

Background Note on a proposed WB Digital Earth Partnership

DRAFT: Program Concept

Digital Earth Partnership

This note presents the case for a dedicated program to harness the opportunities and address the demand in adopting Digital Earth imaging technologies for Sustainable Development.

The goal of the program shall be to accelerate the world's adoption of new digital geospatial services for sustainable development. The envisaged development objective of such a program is to enhance the outcomes of service delivery across sustainable development sectors through improved data services for spatial monitoring, decision support and risk management activities, that are locally appropriate, affordable, scalable and sustainable.

The character of the program is to develop close working collaboration with both traditional development partners and national space agencies and institutions working to advance the effective use of new earth observing services.

Whilst a detailed program has yet to be defined, certain characteristics and guiding principles may be considered to incorporate the lessons learned of past efforts, build on the World Bank Group's comparative advantages, and work in alignment with the Bank's strategy and its new Green, Inclusive, Resilient Development (GRID) framework for sustainable development.

Guiding Principles

Key principles to guide such a program are:

1. Demand Driven: to ensure that program activities are rooted in the core needs and real-world demand from client governments and beneficiaries;
2. Scale and Sustainability: to prioritise the support to operational services with potential to scale and remain viable of time;
3. Cocreation: to adopt processes that provide for local participation opportunities in developing final services through combinations of global and local data as well as traditional and new methods;
4. Ethics: adopt and contribute to the enhancement of ethical frameworks for geodata use, including provisions for protecting vulnerable groups, addressing information bias, minimize intrusion, protect privacy, safeguard sensitive data from theft, and provide accountability.
5. Ecosystem: consider a broader view of the digital ecosystem relating to earth observation, including satellite, drones, internet of things, and traditional data providers, as well as the entire value chain of digital production and data lifecycles.
6. Inclusive Skills, Jobs and Opportunity: invest in local skills, capacity and service provision that leverages today's technologies and also prepares for the next generation, ensuring research and development that is inclusive and collaborative.
7. Standards: adhere to and promote the use of open standards for data licensing, sharing, security, and quality.

Program Activities

Lines of action for program activities may be:

1. Technical assistance: for demand-based services in development operations;
2. Training, capacity building and jobs: to develop local ecosystems of digital service providers, including digital opportunities and entrepreneurship.
3. Partnerships: for facilitating the supply and demand coordination in investment, trainings, and standards development.
4. Mainstreaming: of learning approaches and methods into World Bank Group staff and operations as well as client operations;
5. Standards and Guidance: of best practices for geodata safeguards and ethical considerations;
6. Public goods: provision and access to data, tools, services, and curricula that support the overall goals of the program;

The program shall focus on building capacity on both sides of the supply and demand markets for new services in geodata in sustainable development. Supply-side actors in the development context are the local providers of geospatial services such as data collection, analytics and decision support as well as monitoring and evaluation. Whereas demand-side actors are represented by the clients and user cases benefiting from such services.

Supply-side activities – may focus on developing the curricula, skills and opportunities for a vibrant geospatial services sector that has access and knowledge to utilize the latest earth observations services and integrate these into local production models. Target beneficiaries include university networks and students, civil servants and GIS staff, entrepreneurs and digital innovation hubs. This work includes the establishment of public good resources to facilitate access to data, learning content, analytical tools and algorithms, with a focus on catalogues, methods and skills that leverage low cost, open source, digital resources.

Demand-side Activities – may focus on the operational programs of governments that can benefit from new satellite services and aim to facilitate the design, adoption, and scale-up of operational services. Target groups would be government agencies, bank task teams and development partners responsible for designing and management interventions in sustainable development sectors. Activities can be:

Partnerships and Coordination

The Digital Earth Partnership will build on over 10 years of collaboration with European Space Agency (ESA) but shall also expand to play a coordinating role with additional programs and partners to connect demand for new digital earth services.

European Space Agency

A core partnership shall be to build upon the ESA Space partnership on Innovation for Global Development - a new program of ESA for 2020-2025. This program itself builds on the existing success of initiatives such as Earth Observation for Sustainable Development and will deploy ESA space budget, technical resources, and staff secondments to the World Bank, for new generation EO products and services that respond to needs developing countries.

The Digital Earth Partnership is expected to be a direct beneficiary of new services and innovation stimulated through the ESA program, as well as an equal partner on knowledge sharing and dissemination. At the same time, the Digital Earth Partnership – through the World Bank and participating Development

Partners - is expected to provide inputs to the ESA activities – inputs beyond requirement specification, including having an active role in providing local datasets and beneficiary feedback that enhance service development and localization for client services.

Finally, the opportunity to jointly establish new global public goods – such as global baseline datasets, open access tools and curricula - exists between the two elements of the overall Space Partnership.

The ESA-WB Partnership on Space for Sustainable Development is expected to focus geographically on Africa, across all development sectors.

Additional Space and Technology Partners

The World Bank already works with a wide array of technical institutes, universities, and national space agencies in leveraging new technologies for sustainable development. Most partners contribute in-kind resources in the form of data services, research and analytics, or training materials. Examples include NASA's Harvest program for agriculture, UK Space Agency's Meteor project for natural hazard management and Germany's Aerospace Agency enhancement with the Bank of the World Settlement Footprint digital service to map global urban change.

Firms and institutes have also long been sources of innovation and collaboration and are expected to provide content in terms of research, training and access to data as well as benefit from access to and improved insights into emerging market needs and opportunities. Building such partnerships with nascent digital communities in developing countries is best supported by a Digital Earth Partnership serving as a trusted and neutral technology broker.

Participating Development Partners

The partnership is expected to work with interested development partners to scale the Digital Earth opportunity globally – specific thematic or geographical priorities of development partners can be reflected through specific program windows. The national program of Development Partners with thematic alignment are also important opportunities for partnerships for dissemination, scale and impact.

Coordination with Other Programs

The World Bank Group manages a wide range of development programs internally with high relevance for alignment on the Digital Earth Partnership. In addition, external partnerships are key for innovation, mainstreaming, scale and efficiency. A key function of the Digital Earth Partnership shall be to develop appropriate coordination mechanisms to align internally and externally on new geodata services for stakeholders.

[World Bank Group Comparative Advantages](#)

The World Bank is well positioned to deliver this program as it is ideally aligned to the regional and sectoral strategies. The Bank's key competences as a provider of finance, technical assistance and policy dialogue on both sides of the supply and demand ecosystem are crucial for catalyzing operation and routine services of Earth observing technologies.

In addition, the Bank is itself also a major user and producer of geospatial analytics with an identified priority to reform and scale up its own activities. In particular, the importance of addressing Fragility and Conflict States is seen as a driver of demand for these services to facilitate regional monitoring, identification of vulnerable groups and key beneficiaries, as well as for tracking development outcomes and progress towards the Sustainable Development Goals.

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DRAFT: Part 2: Program Concept

Digital Earth Partnership

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