

LARGE-SCALE EXPLOITATION OF SATELLITE DATA IN SUPPORT OF INTERNATIONAL DEVELOPMENT

→ ENVIRONMENTAL IMPACT ASSESSMENT AND STRATEGIC ENVIRONMENTAL ASSESSMENT

Most significant agriculture sector programs or projects financed by MDBs will have a requirement for either strategic environmental assessment (SEA), or environmental impact assessment (EIA) to take place prior to MDB Board approval. EIA has been a standard safeguard requirement for MDBs for decades, and is now consistently applied by partner countries. SEA is a newer initiative, the purpose of which is to assess the environmental implications of policies, programs, and plans (PPPs). Both SEA and EIA attempt to predict the likelihood of environmental impacts emanating from development proposals. Satellite Earth Observation (EO) is a powerful technique for understanding the biophysical baseline existing in a given geographic space. Understanding the nature of the baseline state is a necessary pre-condition for effect SEA and EIA.

SEA and EIA studies associated with agricultural programs or projects require information on issues such as land cover, productivity, population distribution, water sources, areas of degraded lands, rivers, lakes, wetlands, groundwater vulnerability, protected areas, and many other environmental components that might be affected by a new development.

The service can consist of maps that layer to present a “baseline scenario” in place before the initiation of an agricultural program or project. The service could consist of the original maps in raster or vector format for easy integration within existing GIS systems and/or webportals. It is also possible to receive the service (maps and analytical tools) in a webportal.

DESCRIPTION

Quantitative mapping of the biophysical baseline in an area where agricultural development is to take place

USE

- › Baseline mapping
- › Identify hotspots and evaluate impact of interventions
- › Assist with post-approval monitoring

INPUT PRODUCTS

- › Baseline maps
- › Project overlays
- › Graphical presentation of predicted outcomes

SPATIAL RESOLUTION AND COVERAGE

Local/national (10-30m) and regional (250m) scale

BENEFITS

Better design of projects:

- › Present environmental baseline in graphical format
- › Assist with impact “scoping”, so as to focus on issues of key importance
- › Assist proponents to minimise risk in program and project design
- › Monitor activities more effectively and efficiently

DELIVERY FORMAT

Depending on user needs, e.g.:

- › Vector and raster formats
- › Through a web portal
- › Statistics in tables and/or graphs

FREQUENCY

Depending on user needs, most products can be updated regularly (daily at regional level, every 10 days at local/national scale)

This map was produced using multiple GIS layers. It presents different land use zones in a Province of Vietnam, and can be used to decide the best location for different types of agricultural development.

