



Integrated Geospatial Information Framework

Action Plan for Geospatial Information Management

Jamal Numan

Ministry of Local Government, State of Palestine

Peter ter Haar

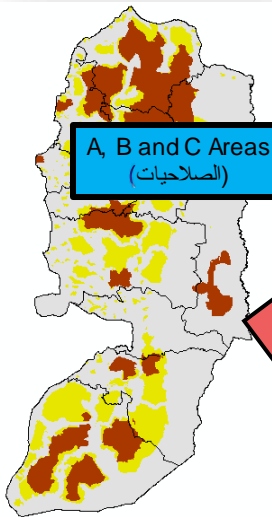
Ter Haar Geoinnovation / World Bank

UN-GGIM 8 Side Event

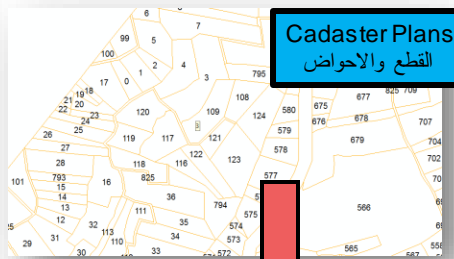
Forum on Global Geospatial Information Management

30 July 2018

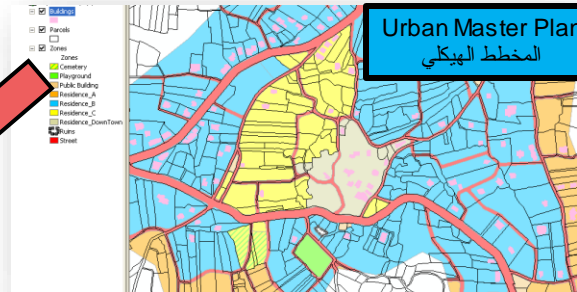
2012: Geomolg Portal (developed with GIZ)



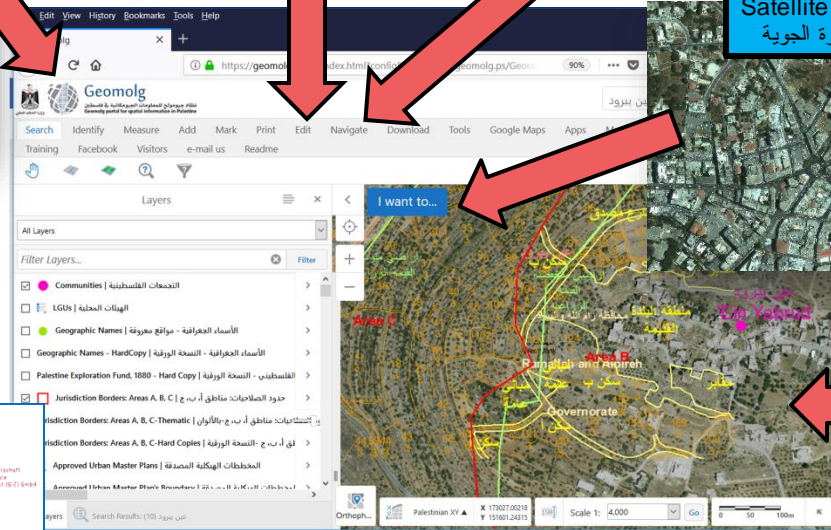
A, B and C Areas
(الصلاحيات)



Cadastral Plans
القطع والاحواض



Urban Master Plan
المخطط الهيكلي



Satellite image
الصورة الجوية

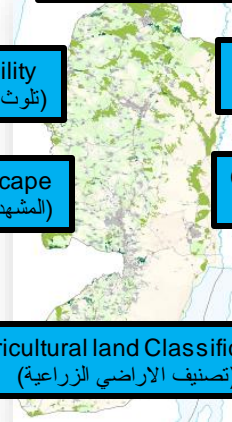
National Spatial Plan
المخطط الوطني المكاني

Vulnerability
(تلوث المياه الجوفية)

Biodiversity
(التنوع الحيوي)

Landscape
(المشهد الطبيعي)

Cultural Heritage
(الاثريّة والتقاليفيّة)



Agricultural land Classification
(تصنيف الاراضي الزراعيّة)



Many data creators connected



Integrated Geospatial Information Framework



سلطة الأراضي
Land Authority



ضريبة الاملاك
Property Tax



وزارة الزراعة
Ministry of Agriculture

سلطة المياه
Water Authority

الاحصاء
Bureau of Central Statistics

الاشغال العامة
Ministry of Public Work

The screenshot shows the 'geomolg' web application interface. At the top, it features the logo of the State of Palestine and the text 'geomolg' and 'نظام جيولوجي للمعلومات الجيومكانية في فلسطين'. Below this is a navigation menu with options like 'Getting Around', 'Maps & Data Sources', 'Tasks', 'Analysis', 'Editing', and 'Beta Functions'. A toolbar contains icons for home, map, layers, search, pan, zoom in/out, and other navigation functions. The main map area displays a satellite view of a city with several data layers overlaid. A legend on the left lists layers such as 'Communities', 'Urban Master Plans', 'National Spatial Plan', 'Agricultural Land Classification', 'Natural Reserve', 'Archaeological Sites', 'Landscape', 'Biodiversity', 'Scenic View Points', 'Vulnerable Areas', 'Cadastral Maps', 'Parcels Registered', and 'Parcels NonRegistered'. A search bar at the top right contains the text 'زيتا' and a dropdown menu shows '1: 29,693'. A 'Map Layers' panel on the right shows a search bar with 'I want to...' and a list of layers with checkboxes and sliders.



MoLG

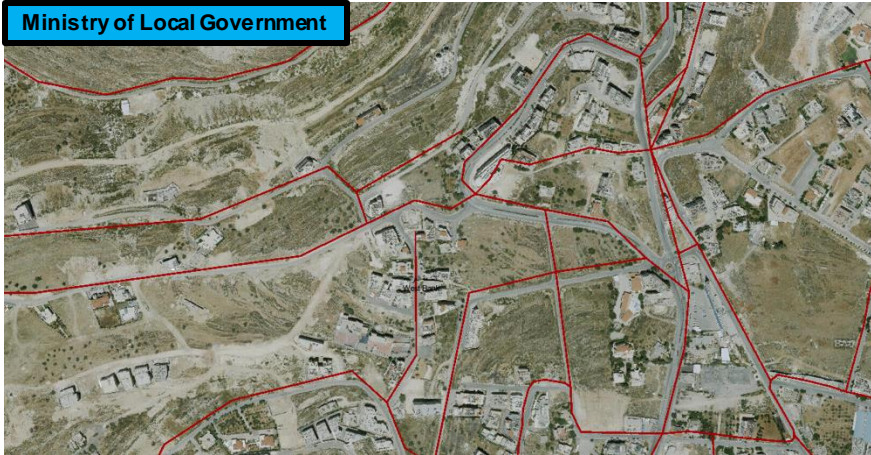


Spatial Data Quality issues

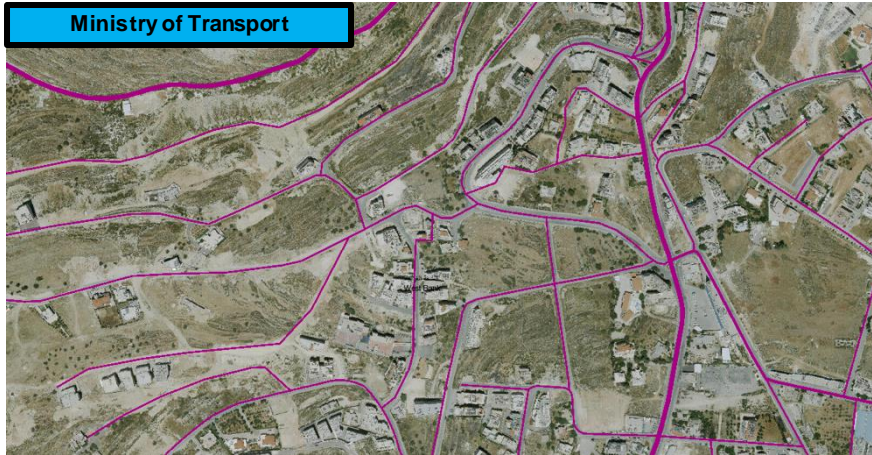


Integrated Geospatial Information Framework

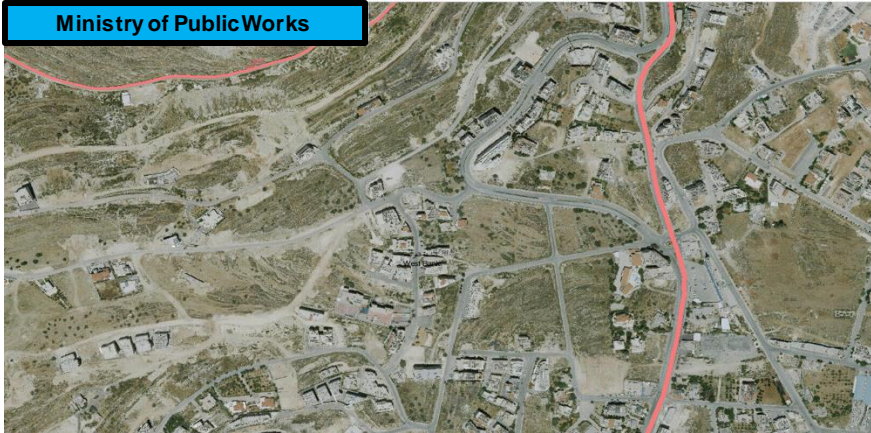
Ministry of Local Government



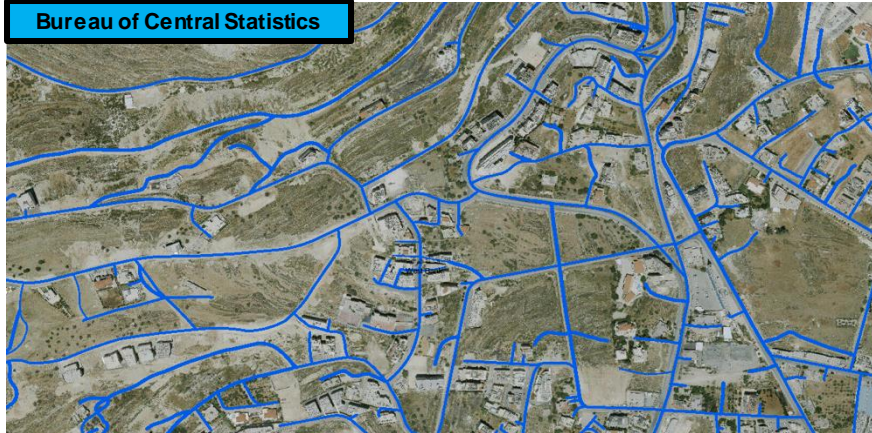
Ministry of Transport



Ministry of Public Works



Bureau of Central Statistics



2016: a strong Mandate

Palestine Council of Ministers



July 2017: Launching Ceremony



October 2017: National SDI Committee established

دولة فلسطين
مجلس الوزراء

قرار مجلس الوزراء رقم (ك/17/176/17) م.و.ر.ج. لعام 2017م

تشكيل اللجنة الوطنية لمعالجة تنفيذ مشروع إنشاء البنية التحتية للمعلومات الجغرافية
وبناء على الصلاحيات المخولة لنا قانوناً
وتسريب وزير الحكم المحلي.
وبناء على مقتضيات المصلحة العامة
ويعد الاطلاع على القانون الأساسي المعدل لسنة 2003م وتعديلاته؛
قرر مجلس الوزراء في جلسته المنعقدة في مدينة رام الله بتاريخ (2017/10/31) ما يلي:

المادة الأولى

تشكيل اللجنة الوطنية لمعالجة تنفيذ مشروع إنشاء البنية التحتية للمعلومات الجغرافية، يتضم في عضويتها

December 2016: Mandate to MOLG to Lead NSDI

دولة فلسطين
مجلس الوزراء

قرار مجلس الوزراء رقم (ك/17/132/16) م.و.ر.ج. لعام 2016م

مشروع إنشاء البنية التحتية الوطنية للمعلومات الجغرافية (NSDI)

بناءً على الصلاحيات المخولة لنا قانوناً

وتسريب وزير الحكم المحلي

وبناء على مقتضيات المصلحة العامة

ويعد الاطلاع على القانون الأساسي المعدل لسنة 2003م وتعديلاته؛

قرر مجلس الوزراء في جلسته المنعقدة في مدينة رام الله بتاريخ (2016/12/27) ما يلي:

المادة الأولى

تكليف وزارة الحكم المحلي بما يلي:

أولاً: تنفيذ مشروع إنشاء البنية التحتية للمعلومات الجغرافية في فلسطين (NSDI) بما يتيح الربط والتبادل

الإلكتروني للمعلومات الجغرافية مع جهات الاختصاص، بالتنسيق مع وزارة الاتصالات وتكنولوجيا المعلومات.



كلاً من:

وزارة الحكم المحلي مقرراً	وزارة الاتصالات وتكنولوجيا المعلومات	وزارة الزراعة
وزارة النقل والمراسلات	وزارة الأوقاف والشؤون الدينية	وزارة الداخلية
وزارة المالية والتخطيط	وزارة التربية والتعليم العالي	سلطة الأراضي
سلطة الطاقة والموارد الطبيعية	الجهات المركزية للإحصاء الفلسطيني	ممثل عن مؤسسات التعليم العالي للتسوية
ممثل عن القطاع الخاص	ممثل عن المنظمات الأهلية	

المادة الثانية

تتولى اللجنة تقييم عمل المشروع، والمصالحة على توصيات اللجان الفنية المختصة بضمان تنفيذ المشروع.

المادة الثالثة

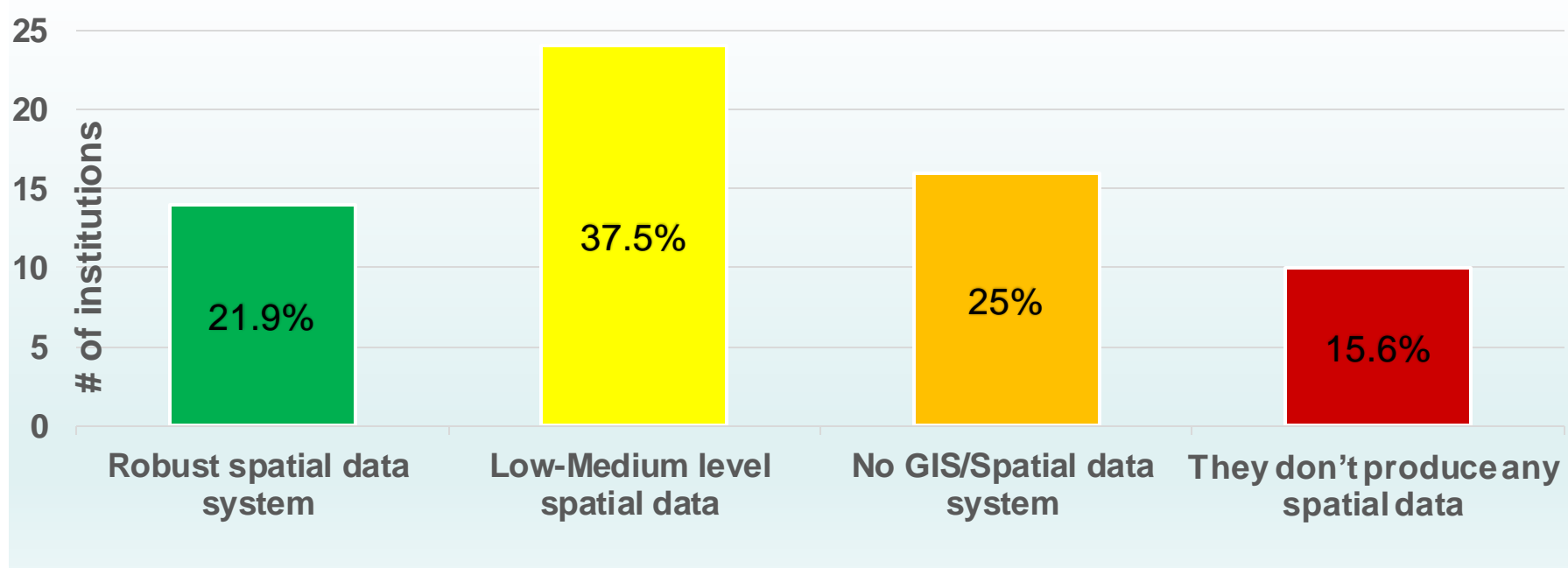
على الجهات المختصة تنفيذ أحكام هذا القرار كل فيما يخصه ونشر في الجريدة الرسمية.



Survey of 64 Organizations in Palestine



- More than 300 layers are produced
- Duplication in 16 fundamental layers
- More than 30 layers are still required but not produced yet



National SDI Committee

Members:

1. Ministry of Local Government (chair)
2. Ministry of Telecommunication and Technology
3. Ministry of Agricultural
4. Ministry of Transportation
5. Ministry of Finance and Planning
6. Energy Authority
7. Ministry of Religious Affairs
8. Ministry of Education
9. Ministry of Interior Affairs
10. Palestine Land Authority
11. Palestine Central Bureau of Statistics
12. Land and Water Settlement Commission
13. Private sector representative: Chambers of Commerce
14. Academic Institution representative: Birzeit University
15. NGO representative





National SDI Committee



Task 1: Monitor NSDI Implementation

- Supervise the development of the technical platform and the legal framework that will govern the work of institutions and departments under the NSDI
- Form and appoint representatives to lead or serve on subcommittees or working groups

Task 2: Oversee Communication and Decision-Making

- Hold monthly meetings to assign tasks, discuss the progress of work, and find solutions to challenges
- Oversee decision-making processes, including committee-wide votes on adoption of standards and policies to be put forward to the Council of Ministries for support
- Maintain continuous communication to keep the Council of Ministers apprised of the NSDI initiative's progress

Task 3: Ensure Education and Sustainability

- Arrange exchanges with regional and international partners as necessary to gain experience to implement the project
- Establish domestic trainings to develop the required technical skills to implement the project in participating public, private, and educational institutions

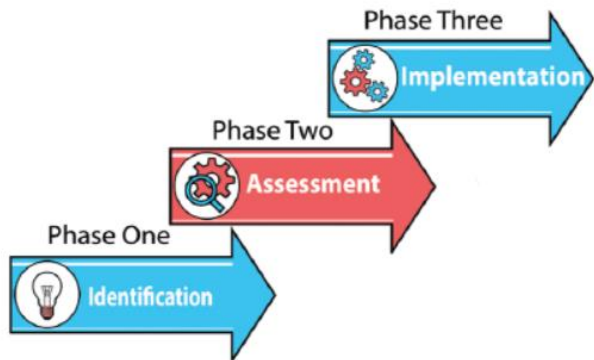


SDI Phases



Integrated Geospatial Information Framework

- 1. Phase I (Kick-off):** this includes identifying spatial data producers (stakeholders) and fundamental datasets, developing standards and policies for the technical platform and legal framework.
- 2. Phase II (Needs Assessment):** this aims at evaluating the technical capacities of spatial data producers and their willingness to share data in accordance with the set of standards and policies. Producers who have legal and technical capacity to share data can embark on a project immediately. Those who fail to have the proper legal or technical aspects will have their needs identified so that they can be met in the next phase
- 3. Phase III (Implementation):** physical support is introduced for producers who failed to have the adequate capacity. This includes hardware, software, training, and staffing.




State of Palestine
Ministry of Local Government



Status Quo
For
Spatial Data Infrastructure (SDI) in Palestine



Implemented by
giz

May 2017



State of Palestine
Ministry of Local Government



Comparison Study
For
Spatial Data Infrastructure (SDI) Development
in United Arab Emirates, United Kingdom,
Turkey and New Zealand



Implemented by
giz

November 2017

2018: World Bank involvement



The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

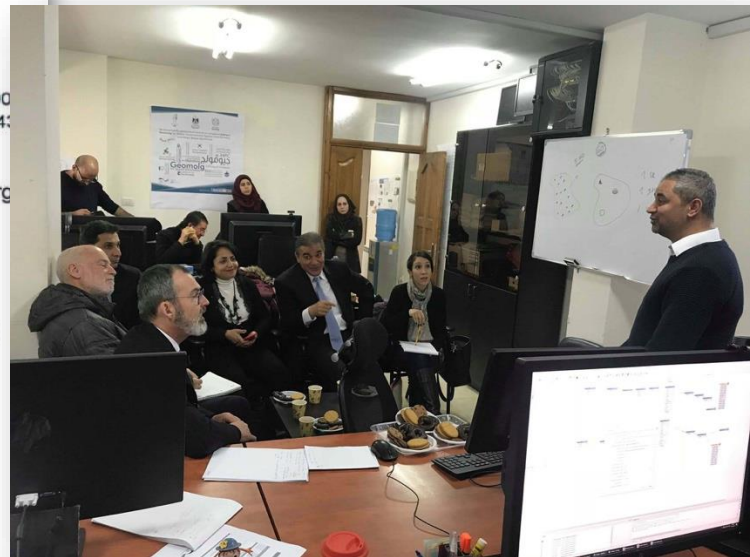
Marina Wes, Country Director
P.O. Box 54842, Jerusalem

Tel (Office): 02-236-6500

Fax (Office): 02-236-6544

mwes@worldbank.org

February 26, 2018



H. E. Dr. Rami Al-Hamdallah
Prime Minister
Palestinian Authority
Ramallah

Implementation Action Plan.

- **TA 4:** Providing additional assessment to property tax once the scope of the project financed by the Netherlands is defined.
- **TA 5:** Supporting the Ministry of Local Government to assess progress made in the establishment of the Spatial Data Infrastructure under the GeoMoLG and preparing an action plan that is in line with international best practices; and
- **TA 6:** Providing support in the development of a strategy to establish a Geodetic Reference

Excellency

The recent Sup
was jointly



May 2018: Start developing an Action Plan



Integrated Geospatial Information Framework



The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

Marina Wes, Country Director
P.O. Box 54842, Jerusalem

Tel (Office): 02-236-6500
Fax (Office): 02-236-6543

mwes@worldbank.org

May 10, 2018



H. E. Dr. Rami Al-Hamdallah
Prime Minister
Palestinian Authority
Ramallah

**Subject: Support to the Palestinian Land Sector Mission
May 21 - June 01, 2018**

Excel
2018.
imple

The mission will meet and coordinate closely with representatives from your office, and other relevant sector stakeholders including the Technical Committee, Palestine Land Authority, Land and Water Settlement Commission, and Geo-MoLG. The joint mission would highly appreciate the opportunity of meeting with you for further consultation and guidance.

Diagnostic of current and target situation



● Estimated situation now

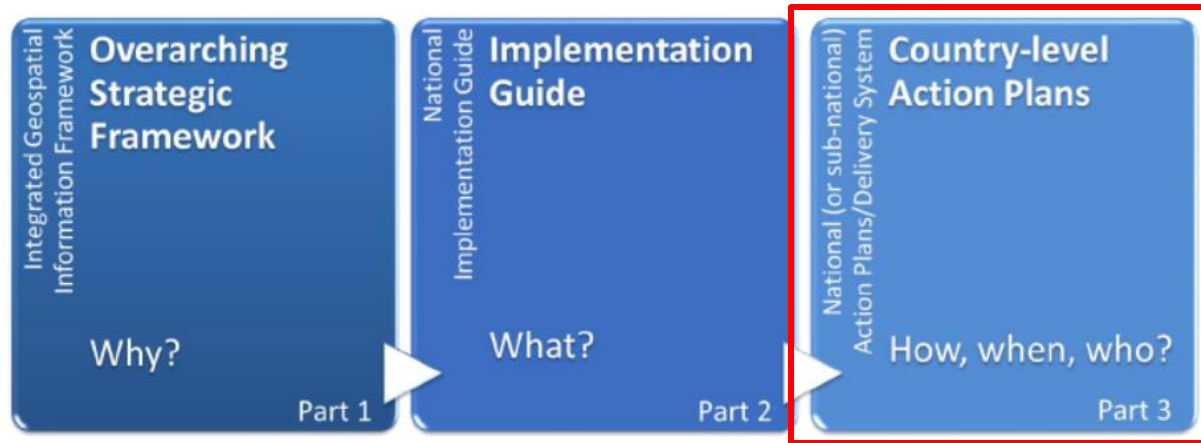
● Planned result of Action Plan



Action Plan for Geospatial Information Management



- 5 Year Action Plan to kick start development of the data infrastructure
- Reform Area V of the Road Map for Reforming the Palestinian Land Sector
- UN-GGIM Integrated Geospatial Information Framework as guidance for the development of this Action Plan





Application of the Framework

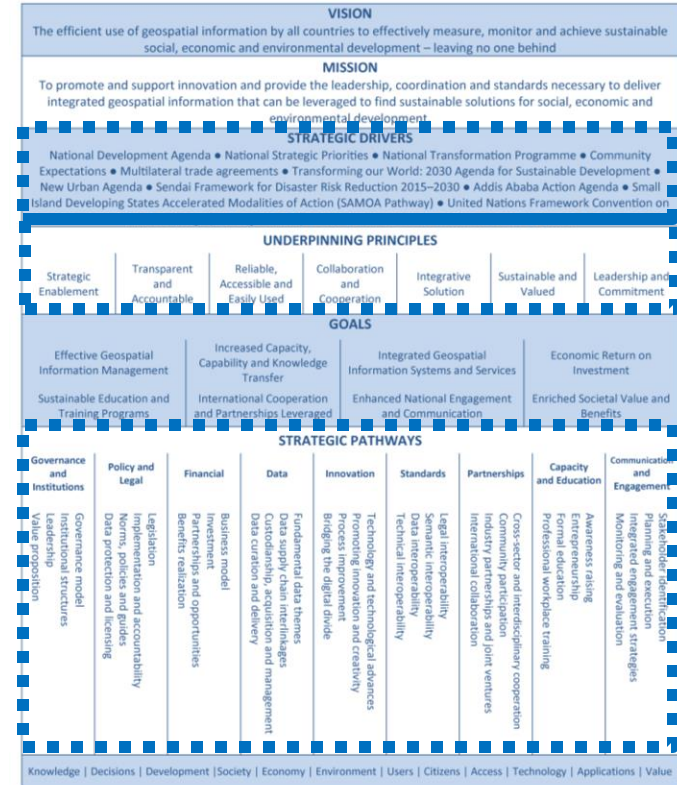


Integrated Geospatial Information Framework

The Geospatial Information Framework was used as guidance and structure in developing the Action Plan, most importantly:

- Strategic Drivers
- Underpinning Principles
- Strategic Pathways

Application was adapted to the specific situation in the State of Palestine, the status of GI and the existing projects





Strategic Drivers: clear link to National Policy Agenda



Integrated Geospatial Information Framework



State of Palestine

National Policy Agenda

2017-2022



Putting Citizens First

December, 2016

Pillar 2: Government Reform		
National Priorities	National Policies	Enabling Geospatial Information
Citizen-Centered Government	7. Responsive Local Government	Ready access to spatial information provides society with information to improve services to citizens. Municipality's engineers will be more responsive since they can access all types of data remotely, and so they can inspect and respond without the need to be physically in the field. Proactivity in responding to citizens' concerns is improved when citizens can raise their concerns also remotely because they have access to the most updated facts on the ground.
	8. Improving Services to Citizens	Provides a whole-of-government approach offering citizens a single window to all government information. Having the most updated geospatial data allow concerning bodies receive and respond to complains faster and allow them to distribute and dispatch their resources efficiently.
Effective Government	9. Strengthening Accountability and Transparency	With clear mandates for government bodies to produce data regularly and accurately, decision-makers can make better and more inclusive decisions. And can hold accountable any responsible body that produce inaccurate data. Geospatial information provides opportunities to monitor and overlay all government information.
	10. Effective, Efficient Public Financial Management	Provides opportunities to remove duplication of effort and increased efficiency of data creation and use.
Pillar 3: Sustainable Development		
National Priorities	National Policies	Enabling Geospatial Information
Economic Independence	11. Building Palestine's Future Economy	Increased availability and usability of spatial data will create a more diverse and efficient service base and realize an increase in economic and social benefits as a result of new products and services.
	12. Creating Job Opportunities	Geospatial information will improve the efficiency of service delivery.
Resilient Communities	26. Ensuring Community and National Security, Public Safety and Rule of Law.	Mapping Palestinian security force access enables the government to measure spatial patterns, assess vulnerabilities and respond proactively with preventative measures.
	27. Meeting the Basic Needs of Our Communities.	Conducting needs assessment surveys are more effective when the data has a geographic tag and can support problem-identification across a jurisdiction and promote gap-filling.
	28. Ensuring a Sustainable Environment and Adapting to Climate Change.	Integrated spatial information from across the government sector to monitor and manage land degradation, pollution, water resources, biological diversity and waste disposal.
	29. Revitalizing Agriculture and Strengthening Our Rural Communities.	Integrated spatial information from across the government sector to monitor and manage land degradation, pollution, water resources, biological diversity and waste disposal.
	30. Preserving Our National Identity and Cultural Heritage	Accessible and accurate map coverage of cultural heritage to support preservation.



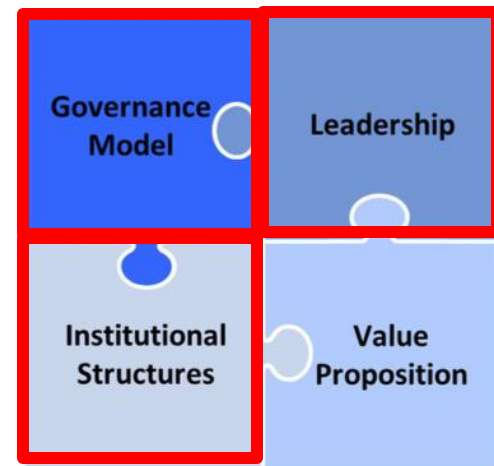
SP1: Governance and Institutions




Primary focus is on capacity building of the institutions and establishment of working groups

Actions:

- 1.1 Establish a Geospatial Information Coordination Unit
- 1.2 Establish (additional) working groups
- 1.3 Institutional Review



 = focus areas



SP2: Policy and Legal




This is an area that is currently hardly developed. A broad basis of policies and legislation will need to be established.

Actions:

- 2.1 Development and implementation of a Geospatial Policy Framework
- 2.2 Development and implementation of a Monitoring Framework



 = focus areas



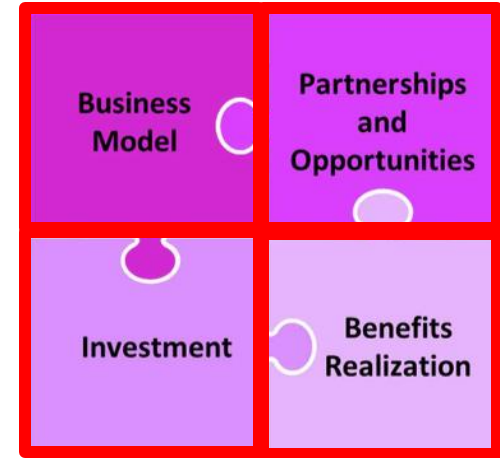
SP3: Financial




This is an area that is currently underdeveloped. Palestine is very dependent on external investment. A nationally accepted business model is required for sustainability.

Actions

- 3.1 Economic Study & Inventory
- 3.2 Development of a Business Plan for Geospatial Information Management



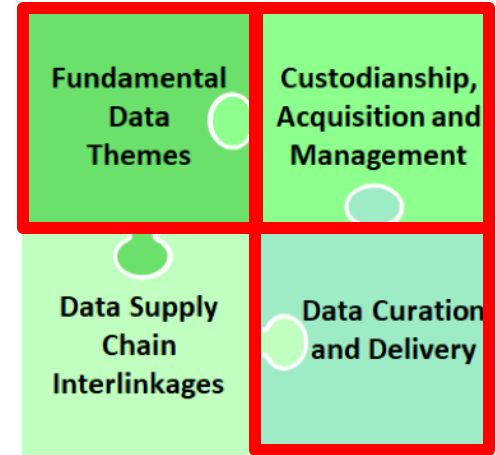
 = focus areas




SP4: Data (1)



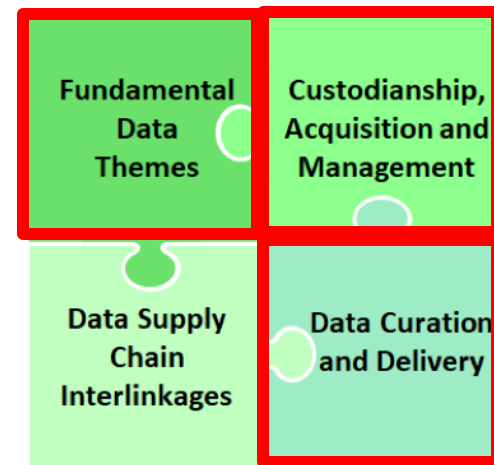
- There are many data suppliers that create data for their own processes.
- Duplication of effort and missing fundamental data.
- Important datasets (such as ortho-imagery) are nationally created but still ad-hoc.
- Data distribution infrastructure needs strengthening.
- Geodetic infrastructure needs rebuilding.




 = focus areas

Actions

- 4.1 Development of a Geodetic Reference Frame
- 4.2 Strengthening of the Geomolg data distribution infrastructure
- 4.3 Development of Functional Area datasets
- 4.4 Development of a definitive Road Network
- 4.5 Review of the specification of the Ortho-imagery layer
- 4.6 Development of a Utility Networks dataset
- 4.7 Development of a Public Service points dataset
- 4.8 Development of a Metadata Catalog
- 4.9 Research into potential for addressing in Palestine



 = focus areas



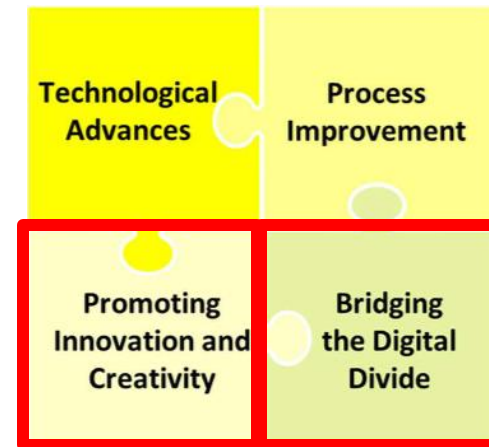
SP5: Innovation




Focus on promoting innovative use of data and getting more groups involved through technology

Actions:

- 5.1 Build an Application Programming Interface
- 5.2 Create a public website (local innovation website)
- 5.3 Open Source Platform
- 5.4 Location Intelligence applications



 = focus areas



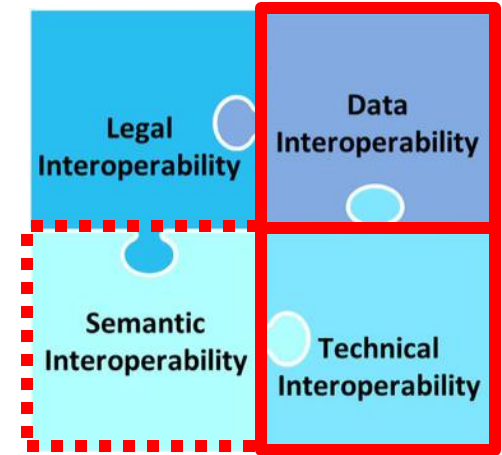
SP6: Standards




Data suppliers each have their own standards now. Primary focus on technical and data interoperability between data suppliers and users.

Actions:

- 6.1 Identification of the current data standards in use
- 6.2 Development and implementation of standards policy
- 6.3 Implementation of standards policy



 = focus areas



SP7: Partnerships




Primary focus on partnerships with private sector (for financial sustainability) and international (for knowledge sharing and investment)

Actions:

- 7.1 Stakeholder analysis
- 7.2 Create partnership model
- 7.3 Implement partnership model



 = focus areas



SP8: Capacity and Education




Level of GI knowledge is low, especially GI developer skills. This makes use of open source software vulnerable.

Actions:

- 8.1 Inventory into the status and availability of geospatial skills
- 8.2 Development and implementation of knowledge exchange programs
- 8.3 Development and implementation of professional training programs
- 8.4 Collaboration with academic sector to adapt curricula



 = focus areas



SP9: Communication and Engagement




The new National SDI Committee and the implementation of the Action Plan will require regular communication with a wide group of stakeholders, including the citizen.

Actions:

- 9.1 Stakeholders analysis
- 9.2 Semiannual Workshops
- 9.3 Quarterly Newsletter
- 9.4 Create a web forum



 = focus areas

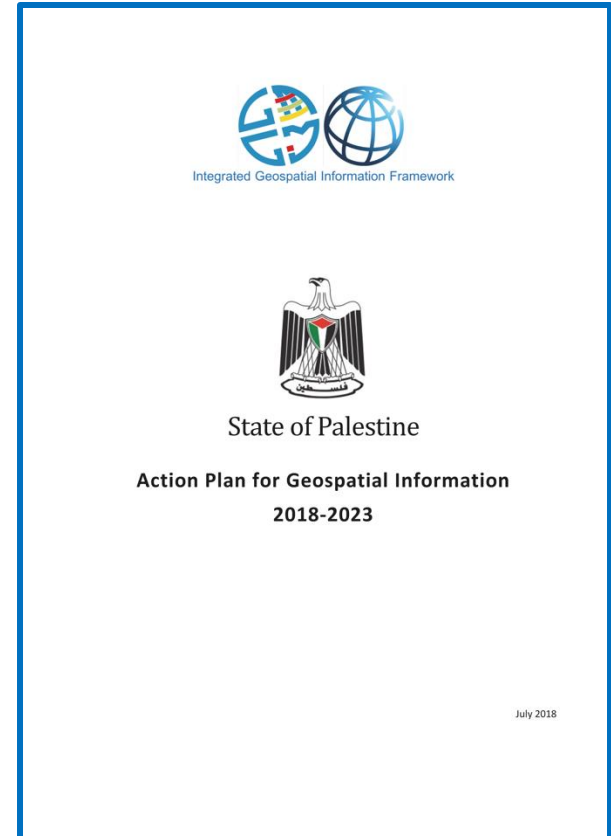


Action Plan conclusions



Integrated Geospatial Information Framework

- 7 Principles
- 33 Actions for 9 Strategic Pathways, including institutional arrangements, technology, data collection and capacity building
- High – Medium – Lower priority
- 5 Year implementation period
- Guidance to investment decisions by government, the World Bank and other donors
- Validation, confirmation and planning the execution in the second half of 2018





Action Plan: leading to results



Integrated Geospatial Information Framework



25 July 2018: The 4th National SDI Committee meeting discussed Terms of Reference of the SDI Committee and the Standardization working group



Integrated Geospatial Information Framework



Questions and Feedback, Please.

JamalN@molg.pna.ps

July 2018