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INTERNATIONAL PROGRAMME FOR RESEARCH ON THE INTERACTIONS BETWEEN
POPULATION, DEVELOPMENT AND THE ENVIRONMENT (PRIPODE)

APPLICATION FORM

*Application deadline: 28 February 2003
(electronic file)*

Dossier n°

Do not fill in

Received

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To complete the application form follow the instructions given in the instruction note

Title of the project

Name of the person in charge

Applicant Centre

Country

I - PROJECT SUMMARY

1. Project Title: Study on Dynamic Resource Use and Land Cover Transition in Sub-Watershed of Sing District, Luang Namtha Province
2. Name of person in charge: Sithong THONGMANIVONG
3. Address of the person in charge: <i>Postal address:</i> Faculty of Forestry, National University of Laos, P.O. Box 7322, Vientiane, Lao People's Democratic Republic <i>E-mail address:</i> nuolrts@laotel.com ; sithongth@hotmail.com <i>Telephone:</i> +856-21-770096 <i>Fax:</i> +856-21-770096
4. Centres or teams involved in the project: Khamla PHANVILAY Faculty of Forestry, National University of Laos Sithong THONGMANIVONG Faculty of Forestry, National University of Laos Thumthone VONGVISOUK Faculty of Forestry, National University of Laos Yayoi FUJITA Kobe University, Japan Jefferson FOX East-West Center, Honolulu, Hawaii Peter Vandergeest Centre for Asian Research, Toronto, Canada Vinod Mishra East-West Center, Honolulu, Hawaii
5. Number of researchers involved in the project: 7 researchers
6. Disciplines concerned by the project: Forestry, Geography, Agricultural Economy, Sociology, Demography
7. Area(s) of research: Lao People's Democratic Republic (Sing District, Luang Namtha Province)
8. Key words describing the project (between 2 and 4 per heading): <i>Population:</i> Displacement, Demographic Change <i>Development:</i> Government Policy, Economic Integration <i>Environment:</i> Degradation, Diversification, Sustainability <i>Geographical field:</i> northern Laos <i>Methods of analysis:</i> Spatial Analysis, Socio-Economic Analysis <i>Sources of data:</i> Satellite Images, Household Interviews

9. Summary of the project (no more than one page):

The main objective of the proposed research project is to assess mechanism of land cover and land use change in northern Laos (Luang Namtha Province) where agricultural landscape is rapidly changing due to increased economic integration to the regional markets, especially in China, and demographic changes including both population concentration and ethnic composition of the population. The scope of the research project is to study the dynamic human and environmental interaction at a watershed level and to investigate the complex mechanism of natural resource degradation and its consequence on household access to natural resources.

Forest cover in northern Laos had significantly degraded in the last decades due to combinations of factors, including shifting cultivation, increased integration to the local market, demographic shifts, and influences of government policies. One of our main hypothesis is that development forces including expansion of commercial crops and government policies on land and forest use are increasingly affecting the agroecosystem of northern Laos, and causing differential household access to resources. While some rural households were able to diversify their livelihood basis amidst the changing socio-economic and environmental dynamics, others were forced into more tenuous and insecure livelihood basis. Our research will assess the actual changes in forest and land cover, and test competing hypothesis that explain causes of such phenomenon including effect of population densities, increasing population concentration, expansion of commercial agriculture, logging, swidden cultivation and government policies on land and forest use.

The proposed research project incorporates both spatial analysis and socio-economic analysis to understand the historical transition and mechanism of land cover and land use at watershed level. It also looks into the effect of land and land cover change on population displacement, population structure, as well as resource tenure and household livelihood. The kind of study bears policy implication for integrated watershed management that offers comprehensive and wholistic view of sustainable resource management in the upland areas of northern Laos.

Finally, the current project aims to enhance multi-disciplinary research capacity of senior academic staffs and young researchers at the Faculty of Forestry at the National University of Laos (NUOL). In particular, the project aims to strengthen their capacity in field data collection and analytical skills applying both quantitative and qualitative methods. Furthermore, we aim to establish linkages between NUOL and other national research institutes, as well as academic and research institutions in the region (i.e. China, Vietnam, Thailand).

II – DESCRIPTION OF THE PROJECT (no more than 5 pages)

This description is left to the discretion of the candidates. It must, however include the following: the problem studied, the national importance of the problem, the relevance for policies on sustainable development, scientific objectives (problems covered by the research, working hypotheses, etc.), data (indicating among the data needed those which are already available and those which need to be collected), methodology (with emphasis on the concepts used), use and dissemination of results, bibliography.

I. Background and Problem Identification

Northern Laos consist of mountainous sloping land with limited access to arable agricultural land. According to the national survey, high incidence of forest degradation is reported in this region (Manivong and Sandewall 1992). While destructive aspects of shifting cultivation in the context of increasing population concentrations in the upland have been given much attention, little attention has been paid to the complex human and agro-ecosystem relations of upland communities. This has resulted in application of government policies that tend to simplify the causes, and restrict shifting cultivation and other uses of forest resources in the upland areas by prescribing how space and other resources should be used. Little study has been conducted to examine the historical patterns of land cover and land use change and the mechanism of land use transition, as well as its relation to population structure, demographic patterns and household livelihoods.

II. Justification and Objectives

Agroecosystem in mountainous mainland Southeast Asia including northern Laos are experiencing rapid transformation (Xu, et al. 1999; Fox, et al. 1995). Upland areas in northern Laos are affected by rapid integration into the regional economy, and also due to government policies on agriculture and development (Cohen 2000 ; Pravongviengkham 1997 ; Yokoyama 2002). Other researchers note that government development policies bear significant impacts on population displacement, resource tenure and household livelihoods (Goudineau 1997, State Planning Committee 2000 ; Vandergeest, 2003). However, few studies have been actually conducted so far that capture historical interaction between environment and socio-economic factors in Laos (Hirsch et al. 1994; Sandewall et al. 2001, Thongmanivong et al. 2003).

The main research objective of the project is to assess the dynamic human and ecological interaction, and its impact on land cover and land use change at watershed level in Luang Namtha Province. The selected region is of national significance because the north has been portrayed as the area where problems with forest degradation are acute, due to high and increasing population densities, high proportion of ethnic groups who traditionally engage in shifting cultivation, and mountainous topography. It is also an area where land use changes are most prominent due to integration of its agricultural production to the regional market.

The kind of study is designed to provide a more wholistic and comprehensive view of upland watershed management which will be useful for policy

makers at all levels. It will be particularly useful to identify areas of resource conflicts and potential areas of resource degradation in the uplands, as well as the impact of these activities on household livelihoods. The results of the study will be shared with the National Agriculture and Forestry Research Institutes (NAFRI) as well as Provincial and District Agriculture and Forestry Offices to further develop strategies for community based natural resource management in the uplands.

One of our main hypothesis in the current research is that not only population increase but increased integration into the market economies as well as government policy on forest and land use are rapidly affecting the diversity of agroecosystems in northern Laos. Consequently, this has instigated differential access to resources and caused economic marginalisation of rural households in different topographic settings. While some rural households are able to diversify their livelihoods amidst the changing socio-economic and environmental conditions, others are forced into more tenuous and insecure livelihoods. We also observe demographic changes in the region in terms of ethnicity, age and gender composition, as well as changing patterns of mobility and settlement. Furthermore, we aim to assess differential impact of government policies on the diverse groups which inhabit this area.

The proposed research aims to investigate historical pattern of land cover and land use change by incorporating time series spatial analysis and socio-economic analysis. By incorporating the two types of analyses, the project aims to reconstruct resource use histories in the research site and to understand the mechanisms of land cover and land use change. It also aims to test the contesting hypothesis on the factors of land cover and land use changes, including demographic factors and impact of government policies. We further aim to assess current status of resource access and use, by examining household discrepancies on resource access and use.

III. Data Collection

Prior to a preliminary field visit, the members of the core research team will review existing literature and secondary data to assess the current resource use situation and its problems in Luang Namtha. For spatial analysis, digital data on Land and Forest Cover (1992) and Watershed Classification (1997) will be obtained from the National Agriculture and Forestry Research Institute (NAFRI). In addition, aerial photographs (1981, 1997) and satellite images (1997, 2000, 2003) will be procured for analysis of land cover and land use change. Population data will be obtained from the National Statistics Office, and from local administrative offices where these data are available.

During the preliminary field visit, the research team will interview Provincial and District Agriculture and Forestry Offices on key policy issues in the region. Following the interview of local authorities, we will begin to analyse aerial photo interpretations and satellite images. Fieldwork will be also conducted in the research site to test aerial photo interpretation and satellite image analysis.

At the same time, district officials and villagers will be interviewed regarding population movement, ethnic composition of the population, resource use history, potential areas of resource use conflicts, and other issues. Finally, a sample of households will be selected from the research site to investigate household discrepancies in resource access and their livelihood basis.

IV. Methods

The proposed research will incorporate spatial analysis and socio-economic analysis to understand the time series transition of land cover and land use, and its relation to population and household livelihoods in a watershed in northern Laos.

For spatial analysis, the main method of analysis used has been described by Thongmanivong and Fujita (2003). However, we intend to adapt this method to analyse land cover and land use change at the watershed level. A time series analysis of aerial photographs (1981, 1997) and Landsat satellite images (1997, 2000, 2003) will be performed in order to assess forest and land cover change of the research site in sub-district of Sing District in Luang Namtha, and also review its relations with demographic changes.

Aerial photos will be digitally scanned and geometrically registered to the UTM projection, zone 48 and WGS84 datum. An orthometric correction of the digitised photos will be conducted using a digital elevation model for the area to create orthophotos (also known as photomaps). The digital orthophotos will then be interpreted in order to identify different land covers and land use types, and boundaries will be digitised on-screen using ArcView software. To augment the on-screen interpretation, the original, hardcopy aerial photographs will also be analysed using stereoscopic interpretation. This will be used to differentiate between different forest cover land use types and to produce a land cover map of the area.

In order to assess more recent transformations of land cover and land use, Landsat 7 Enhanced Thematic Mapper plus (ETM+) satellite images from recent years will be procured for analysis (1997, 2000, 2003). Images will be rectified to the UTM projection, zone 48 and WGS84 datum. This will be followed by collection of representative forest and land cover types in the research site using handheld Global Positioning System (GPS) units. Other relevant information, including elevation above sea level, height, basal area of forest trees, dominant plant species and land use history will also be collected at each GPS measurement point.

Following the fieldwork, the collected information will be entered into a database and used as a reference for identifying training sets in the satellite image. This will be followed by a comparison of signature reflectance values from the different forest and land cover categories represented by the training sets, and then followed by a preliminary classification using ERDAS Imagine software. After the aerial photo interpretation and satellite image classification, an aerial photo interpretation and satellite image from the same year (1997) will be compared to link the two sets of time series data. This will then be followed by a calculation of land cover and land use from each time period using ERDAS Imagine software.

In combination with the spatial analysis, socio-economic data analysis including demographic change and livelihood practices will be conducted at three levels including watershed, village and household. We will incorporate both qualitative and quantitative methods to understand the nature of human and environment interactions in the research site. At the watershed level, we will first review past government policies and development interventions through interviews in Provincial and District Offices and also through review of secondary data including population data obtained from the National Statistical Office as well as local government offices. Aggregate data will be used to conduct analysis on agricultural productivity, population structure, and spatial distribution of population in the watershed.

At the village level, we will incorporate both Rapid Rural Appraisal and Participatory Rural Appraisal techniques at the beginning of the fieldwork to understand the nature of resource use history, and resource use conflicts in the village. Furthermore, we will sample a numbers of villages located in the watershed to assess discrepancies in agricultural productivity between villages and difference in spatial patterns of land and forest use. We will also examine discrepancies in land tenure institutions vis-à-vis population pressure, and commercialisation of agricultural production using methods applied by Otsuka and Place (2001).

At the household level, we will choose a sample of households from different villages to understand household resource use histories by plots, and assess discrepancies in household land use practices and resource tenure. Household resource use histories will be based on assessment of qualitative information of households including access to land, historical use of each land plots and its ownership. Effect of resource tenure on household land use practices will be analysed using quantitative data.

V. Expected Outputs

Research findings will be presented at Provincial and District Agriculture and Forestry Offices for comments and questions. The information will be transferred to these local offices with the scope to support the development of integrated watershed management in the upland areas of northern Laos. A workshop will also be organized towards the end of the project to share research findings with the National Agriculture and Forestry Research Institute (NAFRI), as an effort to exchange research experiences on improved use and management of natural resource in Laos. At the regional level, we aim to share the research experience with regional academic institutions (i.e. Chiang Mai University, Chiang Mai, Thailand; Kunming Institute of Botany, Kunming, PRC; Center for Agricultural Research and Ecological Studies (CARES), Hanoi Agricultural University, Hanoi, Vietnam; etc.) to compare trends in land cover and land use change, its interaction with population change as well as its effect on household resource tenure and livelihoods. Research results will then be published in a report, as well as an academic paper to be submitted to an international journal.

VI. Reference:

- Cohen, P. T. (2000). "Resettlement, Opium and Labour Dependence: Akha - Tai Relations in Northern Laos." Development and Change **31**: p 197-200.
- Fox, J., Krummel J, S. Yarnasarn, M. Ekasingh and N. Podger. (1995) Land Use and Landscape Dynamics in Northern Thailand. *Ambio* **24**(6): p328-324
- Goudineau, Y. (1997). Resettlement and Social Characteristics of New Villages: Basic Needs of Resettled Communities in the Lao PDR, an OSTROM Survey. Vientiane, UNDP.
- Hirsch, P., K. Phanvilay, and K. Tubtim (1994). Resource Management in Nam Ngum Watershed Lao P.D.R. Vientiane, Ministry of Agriculture and Forestry, Department of Forestry.
- Manivong, K. and M. Sandewall (1992). Forest Cover and Land Use in Lao P.D.R., Final Report on the Nationwide Reconnaissance Survey. Vientiane, National Office of Forest Inventory and Planning, Department of Forestry, Ministry of Agriculture and Forestry.
- Otsuka, K. and F. Place (2001). Land Tenure and Natural Resource Management. Baltimore, John Hopkins University Press.
- Place, F. and K. Otsuka (2001). "Population, Tenure and Natural Resource Management: the Case of Customary Land Area in Malawi." Journal of Environmental Economics and Management **41**: 13-32.
- Pravongviengkham , P. (1997). Swidden Based Farm Economies in Northern Laos: Diversity, Constraints, and Opportunities for Livestock. in Upland Farming System in the Lao P.D.R. Problems and Opportunities for Livestock, Vientiane.
- Sandewall, M., B. Ohlsson, and S. Sawathvong (2001). "Assessment of Historical Land-Use Changes for Purposes of Strategic Planning- A Case Study in Laos." 30(1): p55-61.
- Sikor, T. (2001). "The Allocation of Forestry Land in Vietnam: did it cause the expansion of forests in the northwest?" Forest Policy and Economics **2**: p1-11.
- State Planning Committee (2000). Poverty in the Lao PDR: Participatory Poverty Assessment (PPA). Vientiane, SPC.
- Takasaki, Y., B. L. Barham, et al. (2001). "Amazonian Peasants, Rain Forest Use, and Income Generation: the Role of Wealth and Geogrpahic Factors." Society and Natural Resources **14**: p291-308.
- Thongmanivong, S. and Y. Fujita (2003). Dynamic Resource Use and Land Cover Change in Ang Nhai Village. Submitted to *Mountain Research and Development* (Jan 2003)
- Vandergeest, Peter (2003) Land to Some Tillers: Development-induced Displacement in Laos. New Land Tenure Reform. *International Social Science Journal*. **55**(1):pp2-2(1)
- Yokoyama, S. (2002). The Livelihood System of the Population of a Mountainous Area in Northern Laos. Vientiane, National University of Laos.
- Xu, J., J. Fox, L. Xing, N. Podger, S. Leisz and A. Xihui (1999) Effects of Swidden Cultivation, Population Growth, and State Policies on Land Cover in Yunnan, China. *Mountain Research and Development* **19**(2): p123-132

III - THE TEAM

1. Person in charge

Name: THONGMANIVONG **First name:** Sithong.....
Sex: Male **Date of birth:**

Nationality: Lao
Current position: Lecturer, Faculty of Forestry

2. The Centre

(the Centre is the institution which will receive the funds if the project is selected)

Name: Faculty of Forestry, National University of Laos
Acronym: FoF, NUOL

Postal address: P.O. Box 7322, Vientiane, Lao P.D.R.

Telephone: +856-21-770096 **Fax:** +856-21-770096
E-mail: nuolrts@laotel.com

Give the complete name and position of the person representing the organisation:

Name: Houngpeth CHANTHAVONG.....
Position: Vice Dean of Faculty.....

3. Table of the members of the team

Name	First name		Proportion (a)
THONG-MANIVONG	Sithong	Lecturer Watershed and Natural Resource Management Department Faculty of Forestry, NUOL	50 %
VONGVI-SOUK	Thumthone	Project Coordinator NUOL/IDRC Project Faculty of Forestry, NUOL	50 %
FUJITA	Yayoi	Ph D Candidate Kobe University, Japan	50 %
PHANVILAY	Khamla	Head of the Department Watershed and Natural Resource Management Department Faculty of Forestry, NUOL	30 %
FOX	Jefferson	Director Program on Environment East West Center, Honolulu, Hawaii, USA	30 %
VANDERGEEST	Peter	Director Centre for Asian Research, Tronto, Canda	10 %
MISHRA	Vinod	Fellow Researcher East West Center, Honolulu, Hawaii, USA	10 %

(a): proportion (in %) of working time dedicated to the project

4. Individual forms

Researchers taking part in the project for more than 30% of their working time must each fill out an individual form (model attached: cf. p. 11).

INDIVIDUAL FORM (one for each member of the research team)

Name: Khamla

First name: Phanvilay

Sex: Male

Date of birth: 10 September 1964

Nationality:

Lao

Organisation: National University of Laos

Complete address: Department of Watershed and Natural Resource Management, Faculty of Forestry, National University of Laos

City: Vientiane, Lao P.D.R

Telephone: (856-21)770096..... **Fax:** (856-21) 770096

E-mail address: klphanvilay@hotmail.com; klphanvilay@yahoo.co.uk

Current position: Senior Lecturer, Head of Department of Watershed Management

Main degrees (title, University, year):

Master of Science, Asian Institute of Technology, 1994-96

Discipline(s) specialised in: Natural resource management planning, Forest resource planning and management with community based and participatory approach.

Professional experience, notably in research:

(1) December 1999 – ongoing

Project Leader

Resource Tenure in Community Based Natural Resource Management Project, Faculty of Forestry, National University of Laos (NUOL)

Duties:

- Co-ordinating faculty members from different Faculties in the NUOL to carry out research on Community based-natural Resource Management as part of the human resource capacity building of the NUOL with the technical and financial support from International Development Research Centre (IDRC), Canada.

(2) May 1992 - December 1996

Project Coordinator

- Center for Protected Area and Watershed Management (supported by IDRC, Canada), Department of Forestry, Ministry of Agriculture and Forestry

Duties:

- Project coordinator in Community Resource Management Study in Nam Ngum Watershed, Laos
- Conducted field survey at village level on the socio-economic, natural resource management, village boundary delineation
- Summarized and prepared project reports to donors and the Ministry of Agriculture and Forestry.

Five main publications during the last five years relating to PRIPODE:

1. Hirsch, P., K. Phanvilay and K. Tubtim (1996) “Decentralization, Watersheds and Ethnicity in Laos” in Resources, Nations and Indigenous People: Case Studies from Australia, Melanesia and Southeast Asia. e.d. Richard Howitt, John Connel, Phil Hirsch. Oxford University Press: p265-277
2. Hirsch, P., K. Phanvilay and K. Tubtim (1999) “Community Based Natural Resource Management and Conflicts over Watershed Resources, Nam Ngum, Lao PDR” in Cultivating Peace: Conflict and Colloboration in Natural Resource Management. e.d. D. Buckles. Washington D.C., World Bank Institute: p 45-59.
3. Vandergeest P., K. Phanvilay, Y. Fujita, P. Hirsch, P. Vanesterik, J. Fox, C. Wittayapak, S. Tyler (2003) Flexible Networking in Research Capacity Building at the National University of Laos: Lessons for North-South Collaboration. *Canadian Journal of Development Studies (submitted September 2002)*

INDIVIDUAL FORM (one for each member of the research team)

Name: Sithong **First name:** Thongmanivong
Sex: Male **Date of birth:** 5 June 1967
Nationality: Laotian

Organisation: Faculty of Forestry, National University of Laos
Complete address: P.O.Box 2055, Vientiane, Lao PDR.....
City: Vientiane **Country:** Lao PDR.....

Telephone: (+856-20) 628268 **Fax:** (+856-21) 770096
E-mail address: sithong@hotmail.com

Current position: Lecturer/ Deputy Director, Forestry Information Center ...
Main degrees (title, University, year): Master of Science in Remote Sensing
and Geographical Information System, 1996-1997
Bachelor of Forestry, Vientiane Forestry College, 1990-1993

Discipline(s) specialised in: Land Use Planning

Professional experience, notably in research:

- 2000-2002 Participate in Southeast Asia in Transition Project to study social and economic transitions and its resulting environmental impacts. An indicator-oriented analysis of the interaction between socio-economic systems and the environment identifies features of sustainable development in 4 Southeast Asia countries, Laos, Vietnam, Thailand and Philippines. The aim of the project is to identify and recommend effective policies to promote sustainable and environmentally sound economic and social development valuable for the entire region.
- 2001 Join SEARRIN and MSU to conduct fractional cover analysis of forest in Luanprabang Province, using Landsat ETM+ and SPOT data.
- 1998-2000 Team Member, Resource Policy Support Initiative (REPSI). WRI and Danida-funded project to develop environmental education and research at the National University of Laos. Activities include field work and data analysis for Environmental Impact Assessment for the development in Lao PDR.

Five main publications during the last five years relating to PRIPODE:

1. Thongmanivong, Sithong (2000) Land Allocation Policy in the Lao PDR Implications for Promoting a Decentralised Approach to Upland Natural Resource management. Project Report: World Resource Institute
2. Thongmanivong, Sithong (1999) Land Use and Land Cover Changes in Ca River Basin, Xiengkhuang Province. Project Report: Mekong River Commission
3. Thongmanivong, Sithong (in press) The Human Appropriation of Net Primary Production in Lao PDR. Southeast Asia in Transition Project (SEATRANS)
4. Thongmanivong, Sithong (in press) Material and Energy Flow Study in Lao PDR. Southeast Asia in Transition Project (SEATRANS)

INDIVIDUAL FORM (one for each member of the research team)

Name: Fox **First name:** Jefferson
Sex: male **Date of birth:** May 4, 1951
Nationality: USA

Organisation: East-West Center
Complete address: 1601 East-West Road, Honolulu, Hawaii 96848, USA
City: Country: Honolulu, Hawaii USA
Telephone: 808-944-7248 **Fax:** 808-944-7298
E-mail address: foxj@eastwestcenter.org

Current position: Senior Fellow

Main degrees (title, University, year):

Ph.D., Development Studies, University of Wisconsin, Madison 1983
M.S., Water Resources Management, University of Wisconsin, Madison 1978
B.A., Biology, Grinnell College, Grinnell, Iowa 1973

Discipline(s) specialised in: Land-use/land-cover change, land tenure, resource management, GIS and remote sensing

Professional experience, notably in research:

My research seeks to understand land-use and land-cover change in Asia and the possible cumulative impact of these changes on the region and the global environment. I seek to link land-use and land-cover changes to macro-scale changes in the political economy of each country, and to local-scale impacts on different segments of the communities studied. My work also examines the social context of spatial information technology especially when it is used to help local communities map their land claims as well as their land-use practices. I have been instrumental in establishing GIS/remote sensing laboratories in numerous universities and organizations across the Asia/Pacific region.

Five main publications during the last five years relating to PRIPODE:

- Fox, J., R. Rindfuss, S. Walsh, and V. Mishra (editors). 2003. *People and the environment: Approaches for Linking Household and Community Surveys to Remote Sensing*. Boston: Kluwer Academic Press.
- Fox, J. 2002. Siam Mapped and Mapping in Cambodia: Boundaries, sovereignty, and indigenous conceptions of space. *Society and Natural Resources* 15:65-78.
- Fox, J. 2002. Understanding a dynamic landscape: Land use, land cover, and resource tenure in Northeastern Cambodia. In S. Walsh and K. Crews-Meyer (eds.) *Linking People, Place, and Policy: A GIScience Approach*. Boston, Kluwer Academic Publishers.
- Fox J., Dao Minh Truong, A Terry Rambo, Nghiem Phuong Tuyen, Le Trong Cuc, and Stephen Leisz. 2000. Shifting Cultivation: A New Old Paradigm For Managing Tropical Forests. *BioScience* 50 (6): 521-528.
- Fox, J. 2000. How blaming 'slash and burn' farmers is deforesting mainland Southeast Asia. East-West Center Asia Pacific Issues Paper No. 47. Honolulu, Hi.

INDIVIDUAL FORM (one for each member of the research team)

Name: Fujita **First name:** Yayoi
Sex: Female **Date of birth:** 28 February 1972
Nationality: Japanese

Organisation: Kobe University, Graduate School of International Development

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City: Kobe **Country:** Japan

Telephone: +81-724-53-3925 **Fax:** +81-724-53-3925

E-mail address: yayoi@laopdr.com

Current position: Project Coordinator, CBNRM Studies Project at the National University of Laos

Main degrees (title, University, year):

1994 March Doshisha University, Kyoto, Japan (B.A. Law)

1996 March Kobe University, Kobe, Japan (M.A. Economics)

2003 May Kobe University, Kobe, Japan (Ph. D. International Development)

Discipline(s) specialised in: Agricultural Economics, Development Studies

Professional experience, notably in research:

11.1999 Present: IDRC-NUOL project on Community Based Resource Management, Project Coordinator

10.1999 Present: Faculty of Forestry, National University of Laos (NUOL), Asia Studies Program Scholar, Ministry of Education, Japan

3.1998 - 4.1998: Institute of Cultural Research, Vientiane, Lao P.D.R., Visiting researcher

1.1998 - 3.1998: Foundation for Advanced Studies on International Development (FASID) Teaching assistant for RRA and PRA seminar at Khon Khaen University, Thailand

Five main publications during the last five years relating to PRIPODE:

Fujita Y. and K. Phanvilay (2001) Comments to Comparing Land Tenure Reforms in Laos and Thailand. Mekong Updates. Newsletter of Australian Mekong Resource Centre

Vandergeest P., K. Phanvilay, Y. Fujita, P. Hirsch, P. Vanesterik, J. Fox, C. Wittayapak, S. Tyler (2003) Flexible Networking in Research Capacity Building at the National University of Laos: Lessons for North-South Collaboration. *Canadian Journal of Development Studies* (submitted September 2002)

Thongmanivong S. and Y. Fujita (2003) Dynamic Resource Use and Land Cover Change in Ang Nhai Village. Submitted to *Mountain Research and Development* (submitted Jan 2003)

INDIVIDUAL FORM (one for each member of the research team)

Name: Vongvisuk **First name:** Thumthone
Sex: Male Date of birth: 30 November 1976.....
Nationality: Laotian

Organisation: Faculty of Forestry, National University of Laos
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City: Vientiane **Country:** Lao PDR.....

Telephone: (+856-21) 770096..... **Fax:** (+856-21) 770096.....
E-mail address: nuolrts@laotel.com

Current position: Research Assistant, CBNRM Research Project
Main degrees (title, University, year): 2002 Bachelor of Science, Faculty of Forestry, National University of Laos
Discipline(s) specialised in: Land Use Planning, GIS

Professional experience, notably in research:

2001-2003 Research Assistant, GIS mapping at the Faculty of Forestry
2001-2003 Field Assistant, Ground-truthing in field using GPS (Vientiane, Houaphanh, Khammouane Provinces)
2002-2003 Field Assistant, Household survey (Vientiane, Bolikhamxay, Houaphanh Provinces)
2002 Field Assistant, Forest Survey and inventory (Houaphanh Province)

Five main publications during the last five years relating to PRIPODE:

Vongvisuk, Thumthone (2002) Study on Forest Cover Change in Nam Et, Phou Loui National Biodiversity Conservation Area. BSc Thesis. Faculty of Forestry, National University of Laos

5. Presentation of the team (no more than 2 pages)

Indicate the origin of the team, the institutions the researchers are affiliated to, the means available to the team, the comparative advantages of the team, the specific objectives of the team in terms of training, and of the dissemination and transfer of results, the organisations the team is working with and its needs in terms of expertise and consulting for it to be able carry out the project.

The proposed research project will be carried out by a group of senior academic staff and young researchers at the National University of Laos (NUOL), in collaboration with international experts who include those members that have three years experiences working with the NUOL through a research capacity building project funded by the International Development Research Centre (IDRC) of Canada. These include Yayoi Fujita, an agricultural economist and project coordinator of IDRC/NUOL project on research capacity building in community-based natural resource management studies, and Jefferson Fox, a senior researcher specialising on GIS and land use change at the East-West Center in Hawaii and Peter Vandergeest, a sociologist and a director of Centre for Asian Research in Canada. In addition to these three international expert, we invite Vinod Mishra, a demographer working with Jefferson Fox at the East-West Center to advice our study from demographic perspective.

The core research team consists five members including Sithong Thongmanivong and Yayoi Fujita, who conducted a case study on forest cover and land use change in northwest Vientiane as part of a study on transitional land cover and land use in mountainous mainland Southeast Asia, facilitated by Jefferson Fox (Thongmanivong and Fujita 2003). Also, Khamla Phanvilay and Jefferson Fox are core research team member who worked with Yayoi Fujita together on IDRC supported research capacity development project at the National University of Laos (Vandergeest et al. 2003) with a team of academics including Peter Vandergeest and Penny Vanesterik from the York University (Canada) as well as Philip Hirsch from Sydney University (Australia), and Chusak Wittayapak from Chiang Mai University (Thailand) between November 1999 and December 2002.

Thumthone Vongvisouk is also a part of the core research team, who is currently a young researcher at the Faculty of Forestry trained in GIS and is also a project coordinator for the NUOL/IDRC project on research capacity training based at the Faculty of Forestry. He has been assisting Sithong Thongmanivong and Yayoi Fujita at the Faculty of Forestry since 2002 and will be supporting the current research as the main research assistant.

In the proposed research project, Khamla Phanvilay and Jefferson Fox will contribute as supervisors to the core research team. Jefferson Fox will particularly supervise the research team on technical aspects of applying GIS analysis in the current research. Khamla Phanvilay will advise the core research team on the implications of government policies on upland land use and watershed management.

Peter Vandergeest and Vinod Mishra in our research team will be working with the core research team to provide guidances in sociological and demographic changes in the research site. They will join the research team during the field data collection as well as during the data analysis to advice

on methods as well as interpretation of research results from sociological and demographic perspective.

The core research team will be based at the Faculty of Forestry and will use facilities currently available at its GIS office and NUOL/IDRC project office. Computer equipment are available at both offices, however, access to internet, telephone and fax are limited to the IDRC project office. Most of the reference documents are available at the IDRC project office and in the Faculty's own library.

Beyond research objectives, the current project aims to enhance the research capacity of academic staff members at NUOL, particularly in the Faculty of Forestry, and to strengthen NUOL's reputation as a national academic institute. During the fieldwork, we expect to recruit final-year students from the Faculty of Forestry as field research assistants, and we plan to supervise their undergraduate thesis using information generated from the proposed research project.

In the past, the members of core research team have worked with other national institutions in Laos such as the National Agricultural and Forestry Research Institute (NAFRI). We will continue to exchange information through personal and institutional linkages with NAFRI during the project period. At the international level, members of core research team have also experienced working in collaborative research projects with researchers from Chiang Mai University in Thailand and the Center of Biodiversity and Indigenous Knowledge in Kunming, Yunnan Province. The proposed research project will continue to strengthen NUOL's linkages with these regional institutions, and exchange research findings.

As for the potential of the current research team, the members are all experienced working in inter-disciplinary teams. In addition, members have working experience in Laos, and are qualified in terms of geographical knowledge of Laos and technical knowledge in agriculture, forestry, and development economics to pursue the proposed research. One challenging aspect for the core research team is analysis of demographic change and its impact on environment. In our research, we will strengthen this aspect by seeking guidances from Peter Vandergeest and Vinod Mishra who are experts in the field of sociology and population studies, and are well experienced working in the region.

Reference

- Thongmanivong, S. and Y. Fujita (2003). Dynamic Resource Use and Land Cover Change in Ang Nhai Village. Submitted to *Mountain Research and Development* (Jan 2003)
- Vandergeest P., K. Phanvilay, Y. Fujita, P. Hirsch, P. Vanesterik, J. Fox, C. Wittayapak, S. Tyler (Forthcoming) Flexible Networking in Research Capacity Building at the National University of Laos: Lessons for North-South Collaboration. *Canadian Journal of Development Studies* (submitted September 2002)

IV - WORK SCHEDULE

a) Research work carried out before the mid-term evaluation (from June 2003 to February 2004)

June 2003: Secondary data collection, selection of watershed, procurement of aerial photos and satellite images

Jul 2003: Aerial photo, satellite image analysis training (Sithong, Thumthone, Jeff)

Aug - Sep 2003: Aerial photo interpretation, satellite image analysis (Sithong, Thumthone)

Oct 2003: District and Village interviews, preliminary survey (Sithong, Thumthone, Yayoi)

Nov - Dec 2003: Ground-truthing, sampling households for survey (Sithong, Thumthone, Yayoi, Field assistants)

Jan 2004: Data Entry, Rectification of aerial photo and satellite image (Sithong, Thumthone, Research assistants)

b) Drafting of the mid-term report (for February 2004)

c) Research work carried out after the mid-term evaluation (from March 2004 to February 2005)

Mar - Apr 2004:

Socio-economic household survey (Yayoi, Vinod, Peter, Field assistants)

Agricultural land use mapping (Sithong, Thumthone, Field assistants)

Data Entry (Research assistants)

May - Jul 2004: Data analysis (Everyone)

Aug 2004: Writing Workshop (Everyone)

Sep - Oct 2004: Writing research results (Everyone)

Nov 2004: Presentation of results at District and Villages (Everyone)

Dec 2004: Regional Workshop (Everyone)

Jan -Feb 2005: Documentation and Dissemination of Research Findings

d) Drafting of the pre-report (for March 2005)

e) Meeting of Centres (March 2005)

f) Final drafting of the provisional report (for April 2005)

g) Revision of the report after evaluation by the scientific Committee (April-May 2005)