

# Challenges and Opportunities in enhancing geospatial information.

Panama City, Panama  
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Enhancing Geospatial Information Management arrangements Accelerating the Implementation of the SDGs

Sub-regional Workshop on UN-IGIF for the Central America and neighbouring Latin American countries

# Panamá

## Gorgas Memorial Institute for Health Studies

The logo for the Gorgas Memorial Institute for Health Studies, featuring a stylized classical column on the left and the word "GORGAS" in a bold, dark blue, sans-serif font to its right.



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# Task 6: Environmental Scanning and Analysis.

Evaluation of internal and external factors that have an impact on geospatial information management. Understand how to identify our opportunities and strategies or actions to address any issue that poses a threat to the success of the Action Plan.



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# SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)

## Strengths

1. Suitable, trained, and committed personnel.
2. Existence of a legal framework.
3. Availability of quality and metadata standards and norms.
4. Existence of data at the institutional level.
5. The size of our country allows for comprehensive data generation coverage.
6. Collaboration with international organizations.

## Opportunities

1. Data exchange occurs.
2. Cooperation with international organizations.
3. Data organization based on examples of best practices (other countries).
4. Advancing as a successful country in data management and support for the 2030 Agenda.
5. They were taken into account for decision-making.

## Weaknesses

1. Commitment of committee members (availability for participation).
2. Stagnation in the development of standards.
3. Reinforcement of training-
4. Inter-institutional dissemination.
5. Marketing promotion.
6. Lack of budget.
7. Lack of commitment and vision at the hierarchical level.

## Threats

1. The data policy is due to end.
2. Change in leadership and government policy.
3. Public reaction due to lack of information.
4. Data Duplication.
5. Data quality does not meet consumer expectations.
6. Technology becomes obsolete.



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# Main Challenges and Opportunities in the Improvement of Geospatial Information

The challenges mainly focus on overcoming **Weaknesses** and mitigating **Threats**.

## Challenges Based on Weaknesses

Challenges	Weaknesses	Overcoming strategy
Governance and Hierarchical Commitment.	Lack of commitment and vision at the hierarchical level.	Establish accountability mechanisms and integrate the geospatial data infrastructure into national strategic plans.
Regulatory Framework and Standards.	Commitment of committee members.	Create a dedicated and resourced working group to finalize and continuously update norms and standards.
Resources and Financial Sustainability.	Stagnation in the development of standards.	Design a sustainable financing plan, exploring shared-cost models or seeking specific public/private investment for the GDI (Geospatial Data Infrastructure). Implement a continuous and mandatory training program.
Training and Dissemination.	Lack of budget.	Develop a robust communication and marketing plan to demonstrate the value of geospatial data to all levels of government and the general public.



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## Challenges Based on Threats

Challenges	Threats	Mitigation Strategy
<b>Quality Assurance and Trust.</b>	Data quality does not meet consumer expectations; Duplication of information.	Strengthen compliance with quality standards and regulations (Strength 3). Eliminate information duplication by having a single repository (IPDE).
<b>Political Changes and Long-Term Vision.</b>	Changes in leadership and government policy.	Ensure the geospatial strategy through a Law or Decree that guarantees the continuity of the SDI/IDE beyond political changes (leveraging Strength 2: Existence of a legal framework).
<b>Technology Adoption.</b>	Technology becomes obsolete.	Establish a lifecycle for the technological infrastructure, with an assigned budget for periodic migration and updating to new platforms and software.
<b>Data Policy and Public Reaction.</b>	The data policy; Public reaction due to lack of information	Offer data that is high-quality, reliable, and accessible to the public.



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# Main Challenges and Opportunities in the Improvement of Geospatial Information

Opportunities focus on maximizing Strengths to capitalize on Opportunities and counteract Threats.

## Growth Opportunities (Leveraging Strengths and Opportunities).

Opportunities	Relationship (Strength / Opportunities)	Execution Action
<b>National and International Leadership.</b>	S1 (Suitable, trained personnel), S6 (Collaboration with international organization), O2 (Cooperation with international organization).	Convert trained personnel and existing collaboration into a regional excellence hub for geospatial data management.
<b>Use of Standardization.</b>	S3 (Standards and norms), O3 (Organization based on best practices).	Use existing standards as a foundation, supplementing them and rapidly implementing international best practices for data cataloging and organization.
<b>Direct Impact on Public Policy.</b>	O4 (Support for the 2030 Agenda), O5 (Being taken into account for decision-making).	Develop specific data products that demonstrate value in key themes of the 2030 Agenda (e.g., climate, urban development).
<b>Leveraging Data Exchange.</b>	S4 (Existence of data in institutions), O1 (Data exchange).	Leverage the IPDE as a centralized data node where institutions not only share but also produce information, minimizing duplication (Threat 4).
<b>Optimization due to Country Size.</b>	S5 (Country size allows for comprehensive data generation coverage).	Create comprehensive projects by thematic areas for total and homogeneous coverage of fundamental data in key areas, which is feasible given the size of the territory.



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# Main Challenges and Opportunities in the Improvement of Geospatial Information Results

<p>REPÚBLICA DE PANAMÁ MINISTERIO DE VIVIENDA Y ORDENAMIENTO TERRITORIAL</p> <p>DECRETO EJECUTIVO No. 51 (De 14 de febrero de 2013)</p> <p>Que crea la Infraestructura Panameña de Datos Espaciales (IPDE) y se dictan otras disposiciones.</p> <p>EL PRESIDENTE DE LA REPÚBLICA En uso de sus facultades constitucionales y legales y,</p> <p><b>CONSIDERANDO:</b></p> <p>Que en la Sexta Conferencia Cartográfica Regional de las Naciones Unidas para las Américas, celebrada en Nueva York en 1997, se acordó la creación del Comité Permanente para la Infraestructura de Datos Espaciales de las Américas (CP-IDEA), en adelante CP-IDEA;</p> <p>Que el CP-IDEA tiene como objetivo el desarrollo de las Infraestructuras Nacionales de Datos Espaciales en las Américas;</p> <p>Que las metas del CP-IDEA están enmarcadas en los principios de la Agenda 21 de la Conferencia de Naciones Unidas sobre Medio Ambiente y Desarrollo, celebrada en Río de Janeiro los días 13 y 14 de junio de 1992, las cuales tienen la finalidad de maximizar los beneficios económicos, sociales y ambientales derivados del uso de la información geoespacial;</p> <p>Que en la Novena Conferencia Cartográfica Regional de las Naciones Unidas para las Américas, celebrada en Nueva York en el año 2009, se recomendó establecer los mecanismos necesarios para preparar las directrices aplicables a los datos geoespaciales (generación, gestión y difusión), los metadatos, las políticas y los asuntos jurídicos relacionados con el uso de la información geoespacial;</p>	<p>No. 29513 Gaceta Oficial Digital, viernes 08 de abril de 2022</p> <p>REPÚBLICA DE PANAMÁ COMITÉ TÉCNICO DE LA INFRAESTRUCTURA PANAMEÑA DE DATOS ESPACIALES (IPDE)</p> <p>COPIA DEL ORIGINAL</p> <p>RESOLUCIÓN N° 397 De 08 de marzo de 2022</p> <p>Por la cual se aprueba el "Manual de Carga de Datos para Publicar Información Geoespacial Digital a través de la Infraestructura Panameña de Datos Espaciales (IPDE)"</p> <p><b>EL COMITÉ TÉCNICO DE LA INFRAESTRUCTURA PANAMEÑA DE DATOS ESPACIALES (IPDE)</b> En uso de sus facultades constitucionales y legales</p> <p><b>CONSIDERANDO:</b></p> <p>Que, en la Novena Conferencia Cartográfica Regional de las Naciones Unidas para las Américas, celebrada en Nueva York en el año 2009, recomendó establecer los mecanismos necesarios para preparar las directrices aplicables a los datos geoespaciales (generación, gestión y difusión), los metadatos, las políticas y los asuntos jurídicos relacionados con el uso de la información geoespacial.</p> <p>Que el Decreto Ejecutivo N° 51 de 14 de febrero de 2013, crea la Infraestructura Panameña de Datos Espaciales, en adelante IPDE, que tiene como función propiciar una política de...</p>	<p>Catálogo Nacional de Objetos Geográficos-IPDE</p> <p>COBERTURA DE LA TIERRA RED GEODÉSICA TRANSPORTE ACTIVIDADES ECONÓMICAS INFRAESTRUCTURA CLIMA Y METEOROLOGÍA LÍMITES HIDROGRAFÍA Y OCEANOGRAFÍA</p> <p>IPDE INFRAESTRUCTURA PANAMEÑA DE DATOS ESPACIALES</p> <p>VERSIÓN 1.0</p> <p>CC BY NC</p>	<p>Guía para adicional metadatos en Geonetwork</p> <p>2023</p> <p>VERSIÓN 1.0</p> <p>CC BY NC</p>
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## Adopted Standards:

- ISO 19110: 2016 Methodology for cataloguing geographic features
- ISO 19131: 2007 Data product specifications.
- ISO 19101-1:2014 Reference Model. Part 1: Fundamentals.

## Standards in progress:

- ISO 19115-1 Metadata Standard.
- ISO 19157 Data Quality..



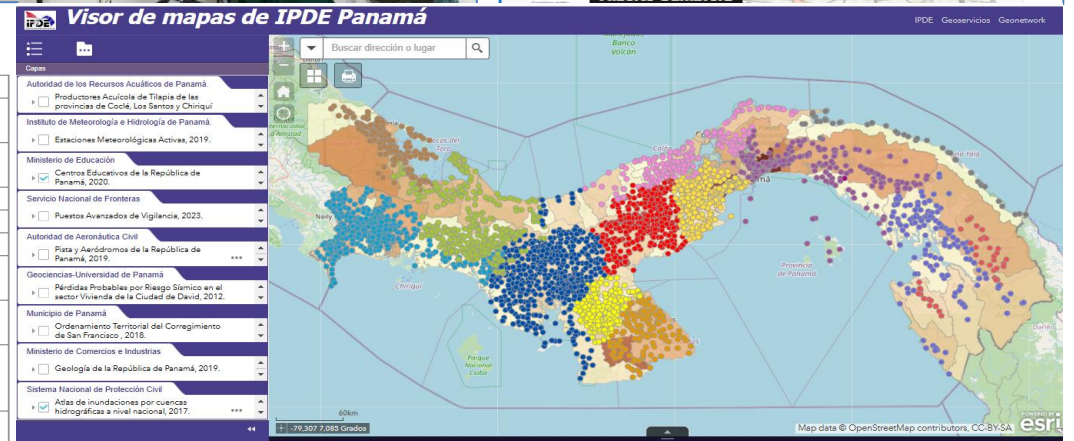
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## GEOSERVICIOS DISPONIBLES

Institución	Nombre del Servicio	WMS	WFS
Instituto Geográfico Nacional Tommy Guardia (IGNTG)	Límites Político – Administrativo de la República de Panamá, 2018. 1:25 000.	WMS	
	Datos fundamentales de la República de Panamá, 2014.1: 25 000.	WMS	
	Malla para Mapas, 2011. 1:25000. Pol. WFS.		WFS
	Malla para Mapas, 2011. 1:5 000. Pol. WFS.		WFS
	Malla para Mapas, 2011. 1:50 000. Pol. WFS.		WFS
Autoridad de los Recursos Acuáticos de Panamá (ARAP)	Red Nacional de Estaciones de CORS, 2015. WFS.		WFS
	Proyectos de tinas Geomembrana, a nivel nacional, 2013, 2015 y 2016.1:25000. Pun. WFS		WFS
	Productores de camarones en estanque, en la provincias de Coclé, Herrera, Los Santos y Veraguas, 2017. 1:25000. Pun. WFS.		WFS
	Productores Acuicola de Tilapia de las provincias de Coclé, Los Santos y Chiriquí, 2017. 1:25000.		WFS



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# Thanks...

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