



IMPLICATION OF REDD+: OPPORTUNITY & CHALLENGES FOR LIVELIHOOD IMPROVEMENT IN LOCAL COMMUNITY, LAO PDR

Low Carbon Asia Research Network (LoCARNet) First
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RESEARCH CENTER FOR NATURAL RESOURCE & CLIMATE CHANGE (NRMCC)

NUoL/FoF

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graph TD; A[NUoL/FoF] --- B[Research Div/NRMCC]; B --- C[Research]; B --- D[Training (GIS/RS)]; B --- E[Service (Forestry, CC...)]
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Research
Div/NRMCC

Research

Training
(GIS/RS)

Service
(Forestry,
CC...)

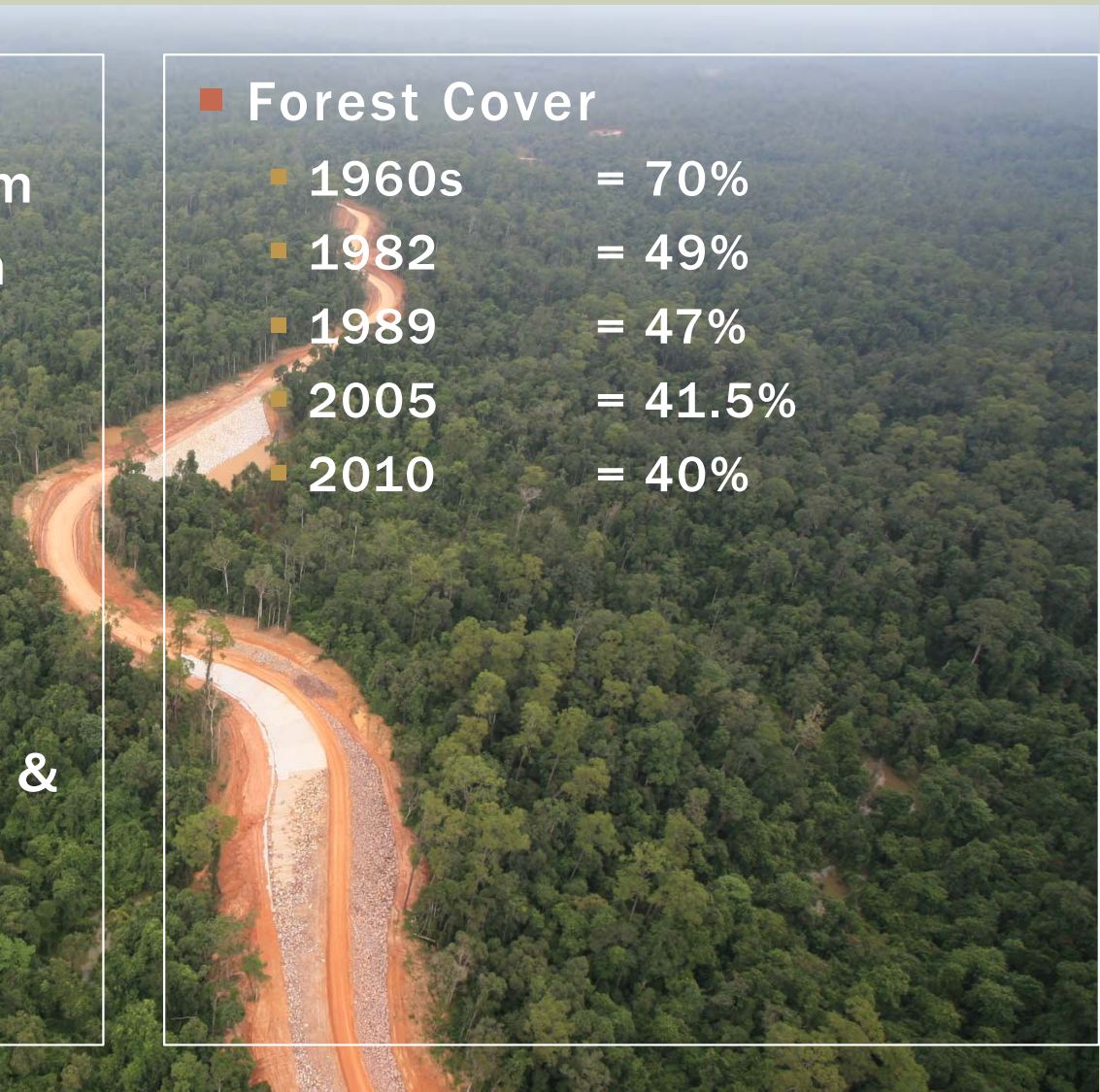
CURRENT RESEARCH PROJECTS

- **EU-IREDD+ : Study the Impact of REDD+ activities in the Nam-Et Phouleo National Protected Area in the North**
- **NUoL-IGES: Study on Community Carbon Accounting Action Research**
- **APF-Net: Forest Cover and Carbon Mapping in the Greater Mekong Sub-region and Malaysia**
- **RECOTC: Building Grassroots Capacity for REDD+**
- **Sumer-net: Research on Integrating Community-based Participatory Carbon Measurement and Monitoring with Satellite Remote Sensing and GIS in a Measurement, Reporting and Verification (MRV) System for REDD+**

SOME BACKGROUND INFORMATION RELATED TO FOREST COVER IN LAO PDR

- Pop = 6.2 m
- Pop Den = 26 ppl/Sqkm
- About 70% of Pop living in rural
- Natural resource-based livelihood is a symbolic of rural Lao
- During 2006-2010 about 30% of National GDP was contributed by Agriculture & Forestry sector

- Forest Cover
 - 1960s = 70%
 - 1982 = 49%
 - 1989 = 47%
 - 2005 = 41.5%
 - 2010 = 40%



DRIVERS OF FOREST LOST



Slash & Burned Cultivation



Forest Fire



Logging without control

DRIVERS OF FOREST LOST (CONT...)



Industrial Plantation



Infrastructure Development

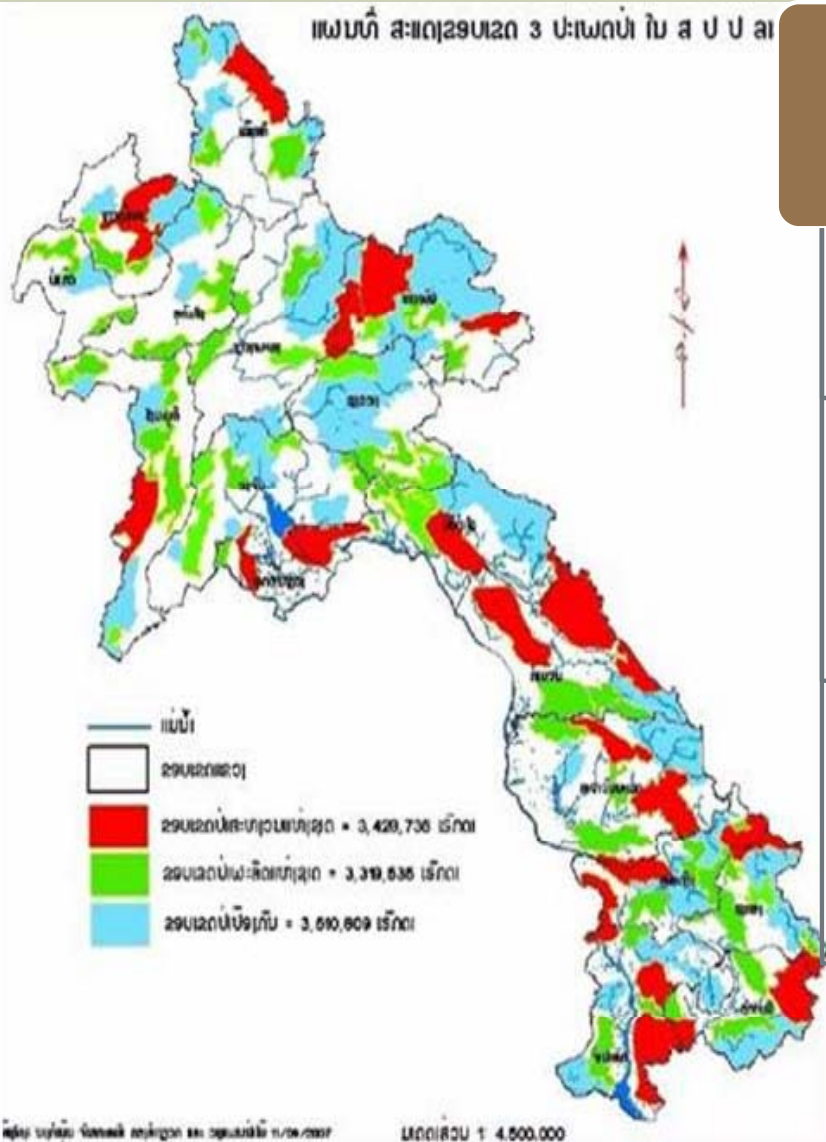


Mining Industry



Hydro Power Project

STATE FOREST CATEGORIES



State forest areas

Production Forest Areas
(3.15 M ha)

Conservation Forest Areas
(4.7 M ha)

Protection Forest Areas
(7.4 M ha)

Forest areas outside state forest areas

Village Forests
(1.56 M ha)

Industrial Tree Plantations
(0.50 M ha)

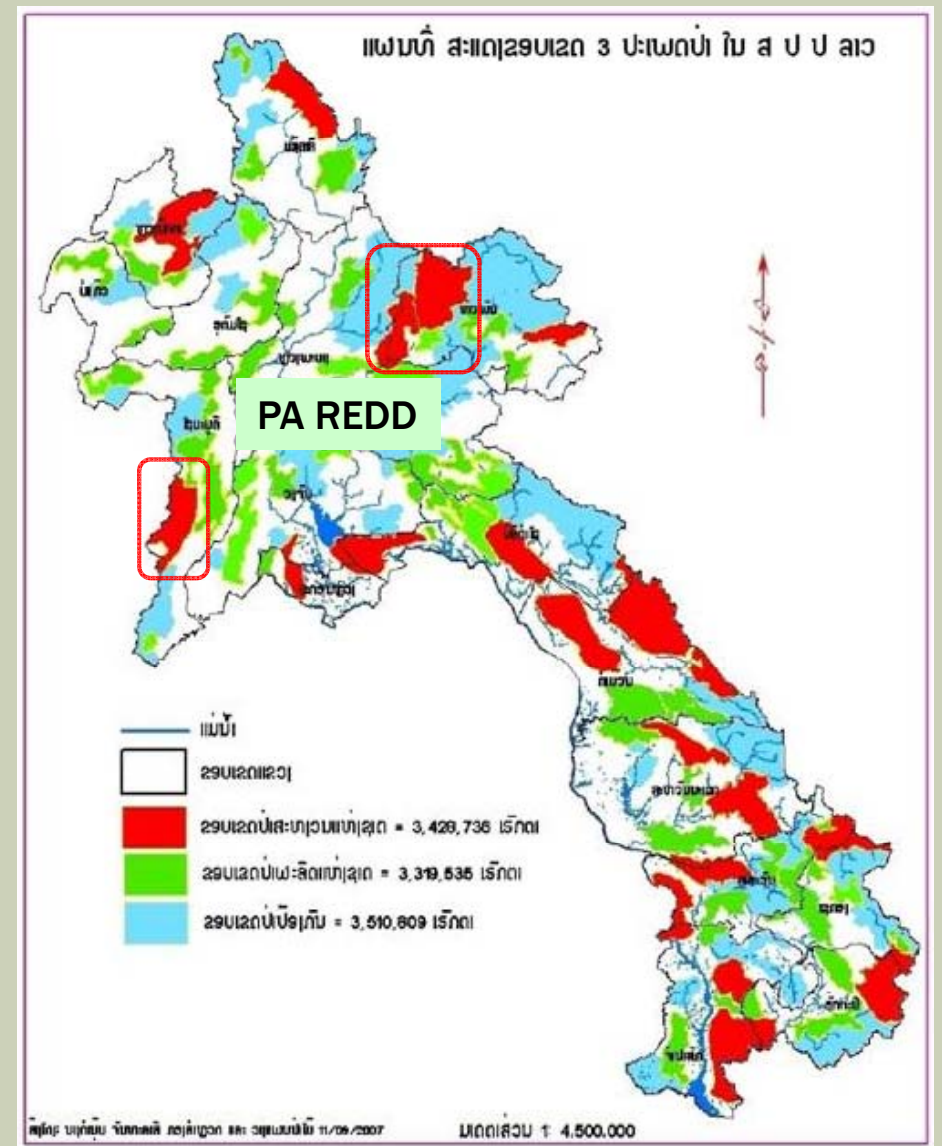
Smallholder Woodlots
(<0.50 M ha)

REDD+ LAO PDR

- **2007 Joint Forest Carbon Partnership Facilities (FCPF)**
 - **Developed Readiness Plan Idea Note (R-PIN)**
- **2008 submitted R-PIN to FCPF**
 - **REDD+ Task Force Committee established (15 members from different sectors including academic institute)**
- **2009 Preparation of Readiness Preparation Plan (RPP)**
 - **Department of Forestry as a focal point**
- **2010 submitted to FCPF**

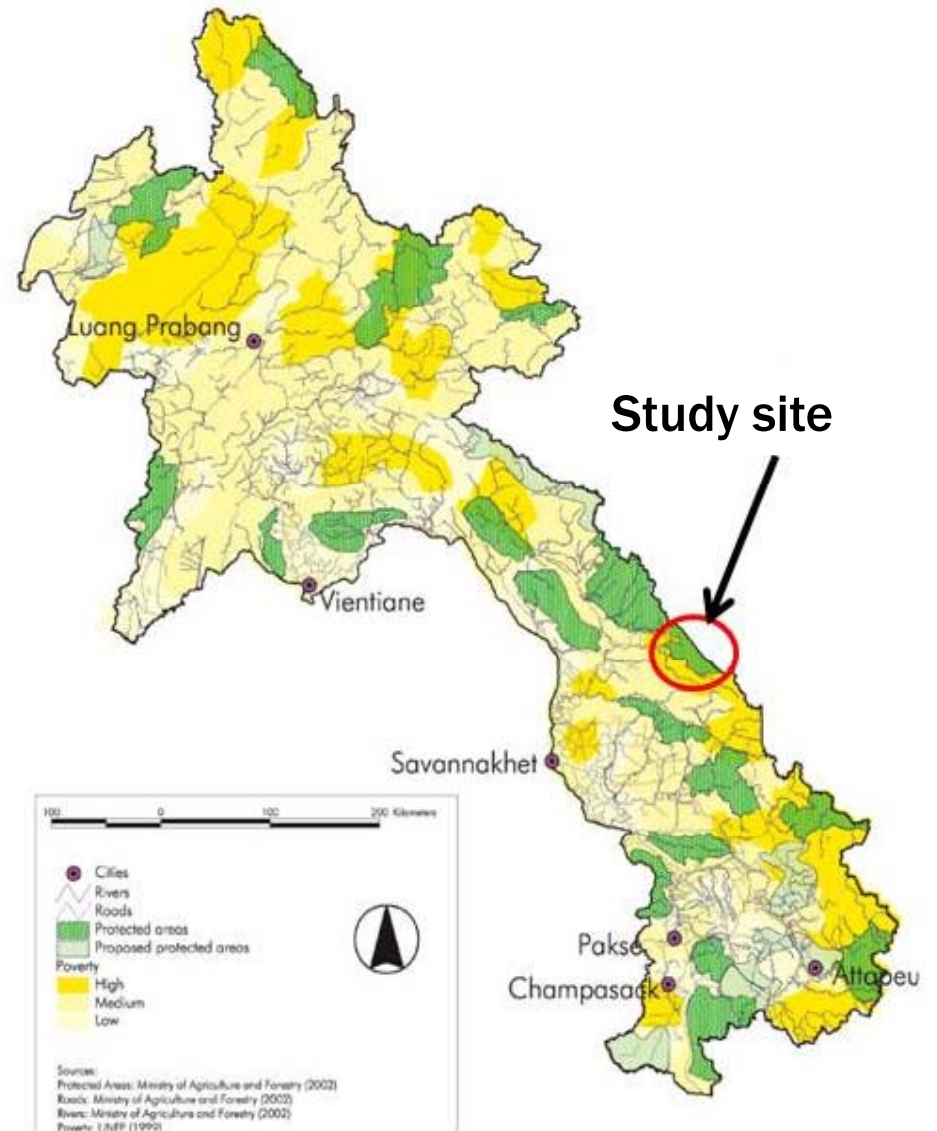
PILOT PROJECT TO SUPPORT REDD+ ACTIVITIES

- Climate Change Protection Through Avoided Deforestation Project (CliPAD) started 2008-2015
- Participatory Land & Forest Management Project for Reducing Deforestation (PAREDD)
- Sustainable Forest Management & Rural Development Project (SUFORD)



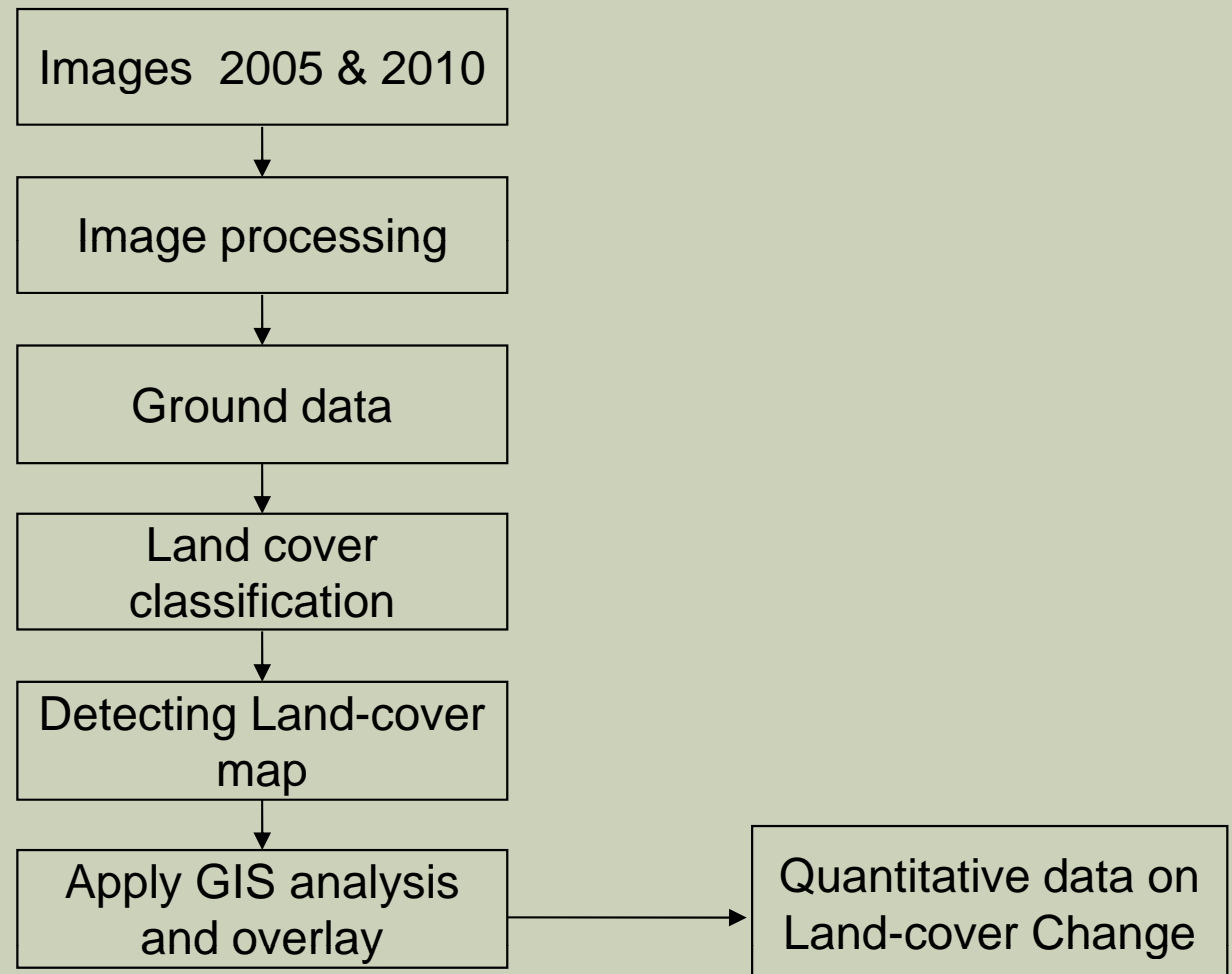
CASE STUDY ON THE OPPORTUNITY FOR REDD+ ACTIVITIES TO REDUCE POVERTY IN LOCAL COMMUNITY

- To study the land cover change And potential for carbon stock
- To study the social economic of the community in order to compare current source income with potential REDD+ project



METHODOLOGY

■ Land cover change



METHODOLOGY (CONT...)

- socio-economic survey
 - Using questionnaires for Participatory interview



RESULTS

■ Land cover

Land Cover Type	Area (ha)		Changed
	2005	2010	
Agriulture Land	90.45	54.00	36.45 -
Urban Area	8.79	12.98	4.19 +
Mixed Decidouse Forest	524.85	431.70	93.15 -
Open & Rocky Area	56.16	47.72	8.44 -
Open Area	0.22	0.72	0.50 +
Other agriculture land	9.69	56.11	46.42 +
Paddy Land	126.99	140.83	13.84 +
Fallow Land	201.42	198.84	2.58 -
Plantation Forest	0.36	0.36	-
Upland Rice	15.44	101.74	86.30 +
Road/Path	4.45	4.45	-
Srub & Bush	4.95	1.33	3.62 -
Unstock Forest	7.27	0.26	7.02 -
Water	30.81	30.81	-
Total	1,081.85	1,081.85	

POTENTIAL CARBON STOCK ACCORDING TO COLIN MOOR ET AL, 2011

Land Cover Type	AGB (tC/ha)	BGB (tC/ha)	Total(tC/ha)
1. Forest Area			
Evergreen Forest	240	61	301
Mixed Deciduous Forest(Average)	81	20	101
Mixed Deciduous Forest (High Density)	107	27	134
Mixed Deciduous Forest (Low Density)	54	13	67
2. Non-Forest Area			
Agriculture	-	-	13
Unstock Forest/Degraded Forest	-	-	28
Paddy,Road,Urban Etc...	-	-	0

Source: Colin Moore et al, 2011

POTENTIAL CARBON STOCK IN THE STUDY VILLAGE

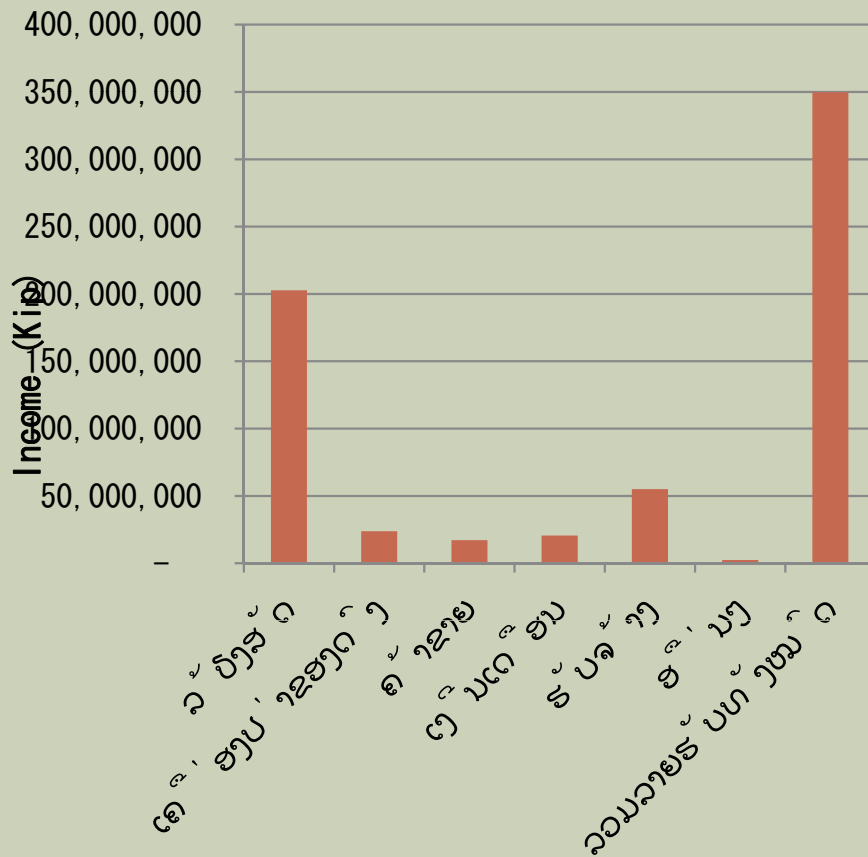
Land Cover Type	Area (ha)	Carbon Stock (tC)	Area (ha)	Carbon Stock (tC)	Difference (tC)
	2005		2010		
Agriulture Land	90.45	1,175.85	54.00	702.00	473.85 -
Urban Area	8.79		12.98		
Mixed Decidouse Forest	524.85	53,009.85	431.70	43,601.70	9,408.15 -
Open & Rocky Area	56.16		47.72		
Open Land	0.22		0.72		
Other agriculture Land	9.69		56.11		
Paddy Land	126.99		140.83		
Fallow Land	201.42		198.84		
Plantation Forest	0.36		0.36		
Upland Rice	15.44		101.74		
Road/Path	4.45		4.45		
Srub & Bush	4.95		1.33		
Unstock Forest	7.27	203.56	0.26	7.28	196.28 -
Water	30.81		30.81		
Total	1,081.85	54,389.26	1,081.85	44,310.98	

SOCIO-ECONOMIC CONDITION IN THE STUDY VILLAGE

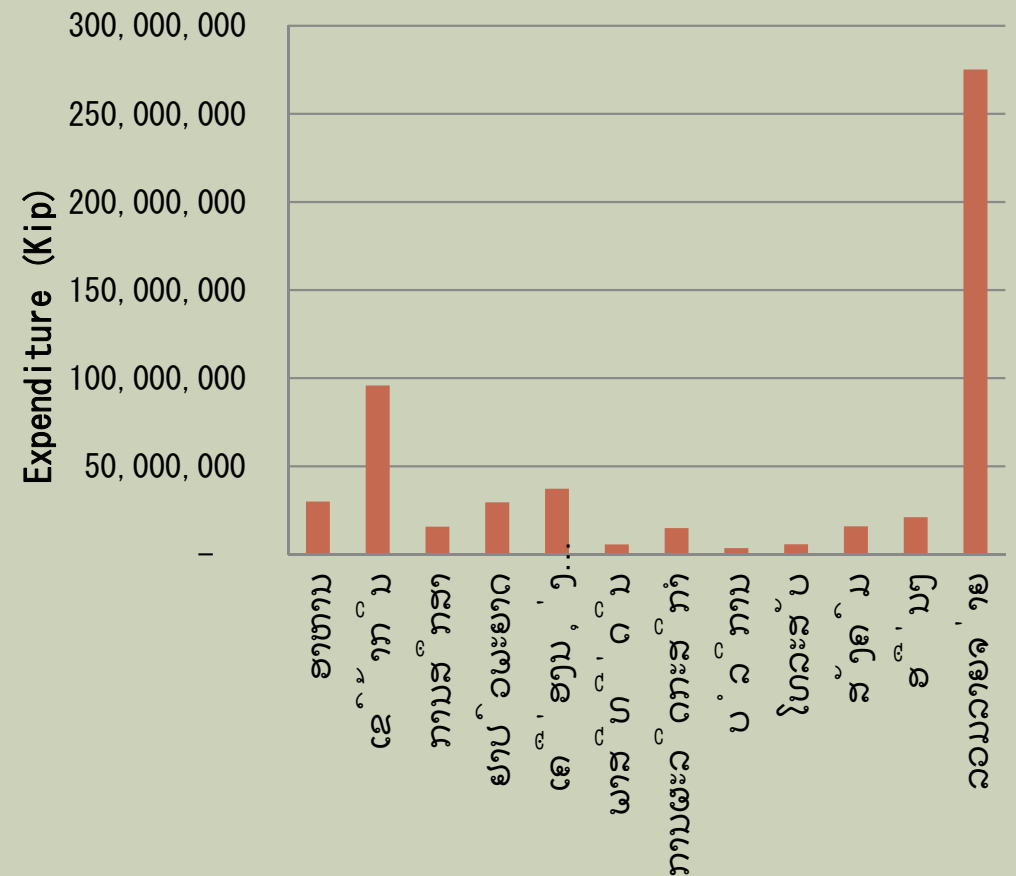
- Largely depend their living on forest resource
- Least infrastructure development
 - One health care unit but lack of materials and staff
 - One primary school also limited resource
 - Difficult transportation, only one season road available (dirt road)
 - No public transportation
 - No electricity
 - Communication is available for mobile (started November 2011)
- Upland rice plantation and paddy rice are the main occupation for any household
- Cattle is more significant for income generation

INCOME & EXPENDITURE

Source of income in Study village 2011



Household expenditure in study village, 2011



OPPORTUNITY AND CHALLENGES FOR REDD+

■ Opportunity

- Low population density
- Still rich of forest resource, especially protected area (20 PAs throughout the country)
- Low industry
- Still open for carbon market especially voluntary market

Base on the study of Colin Moore et al, 2011, simply make a calculation of the Opportunity for carbon credit from REDD+ activities as follow:

Year/Start	2 US\$/Ct	5 US\$/cT	10 US\$/cT	Total income study village, 2011 (US\$)
2005	108,778.52	271,946.30	543,892.60	43, 736. 63
2010	0	0	0	

■ Challenges

- REDD+ is challenged & complicated mechanism
- To establish Reference Emission Level (REL) for the country is difficult, takes times and costly
 - Also lack of capital in both human resource & budget
- Market? Except VCS
- Not yet clear for benefit sharing mechanism
- Economic development activities needs may affect REL

CONCLUSION

- REDD+ mechanism development should be parallel with specific country's development strategy
- REDD+ will work or not depends on stabilization of economic development

Who the REDD+ for ?

THAN YOU !

