



Food and Agriculture
Organization of the
United Nations



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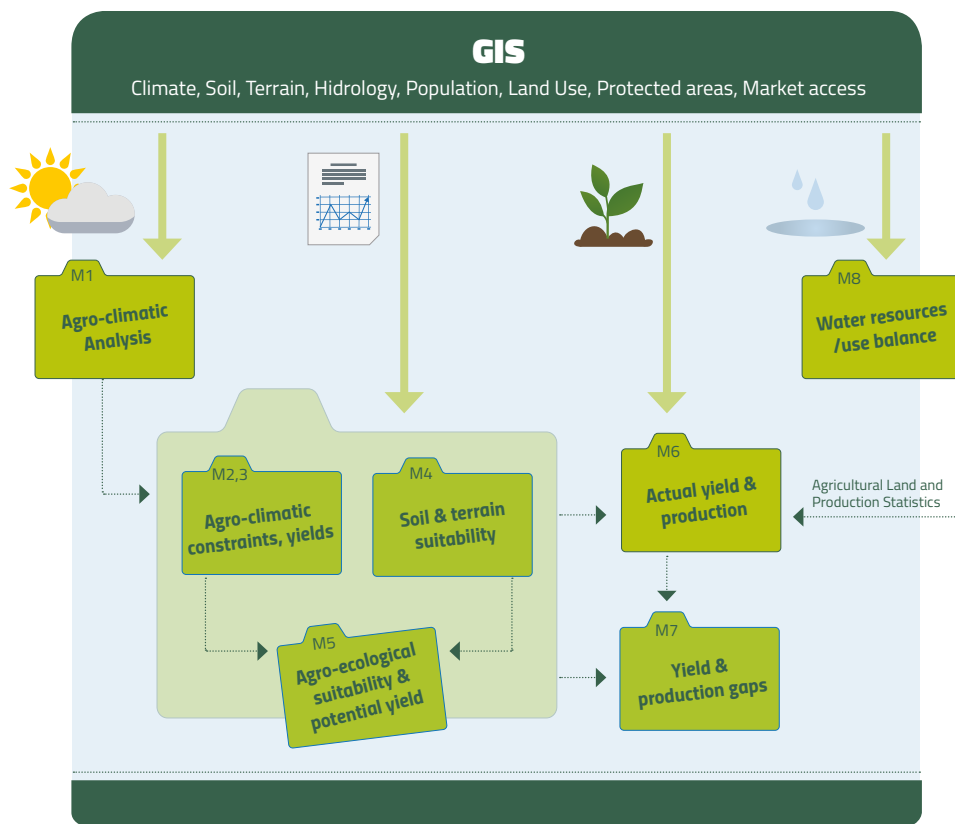
SAMIS PROJECT / Component 2

Strengthening institutional and technical capacity for monitoring and analysis of agriculture production systems and development of Land Resources Information Management Systems (LRIMS) and Agro-Ecological Zoning (AEZ)



Agro-Ecological Zoning (AEZ)

A spatial analysis system quantifying land productivity based on the FAO AEZ methodology is being prepared with the support of IFPRI.



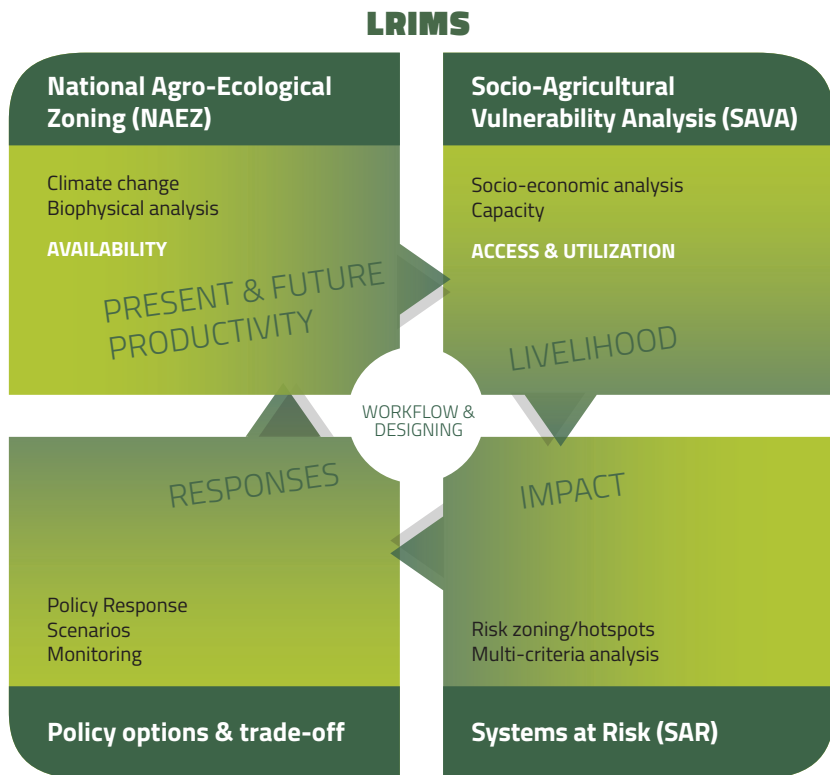
Soil mapping

The update of the existing national soil map will be based on the World Soil Classification Systems and is under preparation by the end of 2019. So far, 46 soil profiles and 177 soil samples were finalized. All soil profiles were recorded with name of the soil profile, soil depth, date, land use type and a complete soil description. Finally, the coordinates were recorded with GPS tracking, photos of the soil profiles were taken and the land use situation was recorded.

Surveys were carried out in the northern provinces of: Phongsaly, Bokeo, Luangnamtha, Xayabouly, Oudomxay, Luangprabang and Houaphanh. The rest of the country will be sampled in 2019.

Land Resources Information Management System (LRIMS)

LRIMS is a web enabled geo-spatial system used to design policy options and guide land management planning for sustainably enhancing food security and supporting risk response in a context of current and future climate change.



Consultation process for data collection and land utilization types

A national level process is ongoing to collect data from multiple government entities. All government entities working in natural resources data are being invited to consultation events and the collection of data is ongoing.

The first consultation meeting on developing was held on July 2018 in Saravan province and Land Utilization Type data are being collected. Similar meetings will be undertaken in the rest of the country during the dry season.

Socio-agricultural scenarios for future crop distribution

Based on hazards and threats, the development of participatory approaches scenarios and option analysis which include the expertise of both local and regional/national experts will be developed.

Systems at risk

Agro-ecological and socio-economical on hazards are linked to prioritize areas of intervention.



LIVELIHOOD

Near certainty	5	10	15	20	25
Highly likely	4	8	12	16	20
Likely	3	6	9	12	15
Low likelihood	2	4	5	8	10
Extremely improbable	1	2	3	4	6
	Minimal	Minor	Major	Serious	Catastrophic



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Cropland cover mapping using machine learning

The new map of cropland cover is under preparation by the end of 2019. Filtered composition and mosaicking is run using the SEPAL, a cloud computing based platform for autonomous land monitoring using remotely-sensing data. It allows users to access powerful cloud computing resources to query, access and process satellite data quickly and efficiently for creating advanced analyses.

The cropland cover map is developed using the ESA Sentinel 2A sensor and classified using the Land Cover Classification System (LCCS), the ISO Standard (ISO 1-19144) classification system developed by FAO and UNEP.

More info about LCCS: <http://www.fao.org/docrep/003/x0596e/x0596e00.HTM>

Capacity Development for central level GIS experts

TRAININGS*	HELD BY
GIS	▪ IFPRI ▪ Software company ▪ The Asian Institute of Technology ▪ English School ▪ FAO (Headquarters) ▪ International consultants
▪ Spatial analysis ▪ Geo-data base ▪ Statistical softwares ▪ Scripting and programming ▪ Land cover mapping ▪ Metadata	
Spatial Modelling	
▪ Landslide risk ▪ Drought vulnerability ▪ Multiple crop modelling ▪ Land suitability ▪ Climate data spatial downscaling	
Spatial socio-economy assessment	
▪ Socio-economical assessment	
Planning	
▪ Landscape level planning and management	
Policy-makers guidance	
▪ Policy and decision-makers training	

* Place of the trainings will be Vientiane. Duration: 2 years.

Objectives

To improve monitoring and analysis of agricultural production systems by strengthening land resources information management systems (through LRIMS) and Agro-Ecological Zoning (AEZ) to support agricultural policies and climate change adaptation.

Expected impacts

- Improved access to information through the release of online information management systems
- Higher institutional capacity about GIS and programme
- Agricultural policies and strategies

include climate change adaptation scenario modelling

- Beginning of practical collaboration with the Ministry of Natural Resources and Environment by establishing common areas of interest in climate change in agriculture.

Benefits

The activity will:

- Enhance long-term food security of LAO PDR agricultural sector
- Support risk response in a context of current and future climate change
- Improve policy makers awareness of climate change
- Support long-term planning.

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