“Space in support of International Development Aid”

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European Space Agency (ESA/ESRIN)
Background
International Financing Institutions (IFIs)

Earth Observation (EO) for Sustainable Development

2016: Agriculture, Urban Development, Water Resources
2018: Marine & Coastal, Disaster Risk Reduction, Fragile & Conflict States, Climate Resilience & Proofing,
2019: Forestry, Ecosystems Services,
Urban : EO Services Overview

Baseline Products
Urban and Peri-Urban Land Use / Land Cover

Green Areas/Networks
Extent, Imperviousness and Change
Building Footprint
Population Density
Waste Sites

Transport Infrastructure
Informal Settlements

Flood Risk
Landslide Risk
Terrain Motion

Detailed
Change
Example: Informal Settlements (Slums)

Land Use and Land Cover (February–March 2017), based on Pléiades (0.5 m resolution) in the city centre and Sentinel-2 (10 m resolution) for periurban areas

Delineation of informal settlements
Two Key consultations with ODA Community in 2018: “Satellite Environmental Information in support of Development Aid Activities in European Aid Agencies”

- 16 Jan: Current Status
- 11-12 Sept: Future Prospects
EO for SDGs

Earth Observations potential contribution to the SDG (169) Targets and (230) Indicators

SDGs with most opportunities for Copernicus data and services

Analysis performed by the GEO EO4SDGs initiative
Longer-Term Vision/Goals
Vision

“Transfer and mainstream environmental information from satellites into Development Assistance operations, activities & financing”
Why? -> to **improve** Development Assistance Operations (DAC: efficiency, impact, sustainability)

**Costs** *(the easy part)*

- Order of magnitudes well-known, but wide range, diverse products
- Resolution -> cost-driver, but data prices falling,
- Possible (& feasible) rough model of project resources available for EO (?) *(0.1% preparation, 1-2% implementation)*

**Benefits** *(the hard part)*

1. Increased efficiencies & impact for existing operations/activities
2. Improved decision-making for future activities (planning, policy-making)
3. New / extended capabilities *(eg. Climate & Disaster resilience)*,
4. Improved transparency, accountability.

➢ Value-proposition could be better consolidated in Development Aid context,
➢ Potential role for OECD?
Barriers

**Awareness**
- Lack of understanding of *what* types of environmental information can be produced and what are the benefits of its use,

**Acceptance**
- Lack of experience *how* to use this source of information and a ‘champion’ to promote its use,

**Adoption**
- Lack of capability to locally *produce & deliver* this source of information operationally and support users in uptake

Activities

1. **Knowledge Development**
   - Co-develop demonstration materials, & do risk-reduction developments for less innovative environmental product types (*eg.* FCV, Climate & Disaster Resilience),

2. **Capacity-Building**
   - Training program for Agencies, IFIs, Client States in the use of EO in operations; co-design and development of methodologies and guidelines,

3. **Skills Transfer**
   - Expertise and capability transfer program for satellite environmental information production & analytics in Developing countries.
Way Forward

- Activities to be implemented in a joint, coordinated program of work: “Space in support of International Development Aid”, 2020-24
- Official Development Assistance (ODA) - Accredited by OECD DAC in June 2018,
- Activity 1, new ESA programme (50 M€), for approval at Space19+ Nov 2019
- Activities 2 & 3, new ODA Trust Funds (WB 100 M$, ADB 35 M$), fund-raising 2019.

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<td>Capacity Building</td>
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Thank You for your attention!