

→ EARTH OBSERVATION FOR SUSTAINABLE DEVELOPMENT

Agriculture and Rural Development

Progress Meeting EO4SD Agriculture Cluster
4-5 October 2017 | ESRIN, Frascati, Italy

Supporting the Green Morocco Plan through the Atlas Mountains Rural Development Project (PDRMA)

Eva Haas, GeoVille



- **Agriculture** – a strategic sector in Morocco
- **80%** of the Moroccan agriculture is localised in disadvantaged, rainfed farmland and mountainous areas
- **The Green Morocco Plan** launched in 2008 is a government strategy to stimulate the agricultural sector
 - Pillar I: modern agriculture
 - Pillar II: smallholder farmers
- **IFAD supports the implementation of the Green Morocco Plan** in mountainous areas through the Atlas Mountains Rural Development Project (PDRMA) (Pillar II)

Targeted MDBs projects and programs



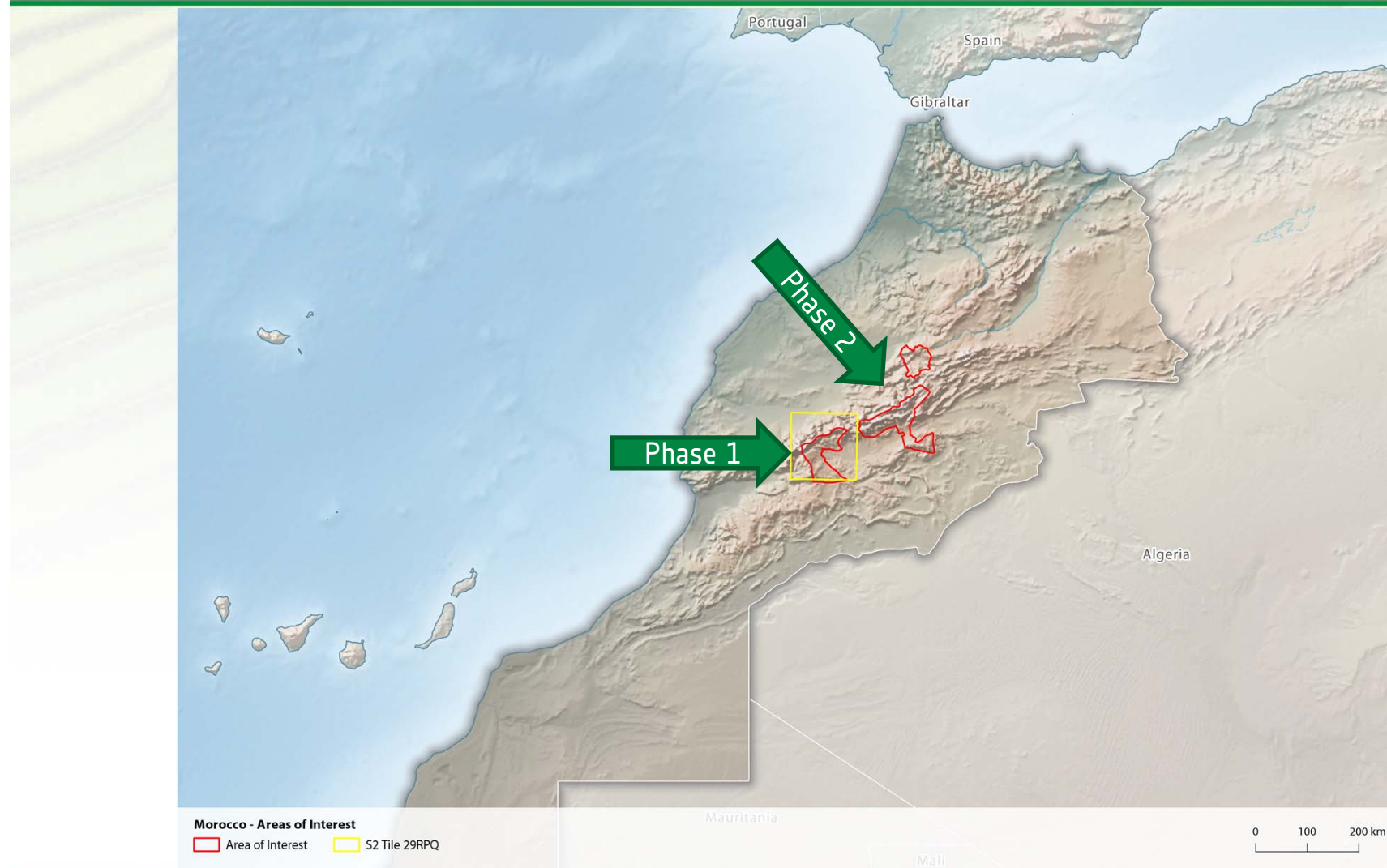
PDRMA aims at reducing poverty in three provinces of the Atlas mountains (Ouarzazate, Tinghir and Béni Mellal) by improving market access, enhancing value chains, and managing natural resources sustainably.

Local stakeholders

- The Ministry of Agriculture and Maritime Fisheries (MAPM), through its Rural and Mountain Development Directorate (DDERZM)
- Central project coordination unit (CPCU) within DDERZM is linked to the field through a provincial project management unit (PMU)

EO4SD local office planned.

Areas of engagement in Morocco



Key questions and fitting EO4SD services



How does the Green Morocco Plan impact the environment ?

Have bare lands been transformed into agriculture?

Can degradation in rangelands be halted?

Which areas are most prone to soil erosion?

How well are the agricultural areas connected to markets?



Land cover mapping

EO-based products and services including agricultural production areas, rangeland and tree cover mapping



Tools to assess land degradation and environmental conditions

EO-based products and services including water-based soil erosion, vegetation dynamic analyses, land degradation assessments



Value chain assessment

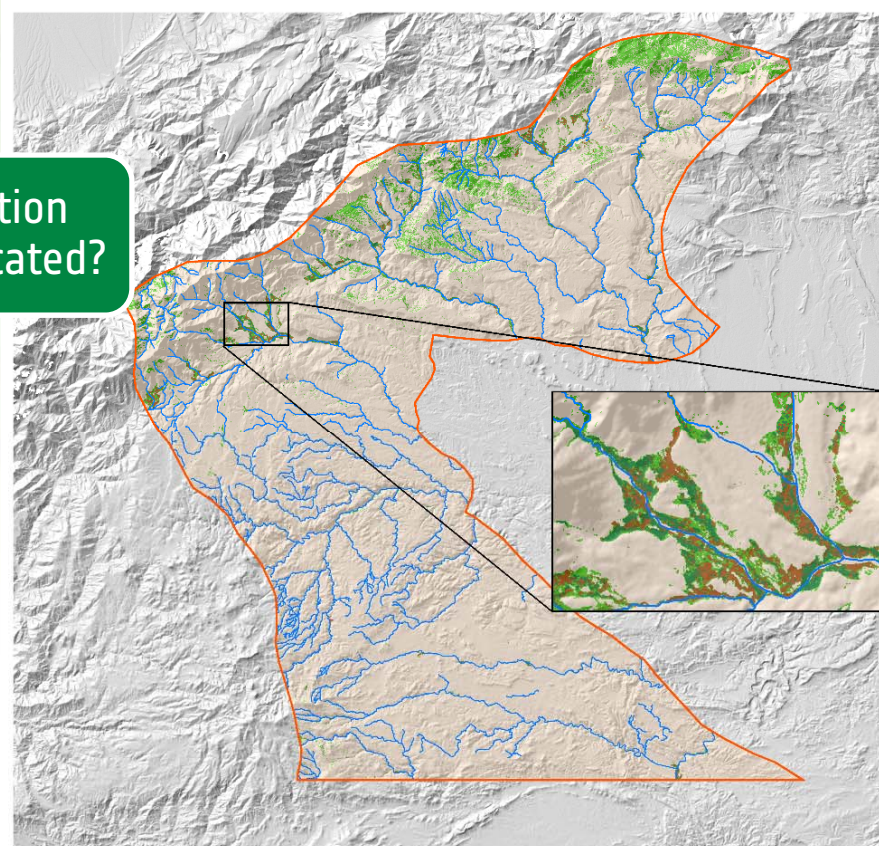
EO-based products and services as well as geo-information products to identify the distance from agricultural production zones to towns/markets

Supporting the M&E component



Detailed land cover mapping

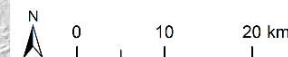
Where are agricultural production areas and natural resources located?



Preliminary land cover classification

- Water
- Non-vegetated
- Trees
- Agriculture
- Rangeland
- AOI Ouarzazate

Spatial resolution: 10m
Time-period: 2016
Input Data: Sentinel-2 L2A time series
Processing: Supervised Random Forest
Classification
MMU: 5px
Post-processing: Rivernetwork from OSM



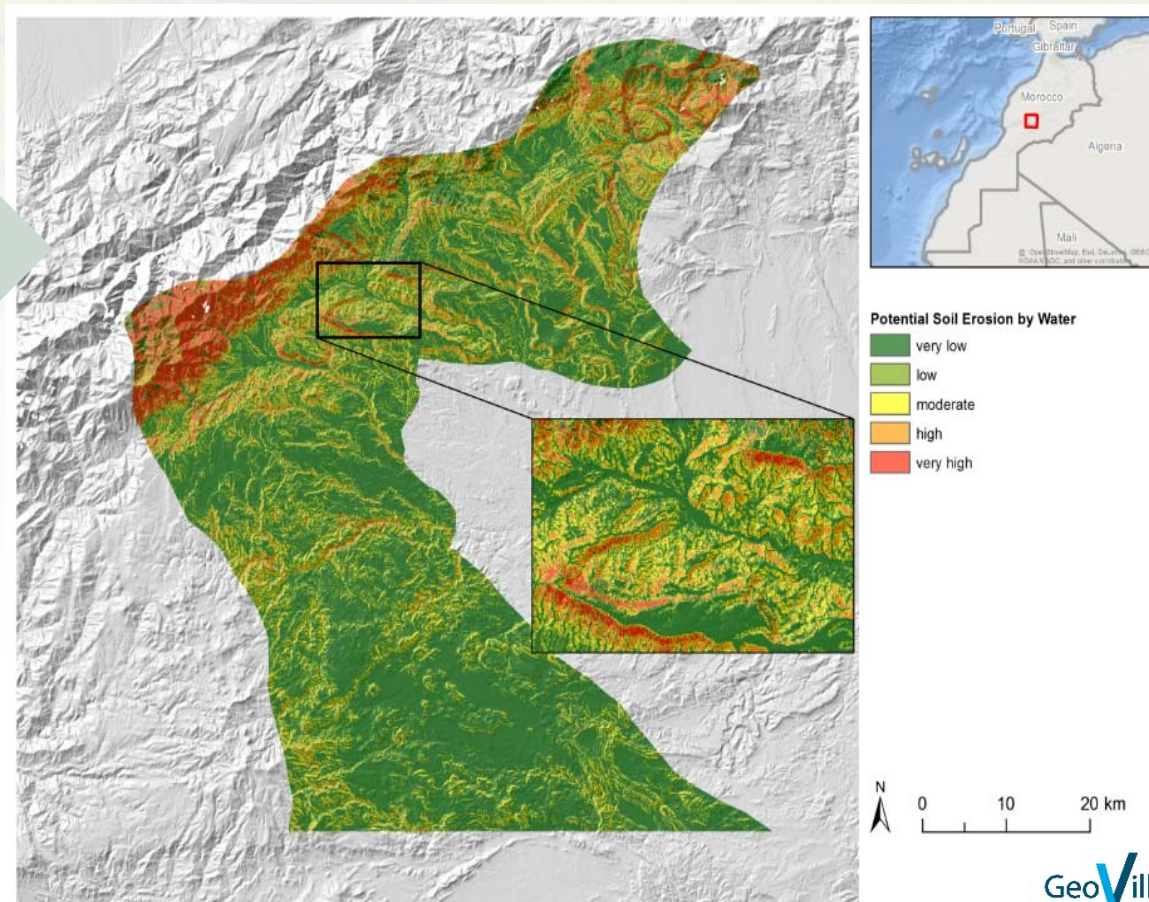
GeoVille

Supporting the M&E component

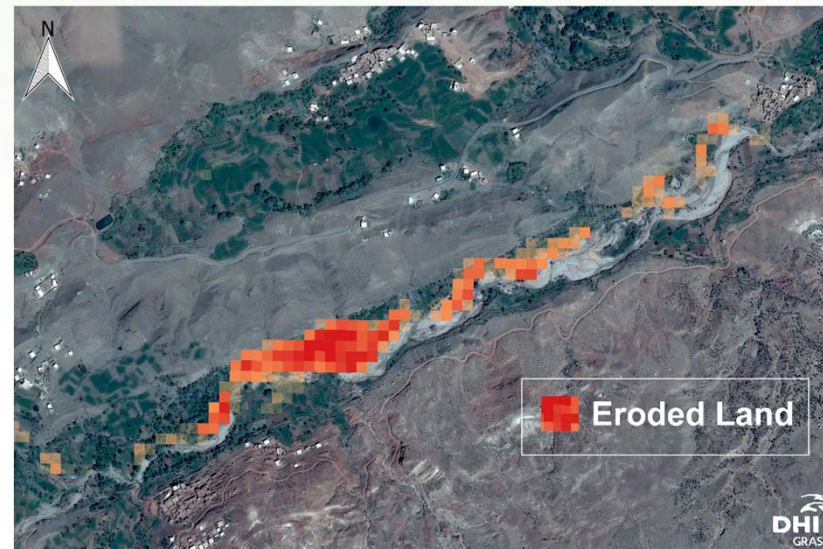
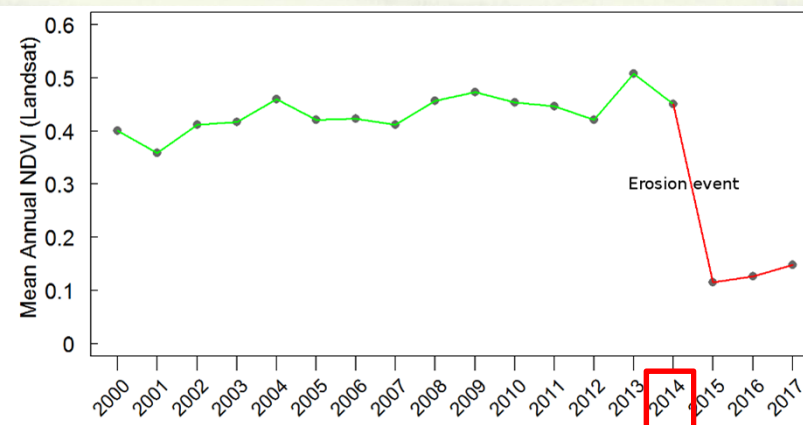
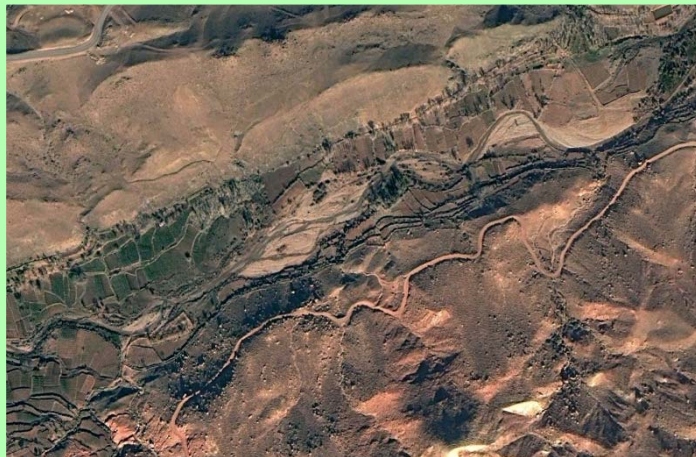


Tools to assess land degradation and environmental conditions

Which areas are most prone to soil erosion?



Loosing agricultural land

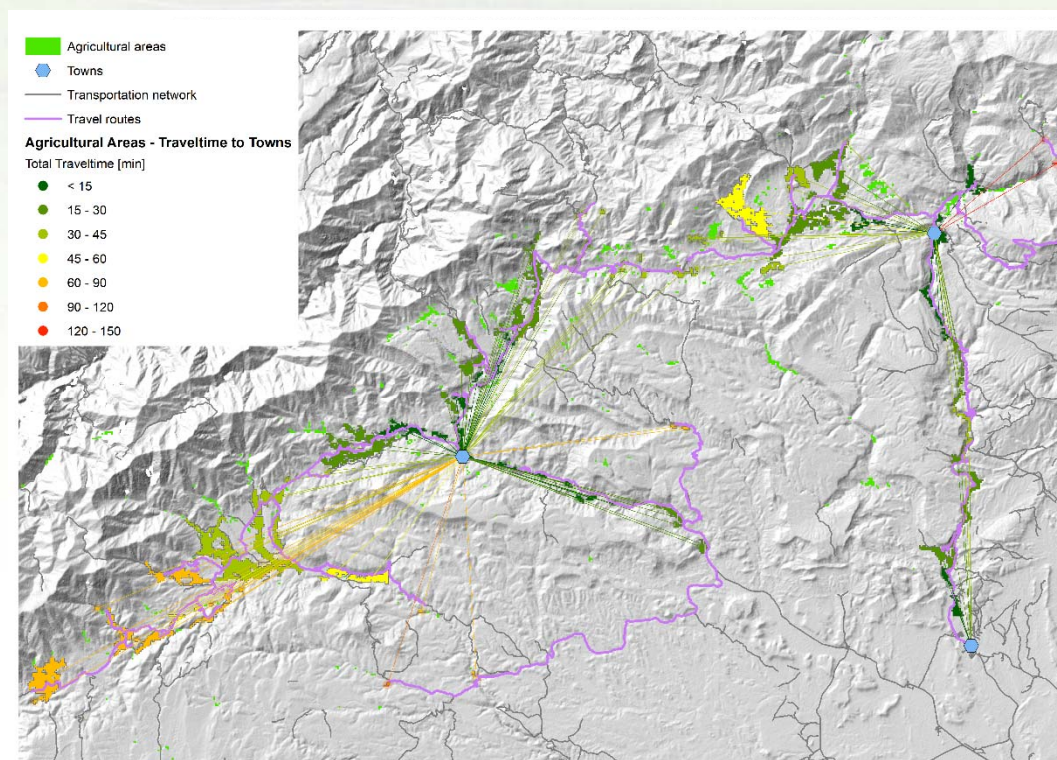


Supporting agricultural value chains

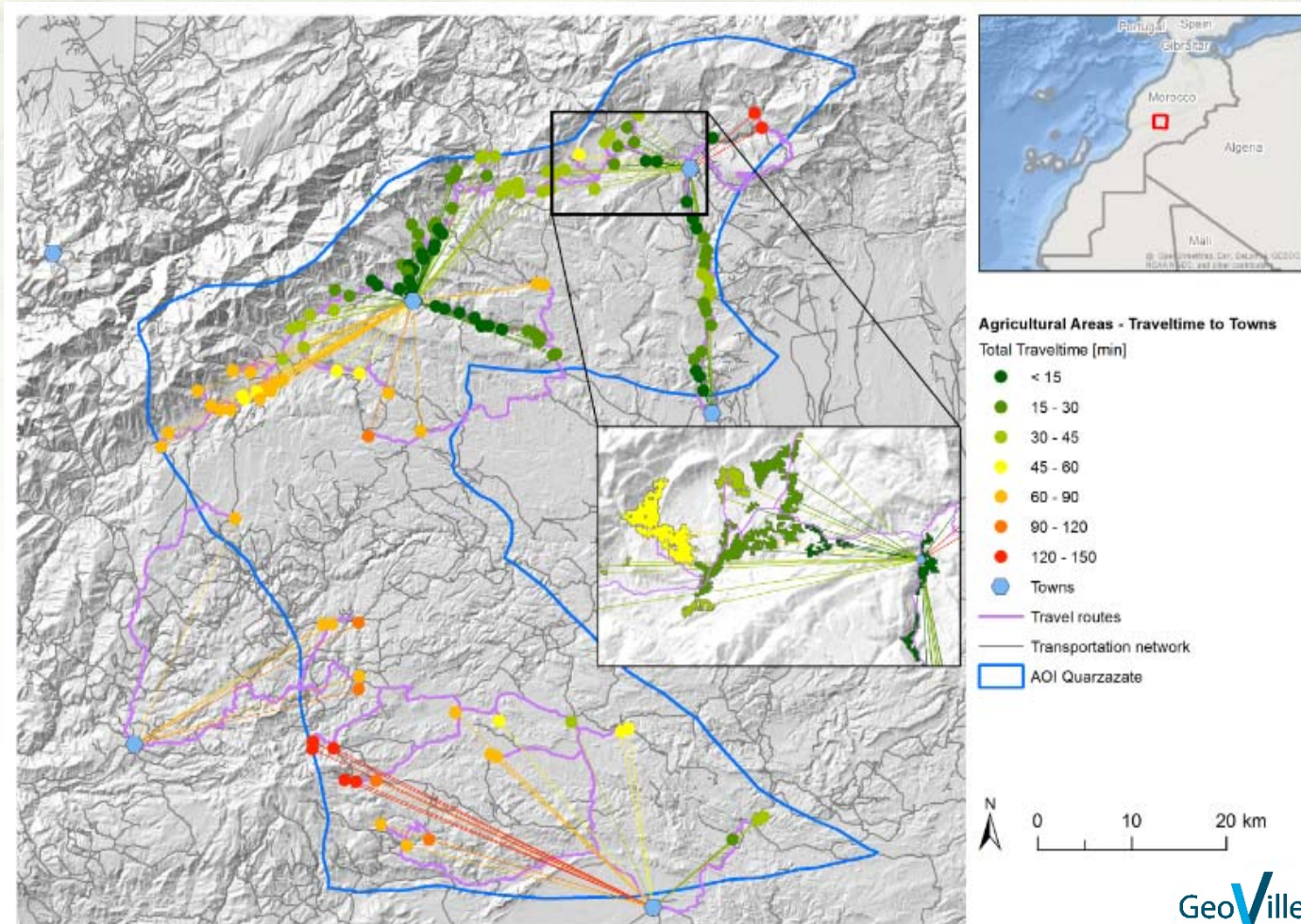


Targeted agricultural value chain assessments

How well are agricultural areas connected to markets?



Travel times from production to market areas



Capacity building plan



Workshop 1

Jan / Feb 2018

Workshop 2

Jan / Feb 2019

1. Introduction to GIS and Remote Sensing

- ☐ Basic information on EO and GIS (e.g. image classification, image interpretation, hands on QGIS, etc.)
- ☐ State of the art software developments (e.g. WOIS, cloud computation, Sen2Agri)

2. EO4SD services

- ☐ Land cover/use change with focus on forestry
- ☐ Vegetation dynamics
- ☐ Land productivity
- ☐ Soil erosion

Focus on sustainable uptake of EO products and services within projects.

- ☐ Using EO4SD services
- ☐ Using information for monitoring and evaluation purposes
- ☐ Conceiving and calculating
- ☐ long term indicators and indicator maps

Thank you - Merci



<https://eo4sd.esa.int/agriculture>
<https://eo4sd.lizard.net/>

