



Implementing the Strategic Framework on Geospatial Information and Services for Disasters in the Americas
UNECLAC and UN-GGIM: Americas, Tuesday, 4 August 2020, 11:00am - 1:00pm

IGIF Implementation Guide: Enabling the implementation of the Strategic Framework on Disasters at the country level

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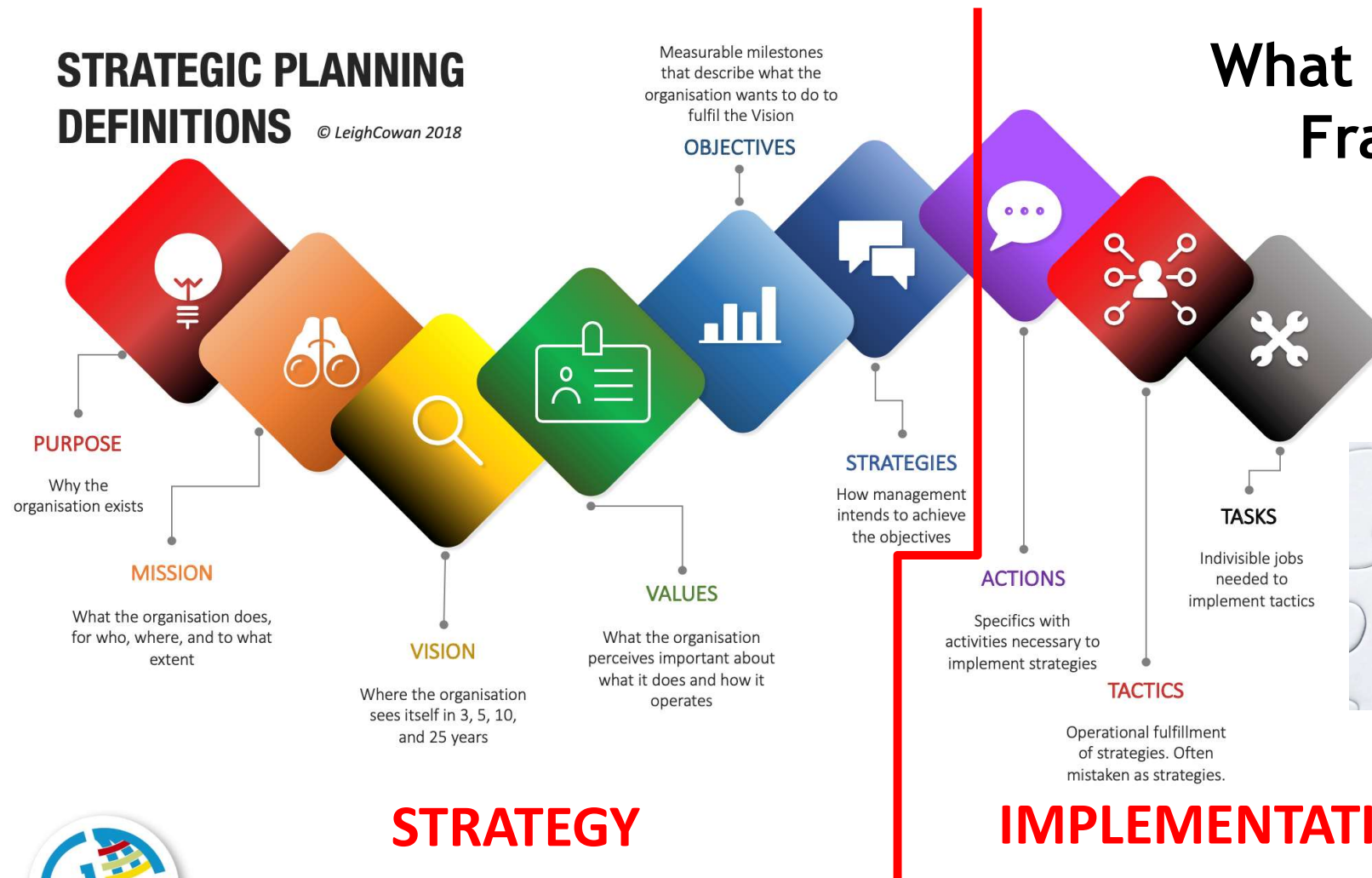
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STRATEGIC PLANNING DEFINITIONS

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What is a Strategic Framework?



STRATEGY

IMPLEMENTATION



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Global Development Frameworks

2030 Agenda for Sustainable Development

Sendai Framework for Disaster Risk Reduction 2015-2030

Paris Agreement on Climate Change

SAMOA Pathway for SIDS

Addis Ababa Action Agenda

HABITAT III New Urban Agenda

Our Ocean, Our Future: Call for Action

Global Geospatial Frameworks

Integrated Geospatial Information Framework (IGIF)

Strategic Framework on Geospatial Information and Services for Disasters

Global Statistical Geospatial Framework (GSGF)

Framework for Effective Land Administration (FELA)

Global Fundamental Geospatial Data Themes

Global Geodetic Reference Frame (GGRF)

National Institutional Arrangements in Geospatial Information Management

Role of Standards in Geospatial Information Management

Compendium on Licensing of Geospatial Information

Future Trends in Geospatial Information Management Reports



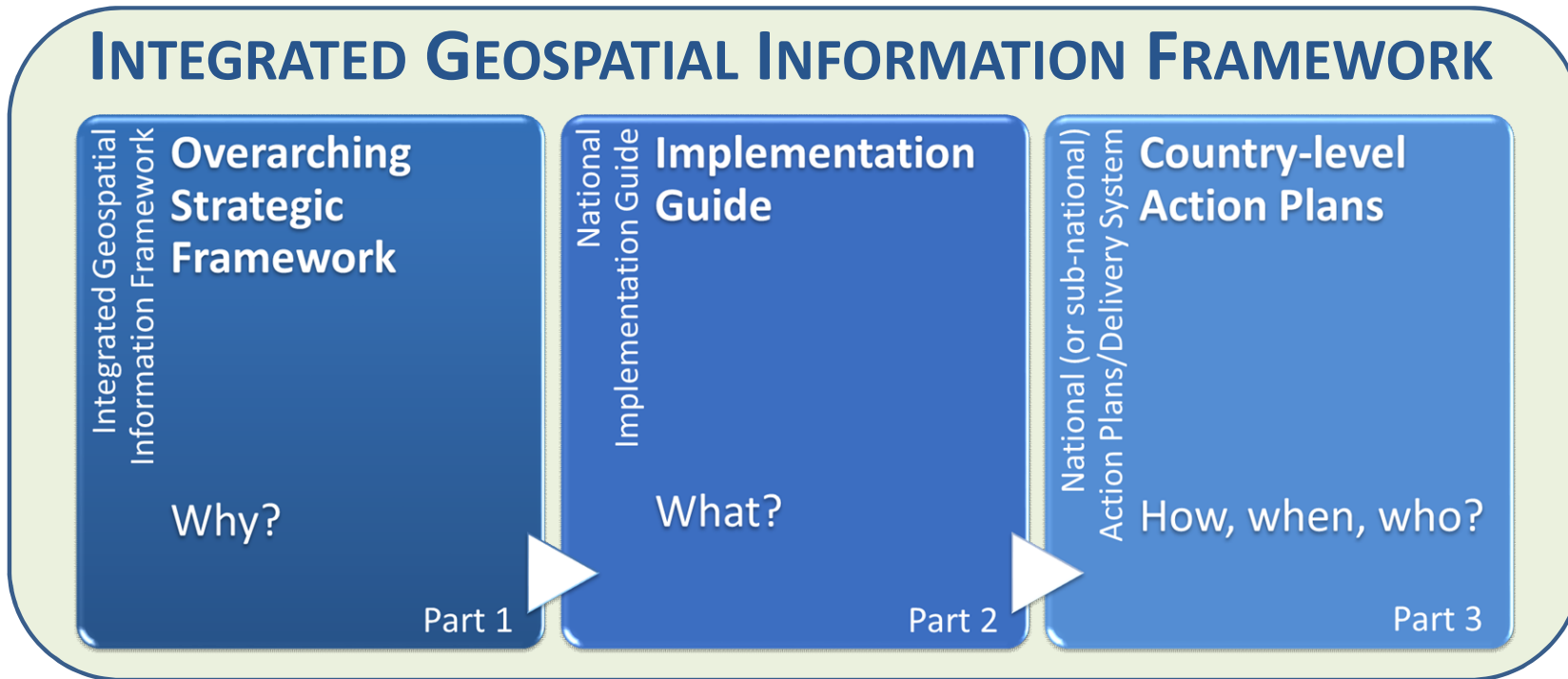
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INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK



Part 1: Overarching Strategic Framework - **WHY** geospatial information is a critical element of national social and economic development, and needs to be strengthened.

Part 2: Implementation Guide - **WHAT** actions can be taken to strengthen geospatial information management.

Part 3: Country-level Action Plans - **HOW** the actions will be carried out, **WHEN** and by **WHOM**.



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The 7 Principles are the key characteristics and values that provide the compass for implementing the Framework, and allow for methods to be tailored to individual country needs and circumstances.

VISION

The efficient use of geospatial information by all countries to effectively measure, monitor and achieve sustainable social, economic and environmental development – leaving no one behind

MISSION

To promote and support innovation and provide the leadership, coordination and standards necessary to deliver integrated geospatial information that can be leveraged to find sustainable solutions for social, economic and environmental development.

STRATEGIC DRIVERS

National Development Agenda • National Strategic Priorities • National Transformation Programme • Community Expectations • Multilateral trade agreements • Transforming our World: 2030 Agenda for Sustainable Development • New Urban Agenda • Sendai Framework for Disaster Risk Reduction 2015–2030 • Addis Ababa Action Agenda • Small Island Developing States Accelerated Modalities of Action (SAMOA Pathway) • United Nations Framework Convention on Climate Change (Paris Agreement) • United Nations Ocean Conference: Call for Action

UNDERPINNING PRINCIPLES

Strategic Enablement	Transparent and Accountable	Reliable, Accessible and Easily Used	Collaboration and Cooperation	Integrative Solution	Sustainable and Valued	Leadership and Commitment
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GOALS

Effective Geospatial Information Management	Increased Capacity, Capability and Knowledge Transfer	Integrated Geospatial Information Systems and Services	Economic Return on Investment
Sustainable Education and Training Programs	International Cooperation and Partnerships Leveraged	Enhanced National Engagement and Communication	Enriched Societal Value and Benefits



The 8 Goals reflect a future state where countries have the capacity and skills to organize, manage, curate and leverage geospatial information to advance government policy and decision-making capabilities.



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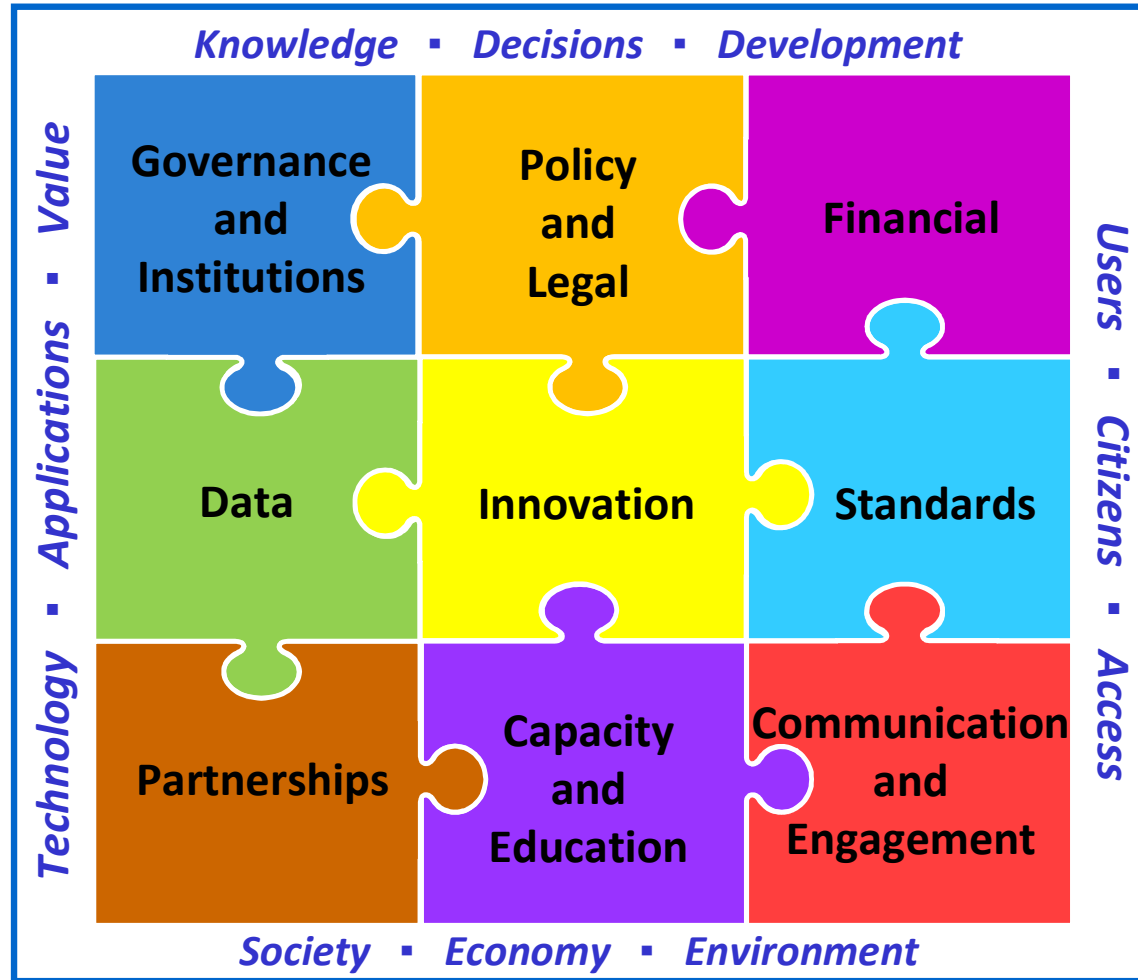
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9 Strategic Pathways

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.



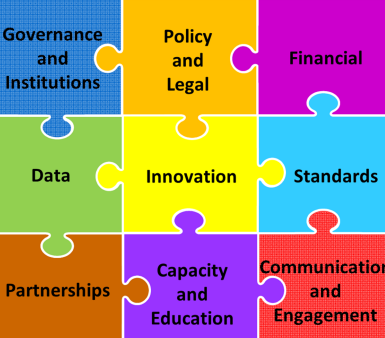
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135 Guidance Actions for Implementation



Elements of Innovation	Technological Advances	Innovation and Creativity	Process Improvement	Bridging the Geospatial Digital Divide
Guiding Principles	Leadership Trust Digital Connectivity	Digital Literacy Collaboration Emblemment	Empowerment Supportive Policies User Centric	
Key Actions for Strengthening Geospatial Information Management	Geospatial Landscape Innovation Group Technology Maturity Index Strategic Alignment	Transformation Roadmap Modernizing Data Assets Methods Enabling Infrastructure	Operationalising Innovation National Innovation System Innovation Programs Innovation Hubs Process Improvement	Identifying Innovation Needs Monitoring Trends Technology Needs Assessment
Tools to Assist in Completing the Actions	IGIF Technology Maturity Index Capacity Framework Matrix Geospatial Drivers and Trends ICT Data Inventory	PEST and SWOT Analyses Modernizing Data Assets Modern Data Creation Methods Data Integration Approaches	Data Storage Processes Pillars of an Innovation Program Critical Path Analysis Open SDG Data Hubs	
Interrelated and/or Prerequisite Actions	Governing Board (SP1) Governance Model (SP1) Specialist Working Groups (SP1)	Geospatial Information Coordination Unit (SP1) Data Inventory (SP4) Data Gap Analysis (SP4)	Country-level Action Plan (SP1) Geospatial Information Management Strategy (SP1)	
Outcomes	Improved Processes for Data Collection, Management, Analysis and Distribution	Increased Productivity Through an Innovation Enabled Environment Improved Decision-Making	Ability to Bridge the Geospatial Digital Divide Innovative Workforce	

Elements of Governance and Institutions	Governance Model	Leadership	Value Proposition	Institutional Arrangements
Guiding Principles	Facilitate Strategic Outlook Credibility Participatory	Open and Transparent Accountability Guidance Clarity	Project Management Oversight Communication and Evaluation Legal Interoperability	
Key Actions for Strengthening Geospatial Information Management	Forming the Leadership Strategic Coordination Units Specialist Working Groups	Setting Direction Strategic Alignment Study Geospatial Information Management Strategy	Tracking Success Monitoring and Evaluation Success Indicators	
Tools to Assist in Completing the Actions	Steering Committee Charter Example Strategic Alignment Template	Guidance for Vision, Mission and Goal Statements Country-level Action Plan Template	Monitoring and Evaluation Template Success Indicators Example	
Interrelated and/or Prerequisite Actions	Policy Framework (SP2) ICT Capacity Review (SP5) ICT Needs Assessment and Gap Analysis (SP5)	ICT Needs Assessment and Gap Analysis (SP5) Stakeholder Engagement Strategy (SP9) Legal and Policy Review (SP2)	Data Inventory and Gap Analysis (SP4) Socio-Economic Value Assessment (SP3)	
Outcomes	Strengthened Leadership, Institutional Mandates and Political Buy-in	Efficient Planning and Coordination Geospatial Information is Valued	Cooperative Data Sharing	

Elements of Standards	Standards Governance and Policy	Technology and Data Interoperability	Compliance Testing and Certification	Community of Practice
Guiding Principles	Leadership Compliance Engagement	Collaborative Modernized Practice Interoperability Scalable	Usability Responsive Accessible Open and Extensible	
Key Actions for Strengthening Geospatial Information Management	Direction Setting Standards Governance Framework Standards Awareness Strategic Goals	Planning for Change Action Plan Institutional Arrangements	Ongoing Management Standards Review Program Community of Practice Capacity Building	Understanding National Needs Baseline Survey Standards Inventory Needs Assessment and Gap Analysis
Tools to Assist in Completing the Actions	National Governance Model Examples Standards Baseline Survey Needs Assessment and Gap Analysis Template	Roles and Responsibilities for National Standards Standards Training, Tools and Related Resources	User Community Case Studies and Statements of Benefits Community Best Practice Examples	
Interrelated and/or Prerequisite Actions	Governing Board (SP1) Geospatial Information Coordination Unit (SP1) Specialist Working Groups (SP1)	Data Framework (SP4) Data Inventory Template (SP4) Data Inventory Questionnaire (SP4) Checklist for Creating Metadata (SP4)	Join/Build a Community of Practice/Capacity Building Methods (SP8) Communication Plan (SP9)	
Outcomes	Minimized Barriers to Data Sharing and Integration Improved Update of Geospatial Information	Rapid Mobilization of New Data and Technologies Efficiencies in Geospatial Data Production and Lifecycle Management	Enhanced Abilities to Share Geospatial Information and Address Issues of Common Importance	

Elements of Legal	Legislation	Policies, Norms and Guides	Data Protection, Licensing and Sharing	Governance and Accountability
Guiding Principles	Available and Compatible Accessible and Equitable	Stewardship and Trust Strategic and Responsible Optimize Value and Resources Secure and Safeguarded	Future Proof and Responsive Policy Coherence and Legal Interoperability	
Key Actions for Strengthening Geospatial Information Management	Providing Leadership Review Group	Addressing Opportunities Design and Develop Data Sharing and Dissemination Licensing Geospatial Information	Addressing Coherence Intellectual Property Rights Privacy and Data Protection Liability Concerns Sensitive Information	
Tools to Assist in Completing the Actions	Common Legal Terms Review and Assessment Considerations Review and Assessment Questions	Use Case Example Gaps and Opportunities Gap Analysis Matrix Policy and Legal Instruments	Assessing Fitness for Purpose for a Policy Managing Intellectual Property Rights Addressing Sensitive Information	
Interrelated and/or Prerequisite Actions	Governing Board (SP1) Geospatial Coordination Unit (SP1)	Geospatial Information Management Strategy (SP1) Specialist Working Groups (SP1)	Identify Key Stakeholders (SP9) Stakeholder Analysis (SP9)	
Outcomes	Sound and Enabling Policy and Legal Environment Maximizes Utility of Geospatial Information with Safeguards	Mandates and Responsibilities Clarified Strengthened Governance and Accountability	Effective, Secure Management and Applications Responsive to Changes and Progress	

Elements of Partnerships	Cross-sector and Interdisciplinary Cooperation	Private Sector and Academia Collaboration	International Collaboration	Community Participation
Guiding Principles	Mutual Respect, Trust and Understanding Leadership, Commitment and Empowerment	Shared Vision and Goals Learning and Development Transparency and Communication	Clarity and Realism of Purpose and Scope Performance Management and Accountability	
Key Actions for Strengthening Geospatial Information Management	Understanding Partnerships Need for Partnering Types of Partnership	Identifying Potential Partners Potential Partners Preliminary Screening Initial Engagement	Formalizing Partnership Establishing Agreement Communication Plan Governance Structure	Evaluating Opportunities Partnership Opportunities Selection Criteria
Tools to Assist in Completing the Actions	Stakeholder Identification and Analysis Types of Partnerships	Evaluation of Potential Partners Success Indicators	Communication Plan Review and Evaluation	
Interrelated and/or Prerequisite Actions	Geospatial Information Policy and Legal Review and Assessment (SP2) Sources of Funding: Business Case (SP3) Data Gap Analysis (SP4)	Data Acquisition Program; Data Governance; Storage and Retrieval System; Data Release (SP4) Data Acquisition Alternatives; Technology Needs Assessment (SP5)	Geospatial Innovation System; New Product and Services (SP5) Capacity Needs Assessment (SP8) Stakeholder Identification; Stakeholder Analysis; Communication Plan (SP9)	
Outcomes	Increased Development Capacity Expanded Capability	Sharing, Learning and Knowledge Transfer Empowered Creativity and Innovation	Enhanced Organizational Knowledge, Expertise and Proficiencies Agility and Flexibility	

Elements of Financial	Business Model	Opportunities	Investment	Benefits Realization
Guiding Principles	Adherence Accountable Transparent	Leadership Responsive Credible	Collaborative Stewardship Sustainable	
Key Actions for Strengthening Geospatial Information Management	Setting Direction Financial Governance Financial Accountability	Financial Plan Desired Business Model Financial Planning	Sources of Funding Sources of Funding Strategic Opportunities	
Tools to Assist in Completing the Actions	IGIF Current and Desired Future Dual-Survey Survey IGIF Baseline Survey World Bank/FAO/SDI Diagnostic Tool	Business Model Canvas Developing a Business Model – Some Considerations Geospatial Program Budget	Components of a Business Case Developing an Annual Budget – Considerations Possible Financing Models	
Interrelated and/or Prerequisite Actions	Governing Board (SP1) Geospatial Coordination Unit (SP1) Governance Model (SP1) Specialist Working Group (SP1)	Review Group (SP2) Country-level Action Plan (SP1) Data Sharing and Dissemination (SP2)	Geospatial Information Management Strategy (SP1) Strategic Alignment Study (SP1) Communication Strategy (SP9)	
Outcomes	Investment plan with funding sources, obligations, and estimates for future years	New funding initiatives identified to meet national geospatial information priorities	Financial accounting of costs associated with all aspects of national geospatial information program	Socio-economic value of geospatial information is defined, and aligned to financial plan to realize benefits

Elements of Capacity and Education	Awareness	Formal Education	Professional Training	Entrepreneurship
Guiding Principles	Responsible Relevant Responsive	Objective Inclusive Holistic	Collaborative Coordinated Resilient	Incentivized Sustainable Accountable
Key Actions for Strengthening Geospatial Information Management	Setting Direction Capacity and Education Working Group Target Groups	Considering Alternatives Capacity Development and Education Strategy	Taking Actions Community of Practice Innovation Hubs and Incubators Geospatial Industry Challenges Scholarships and Internships	Assessing Value Monitor and Evaluate
Tools to Assist in Completing the Actions	Knowledge-Skills-Resource Matrices for Organizations and Teams Capacity Scanning Matrix	Incremental Approach to Needs Assessment/Analysis Gap Analysis Approach to Needs Assessment/Analysis PEST and SWOT Analysis	Typical Components of a Capacity Development and Education Strategy Types of Capacity Development Approaches Recording Success Indicators for Capacity Development	
Interrelated and/or Prerequisite Actions	Geospatial Coordination Unit (SP2) Specialist Working Groups (SP1) Governance Model (SP1) Design and Develop (SP2)	Data Sharing and Dissemination (SP2) Innovation Hubs (SP5) Potential Partners, Preliminary Screening and Initial Engagement (SP7)	Communication Strategy (SP9) Communication Plan (SP9) Stakeholder Identification (SP9)	
Outcomes	Broad geospatial awareness and capabilities at all levels Increased adoption and application of geospatial technologies and processes	Stimulate creativity and innovative solutions to address real-world challenges, economic opportunities and growth, and wellbeing of society	Equipped with increasing knowledge, proficiencies and instincts in geospatial and geospatial sciences.	

Elements of Data	Data Themes	Custodianship, Acquisition and Management	Data Supply Chains	Data Duration and Delivery
Guiding Principles	Governance Consistent Identification Quality Management	Metadata Standards Accessibility Reusable Formats	Authoritative Timeliness Provenance Integrity	Demand Driven Efficiency Security Respected Rights
Key Actions for Strengthening Geospatial Information Management	Getting Organized Data Framework Data Inventory Dataset Profiles	Capturing and Acquiring Data Data Capture Data Acquisition Program	Maintaining Accurate Positioning Maintained Geodetic Infrastructure	
Tools to Assist in Completing the Actions	Fundamental Geospatial Data Themes Description Data Inventory Questionnaire Dataset Profile Template Gap Analysis Matrix	Data Theme Road Map Template Data Custodianship Policy Principles Data Governance Roles Data Management Plan Elements	Metadata Creation Checklist Data Release Guidelines Infrastructure Global Statistical Geospatial Framework Geospatial/Statistical Integration	
Interrelated and/or Prerequisite Actions	Geospatial Strategy (SP1) Country-level Action Plan (SP1) Governance Model (SP1) Geospatial Steering Committee (SP1)	Geospatial Information Coordination Unit (SP1) Policy Framework (SP2) Licensing Models (SP2) New Data Capture Methods (SP9)	Storage Solutions (SP5) Metadata Standards (SP6) Establishing Partnerships (SP7) Identify Key Stakeholders (SP9)	
Outcomes	Increased Range and Scope of Authoritative Data	A Critical Mass of Centrally Coordinated Data Cost Reduced Through Productivity Improvements	Ability to Monitor and Measure Progress Towards Achieving the SDGs	

Elements of Communication and Engagement	Stakeholder and User Engagement	Strategic Messaging and Engagement	Communication Strategy, Plans and Methods	Monitoring and Evaluation
Guiding Principles	Trusted and Transparent Personalize and Participatory	Inclusive and Impartial Meaningful and Timely	Coordinated and Consistent Purposeful and Effective	Adaptable and Responsive
Key Actions for Strengthening Geospatial Information Management	Providing Leadership Engagement Strategy Steering Group Internal Communication	Setting Direction Policy Platform Geospatial Brand Strategic Messages	Monitoring Progress Review and Evaluate Stakeholder Surveys	
Tools to Assist in Completing the Actions	Categories of Stakeholders Identifying and Classifying Stakeholders	Stakeholder Analysis Matrix Stakeholder and Communication	Stakeholder Communication Plan Communication Methods	Communication Methods – Advantages and Disadvantages Review and Evaluation: Benchmarking
Interrelated and/or Prerequisite Actions	Geospatial Information Management Strategy (SP1) Specialist Working Groups (SP1)	Governing Board (SP1) Socio-Economic Impact Assessment (SP3)	Geospatial Coordination Unit (SP1) Benefits Realization Plan (SP3)	
Outcomes	Heightened Awareness and Active Engagement	Engaged, Inclusive and Participatory	Positive and Beneficial Relationships	Increased Opportunities, Innovations and Accomplishments

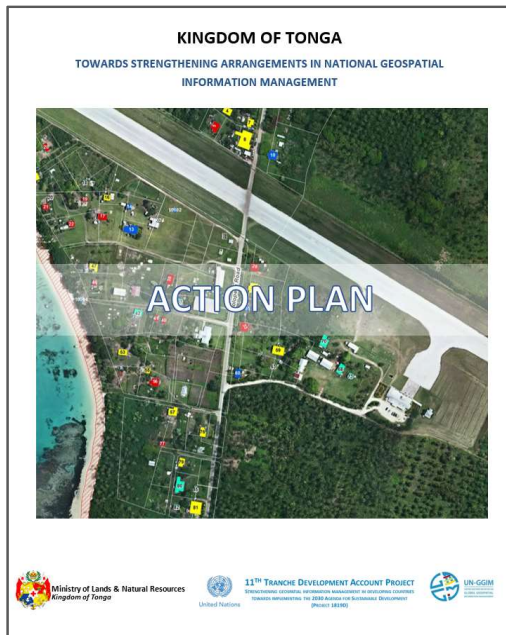
IGIF: Country-level Action Plans (CAPs)

- Country-level Action Plans (CAPs) describe HOW the actions will be carried out, WHEN and by WHOM.
- A CAP provide the process to build an IGIF for a nation, beginning with specific plans that align with a nation's priorities and circumstances.
- A CAP references the specific guidance, options and actions provided in the Implementation Guide and addresses each of the Strategic Pathways, while taking into account the strategic and operational needs of a country when implementing the Framework.
- The CAP is a plan, not a programme that is implemented. The CAPs contain the processes, templates and tools that are available and necessary to first develop a national action plan, and then operationalize the IGIF through its subsequent implementation, and aligned with national priorities.
- The CAPs will include elements such as the economic impact and value of geospatial information systems, identification of investment needs and priorities, and sequenced implementation options.

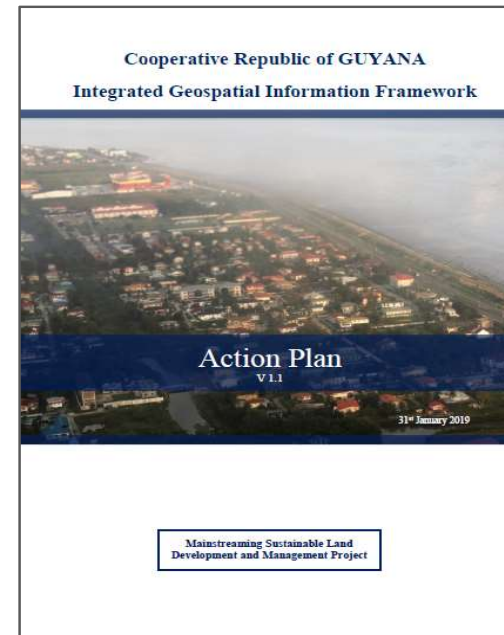


IGIF: Country-level Action Plans - Approaches

United Nations and the World Bank are actively engaged in assisting countries to develop
Country-level Action Plans



Development Account Project
UNSD
(self-paced learning and execution)



Technical Assistance Programs
World Bank and FAO
(assisted execution)



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Strategic Framework on Geospatial Information and Services for Disasters

Scope and Purpose

The strategic framework aims to guide all stakeholders and partners in the management of geospatial information and services in all phases of disaster risk management

Expected Outcome

The social, economic, and environmental risks and impacts of disasters are prevented or reduced through the use of geospatial information and services

Goal

Quality geospatial information and services are available and accessible in a timely and coordinated way to support decision-making and operations within and among all stakeholders and partners and in all phases of disaster risk management

Priorities for Action

Member States with the support of regional and international organizations as well as other relevant organizations should focus their action on the following 5 priorities for action



Priority 1 Governance and Policies

Policies, collaborative agreements and legal frameworks aiming at improving the availability and accessibility of quality geospatial information and services among all stakeholders and partners established and implemented in all phases of DRM



Priority 2 Awareness Raising and Capacity Building

Awareness is raised among concerned entities on the importance of geospatial information and services and all necessary technical and human capacities are built and/or strengthened



Priority 3 Data Management

Geospatial databases and information products are developed based on common standards, protocols and processes as important tools in every decision-making process across all phases of DRM



Priority 4 Common Infrastructure and Services

Common facilities and services are established for all key stakeholders and partners to have a common operational picture of emergency scenarios



Priority 5 Resource Mobilization

All necessary technical, human and financial resources are available to sustain all the activities of DRM

Guiding Principles

The strategic framework is guided by the 2030 Agenda for Sustainable Development, International Strategy for Disaster Reduction, Sendai Framework for Disaster Risk Reduction (2015-2030), the UN-GGIM Global Statistical Geospatial Framework, UN General Assembly resolution on international cooperation on humanitarian assistance in the field of natural disasters, from relief to development and other relevant instruments. It is also guided by the principles of open data and requirements of national data infrastructure, and by the UN-GGIM's Statement of Shared Guiding Principles for the Management of Geospatial Information.

During disaster situations, the data-sharing mechanism to support decision-making is generally not in place. As a result, the many actors and stakeholders simultaneously engaged in response are not only gathering volumes of concurrent and inconsistent geospatial datasets, but they are also concerned with issues of coordination and communication. This underscores the strong relevance of a Strategic Framework.



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WHAT specific actions need to be taken for implementation of the Strategic Framework, and HOW will the actions be carried out, WHEN and by WHOM?

VI. Implementation

34. Geospatial information and services contribute vastly to the overarching effort of preventing or reducing the social, economic, and environmental impacts of disasters. Thus, Member States and other stakeholders should prioritize a geospatially-oriented agenda in their respective development plans and programs.

35. Member States and other stakeholders should commit themselves to the full implementation of the priorities for action by improving their current capacities in providing geospatial information and services across all phases of DRM and actively promoting the goals of the five priorities for action, and translate the same into national implementation plans.

36. A participatory and inclusive approach in generating, improving and managing geospatial information should be employed by all entities involved in DRM efforts.

37. Managing geospatial information and services before, during and after disasters will require all Member States and other stakeholders to institutionalize good governance practices and science-based policies supported by improved capacities on human resource, infrastructure and geospatial data management, among others.

38. In support to the Sendai Framework for Disaster Risk Reduction (2015-2030), international cooperation should be recognized as a critical element in managing geospatial information and services before, during and after disasters, and thus implementing the provisions of the strategic framework. Adopting best practices and identifying champions among Member States will augment their existing capacities in using geospatial information and services across all phases of the DRM.

This Strategic Framework is not only timely in view of the increasing number and impact of disasters, but also contributes to the Member States' implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.





Governance and Policies



Awareness Raising and Capacity Building



Data Management



Common Infrastructure and Services



Resource Mobilization

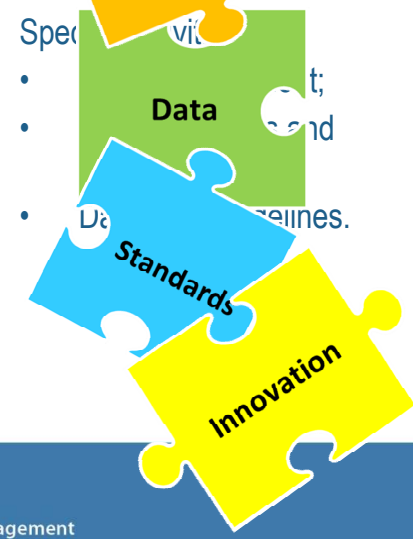
Refers to the framing, implementation and monitoring of policies to make geospatial information accessible and available across all phases of the disaster cycle.



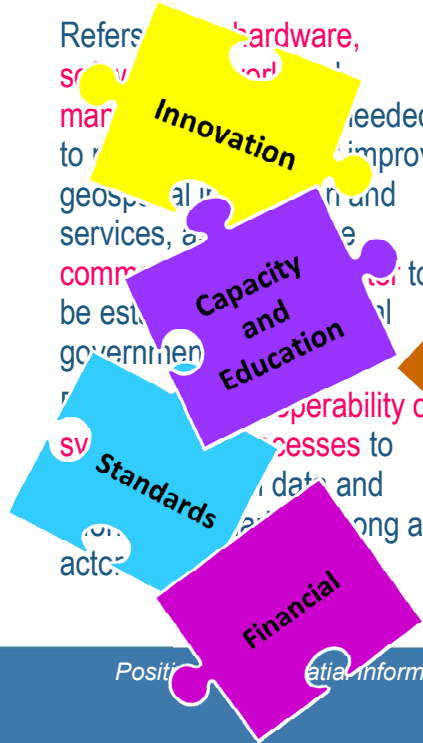
Refers to the improved understanding and use of spatial data as a vital tool for disaster risk reduction and all new technical and communication activities are built and/or strengthened especially in the pre-disaster phase of the disaster cycle.



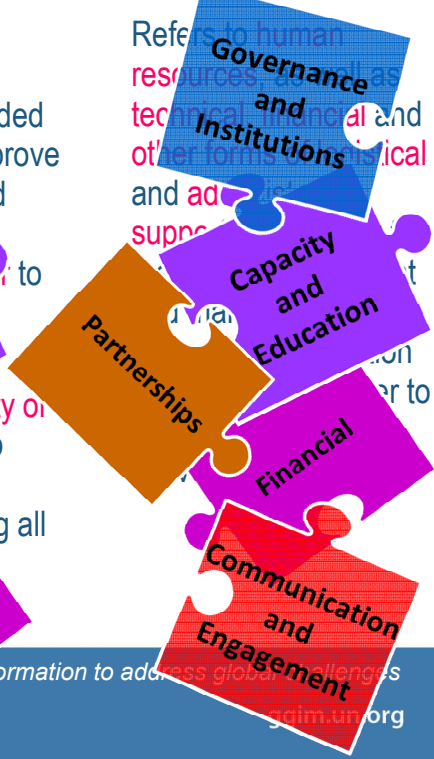
Refers to the comprehensive management and use of data and information to support disaster risk reduction activities.



Refers to the hardware, software and services needed to improve geospatial information and services, and to be established by government and other stakeholders.



Refers to human resources, technical and other forms of support needed to address global challenges.

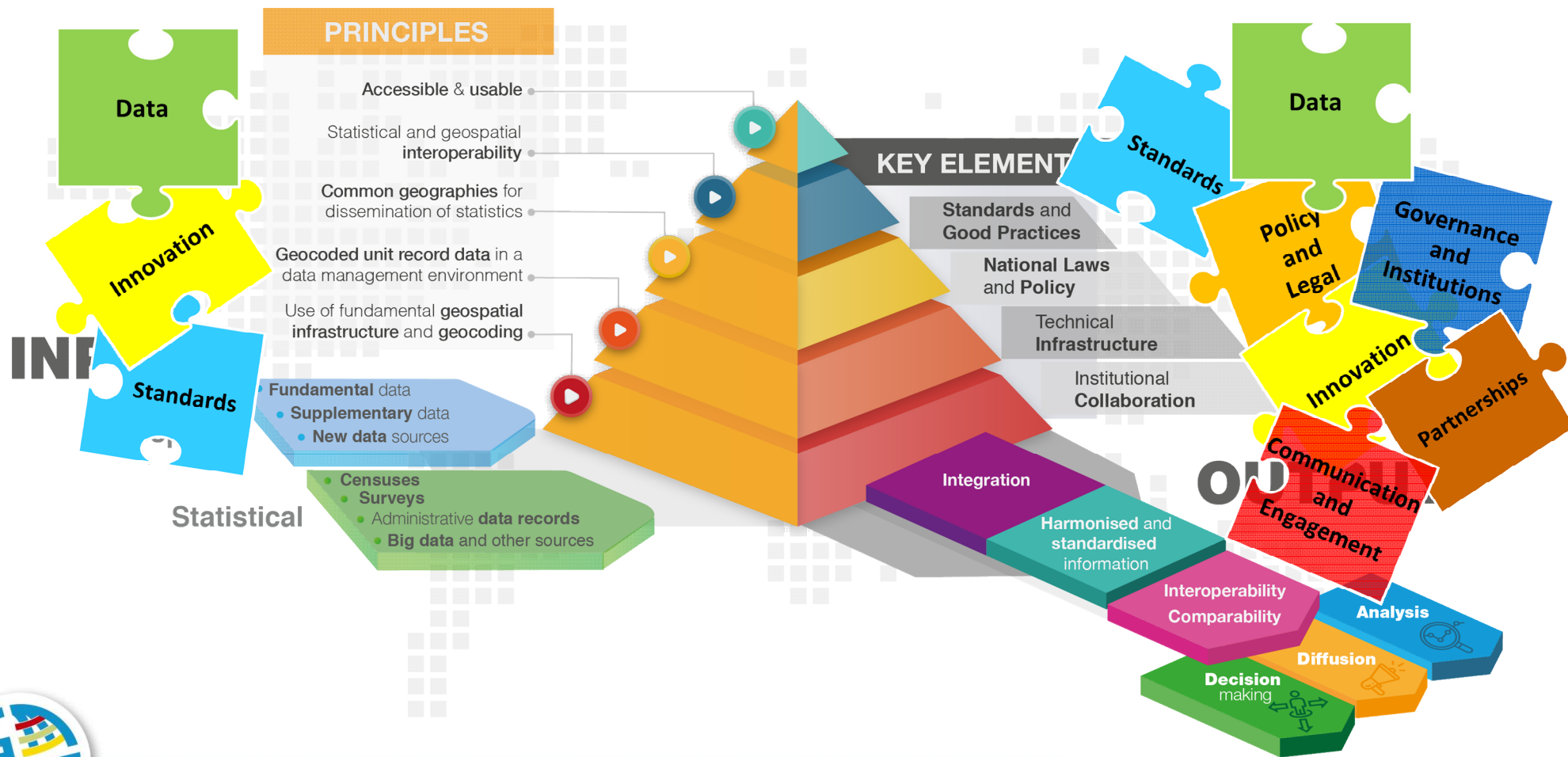


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Transforming our world -
The 2030 Agenda for
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Role of
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Compendium
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Future Trends
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