



Food and Agriculture
Organization of the
United Nations



PBL Netherlands Environmental
Assessment Agency



UNIVERSITY OF TWENTE.
Faculty of Geo-Information Science and Earth Observation

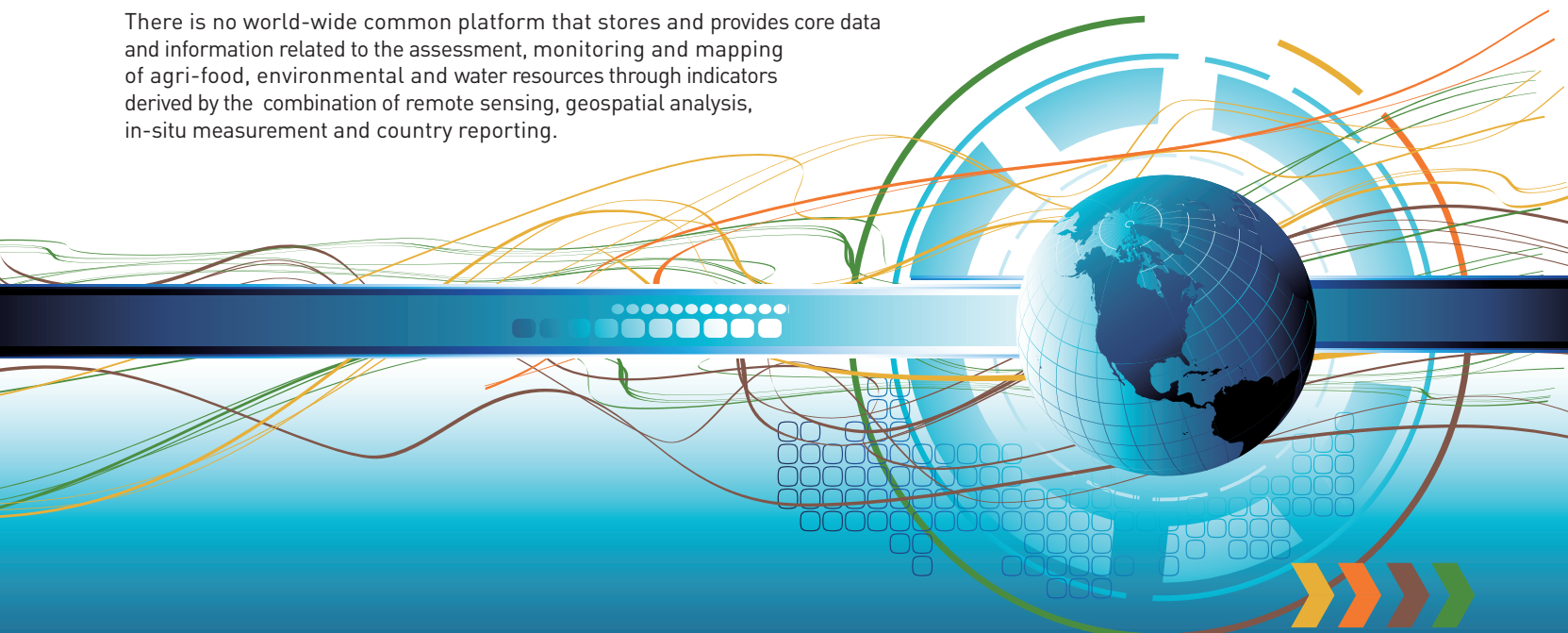
ESTABLISHMENT OF A SPATIAL DATA INFRASTRUCTURE (SDI) FOR FOOD AND AGRICULTURE

Supporting comprehensive assessment of environmental
conditions and monitoring food security



PROBLEM

There is no world-wide common platform that stores and provides core data and information related to the assessment, monitoring and mapping of agri-food, environmental and water resources through indicators derived by the combination of remote sensing, geospatial analysis, in-situ measurement and country reporting.



THE INITIATIVE

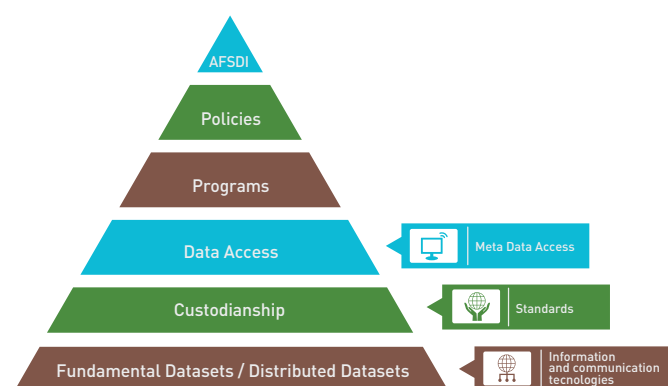
- Intends to reaffirm the value and improve the use of agriculture and food information in UN processes and Member States, with a special focus on the post-2015 development agenda.
- In the outcomes of the United Nations Conference on Sustainable Development in Rio de Janeiro (Rio+20), July 2012, was emphasized the need to support developing countries in their efforts to collect environmental data.
- The Rio+20 Outcome Document, "The Future we Want", recognizes "the importance of space-technology-based data, in situ monitoring and reliable geospatial information for sustainable development policymaking, programming and project operations".
- Is inspired by the successful cooperation between FAO and UNEP, which are collaborating in the pursuit of focused and coherent actions that contribute to the achievement of sustainable development, in the context of an integrated post-2015 development agenda.
- Emphasises the monitoring and assessment of agriculture and environmental conditions for food security and environmental sustainability and enhancing decision making through spatial data.
- Support over 30 UN organizations, agencies and funds who have expressed the need for the establishment of an overarching Spatial Data Infrastructure, to avoid multiplication of efforts and enhance their operations.

OBJECTIVES

Goal

The establishment of Agri-Food Spatial Data Infrastructure (AFSDI) to support comprehensive assessment and monitoring of food security and environmental sustainability in the selected countries; and to support Country Governments and Organisations on the attainment of the Sustainable Development Goals (SDGs) through development of mechanism for increasing system coherence in the use and exchange of agri-food and geospatial data".

- make agri-food and geospatial open data commonly available, based on international standards (also for private sector app development);
- enhance selected countries' capacity on the use of geospatial data for agri-food monitoring and analysis;
- support monitoring and assessment of agriculture and environmental conditions in selected countries.
- create a user-friendly environment which facilitates agri-food and geospatial data management;
- develop technology, services and related policies for collection, updating, sharing, and analysis of datasets;
- strengthen key data, reduce duplication, improve reliability and quality and promote data custodianship;
- achieve common interoperability standards, protocols and interfaces that support real-time integration of information.



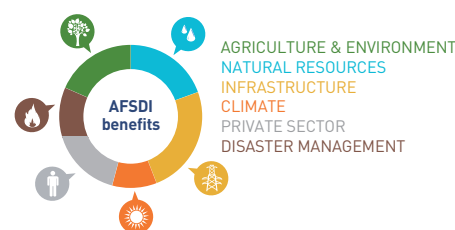
PARTNERSHIP

Key partners:

- ✓ FAO, UNEP, UNSDI-NCO
- ✓ PBL Netherlands Environmental Assessment Agency
- ✓ Twente University
- ✓ The selected countries Governments
- ✓ Private sector, international and local NGOs, rural communities, which will benefit from information and decision support systems with special emphasis on the inclusion of gender.

OUTCOMES

The AFSDI comprises a framework of technologies, policies and institutional arrangements that together facilitate the creation, exchange, and use of geospatial data and related information resources across an information-sharing community. It provides institutionally sanctioned, automated tools and methods for posting, discovering, evaluating and exchanging geospatial information between producers and users.



Phase 1

- Establish strategy to achieve common interoperability standards, protocols and interfaces that support real-time integration.
- Build an open source GDW and toolkit.
- Develop dedicated geospatial information, data models, and supporting information needed for the data content of the AFSDI.
- Filling the Geospatial Data Warehouse (GDW) with information layers.
- Communication and dissemination of the AFSDI results.

Phase 2

- Strengthen selected countries' capacity in the areas of agri-food monitoring and analysis through geospatial information.
 - Enhance the geospatial information framework at FAO and UNEP to improve the collection, aggregation and dissemination of geospatial information and services.
 - Contribute to Agro-Food monitoring in the selected countries.
- Main applications:

- ✓ World Road Database to be integrated in GDW.
- ✓ Application of advanced geospatial technology to enhance smallholder livelihoods.
- ✓ Implementation of an improved agriculture statistical approach based on GSAS.
- ✓ Create Land Resources Inventory (LRI) and conduct land and water resources assessment.
- ✓ National Agro-Ecological Zoning assessment.
- ✓ Communication and dissemination of the results.

