



# Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

# 17 PARTNERSHIPS FOR THE GOALS

## THE GLOBAL GOALS For Sustainable Development



### Targets

**Target 17.16:** Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

**Target 17.18:** By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.

### Indicators

**Indicator 17.16.1:** Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

**Indicator 17.18.1:** Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics.

### Data collection



Geographic information is any information concerning phenomena implicitly or explicitly associated with a location relative to the Earth. Geographic information is required to monitor sustainable development goals by administrative boundaries.

Modern technologies allow vast amounts of geographic information to be collected in many different ways. Apart from traditional field surveys, satellites, unmanned aerial vehicles (UAVs) and volunteered geographic information contribute to the wealth of geographic information available today. Advanced technologies, such as Lidar (light detection and ranging) and SAR (synthetic aperture radar), make it possible to discover, study and analyse the geographic phenomena in new ways.

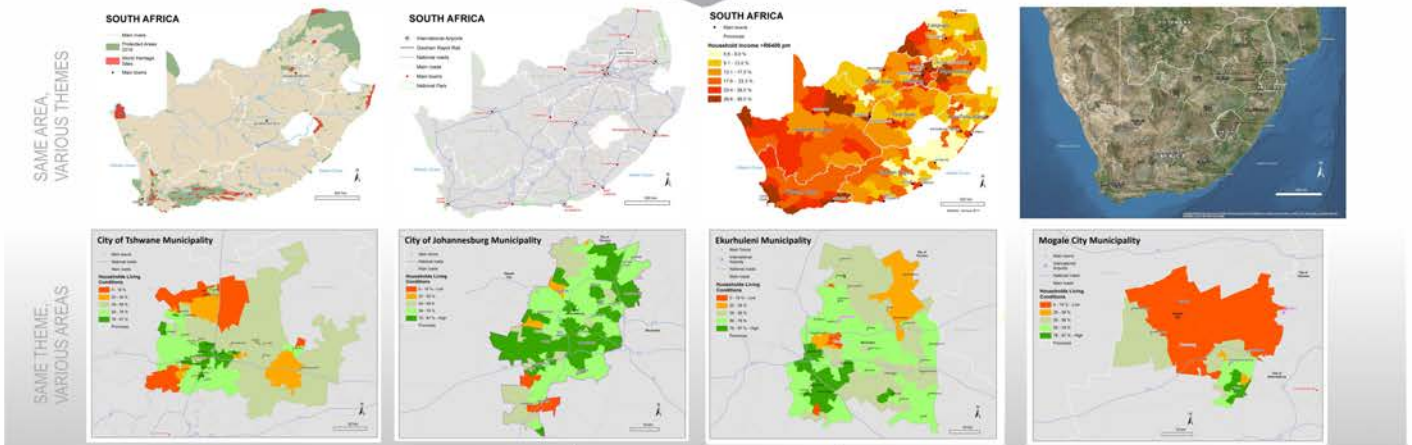
Multiple stakeholders are involved in data collection. Statistical agencies or departments typically collect demographic, but different organizations are responsible for the collection of geographic information about the natural environment.

### Data collection



### Data collection to maps

Vast amounts of geographic information is categorized by administrative boundaries for further analysis and comparison.



### Maps to geospatial

A SDI facilitates the sharing of geographic information, e.g. through geospatial. Sharing relies on standards for interoperability.

### SDI

A spatial data infrastructure (SDI) is an evolving concept about facilitating and coordinating the exchange and sharing of spatial data and services between stakeholders from different levels in the spatial data community. With this in mind, many countries are developing SDIs to manage and better utilise their geographic information assets by taking a perspective that starts at a local level and proceeds up through state, national and regional levels to the global level. This has resulted in the development of different forms of SDI at, and between, these levels. Increasingly, these countries are finding it necessary to cooperate with other countries to develop multi-national SDIs (regional and global SDIs) to assist in decision-making that have important impacts across national boundaries.

Multiple SDI stakeholders either impact the SDI or are affected by the SDI. Stakeholders define the scope and policies to meet the purpose of the SDI; they implement the SDI based on the scope and policies; and they make use of products and/or services as intended in the purpose of the SDI (Hjeltnager et al. 2008).

SDIs and standards, developed through partnerships between multiple stakeholders, facilitate discovery, sharing and interoperability of geographic information for maps of sustainable development indicators.

SDI stakeholder	Description
Policy maker	Sets the policy pursued by an SDI and all its stakeholders
Producer	Produces SDI data or services
Provider	Provides data or services to users throughout SDI
Broker	Brings users and providers together and assists in the negotiation of contracts between them
Value-added reseller	Adds some new feature to an existing product or group of products, and then makes it available as a new product
User	Uses the SDI for its intended purpose



### Key standards bodies for geographic information



**ISO/TC 211. Geographic Information/Geomatics.** is responsible for standardization of geographic information in the International Organization for Standardisation (ISO), the world's largest developer of voluntary international standards through global consensus. ISO membership allows countries to influence standards development and strategy by participating and voting in ISO technical and policy meetings. Liaison organizations (international or broadly based regional organisations working in or interested in similar or related fields) participate in working groups that prepare drafts of standards. The work of ISO/TC 211 aims at establishing a structured set of standards for information concerning objects or phenomena that are directly or indirectly associated with a location relative to the Earth. Standards developed by other technical committees are also relevant, e.g. information technology standards developed by the ISO/IEC Joint Technical Committee 1 and ISO/TC 204, Intelligent transport systems.



The **Open Geospatial Consortium (OGC)** is an industry consortium that defines, documents and tests implementation standards for geospatial content and services. OGC standards leverage some of the abstract standards defined by ISO/TC 211. OGC membership is open to any organisation or individual. Four types of membership (associate, technical, principal and strategic) provide increasing levels of influence on standards development. OGC has 500+ members representing governments, the private sector, universities, NGOs, research communities and the open source community. OGC work is guided by member approved Policies and Procedures, that evolve in response to member and market requirements.



The mission of the **International Hydrographic Organization (IHO)** is to create a global environment in which states provide adequate and timely hydrographic data, products and services and ensure their widest possible use. In order to achieve this mission, standards for nautical products, services and survey practices are developed. For example, IHO publication M-4 has resulted in the adoption of consistent colours, symbols, nomenclature and general presentation for charts produced by IHO Member Organization. This has made it possible for mariners to confidently use charts compiled by any member organisation. Standards are developed by IHO member states, i.e. countries who have acceded to the Convention on the IHO.

### Geospatial

### products & decisions

Geographic information available through SDIs facilitates map production, spatial analysis, decision-making and planning of interventions towards achieving sustainable development goals.



### References (details to be added)

Cooper, A.K. et al., 2011. Extending the formal model of a spatial data infrastructure to include volunteered geographical information. Proceedings of the 23th International Cartographic Conference (ICC), Paris, France, Cooper, A.K. et al., 2012. A spatial data infrastructure model from the computational viewpoint. International Journal of Geographical Information Science, 27(9), pp.1133-1151. Hjeltnager, J. et al., 2008. An initial formal model for spatial data infrastructures. International Journal of Geographical Information Science, 22(11-12), pp.1295-1309. Moeltinger, H., book on metadata standards...