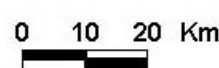


Precursor project 1: ESA TESEO desertification

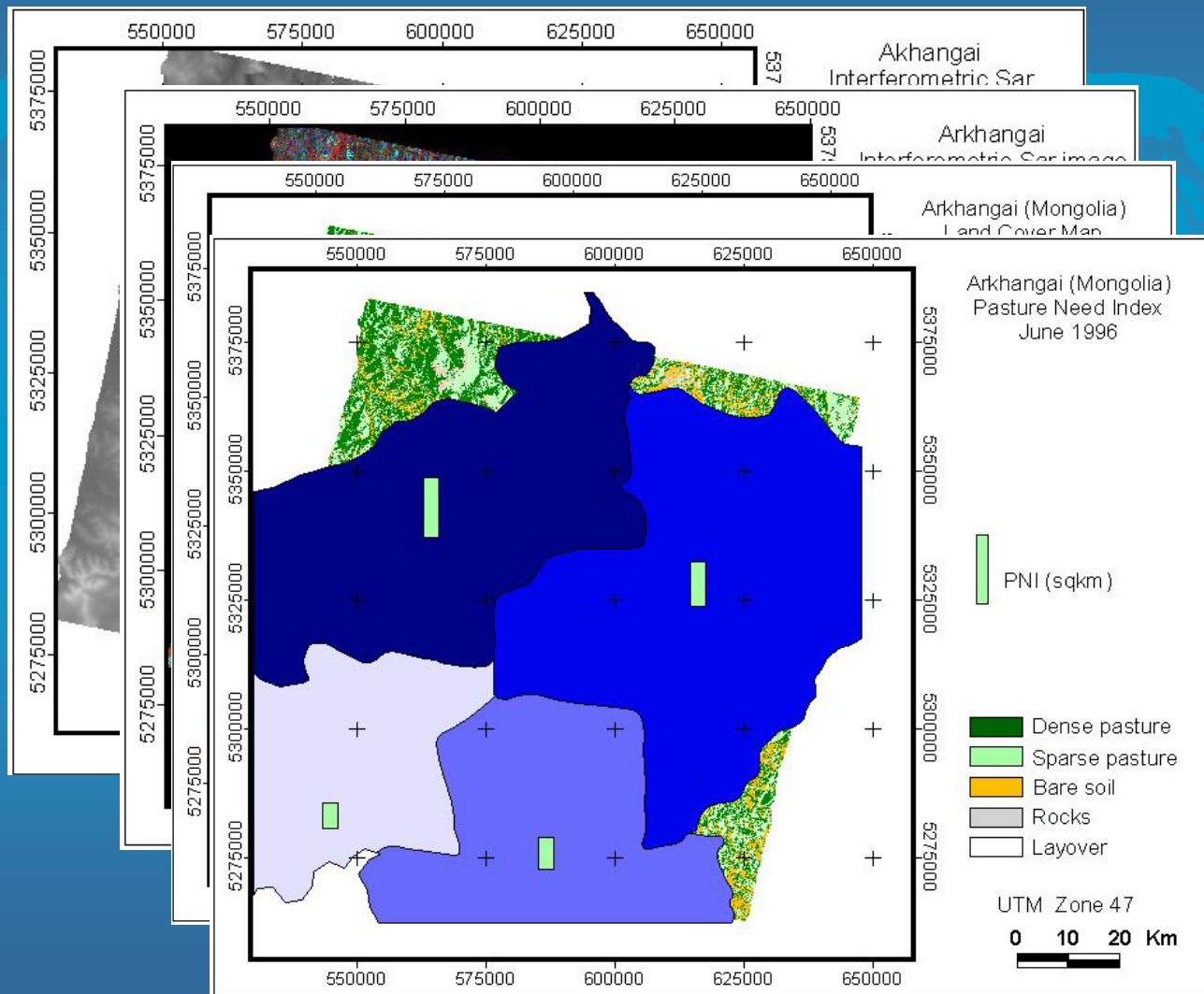
- sarmap
- University of Valencia
- EOS.D2C, France
- Chinese Academy of Forestry

In collaboration with

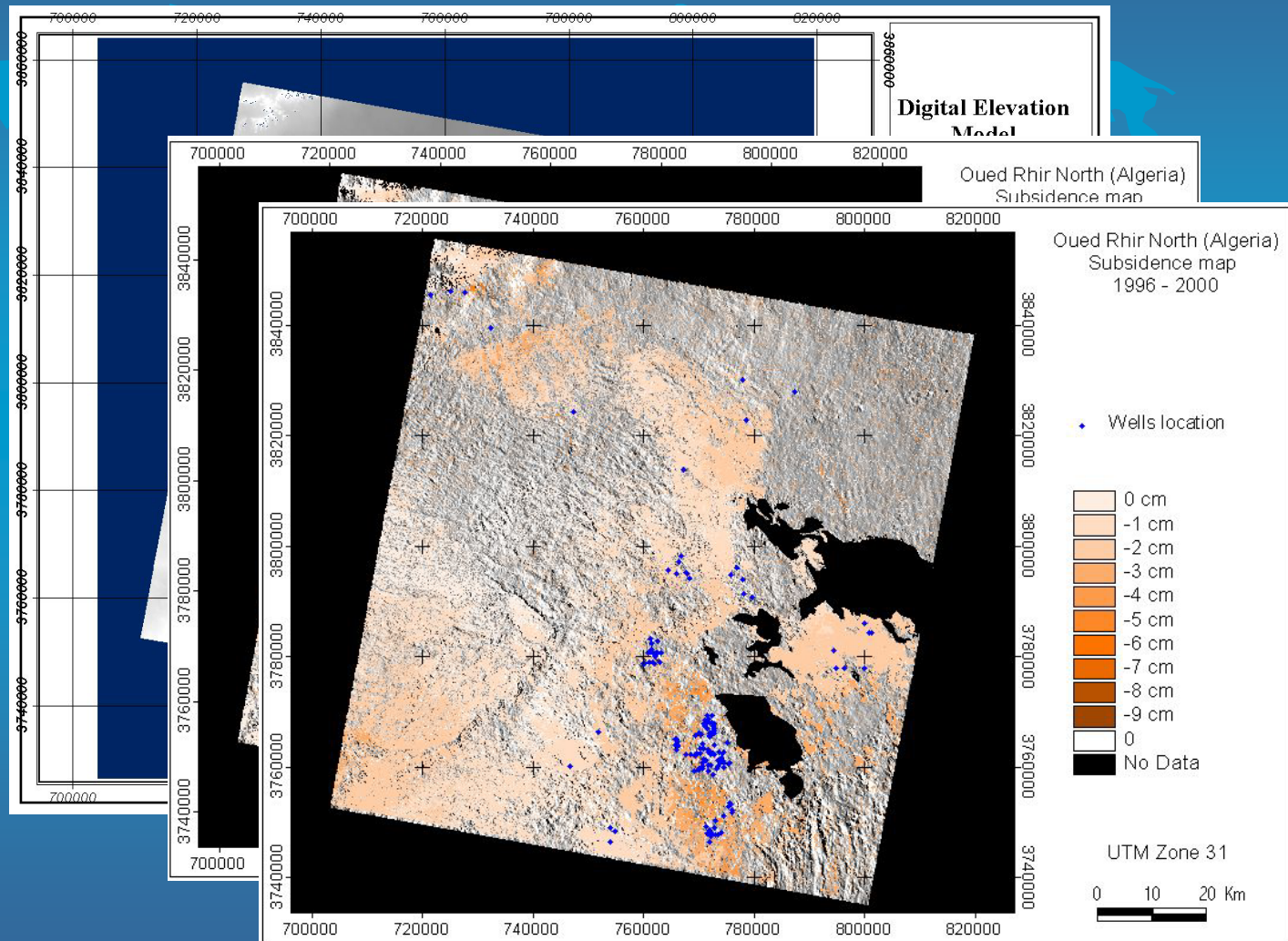
- EEF-Switzerland
- Centre de Suivi Ecologique, Senegal
- Observatoire du Sahara et Sahel, Tunisia
- ECO Asia, Mongolia
- Swiss Development Cooperation



Example products over the Arkhangai area / Mongolia



Example products over the Oued Rhir Nord / Algeria



Precursor project 1: ESA GMES Food Security

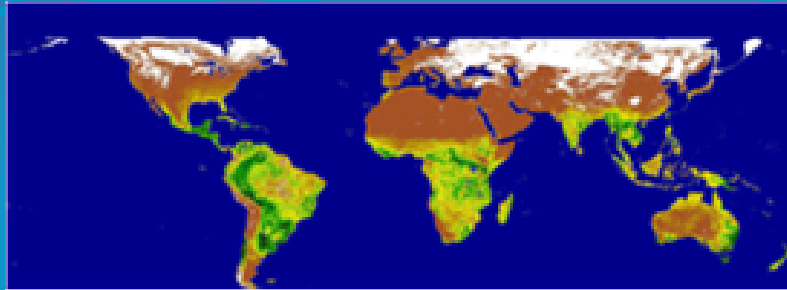
- VITO
- sarmap
- AVIA GIS
- Synoptics
- TRASYS
- ESYS

In collaboration with

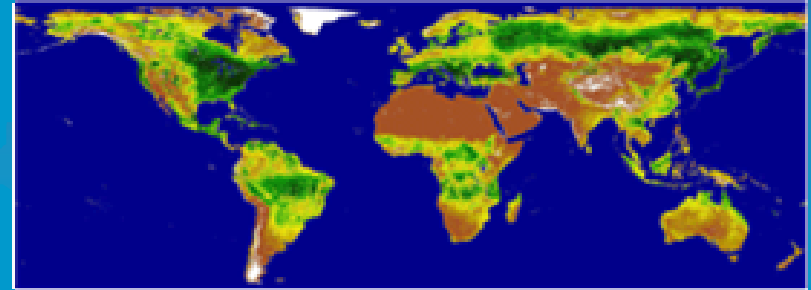
- EEF-Switzerland
- FAO
- JRC
- CIMMYT/CGIAR
- SADC

Small Scale Monitoring Module

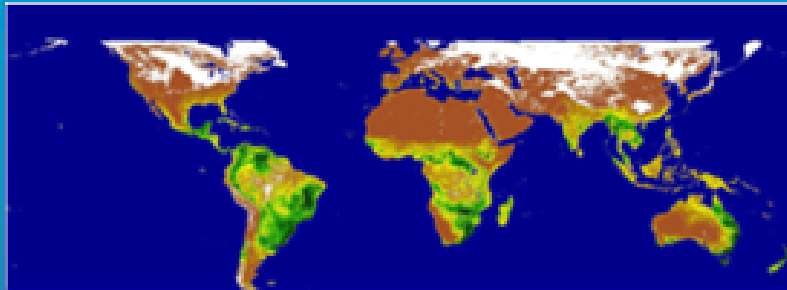
Dry Matter Productivity 10-days data



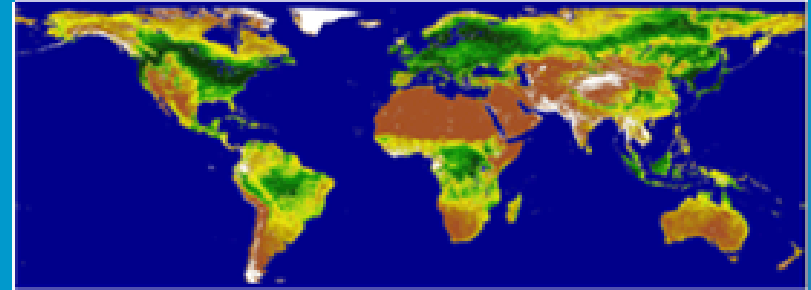
January 2000



July 2000



January 2001

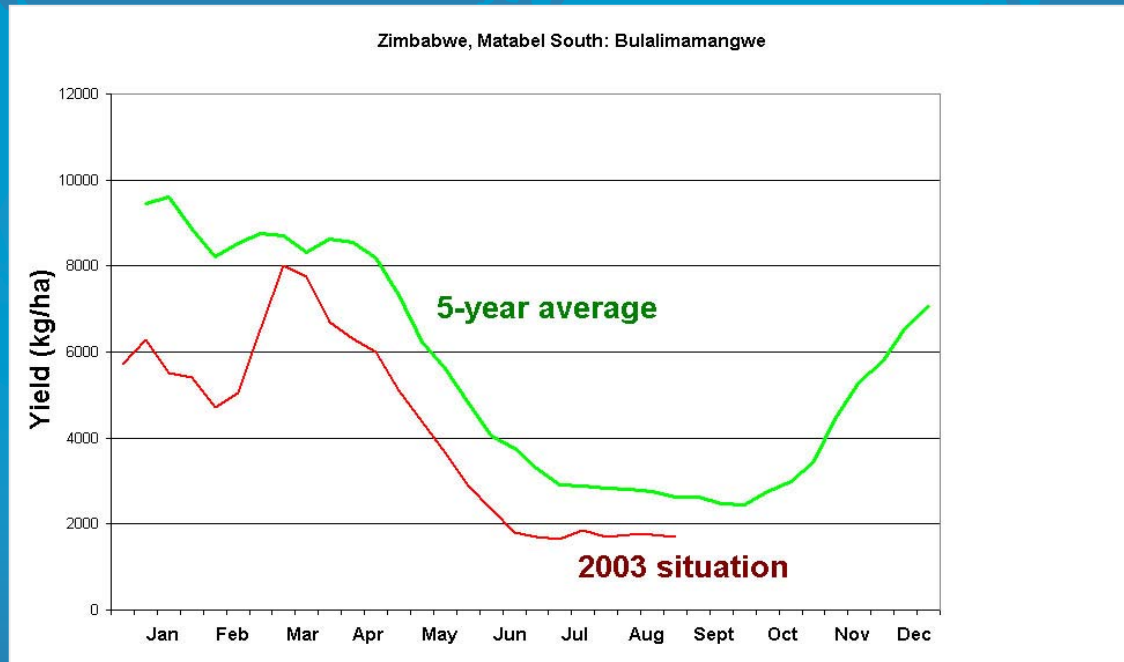


July 2001



Small Scale Monitoring Module

Trend Analysis

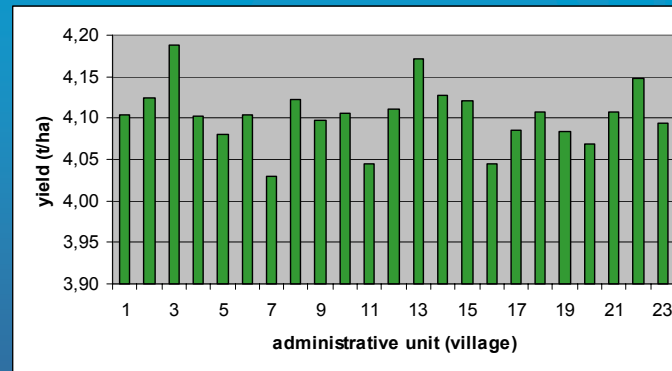
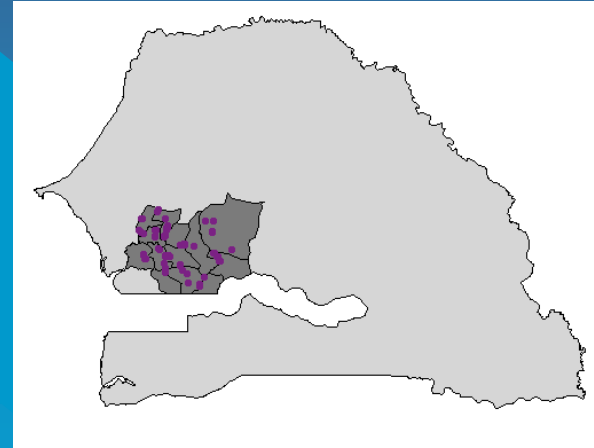


Yield Forecast Module

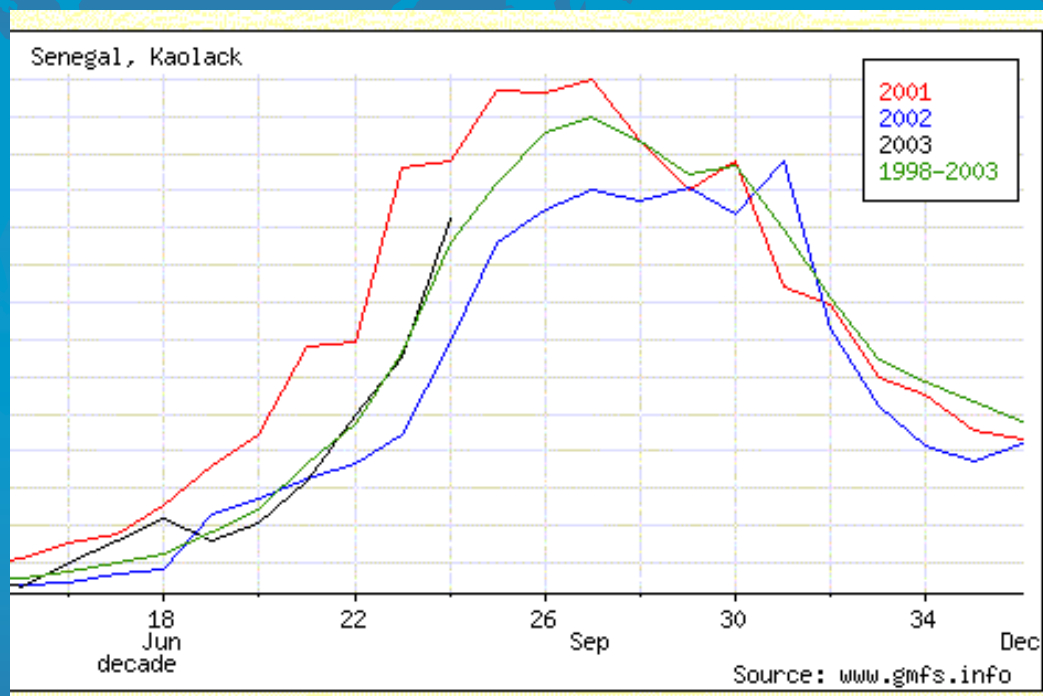
- Crop location
- Crop status
- Crop parameters
- Soil parameters
- Meteorological Data

+

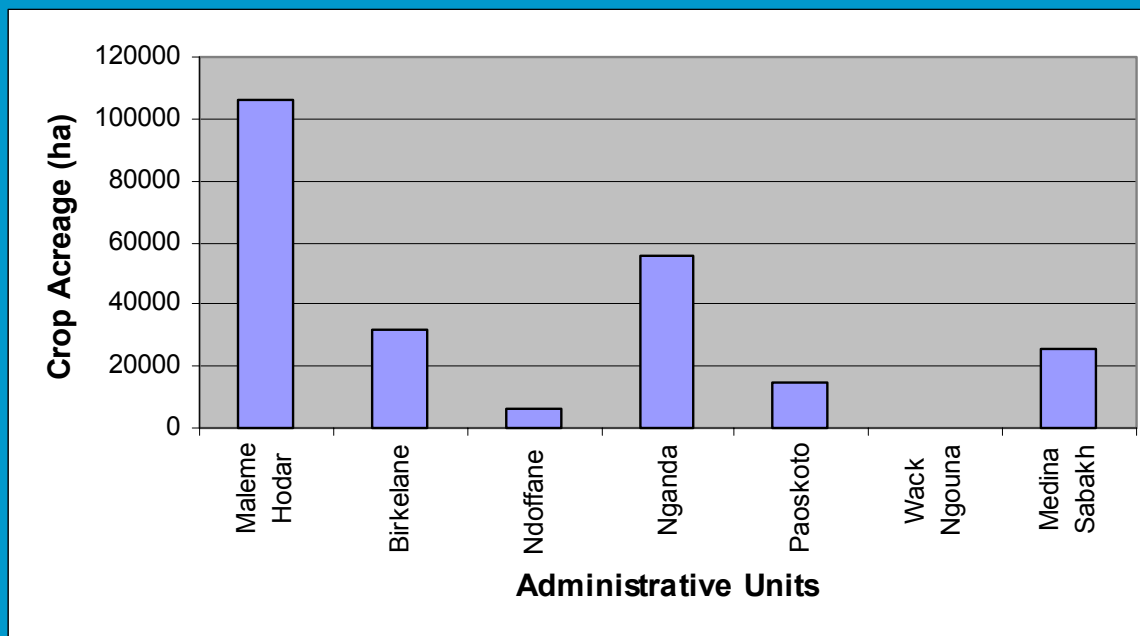
- Agro-Meteorological Model



Cross-validation between SSMM and YFM



Large Scale Mapping Module

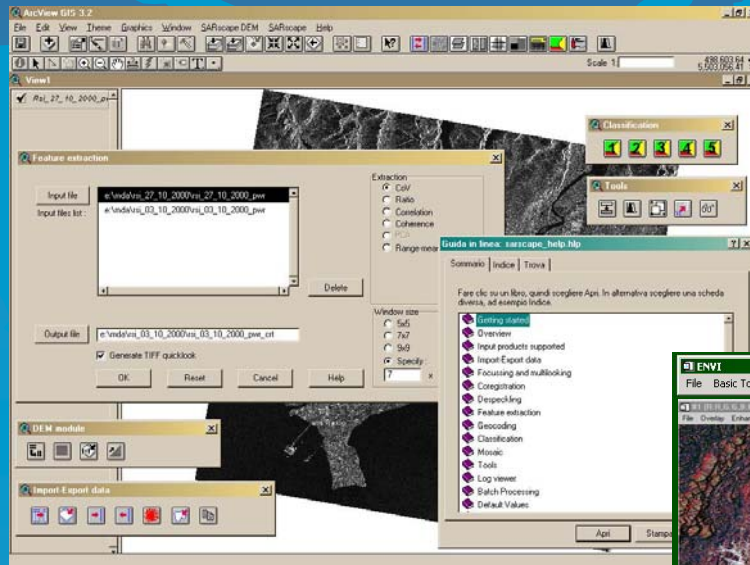


Information Dissemination

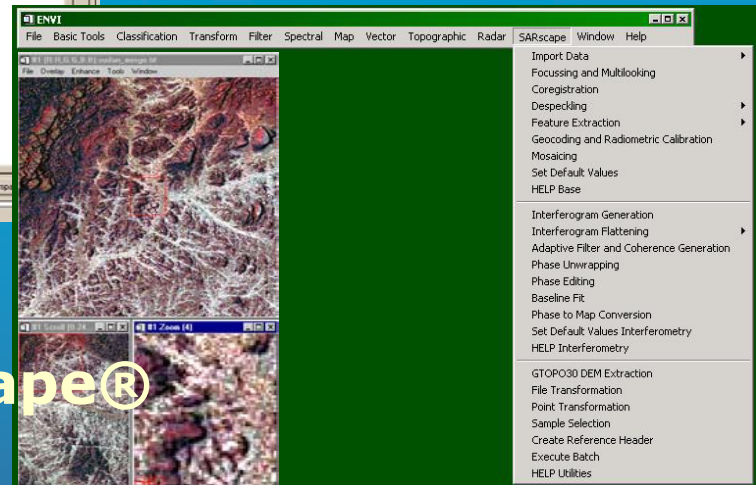


Implementation

ArcView SARscape® version



ENVI SARscape® version



GeoMania SARscape® Korean, Chinese and Japanese (Q1 2004) versions

Title Desertification

Product Leader

Francesco Holecz

Affiliation

sarmap

Product Team

- V ITO, Belgium
- CIMMYT/CGIAR
- Centre de Suivi Ecologique, Senegal
- Ministry of Agriculture, Malawi
- National Early Warning Unit, Malawi
- Regional Early Warning Unit, SADC
- FEWS NET, USGS

Agreement status

Pending

Preferred agreement type

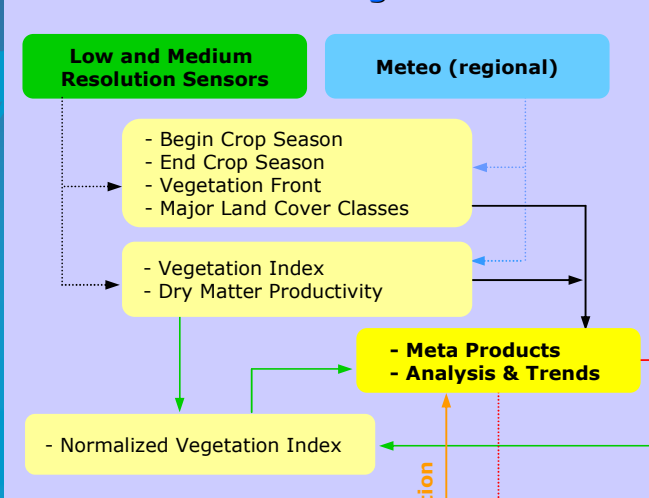
Individual

Project objective

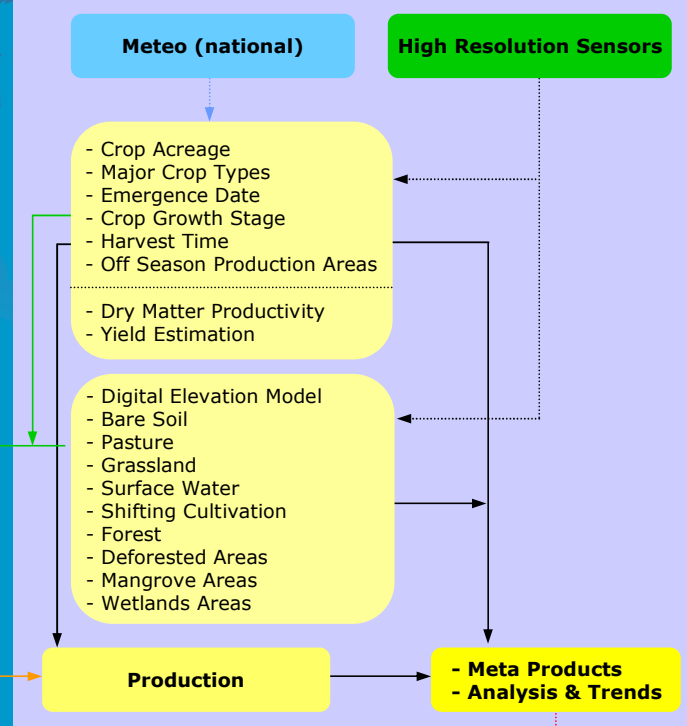
To identify and assess land degraded areas and to quantify the level of vulnerability

Methodology and Products

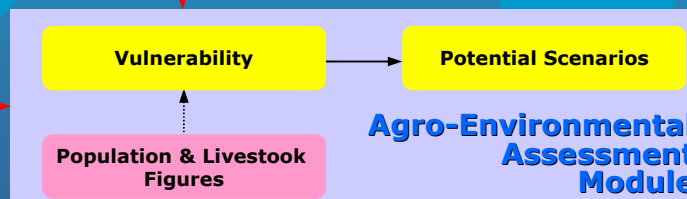
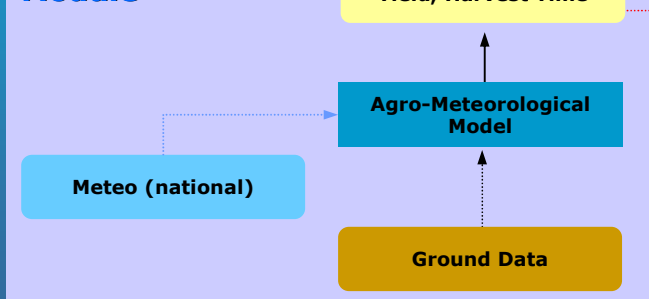
Small Scale Monitoring Module



Large Scale Mapping Module



Yield Forecast Module



Earth Observation



Earth Observation ... besides ALOS PALSAR

Platform	Type	Resolution
NOAA AVHRR	MS	1 km
SPOT Vegetation -1,-2	MS	1 km
Meteosat Second Generation	MS	1 km
ENVISAT MERIS RR	MS	1 km
ENVISAT ASAR GM, BWSM	SAR	1 km
ENVISAT MERIS FR	MS	300m
MODIS (Terra, Aqua)	MS	250,500,1000m

Platform	Type	Resolution
Landsat 1-7 – MSS,TM,ETM+	MS	80,30,15m
SPOT HRS, HRG	MS	20,10,5m
ERS-1/2	SAR	25m
Radarsat-1 FB,IM,WS	SAR	10-100m
ENVISAT ASAR AP,WS	SAR	15-150m
IRS 1-6	MS	20,10,5m

Test Site 1, Vulnerability - Agriculture and Population Pressure

Prototype Area 1

Senegal

Corresponding observation plan polygon(s)

E2 (part) / E3 (part)

No. PALSAR paths/coverage

every 44 days
June to November
if possible the whole year

PALSAR request (Year 1-3)

28 MHz HH or 14MHz HH+HV

Input data (EORC products)

PALSAR SLC data

Ancillary data requests

None

Test Site 2, Vulnerability - Agriculture and Population Pressure

Prototype Area 2

Malawi

Corresponding observation plan polygon(s):

E4 (part)

No. PALSAR paths/coverage:

every 44 days
October to May
if possible the whole year

PALSAR request (Year 1-3):

28 MHz HH or 14MHz HH+HV

Input data (EORC products):

PALSAR SLC data

Ancillary data requests:

None

Test Site 3, Vulnerability - Agriculture and Population Pressure

Prototype Area 3

Zimbabwe

Corresponding observation plan polygon(s):

E6 (part)

No. PALSAR paths/coverage:

every 44 days
October to May
if possible the whole year

PALSAR request (Year 1-3):

28 MHz HH or 14MHz HH+HV

Input data (EORC products):

PALSAR SLC data

Ancillary data requests:

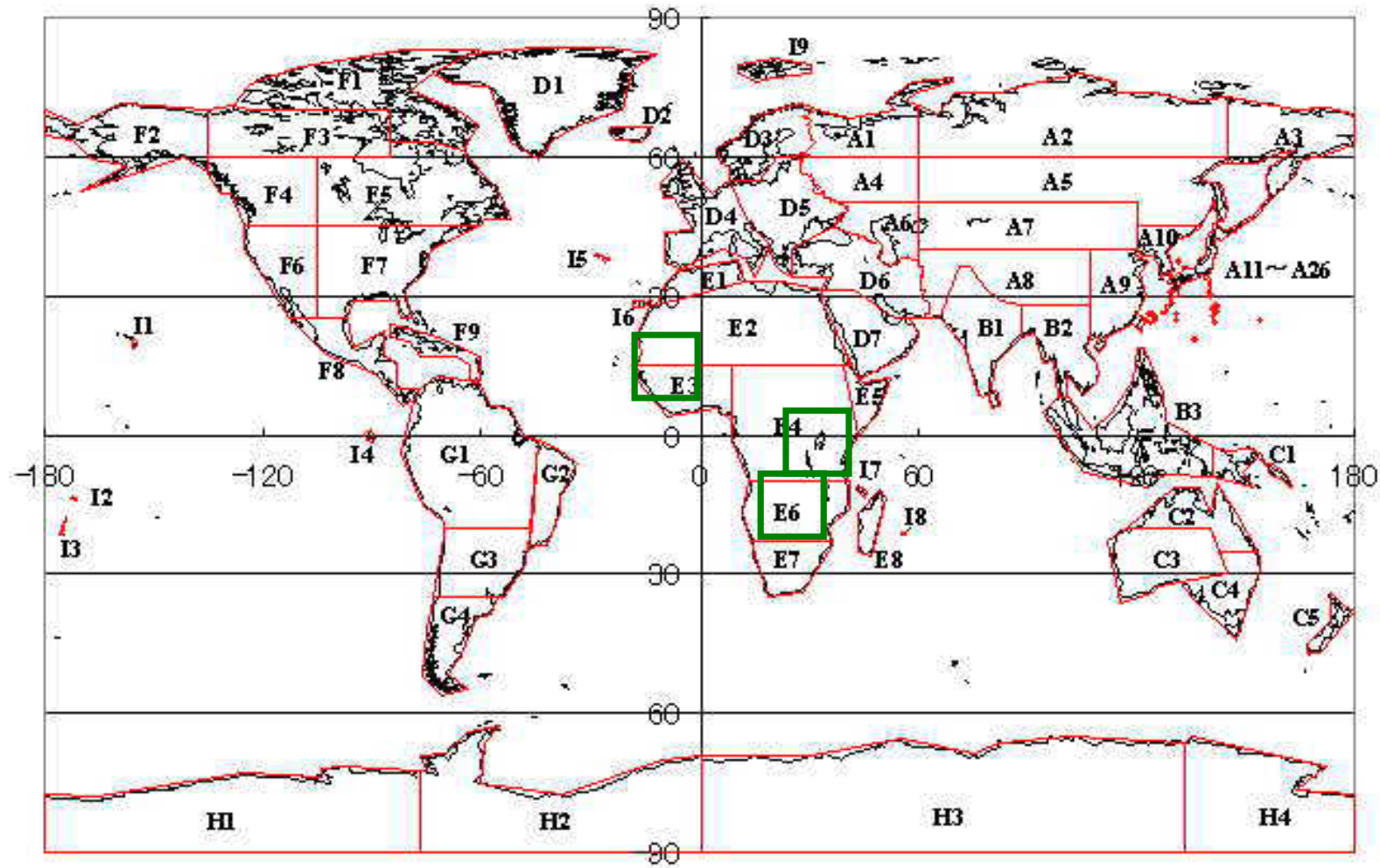
None

A stylized world map in shades of blue serves as the background for the slide. The map is centered, showing the continents of North America, South America, Europe, Africa, Asia, and Australia. The text is overlaid on the map.

Test Site 4, Vulnerability - Pasture and Livestock Pressure

China / Mongolia?

Land Degradation



Location of Prototype Areas