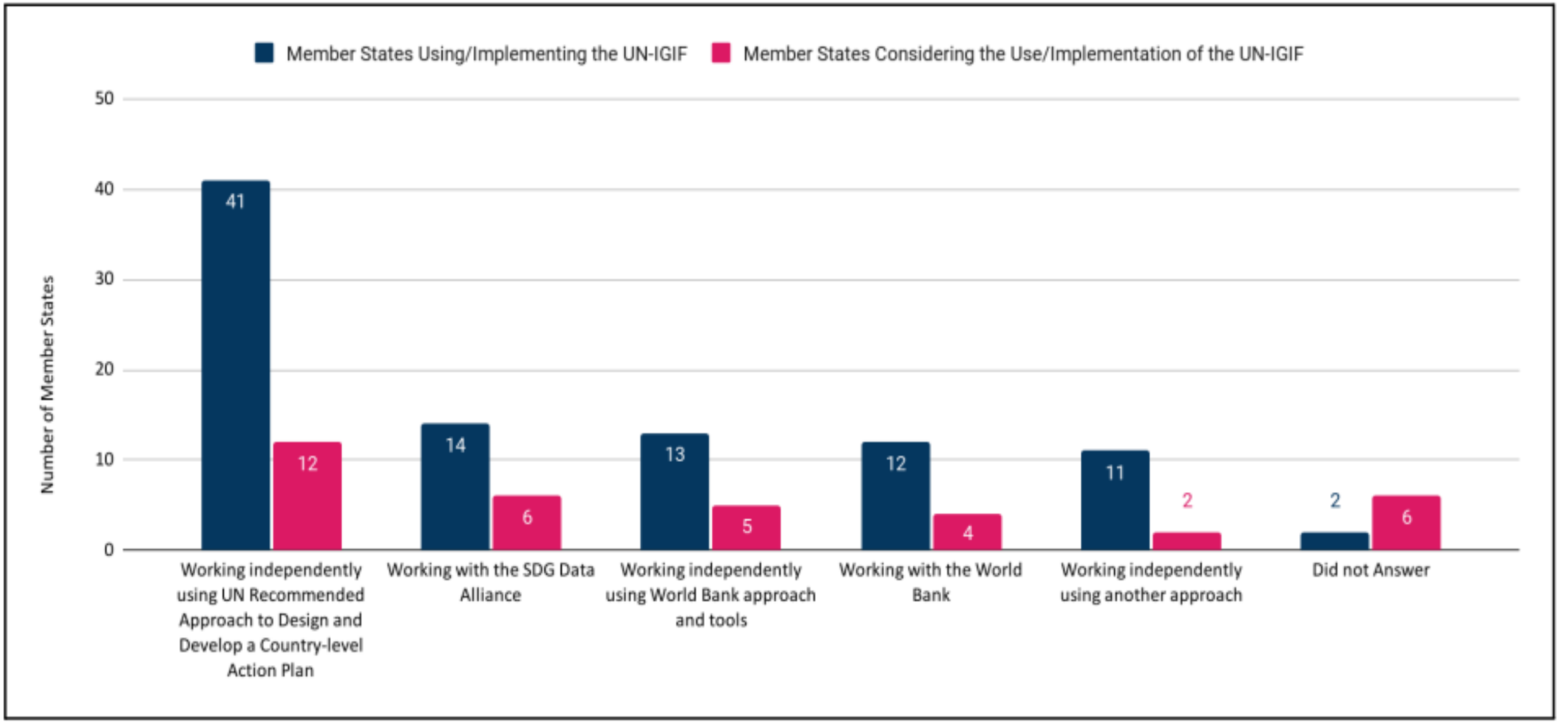


Figure 12. Type of Approach Utilized by Member States Using/Implementing or Considering the Use/Implementation of the UN-IGIF



WG-4: IGIF (Proposed Activities in Year 2024-25)

1. Working Group Meetings (online) with members.

2. Online sessions/Discussions/Workshops for new updates and activities for Peer-to-Peer learning.
   (To share experiences, Practices, developing awareness and education about HLG-IGIF actions and customization required for Asia and Pacific region.)

3. To organize Training and Capacity building workshops (Online/Offline).

4. To constitute a **Virtual Technical Advisory Group** to support the member Countries.

THANK YOU

Preamble Phrase:

Recognizing the pivotal role that a future UN-GGIM-AP Geospatial Information Service Centre can play in driving sustainable development, enhancing disaster risk management, and enabling informed decision-making at all levels. Acknowledging the importance of fostering robust regional cooperation and capacity-building initiatives to ensure the Centre's effectiveness in improving the availability, accessibility, and practical application of geospatial services and products across member States of UN-GGIM-AP.

Acknowledging the unique challenges faced by Small Island Developing States (SIDS), including resource constraints and limited access to experienced personnel, in implementing the United Nations Integrated Geospatial Information Framework (UN-IGIF) and adopting advanced geospatial technologies to meet national demands. Recognizing the importance of fostering close cooperation and collaboration with the Thematic Groups of UN-GGIM and other active stakeholders, such as the Data Alliance and donor communities, to ensure a coordinated and holistic approach to delivering effective solutions. Further reaffirming the commitment to the eventual establishment of a UN-GGIM-AP Geospatial Information Service Centre as a sustainable mechanism to address these challenges.

Operational Phrase:

Decides to establish a Virtual Technical Advisory Group, composed of subject matter experts contributed by interested Member States, as an interim measure to provide technical assistance to Small Island Developing States (SIDS).

Requests that the Virtual Technical Advisory Group operate in close cooperation and collaboration with the Thematic Groups of UN-GGIM and other active players, such as the Data Alliance and donor communities, to deliver cohesive and aligned support tailored to the specific needs of SIDS.

Further requests that the Virtual Technical Advisory Group prioritize assistance in tailoring the United Nations Integrated Geospatial Information Framework (UN-IGIF) and developing national action plans aligned with it, ensuring a unified approach that leverages expertise and resources from all partners. Encourages Member States to actively participate in this initiative by nominating experts and contributing resources, laying the groundwork for the future establishment of the UN-GGIM-AP Geospatial Information Service Centre.