Remote Sensing-related Activities of Forest Management in Lao PDR

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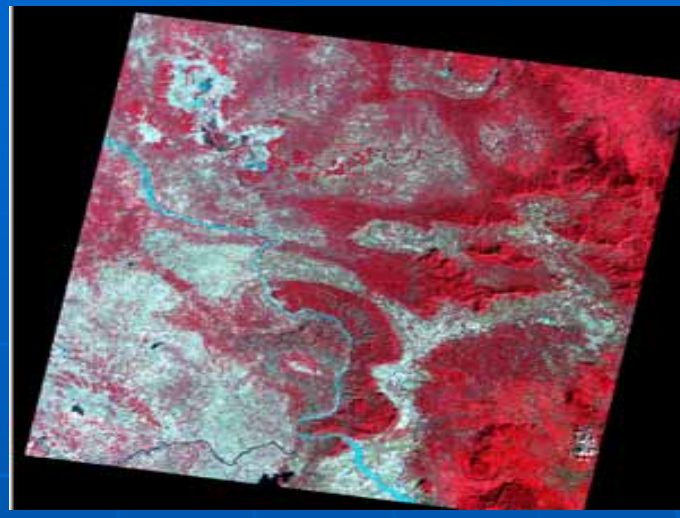
Outline



1. Background
2. International Cooperation
3. Forest Resources in Lao PDR
   - Forest Cover Monitoring
   - Forest Fire
   - Shifting Cultivation
4. Next steps implementation

Background

- Created in 1993, it is coordinating with other institution
- The Environment Data Center of the ERI, STEA is the national focal point on the Environment Data. It main duties are to harmonize environment data using the GIS and Remote sensing Technologies.
- Establish an environment database for the whole country , summary, analyse, and assess such data for the creation of the reporting system on the state of the environment report

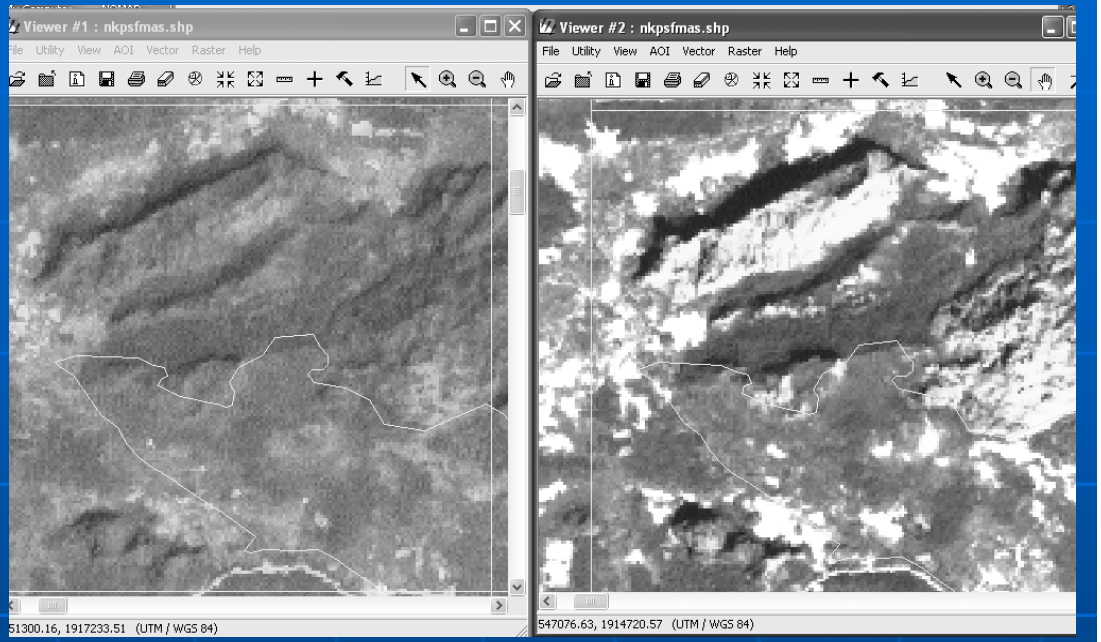
International Cooperation

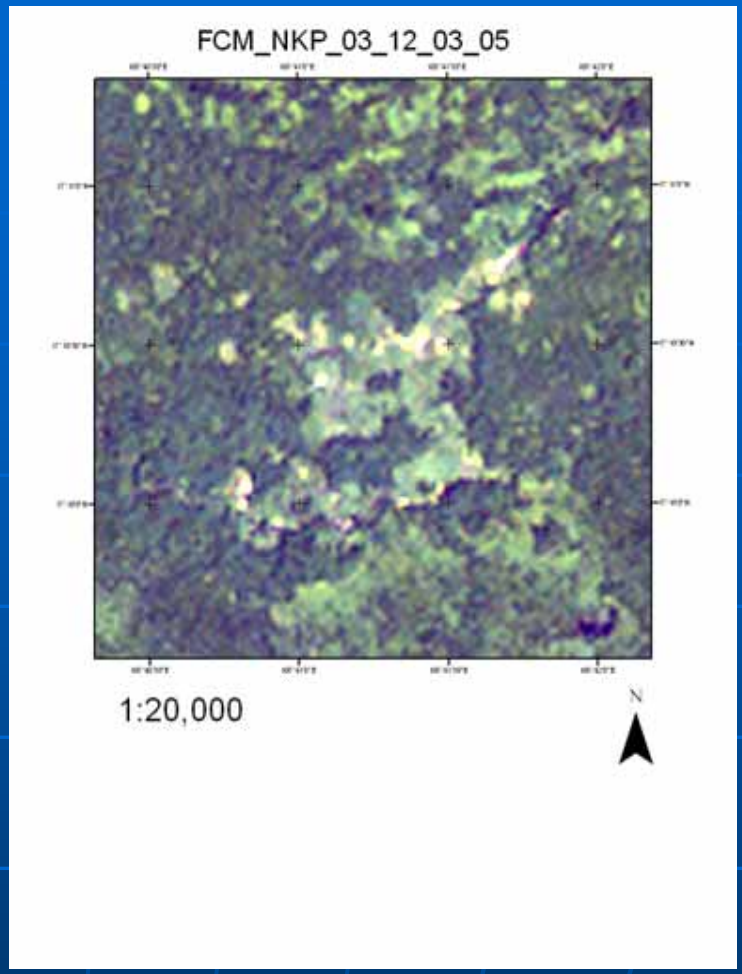
- MRC (Land Use) 1993-1997
- NASDA/Khonken University, (Savannakhet land use) 1997-2000
- Unexploded ordnance/UXO (Village location) 1999-2000
- ADB (application RS-GIS for GMS poverty reduction) 1999
- UNEP RRC.AP (SOER, GMS atlas, SEMIS II) 1999-present
- WB (Lao Environment Monitoring Report) 2005
- SCOSA, 2005-2007
- SUFORD/STEA&MAF(Forest cover monitoring) 2003-2007
- UNESCO/Research, 2005-2006
- JAXA/AIT/ Mini-Project: Flood Monitoring using RS&GIS 2006-2007

Forest Resources in Lao PDR

- Lao PDR is a mountainous country.
- Total Land Area of 236,800 Sq Km
- Pop: 5.8 million (2004)

Forest Cover Monitoring:





- About 41.5 percent of forest cover (2002)
- Monitoring forest cover from satellite image to detect & report on changes/(MAF/FIPD&STEA/EDC/SUFORD Project)
- Software: ERDAS Imagine 8.7, ArcGIS 9 and ArcView
- Image Acquisition: Landsat ETM (download from the internet)

Field Verification

- to check the detect change
  (Landsat ETM, GPS & Topographic map)

Forest Fires

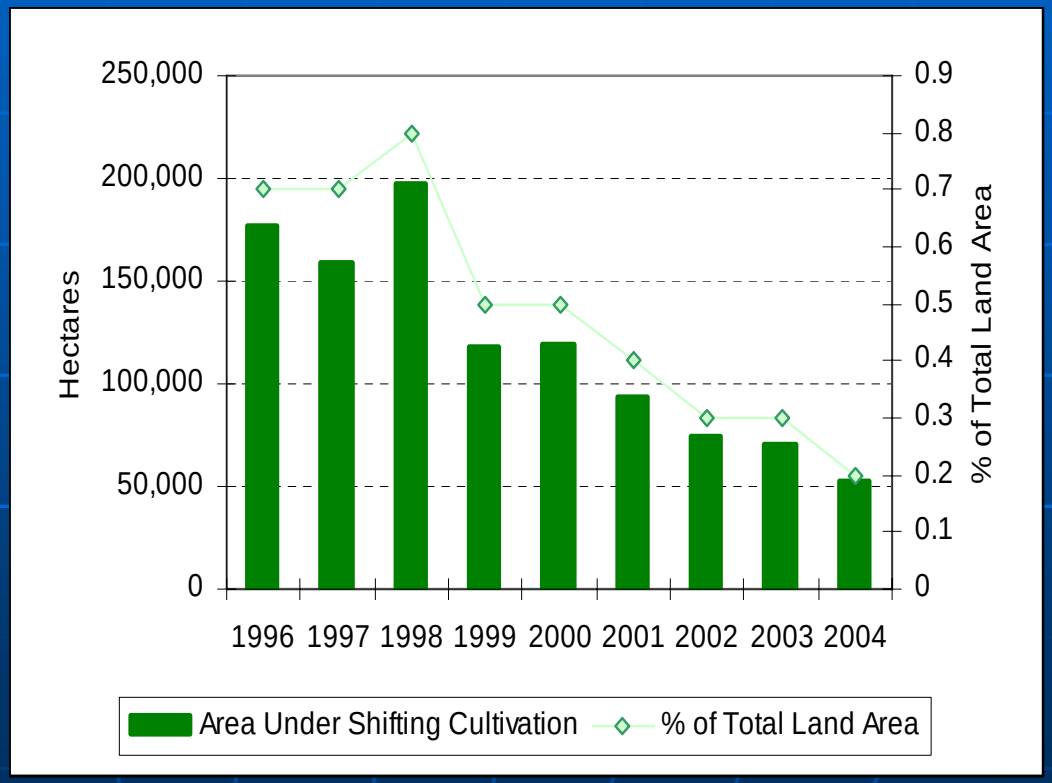
- Main-made
- They are mostly observed during the dry season (February to April)
- The main reason for forest fires is ***slash-and-burn*** cultivation without proper supervision by the farmers. Often much more area than planned for cultivation is burned.
- Lack of knowledge
- Lack of monitoring using RS&GIS for forest fire

Shifting Cultivation

As of 1998, shifting cultivation area in the north represented 70% of the total rain-fed upland area. The central & southern regions (Where lowland rice predominates) account for roughly 16% & 14% of shifting cultivation, respectively.

Area under Shifting Cultivation

- Shifting cultivation has been the dominant farming system in the uplands for many generations.



Lao PDR. EPA Report, 2006

Upland Rice: Area Harvest / Ha

	1976	2005
Northern Region:	136,958	80,440
Central Region:	39,142	14,330
Southern Region:	28,047	10,470
Grand total:	*204,147*	*105,240*

Upland Rice Production / Ton

	1976	2005
Northern Region:	139,795	163,400
Central Region:	33,017	29,550
Southern Region:	29,179	21,850
Grand total:	*201,991*	*214,800*

Source: MAF, 2006 or http// www. faorap-apcas.org

Next steps implementation

We need to consider these following activities:

- Creation of national data network in order to ensure coordination within concern institution;
- Promote and development of the use of RS&GIS in to the natural resources management, environment quality monitoring and disaster mitigation;
- National policy and regulation of the space environment use; and
- Enhancement of National staffs capacity building.

Welcome to Lao PDR


Tank you very much