



Mainstreaming EO & GIS in IFAD operations – Prospective needs

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Ongoing inventory of EO/GIS use in IFAD

55 initiatives*

73

countries

48

IFAD staff

53**

projects

11

divisions

*16 initiatives need further information/analysis

**19 have ASAP funding and 6 GEF funding

EO/GIS uses to date

<https://airtable.com/shrguVwWEr86riTAI/tbIF2FY2rvAqAsGP3/viwGWhnVHeaFvaBO2>

Airtable IFAD GeoSpatial Initiative Inventory

Initiatives | People | Countries | Divisions | Projects

Grid view | 2 hidden fields | Filter | Group | Sort | ...

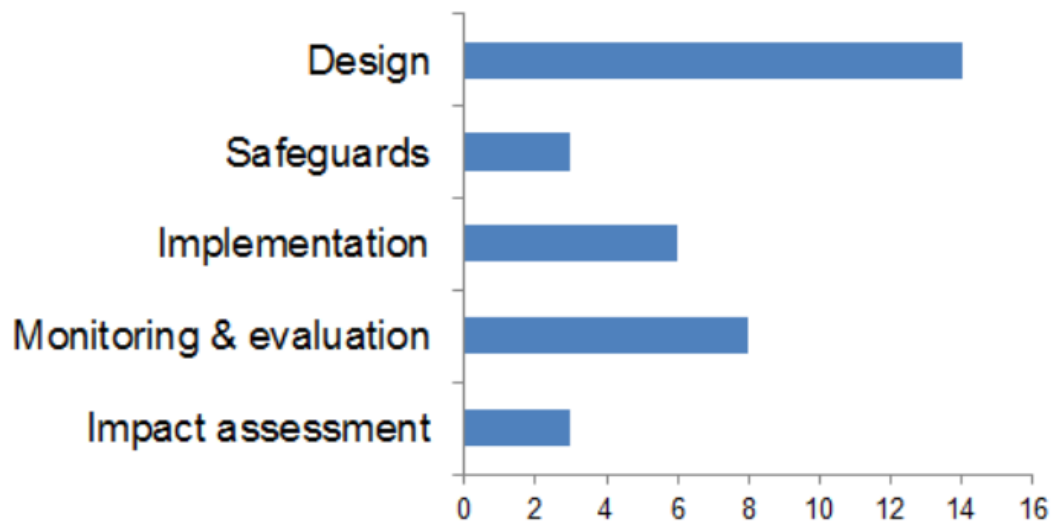
Initiative	Inventory status	Description	Time	Countries	Projects	Division	Resource person	URL	Attachments
1 Watershed development in Gambia (CHOSSO project)	Completed	ASAP grant 2000001123 ...	2015 - ongoing	Gambia	Nema	WCA	Latham, Michelle	https://webapps.ifad.org/members/...	
2 Projet d'amélioration de la résilience des systèmes agricoles au Tchad (PARSAT)	Completed	MISE EN PLACE D'UN SYSTEME DE SUIVI AGRO-ECOLOGIQUE ...	2017/2018	Chad	PARSAT	WCA	Takoutsing, Bertin Vagen, Tor Sene, Amath Pathe Brie, Alice		
3 ESA Earth observation for international institutions (EOFI) 2009	Completed	Earth observation analysis provided by the European Spac...	2009	Madagascar	AD2M Phase II PHBM II AROPA	ESA	De Vos, Sophie THIERRY, Benoit		

Initiative	Climate finance...	Categories	Project stage	Type	Purpose	Data used	Notes
1 Watershed development in Gambia (CHOSSO project)		Moderate (e.g. GIS)	Safeguards	Capacity development	Vulnerability assessment Mapping	Meteorological data Water points and rivers	
2 Projet d'amélioration de la résilience des systèmes agricoles au Tchad (PARSAT)		Moderate (e.g. GIS)	Implementation	Capacity development	Training		
3 ESA Earth observation for international institutions (EOFI) 2009	ASAP	Advanced (e.g. earth observa...		Partnership Knowledge product(s)		Land cover Crop yields Digital Elevation Model	Further analysis needed to understand how the provided data was used
4 ESA Earth observation support for IFAD 2014	ASAP	Advanced (e.g. earth observa...		Partnership Knowledge product(s)		Digital Elevation Model Land cover	Further analysis needed to understand how projects benefited from the dat...
5 IFAD-WFP partnership (sharing Giancarlo Pini)		Advanced (e.g. earth observa...		Partnership Knowledge product(s)			
6 Earth Observation for Sustainable Development (EO4SD)		Advanced (e.g. earth observa...		Partnership Knowledge product(s)			

EO/GIS use by purpose in IFAD



EO/GIS entry points, contexts, applications



27
K-products

Maps, studies, publications, data sets, assessments,

3
large grants

(1) TSLI-ESA II; (2) EODM; (3) IFAD/ICRAF grant for EO

5
analytical tools

(1) CoMon, (2) Pasture monitoring, (3) MPAT, (4) M&E, (5) Water model

2
databases

(1) Genode
(2) RACK station

4
partnerships

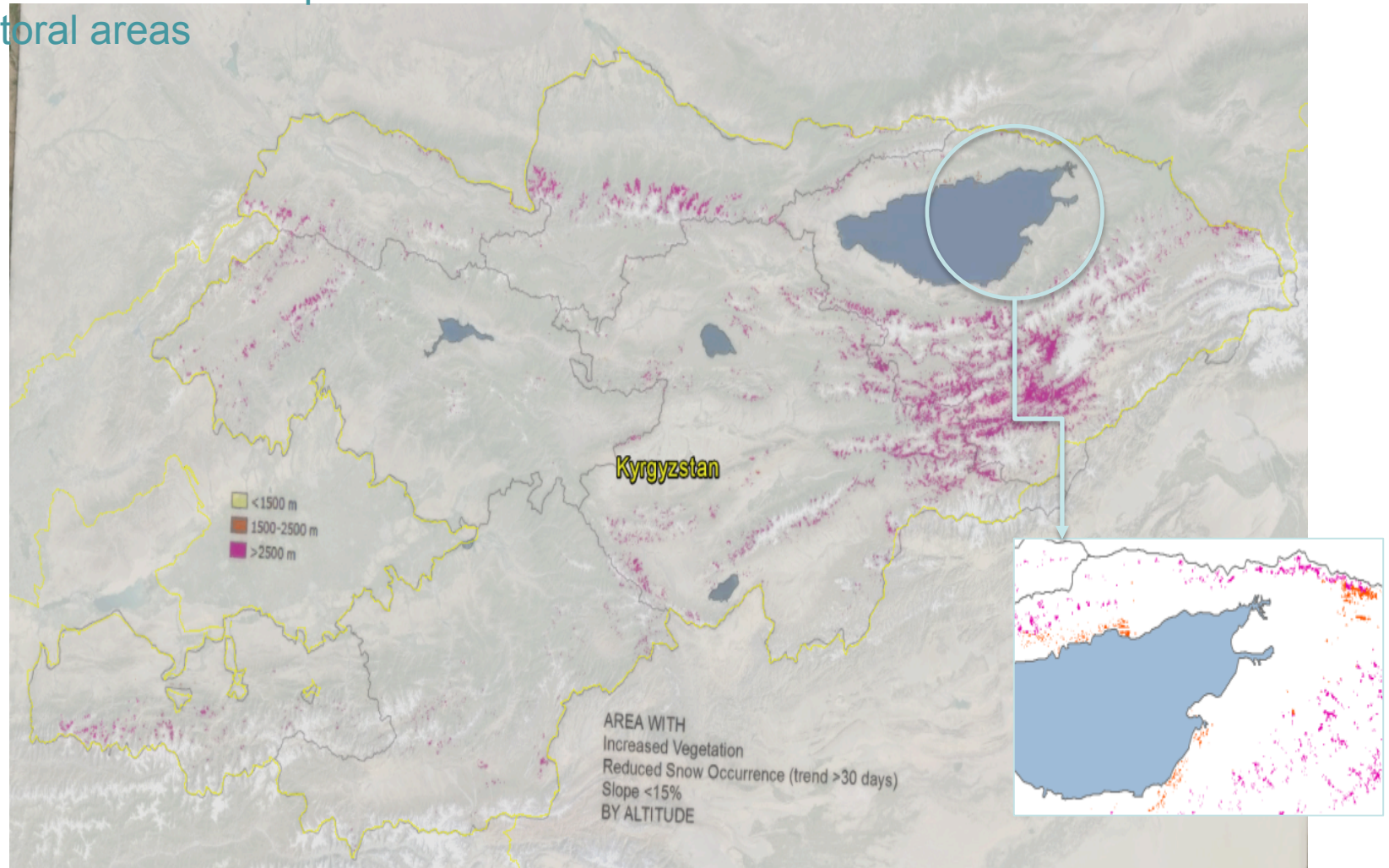
(1) WFP/IFAD
(2) three initiatives with European Space Agency

2
capacity dev

(1) PARSAT
(2) CHOSSO

Examples

Kyrgyzstan: COSOP, SECAP
and Project Design
Identification of new potential
pastoral areas

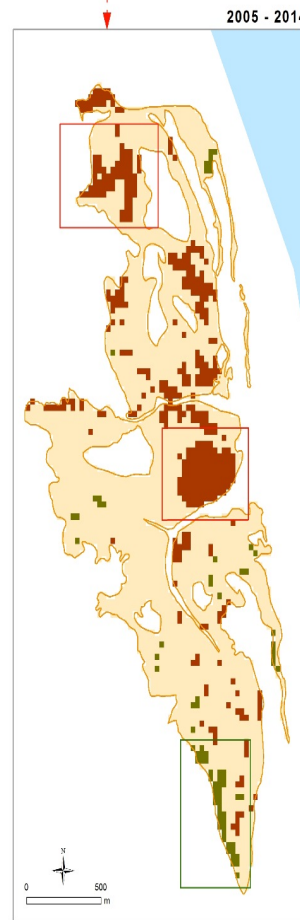
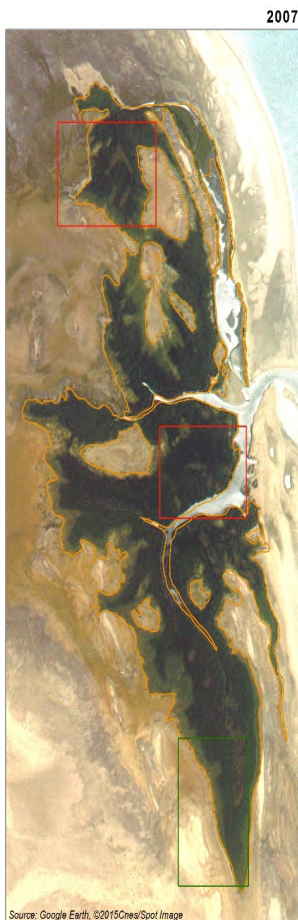


Examples

Djibouti: Project Design Monitoring

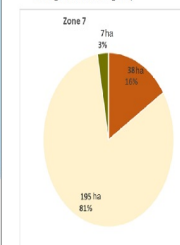
Identification of mangroves degraded areas

Djibouti
Programme to Reduce Vulnerability in Coastal Fishing Areas
Godoria
Coastal vegetation surface: 240 ha

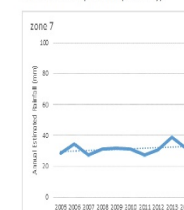


Vegetation variation
Normalized Difference Vegetation
Index (NDVI) 2005 - 2014

Positive (green), negative (brown),
no variation (yellow) in vegetation
intensity between 2005 and 2014
(in hectares and area percentage)
(Data source: Landsat, res 30m
-Google Earth Engine)



Annual estimated rainfall
2005 - 2014
(Data source: Climate Hazards Group
Infrared Precipitation (CHIRP))

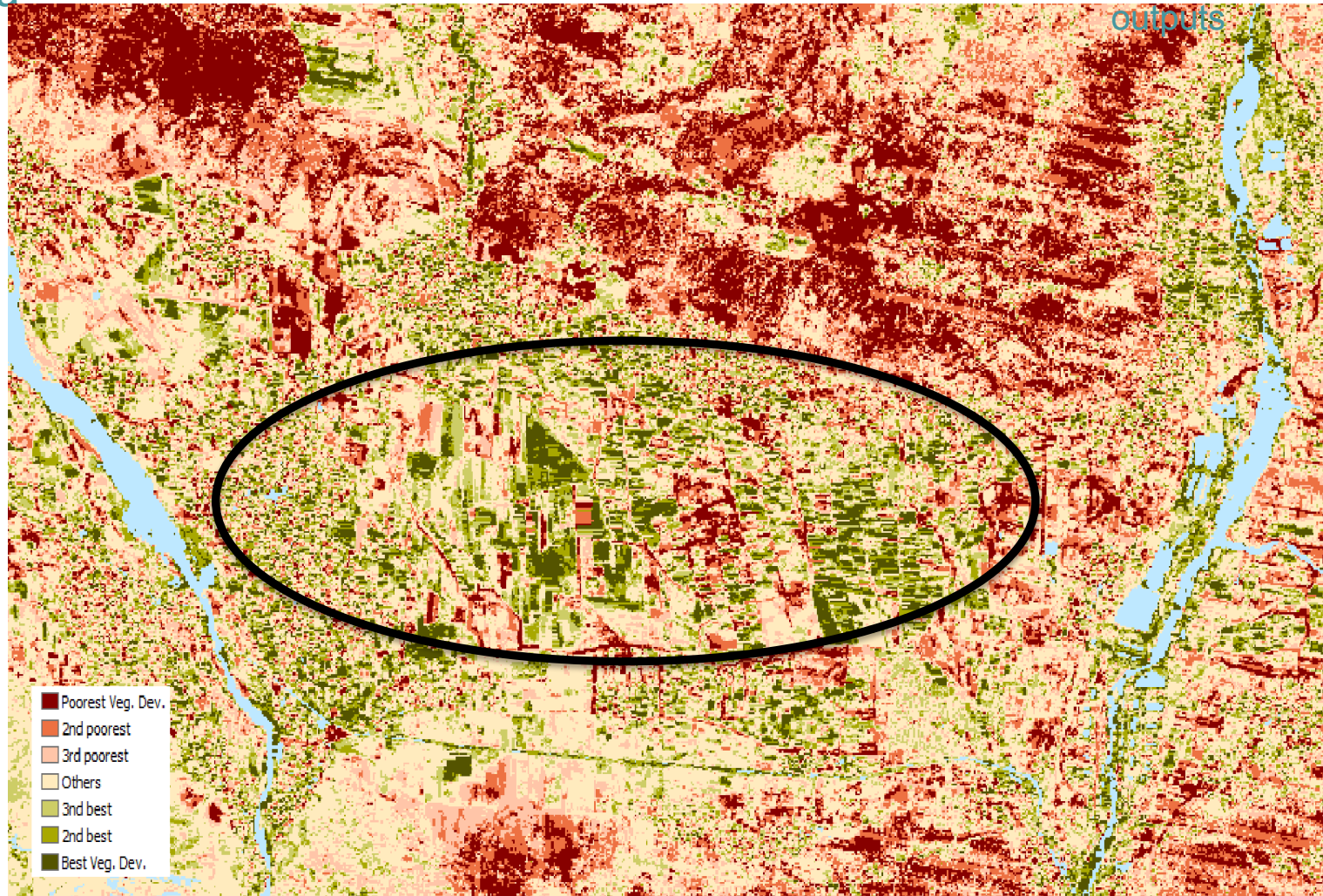


- Coastal vegetation
 - Negative variation area
 - Positive variation area
- NDVI landsat trend**
- Negative variation
 - Minor variations
 - Positive variation

Examples

Georgia : Project Monitoring Performance of rehabilitated irrigated area

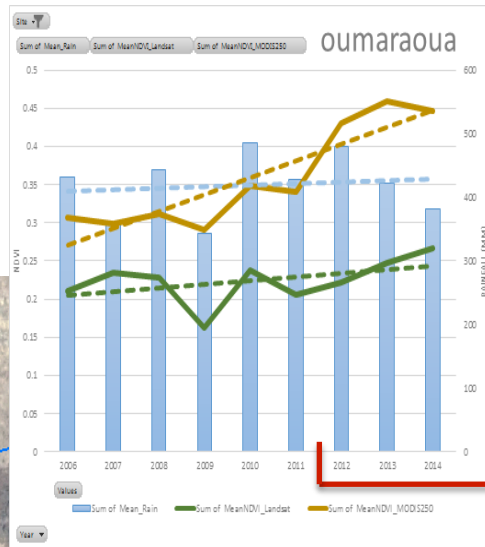
Preliminary
outputs



NDVI ranking 2014 (project intervention) vs 10
years time-series

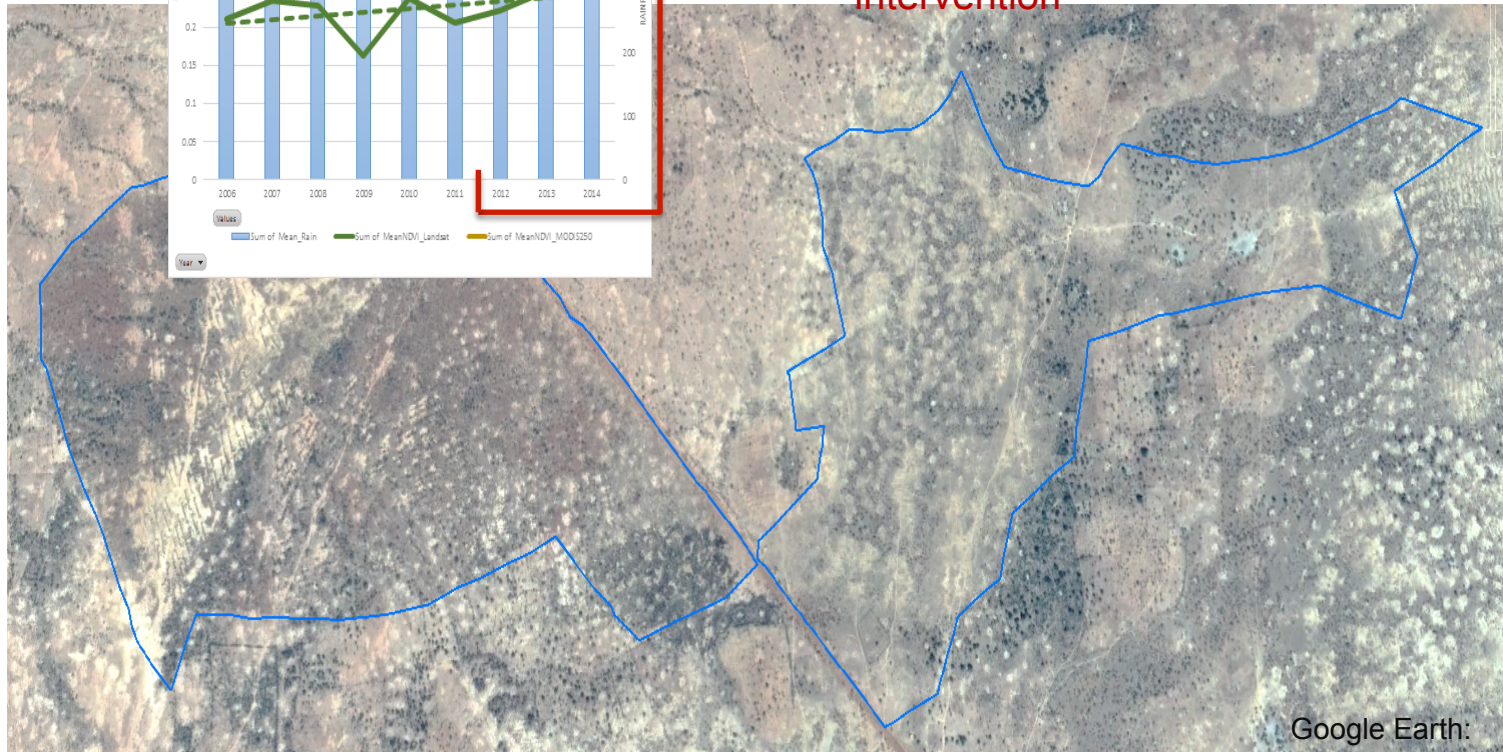
Examples

Niger: Project Monitoring, Impact Assessment of land rehabilitation actions



Project intervention

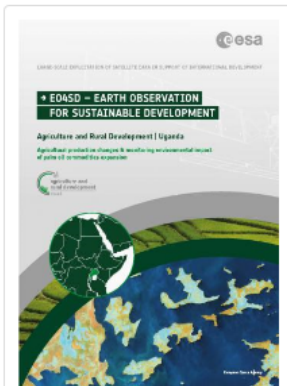
Preliminary



Google Earth:
01/2014

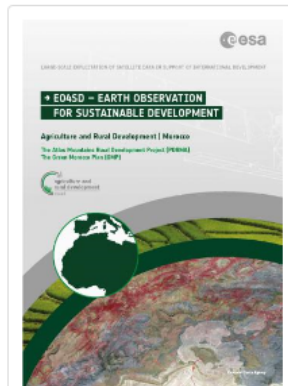
Sample EO/GIS prospective needs for IFAD

- High temporal and geographical resolution **poverty mapping** very useful for M&E (including resilience) purposes – NB MPAT
- High resolution **yield measurement** on a seasonal and ideally within season timeframe – note smallholders mixed crops in small areas, challenging!
- Real-time mapping of **agricultural drought** conditions in relation with the phenological phases to project potential drops in production in our project areas. This would be instrumental for forecast-based finance embedded in index-based insurance or contingent loans.
- Real-time **irrigation** effectiveness and salinity risk mapping & integration with socio-economic / ground truthing from supervision data
- Real-time **pasture** condition and over grazing risk mapping & integration with socio-economic / ground truthing from supervision data



Agricultural production changes & monitoring environmental impact of palm oil commodities expansion in Uganda

Brochure
English



The Atlas Mountains Rural Development Project (PDRMA) The Green Morocco Plan (GMP)

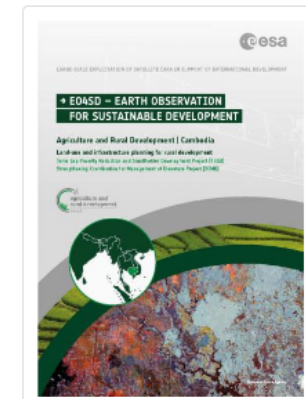


The Global Environment Facility Integrated Approach Pilot (IAP) program on sustainability and resilience for food security in sub-Saharan Africa



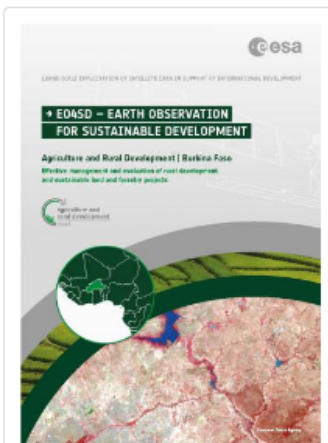
Supporting sustainable land management and food security in Ethiopia

Brochure
English



Land-use and infrastructure planning for rural development in Cambodia

Brochure
English



Management and evaluation of rural development, sustainable land and forestry projects in Burkina Faso