



Experiences in Development of IGIF Country-level Action Plans: Nepal



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Presentation Outline

- Development Account Project (Project 1819D)
- IGIF
- Assessment and Analysis Component of DA Project
 - ▷ The Current and Desired Performance Questionnaire
 - ▷ Baseline Survey
 - ▷ Stakeholder Identification and Analysis
 - ▷ Stakeholder Workshop
 - ▷ Strategic Alignment
 - ▷ Vision, Mission and Goals
 - ▷ Gap Analysis Matrix
 - ▷ Needs Assessment and Gap Analysis Report
- Observations





Development Account Project

The Development Account is a capacity development programme of the United Nations Secretariat aiming at enhancing capacities of developing countries in the priority areas of United Nations Development Agenda.

Focus Improving and Strengthening National geospatial information management capacity





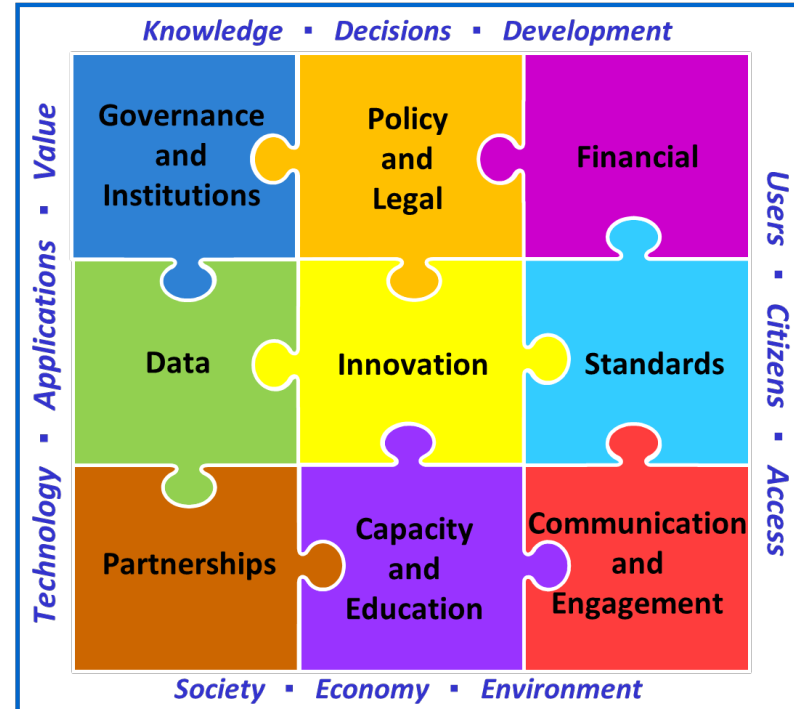
Integrated Geospatial Information Framework

- IGIF is a United Nations endorsed Framework that was developed to provide a basis and guide countries to reference when developing and strengthening their national and sub-national arrangements in geospatial information management and related infrastructures

Governance →

Technology →

People →





Components of DA

Project Execution Plan

Component 1

- **Objective:** Each country to understand the requirements of the Development Account Project Plan, assign a project leader and team, and develop a Project Execution Plan.
- **Outcome:** A shared understanding of the Development Account Project and a commitment by each Country to undertake information gathering, analysis and planning tasks as appropriate towards strengthening geospatial information management.

Needs Assessment and Gap Analysis

Component 2

- **Objective:** Each country to review their current situation and identify needs with respect to their current and future goals; followed by a review by resource persons.
- **Outcome:** A shared understanding of current limitations and problems, and a common view of what the future geospatial information management ecosystem should include.

Country Action Plan

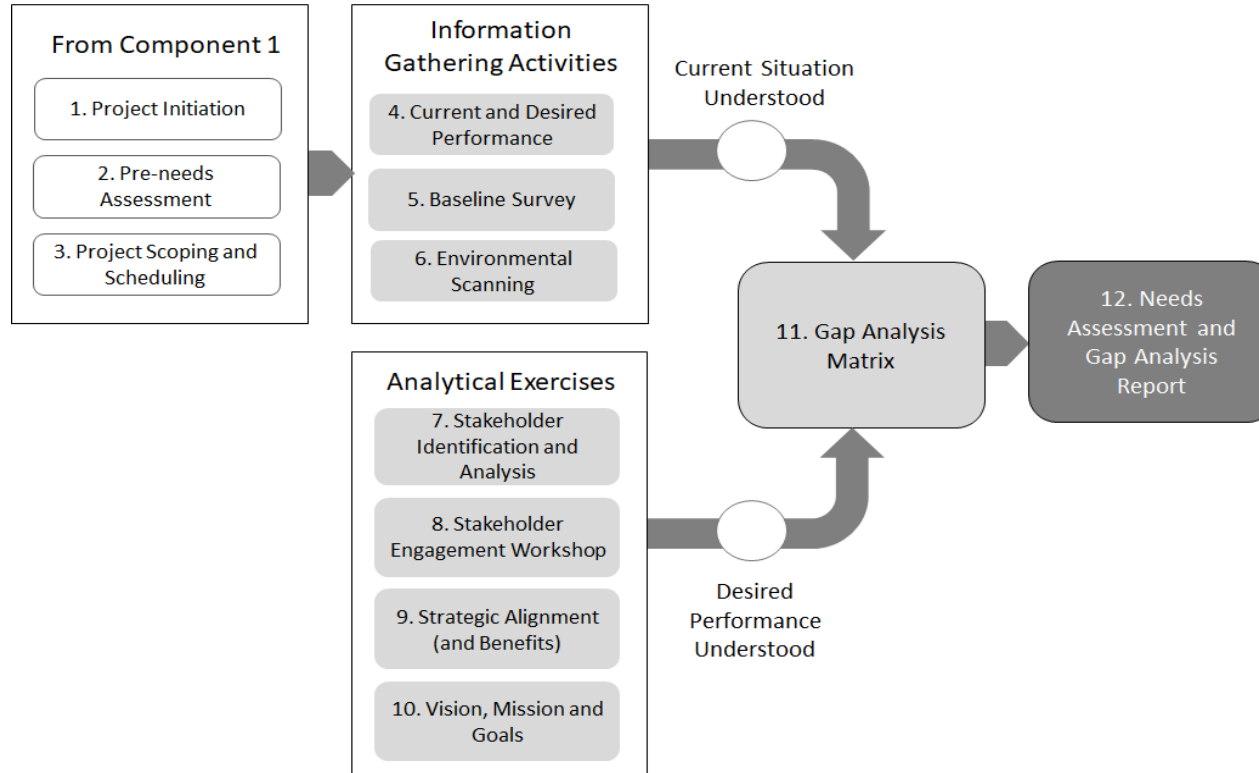
Component 3

- **Objective:** Develop draft Country-level Action Plan with guidance from resource persons.
- **Outcome:** A Country-level Action Plan identifying what needs to happen, when, why, how and by whom in order to strengthen geospatial information management. The Plan reflects the needs identified in Component 2.





Component 2 – Assessment and Analysis





Activity: The Current and Desired Performance Questionnaire

The activity was conducted as follows:

- Discussed with project team and few stakeholders that represent the user community
- Sent the survey to additional stakeholders to get their perspectives on the current situation and future priorities : Department of Mines and Geology, Forest Research and Training Center, Private Sectors
- Worked through each survey question in turn.
- Wrote down the major points of the discussion

GOAL 1: Effective Geospatial Information Management		
Enabling geospatial information governance, policy and institutional arrangements that ensure effective geospatial information management, accommodate individual organizational requirements and arrangements, and that are aligned to national and global policy frameworks		
Current Performance	Statement	Desired Performance
<p><u>Progress</u></p> <p>1 = Not started; 2 = Minimal; 3 = Moderate; 4 = Extensive; 5 = Achieved</p>	<p>The extent to which our governance arrangements for geospatial information management bring together a broad range of institutions to share and provide access to data.</p>	<p><u>Priority</u></p> <p>1 = Low and 5 = High</p>
<p>① ② ③ ④ ⑤</p>		<p>① ② ③ ④ ⑤</p>
<p>Comment:</p> <ul style="list-style-type: none"> There is not policy or legal arrangement that brings together a broad range of institutions to share and provide access to data. Institutional arrangement for geospatial information management has been made recently. (Geographic Information Infrastructure Division under Survey Department was formed in year 2016 as a Nodal agency for National Spatial Data Infrastructure (NSDI)). However there is duplication on preparation of similar data by different institute. All the institution do not share the geospatial data prepared for their respective use. There is not legal or institutional arrangement for this as well. There is lack of coordination among institutions. 		





Activity: The Baseline Survey

The objective of the Baseline Survey is to gather detailed information about the current geospatial information management ecosystem in a country.

Gathered the information to answer the questions from subject matter experts.

DATA - BASELINE

The following questions are designed to understand what data is collected, its quality and how it is currently managed and distributed.

1	<p>Do you have a National Geospatial Data Framework?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Go to Question 2)</i></p> <p>If Yes, which of the following are part of the Data Framework</p> <p><input checked="" type="checkbox"/> A set of fundamental data themes</p> <p><input checked="" type="checkbox"/> A set of application data themes</p> <p><input checked="" type="checkbox"/> A set of statistical data themes</p> <p><input type="checkbox"/> Data standards</p> <p><input type="checkbox"/> Metadata standards : Survey Department is using North American Profile of ISO 19115:2003 to publish Metadata</p> <p><input type="checkbox"/> Mandated data custodians</p> <p><input type="checkbox"/> Data Quality</p> <p><input type="checkbox"/> Data Release Category</p> <p><input checked="" type="checkbox"/> Pricing and Licensing Conditions</p> <p><input type="checkbox"/> Other _____</p>
2	<p>Do you have an inventory of government data holdings?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Go to Question 2)</i></p> <p>If yes, please answer the following:</p> <p>Approximately how many datasets have been inventorised? _____</p> <p>How many different <u>organisations</u> contribute data to this inventory? _____</p>





Activity: Stakeholder Identification

- **Data Suppliers/Producers** Survey Department, D, MG, DUDBC, DNPWC,
- **Valueadding Organizations** NGO's/INGO's
- **Business Users: Geospatial Company,** Commercial Real Estate Agencies
- **Decision Makers** Cabinet, Commissions
- **Interest Groups** V/GI Community, NGES
- **Government Organizations** National/federal provincial and local government
- **Education Institutions** KU, TU, LMTC
- **Media Organizations**





Activity: Stakeholder Workshop

- SWOT Analysis
- PEST Analysis

<p>POLITICAL</p> <ul style="list-style-type: none"> • Safer Country • Policy and legislation • E-Government • Regional Needs • Sufficient government support and Funding • Copyright and Intellectual Property • Value & importance to the country 	<p>ECONOMIC</p> <ul style="list-style-type: none"> • Investment Opportunities for revenue growth • Savings • Modernization and maintenance • Professional Skills • Plant, equipment and personnel availability 	<p>SOCIAL</p> <ul style="list-style-type: none"> • Institutional Culture • Community needs • Intergenerational issues • Geographic and geospatial education capacity • Computer literacy • Community safety 	<p>TECHNOLOGICAL</p> <ul style="list-style-type: none"> • Data quality • Legislation • Technology level • Power (utilities) availability • Broadband capacity • Standards, Metadata etc. • Innovation
<p>STRENGTHS</p> <ul style="list-style-type: none"> • Leadership • Skills • Technology • R &D • Community demand • 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> • Missing, outdated, or sub-standard data themes • Policy • Cross agency collaboration • ROI and Pricing Models 	<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> • Expansion of data use • New applications • Community crowdsourcing • Government branding • Community trust 	<p>THREATS</p> <ul style="list-style-type: none"> • Free data policy impacts on ROI • Change in policy • Consumer behaviour • Obsolete Technology • Insufficient resources





Activity: Strategic Alignment

- Promote tourism, provide better services to tourist
- Socially Inclusion
- Transparency/easy and Accessible medium of data dissemination
- Economic Development
- Increased Agricultural Productivity
- Urban Planning
- Disaster Management
- Environment Management





Activity: Vision, Mission Goals

Vision

Achieve sustainable social, economic and environmental development by efficient application of geographic information management for decision making.

Mission

Working together to create and leverage value of geospatial Information in Government Decision making and private sector innovation





Activity: Vision, Mission Goals

Goals

- To ensure continuous and easy access of geographic information for
- To improve the availability, quality value of geographic information
- To create environment for optimum use of Geospatial Information by government and people for decision making
- To increase capacity, capability, and knowledge transfer in geographic information
- To make institutional, legal and policy framework to achieve above goals.





Activity: Gap Analysis Matrix

Identify current situation and gaps

2. Policy and Legal

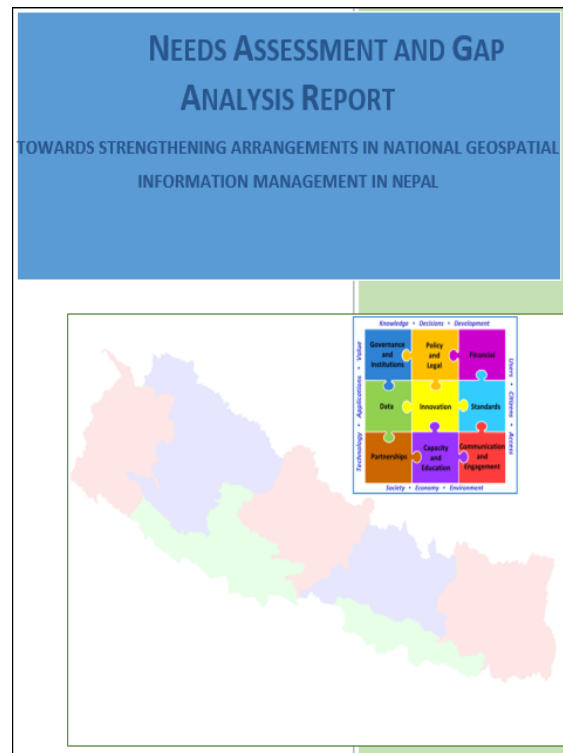
Elements	Current Situation (Challenges)	Desired Future	Capacity Gap	Possible Strategies
<ul style="list-style-type: none"> • Legislation • Norms, Policies and Guides • Implementation and Accountability • Data Protection and licensing 	<ul style="list-style-type: none"> • There is no mandate to share data. • Agencies don't know how to release data in a way that manages the risk that data will not be used correctly. • Lack of capacity and understanding of the policy framework • Pricing of some of the spatial data is determined by "Directives for the distribution and selling of digital data". • There is law related to Right to information and Spatial data capture but need updates as there are gaps and overlaps. • Draft NSDI policy is developed covering aspects of data distribution. • Limited people are aware about existing policy and arrangements. 	<ul style="list-style-type: none"> • Agencies work together and share geospatial information and they have a common understanding of the benefits and value of geospatial information. • There exist geospatial policies and laws stimulate data sharing, innovation and use of geospatial information. 	<ul style="list-style-type: none"> • A lack of policies and legal document concerning Geospatial Data Management including data sharing, data security, data custodianship and intellectual property right. • No Licensing and Pricing Framework 	<ul style="list-style-type: none"> • Form a committee or council to review the legal and policy framework and advice government to prepare and implement policy and or NSDI Law • Develop the Legal and Policy Framework • Prepare policy related to: <ul style="list-style-type: none"> ✓ Data sharing ✓ Custodianship ✓ Data Release ✓ Standards ✓ Intellectual Property • A compliance Strategy to encourage and assist organizations to comply with policies and laws and in doing so, advance the development of the NSDI





Activity: Gap Analysis Report with Actions

- Compiled all the information and take reference of IGIF Implementation Guide to prepare report
- Total 34 Actions are identified





Action Points

Governance and Institutions

1. Appoint an NSDI Steering Committee to lead the implementation of the Integrated Geospatial Information Framework
2. Establish a Geospatial Information Coordination Unit to coordinate and be accountable for all Integrated Geospatial Information Framework related activities.
3. Establish Specialist Working Groups to advise the coordination unit and Steering Committee on data, technology, policy, and capacity and education matters.
4. Develop a Governance Model defining the NSDI roles and responsibilities of key institutions.
5. Develop a National Geospatial Information Strategy Develop Country Action Plan





Action Points

Policy and Legal

1. Review the existing Legal and Policy Framework to determine barriers to geospatial information sharing and usage.
2. Develop the Legal and Policy Framework - laws, regulation, policy, good practice, agreement, etc.
3. Prepare/update policy/laws/regulations to support integrated geospatial information management.
4. Develop a compliance strategy to encourage and assist organizations to comply with policies and laws to advance the development of the NSDI.





Action Points

Financial

1. Undertake a Socio-economic Value Assessment to understand the return on investment generated through geospatial improvement activities that are strategically aligned to government priorities.
2. Review the current Government budget/business model with a view to creating a market-driven business model that contributes to socio-economic development.
3. Under the NSDI Coordination Unit, establish the NSDI Financial Program Management.
4. Develop business cases for specific geospatial improvement projects on a case by case basis.





Action Points

Data

1. Develop Data Framework to organise Nepal's geospatial and statistical information.
2. Densify Geodetic Network to enhance the fundamental spatial reference system
3. Conduct a Data Inventory to understand the extent of government data holdings.
4. Implement a Data Enhancement and Quality Improvement Program to update topographic base maps, fundamental data themes and operationalize the Data Framework:
5. Mandate data custodianship to appropriate agencies and develop Custodianship Guidelines





Action Points

Innovation

1. Enhance the geoportal so that specialist applications can be built to deliver priority needs.
2. Establishment a research and development unit with cross agency and cross discipline involvement, to innovate in the national interest.
3. Develop an Innovation Program to incentivise the use of spatial data by the government, private sector and citizens.





Action Points

Standards

1. Establish and maintain a National Standards Governance program to review, assess, develop, evaluate, and endorse national standards for geospatial information management.
2. Undertake an inventory of standards used across government agencies.
3. Develop policies and procedures promoting the procurement, implementation and use of standards-based technologies and data.
4. Promote broad public/private sector stakeholder dialogues and forums to raise awareness and to promote a common standards framework.
5. Develop and implement policies and procedures to monitor and assess compliance with endorsed national standards.





Action Points

Partnerships

1. Establish a Partnership Framework and Plan to understand, evaluate, select, formalize and manage partnerships.

Communication and Engagement

1. Develop a Stakeholder Communication and Engagement Plan to maintain open lines of communication with stakeholders





Action Points

Capacity and Education

1. Promote the inclusion of geospatial information in curriculum of secondary schools.
2. Create education material to support regular professional training on geospatial information management.
3. Organize outreach programs and workshops to raise awareness and build capacity.
4. Develop a Capacity and Education Plan targeted towards professional development in geospatial technologies.
5. Conduct education and awareness raising activities to increase community participation in citizen science projects





Some Observations

- Communicating importance of Geospatial Information Management is still a challenge.
- Geospatial Information should be for decision making in various sector and not only for technical people.
- Maximum Stakeholder Engagement is necessary to identify all the issues.
- Country action plan will guide Geographic Information Management in Nepal for many years to come. However, this document and IGIF itself should evolve with time.
- This Development Account Project has developed excellent tools and documents which could be used by other countries as well for Geospatial Information Management.

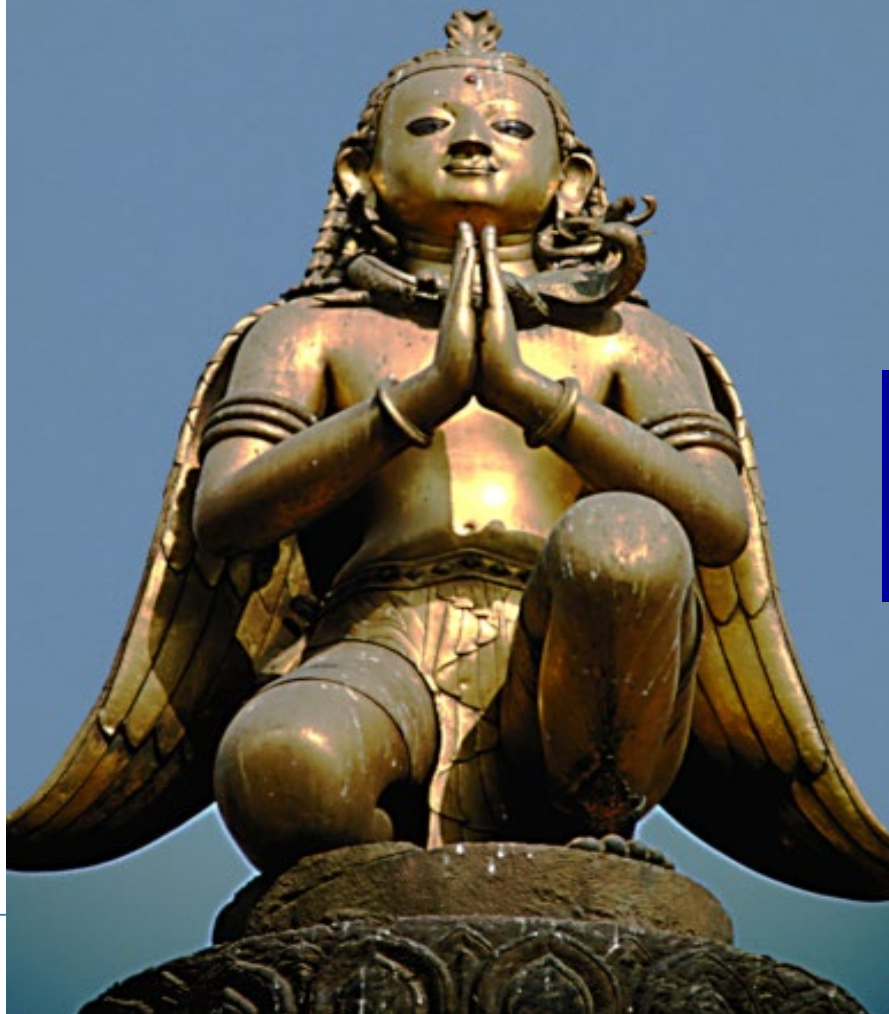




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Thanks for listening

