

## ASSESSING AND ANALYZING

### RECOMMENDED TASK 8

#### STRATEGIC ALIGNMENT (AND BENEFITS)

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##### 1. Purpose

Priorities for strengthening integrated geospatial information management should be aligned with the strategic priorities of government. The Strategic Alignment Tool assists countries to align geospatial information management activities to what matters most.

Strategic alignment enables higher performance of integrated geospatial information management, by optimizing the contributions of organisations (people, processes, and inputs) in a way that minimizes waste and misdirection of effort and resources.

##### 2. Rationale

Everything happens somewhere! Location now underpins everything we do. Its full integration with other data of relevance to our lives and livelihoods provide us with better, and importantly, more useful and insightful information, and evidence towards shared understanding and collective actions. This in turn will enable us to better achieve local and national goals, other important regional and global goals. Geospatial information and Earth observations provide the evidence for sustainable development, to measure, monitor and report on progress. Integrated geospatial information management assist in response and recovery from disasters and crises. Geography and location relate people, activities and events to place and to one another, informing policy-development, decision-making and actions.

Integrated geospatial information management is a strategic enabler. It enables improved planning for economic growth and delivery of better services, and supports the delivery of the SDGs, such as strategies for poverty alleviation, engenders socially inclusive development, address climate related challenges, facilitates protection of the environment, reduces disaster response times, supports regional cooperation and promotes transparency in governance. The rationale can be many, and a non-exhaustive discussions are detailed under the following points.

- **Climate Change:** Climate Change is the defining issue of our time and we are at a defining moment. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale. Without drastic action today, adapting to these impacts in the future will be more difficult and costly. The latest scientific [report by the IPCC](#) finds changes in the Earth's climate in every region and across the whole climate system. The report clearly states that the role of human influence on the climate system is undisputed.

- **Economic Growth:** Managing the orderly development of terrestrial and maritime resources including the coastal zones, and subsequent provision of a multitude of government and private sector services through infrastructure development, requires integrated planning. This is fundamental to a vibrant economy and community. Planning is underpinned by a good understanding of where things are and how they relate to each other. The range of services and infrastructure includes roads, rail, ports, utilities, and community services such as education, health, welfare and justice, to name some. Providing whole-of-government geographically-referenced integrated data allows for optimal planning of infrastructure and services to meet future needs.
- **Socially Inclusive Development:** Government's ability to understand and recognise the geographic distribution and demographics of people throughout the country, and respond effectively to their needs, is dependent on having sound information on which to base planning and decision-making. This information comes from a wide variety of sources, and can become meaningless without a geographic context. Integrated geospatial information management enables the integration of statistical and other meaningful data in a geographic context. This allows effective development of government policies and the planning of government infrastructure and services for regionally balanced decision-making.
- **Poverty Alleviation and Improved Health Services:** In many countries, the Government is targeting poverty reduction with poverty alleviation programs, and supporting special projects, such as health care, sanitation and waste management and drinkable water. This will directly benefit communities by improving their physical wellbeing and socio-economic status. Geospatial information support these project objectives by making planning far more effective. This in turn assists in the effective delivery of critically important basic human need programs.
- **Protection of the Environment:** Many countries face a host of environmental problems such as land degradation, pollution and poor management of water resources, loss of biological diversity, coastal erosion and coastal zone degradation, increasing scarcity of water for agriculture, waste disposal in urban areas, and traffic congestion in the main cities. The challenge is to balance increased development with sustainable environments. Management of natural resources, particularly with increased pressures resulting from changes on the planet, requires accurate geospatial information to understand and manage the many competing factors in the environment. In many cases, the various government agencies have their specific areas of responsibility and each retains specific geographically-related information to support that responsibility. Conversely, each needs to access data from other agencies in establishing their own natural resource management plans. Being able to share integrated geospatial information management through improved technology and methods will allow better-informed natural resource management decisions. This is essential as economic growth may result in unsustainable use of natural resources and unintended environmental implications for local habitats.

- Water Resource Management:** A number of governments have a key priority to improve the accessibility of clean water supply and sanitation. Achievement of this goal will require an excellent foundation of spatial information. In many situations, geospatial information on water resources is maintained within several organisations with specific responsibilities such as those responsible for Irrigation and Water Resources Management, Land and Land Development and Water Supply and Drainage. The ability to share geospatial information management transparently across agencies will mean that agencies can focus on their core tasks rather than diverting resources into searching for, and retrieving, data.
- Disaster Response:** Planning, mitigating, responding to, and recovering from natural disasters, is crucial to providing safe and secure communities. Geospatial information is critical in these processes. In terms of mitigation, geospatial information contributes to the placement of early warning systems as a preventative measure prior to a pending disaster event. Improved information sharing technologies will provide a common operating picture and up-to-date information that can be shared across the spectrum of agencies that are managing the environment and dealing with emergency situations. In emergency management terms, being able to share integrated geospatial information in real-time means the 'same Information will be delivered to all agencies at the same time'.
- Industry development:** Integrated geospatial information supports planning requirements for increasing industrial development and the growing demand for new infrastructure. In many countries, industrial activities are increasing and many agricultural workers will seek higher-paid employment in industry and other services. Many of these jobs will be in urban areas and this suggests an accelerating rural–urban transition. Achieving employment growth, while ameliorating potential adverse social and environmental impacts of urbanization, will be a key development challenge for countries. Geospatial information provides context to analysing these types of complex situations.
- Agricultural productivity:** In some countries, small-scale farming has declined over the past decades due to irregular rainfall, recurrent drought and poor irrigation infrastructure. Food security in terms of availability, accessibility and affordability is uncertain, most notably in rural regions. Integrated geospatial information can be analyzed by government to assist smaller farm holders through yield monitoring and crop stress mapping, variable rate technologies (for applying fertilizers and irrigation), soil condition mapping and salinity mapping, and the control of pests and disease outbreaks. In the longer term this will lead to achieving a higher productivity and profitability in agriculture.

### 3. Strategic Alignment Process

The Strategic alignment process results in the linking of integrated geospatial information needs and resources with the priorities of government (national sustainable development, SDGs, regulatory, physical, etc.). It essentially defines a portfolio of geospatial information management activities, projects and programs that will deliver a country's strategic priorities. Institutional mandates can be harmonized in line with higher level government initiatives.

The first step is to identify the country's strategic priorities. This involves listing the strategic drivers that will benefit from having strengthened geospatial information management, determining what activities are required to facilitate transformational change, and prioritizing effort.

The table below can be used to identify strategic drivers, provide evidence of these strategic priorities e.g. the relevant government strategy, and the associated geospatial theme, benefits of geospatial information, the gap in capability, as well as their investment priority to the nation. Some examples have been provided.

#### 4. Example Strategic Alignment Tool

List of Strategic Priorities (*add rows as required*):

Strategic Drivers	Evidence of Government Strategic Priority	Geospatial Theme	Benefit of Geospatial Information	Current Situation	Investment Priority
<i>Example</i> Achieve improved service delivery from a citizen's perspective	<b>eGovernment Strategy 2017-2025</b> The strategy aims to simplify the delivery of information and services to citizens in order to overcome dissatisfaction with fragmented service delivery.	Accessible Information	Access to Geospatial Information allows users to complete an interaction with government without the need to visit individual agencies. This fosters transparent government.	Geospatial information is currently not accessible  There is no mandated policy on data sharing	High
<i>Example</i> Reduce the incidence of urban flooding	<b>Disaster Management Plan 2015-2020</b> The Plan aims to reduce flooding in urban areas by being able to predict areas of flooding vulnerability and make plans to ensure public safety	Flood Risk Models	Essential to understanding risk to humans and infrastructure. Required for urban development and investment planning	LiDAR coverage across urban areas is not available  There is no digital elevation model of urban areas  Capacity building in LiDAR and DEM is required	High
<i>Example</i> Reduce the pollution of waterways to protect future water resources	<b>Country Development Master Plan until 2025</b> One of the aims is to improve the quality of drinking water. The plan lays down the guidelines and policies for industrial waste management in order to protect the environment and ensure community safety.	Water Quality Monitoring	Essential for analysing how industrial waste impacts water quality and downstream communities.	The location of industrial activity along waterways is not known  No water quality sensors  Capacity building to maintain and use data is required  Waste management permitting and monitoring is required	High