

**Mainstreaming biodiversity into agriculture and land
management in the Lao People's Democratic Republic**

UNDP/FAO/GEF/Government of Lao PDR

GEF Agency Project ID 2903

Project Preparation Phase

Progress Report

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Vientiane, 11 December 2009**

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1. Introduction

This progress report is prepared in compliance with the TOR of National Farming Systems expert for the upcoming initiative “*Mainstreaming Biodiversity into Agriculture and Land Management in Lao PDR agricultural and land management policies, plans and programme*”. It describes the progress of the reviews of available secondary data (reports) and discussion with stakeholders and initially interviewed resource persons consulted so far, as well as with members of the project design team for the period of 25th November to 10th December 2009

2. Progress Result of the mission

2.1. Advancement of the discussion with stakeholders and interview of resource persons

2.1.1. Meeting with the Department of Agriculture and Rice and Commercial Crops Research Centre (RRCRC) of the National Agriculture and Forestry Research Institute (NAFRI)

The author joined the Team Leader and National Biodiversity Expert to discuss with head of Plant Quarantine Division of the Department of Agriculture of the Ministry of Agriculture and head of biodiversity unit and deputy director of the Rice and Commercial Crops of RRCRC of NAFRI. The general objective of the meeting was to have the information on the mandate of the centre, what had been done for the research on local rice varieties as well as the wild rice. The specific objective of the author to participate in this discussion was to know if there is the decreasing of planting the local rice varieties. Why and where (location) is the most diversified local rice varieties used? What does the centre do or have done to conserve the diversity of local rice varieties at the farm level as well as the wild rice. The summary of this discussion please find in annex: 4.1).

2.1.2. Discussion with Lao Front for National Edification

The author joined the Policy Analysis Expert to present the project to the Deputy Director of the Lao Front for National Edification. This meeting allowed the Project design team to understand better the organisation chart of the Lao Front for National Edification and its role in the development of the country especially the role of coordination from the grass roots people to the top policy decision makers, promotion dissemination of government policies and program, and conflict resolution at the village level.

2.1.3. Discussion with the Land policy and control Department of National Land Management Authority

The land policy is very important for the development of economy of the country especially for the agricultural sector where more than 75% of the active population in Lao PDR work in this sector and it contributes more than 40% to the Gross Domestic Products of the country. The suitable land strategy and policy allow farmers to exploit the resources in the sustainable way.

The author joined with the Policy Analysis Expert to meet with the Director of Land Policy and Inspection Department and its staff to present the project and to discuss the progress of the Land strategy and Land used plan.

2.2. Collecting the information on NAFRI

The Team leader requested the author to look for the information on NAFRI mandate, role and structure and make the summary to the team (see annex: 4.2).

2.3. Farming systems analysis

Based on discussion with the organization that worked in the agricultural sector development and review of the document (reports) the author has summarized the diversity of farming systems in Lao PDR (see annex: 4.3).

3. Work Plan

Until the end of the mission, the author has the following work plan:

1. Getting the information on farming practices (upland and lowland) and the input use in farming systems, the impact of the use as well as the use of input for the important crops.
2. Looking for available agricultural techniques for the upland developed by the NAFRI for the purpose of soil fertility improvement and soil erosion control in the upland.
3. Working with the Marketing expert to identify which farming system is appropriated for organic development.
4. Finalise the technical report and help the team leader to finalise the whole project document.

4. Annex

Annex 4.1: Diversity of Rice varieties and Rice Research in Lao PDR

In the previous time, Lao farmers grown several varieties in their rice field, the interest was to reduce the risk regarding the labour for the transplanting and harvesting, the availability of the water and to reduce the risk regarding the rice insects and pest. The situation changed today as the socio-economical condition of the country has changed (Food security, market oriented, regional integration, environment protection). In the Lowland the rice cultivation became intensive, especially the provinces which are located along the Mekong river. Many local varieties existing in lowland area were almost replaced by the improve varieties produced by the rice research centre at Naphok (Vientiane) and Thasano (Savannakhet province) since the yield is higher allowing the farmers ensured the food security and have the rice surplus to sell in the market. However, only some improve rice varieties are suitable for planting in valleys of the upland and there is not the improved rice variety developed for the upland.

The discussion with the Department of Agriculture and the RRCRC of the Ministry of Agriculture and Forestry shows that so far the centre collected almost 15,000 local rice accessions (sample) from 1995 to 2003 with the helps of SDC and IRRI. One part of these accessions has been kept in the gene bank of the centre and another part is been kept in the IRRI's gene bank in the Philippines. The varieties of most of accessions have not been identified, only the black rice accessions have identified. Every year only about 1000 accessions are regenerated (replanted) however, the germination rate was very low since there is a problem of the irregularity of the electricity power of the gene bank's refrigerator. Additionally, the RRCRC has no any program to conserve the diversity of local rice varieties at the farm level.

Concerning the wild rice so far there was the survey of the wild rice sites, however today some of the sites were transformed by the construction of the road access and new building.

The challenge for the project design will be how to allow the farmers to conserve the local varieties, which incentives or condition should be provided to the farmers knowing that farmers do what they do according to their physical and socio-economical factors. For the wild rice it seems that the survey and the establishment of the area found the wild rice as the conservation area will be interesting to protect from any private uses for other purpose than farm.

Annex 4.2: National Agricultural and Forestry Research Institute

Research for poverty alleviation and sustainable natural resource management

The National Agricultural and Forestry Research Institute was established in 1999 in order to consolidate agriculture and forestry research activities within the country and develop a coordinated National Agriculture and Forestry Research Systems.

NAFRI aims to contribute to the goals of the Government of Laos by focusing on adaptive research to overcome specific problems related agriculture and forestry production. NAFRI has quickly evolved from a focus on providing technical research result to informing national debate on poverty alleviation and sustainable development.

NAFRI is part of the Ministry of Agriculture and Forestry (MAF) and is equal in status to other technical departments under MAF.

NAFRI is mandated to undertake integrated agriculture, forestry and fisheries research in order to provide technical information, technical norms and results from agriculture, forestry, and fisheries to improve agriculture development strategy formulation in accordance with the government policies.

Its main responsibilities are to:

1. Develop specific programmes and projects to implement the government's priority development programmes.
2. Provide feedback and advice to MAF so as to improve implementation of policies
3. Take the lead in land related studies, land use planning and zoning and land management
4. Collect, screen and support multiplication of improved seeds and varieties
5. Conduct research for the development of effective and demand driven technologies, methods, models and systems for agriculture and forestry production
6. Gather, process, manage and exchange information and research result with all relevant partners related to agriculture and forestry development
7. Coordinate with relevant research and development partners at all levels.
8. Serve as secretariat to MAF Scientific Council.

NAFRI structure:

There are three cross-cutting programmes at NAFRI:

1. Upland Research and Development Programmes
 2. National Rice Research Programmes
 3. Agrobiodiversity programmes
- I. Administration and Management Division
 - II. Commodity based Research Centres
 1. Rice and Commercial Crops Research Centre (RRCRC)

Collection of the local rice and cash crop (maize for example) varieties, research for new improved varieties, testing the new variety both in station and farm and multiplication the varieties.

2. Horticulture Research Centre (HRC)

Collection of the local fruits and vegetables, research for new varieties, testing and multiplication of new varieties.

3. Forestry Research Centre (FRC)

Collection of the tree species including NTFP, domestication and multiplication of some rare and demanded species.

4. Livestock Research Centre (LRC)

Research on breeding and mostly research on animal nutrition.

5. Living Aquatic Resources Research Centre (LARReC)

Collection of aquatic animal's species in Lao PDR, research on breeding and animal nutrition

III. Non-commodity based Research Centres

1. Agricultural Land Research Centre (ALRC)

Lao PDR soil classification, soil analysis, soil improvement and land use planning.

2. Agricultural and Forestry Policy Research Centre (AFPRC)

Research on the impact of policies in agriculture, social-economics as well as environment.

3. Information Mangement Centre (IMC)

Publication of the research findings and website of the NAFRI.

4. Conservation Agriculture Research Centre (CARC)

IV. Regional Centres

1. Northern Agricultural and Forestry Research Centre (NAFReC)

2. Southern Agricultural and Forestry Research Centre (NAFReC)

Annex 4.3: Diversity of farming systems in Laos

The rural populations have a territory and natural resources from which they create the value by using a system of production. The products obtained are use according to the priorities of the producers: to feed the family, then to increase the incomes of the family in order to improve their living condition.

1. Farming systems based on the production of rain feed rice in the upland

- a. Sticky rice, garden, small animal, NTFP, handicraft (everywhere in zones isolated of mountain, especially at Austro-Asiatic ethnic group).
- b. Sticky rice, small animal, cash crop (sesames, groundnut, soya, sugar cane, maize, castor oil, rubber, tea), small animal, gathering- (everywhere in accessible valleys or the products can be transported, especially at the Austro-Asiatic ethnic group and the minority Tai).
- c. Ordinary rice, small animal, corn, small, gathering (cow sometimes) - (northern area at the Miao-Yao and the Tibeto-Burmese ethnic groups).
- d. Sticky rice, benjoin tree (*styrax tonkinensis*), small animal, and gathering (Austro-Asiatic groups in some districts of Houaphanh, Xiengkhouang, Oudomxay and Phongsaly province).
- e. Sticky rice or ordinary rice, seasonal rural work, small handicraft, small animal, garden, gathering, selling the products in the market (everywhere or where there is less density of forest, close to the access roads or the place where the employment is possible, especially at the Austro-Asiatic and the tibeto-Burmeses ethnic groups).

2. Farming systems based on the permanent rice production (lowland rice)

- f. Sticky rice (southern, centre and north region) or with irrigation (centre and north), buffaloes, cows, small animals, fishery, garden, weaving and collection near to the mountain- (Tai ethnic groups and some minorities of the other linguistic families).
- g. Sticky rice (and ordinary) rain feed or with irrigation, cow or buffaloes, small animals, fishery, truck farming, weaving, handicraft, service (rice mills, tractors, etc), part time jobs, processing of the products centred on the market (Tai ethnic group with some groups Austro-Asiatic and Miao-Yiao around Vientiane) into zone péri-urban and close to Thailand).
- h. Intensive irrigated rice growing (two seasons), mechanization, processing and marketing of rice, cows, other lines of business and of trade (Tai ethnic group of the Mekong plain and some sites of mountain as in the district of Phieng Sayaboury, in the district of Vangvieng in the province of Vientiane, in the

irrigated plains of Oudomxay and Luang Namtha, periurban of Vientiane and close to Thailand).

- i. Sticky rice, buffaloes, small animal, fishery, small trade (Tai ethnic groups at the edge of Mekong).

3. Other based farming systems

- j. Cows, small animal, vegetable as secondary crop, and gathering the NTFP.
- k. Cows or buffaloes, sticky rice. Small animal, garden and small trade (Tai in the district of Pek and Khoun, Xiengkhouang, Austro-Asiatic groups in the animal pasture zones of Oudomxay, Luang Namtha and Phongsaly).
- l. Cows and coffee, tea, cardamom. Vegetables, fruit tree-small animals (Austro-Asiatic and Tai of the Bolovens plateau).
- m. Fishery and gathering, vegetables on the bank, small animal and small shop (Tay from the middle and lowland of Mekong).
- n. Village's activities, intensive vegetables growing, weaving, mushroom, market activities, small shop, handicraft, seasonal works). Zone péri-urban and bordered with Thailand between Vientiane and Champasack (Tai and some of Austro-Asiatic ethnic groups).
- o. System based on local opportunities like the production of charcoal, the handicraft industry under contract, employment in Thailand, urban employment, community projects, etc. (zones péri-urban and bordered with Thailand).
- p. Cash crop production under contract like the fruit trees, sesames, soya, palm tree, jatropha, teak, rubber, and eucalyptus, etc). - (Tai ethnic groups and Austro-Asiatic in border zones accessible with Thailand, Vietnam and China (Vientiane, Borikhamxay, Khammouane, Savannakhet, Champassak, Luang Natha, Oudomxay, Sekong and Attapeu,).

The diversity of the practices existed in one of these systems according to the area, the ethnic group, the possibilities of the market and the access to the new techniques. In reality, their components are much more complex, each household practice more than 5 activities. This plural traditional family activity, built on the concept of food safety, of self-subsistence and exchange, still makes live the majority of the rural households. The market economy develops since 1988 and touches especially the zones péri-urban and the border areas or where the market is organized.

Annex 4.4: List of Resource Persons

Person	Position	Institution/ Organization
Persons already consulted		
Dr. Soulaphone Inthavong	Director of Plant Quarantine division	Department of Agriculture, Ministry of Agriculture Su-inthavong@hotmail.com
Mr. Souvanh Thadavong	Head of biodiversity Unit	Rice and Commercial Crops of RRCRC of NAFRI.
Mrs. Kongpan	deputy director	Rice and Commercial Crops of RRCRC of NAFRI.
Professor Dr. Sayamang Vongsack	Vice President of Lao Front for National Edification	Lao Front for National Edification
Mr. Noupanh Mahaphonh	Director	Land Policy and Inspection Department/ NLMA 020 9801563
Mr. Sourisack Rathsasombath	Head of Land Conflict Resolution division	Land Policy and Inspection Department/ NLMA 020 2214877
Mr. Somsanith Phoudavong	Head of Land Inspection division	Land Policy and Inspection Department/ NLMA 020 900987
Persons still to be consulted		
Dr. Khouang Douangsila	Director of National Rice Research Program	koung.d@nafri.org.la
Mr. Thipphasone Sukhathammavong	Head/ member	Department of Planning and International Coop Division - PMO/ National Leading Committee on Rural Development and Poverty Reduction Sone04@yahoo.com / 020 2575123
Mr. Niels Morel	Adviser	Capitalization Program to Support Rural Development Policies (PCADR)/ AFD/ MAF 020 7827695 nielsmr@laoconsulting.com
Dr. Jean-Christophe Castella	Coordinator	Catch-Up Program, IRD-CIFOR/ NAFRI HP: 020 777 39 34/ j.castella@ird.fr
Peter Fodge	Director	BURAPHA; bafco@laopdr.com / 021 451841/ 451842
Mr. Vongvilay Vongkhamsao	Deputy Head	Planning Division NAFRI; vongvilay_v@nafri.org.la / 020 5604759
Mr. Phetsakhone Soulygnalth	Technical Officer	NAFES; phetsakhone@hotmail.com / 020 2429508
Mr. Michael Victor	Technical assistant	NAFRI
Department of Regulation	Deputy Head	MAF
Thevalack Phone Keo	Technical Staff	WREA

Annex 4.5: List of currently identified References to be reviewed

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TABI, 2008: The Agro-biodiversity Initiative (TABI) - Project Document Phase I (2009-2011). Final Version.

TABI, 2009: TABI Overview and Summary Description. Project document.

TABI, 2009: Revised Annual Work Plan and Budget 2009-2010. Project document.

Annex 3: Mission Schedule

Date	Activity/Location
Wednesday 28/10/2009	<p>VTE</p> <p>Morning: introductory meeting with Linda Norgrove and getting the tasks, discuss about the task and do the planning how to make the tasks done before meeting with the team leader in 3 days.</p> <p>Afternoon: Trying to get different maps for the teams as requested by team leader Reading the documents, answer to the questions of the ABD team leader</p>
Thursday 29/10/2009	<p>Morning: Ready the documents, answer to the questions of the ABD team leader</p> <p>Contacting with Faculty of Forestry, searching the documents at the library of NOUL , discuss with Deputy Director of National Science council</p>
Friday 30/10/2009	<p>Morning: Ready the documents, answer to the questions of the ABD team leader</p> <p>Afternoon: Meeting with Director of National Rice Research Centre about the wild rice species in Lao PDR.</p>
Saturday 01/11/09	<p>Ready the documents, answer to the questions of the ABD team leader</p>
Sunday 2/11/2009	<p>introductory meeting with Team Leader (TL) and members of project Team (IPE- international policy expert, NBE-national biodiversity expert)</p> <p>Draft of overall team working plan.</p>
Monday 02/11/09	<p>Morning: work on overall project concept and implications for farming systems component</p> <p>Afternoon: Off</p>
Tuesday 03/11/09	<p>Morning: Off</p> <p>Afternoon: Read the documents</p>

Wednesday 04/11/09	Morning: Read the documents Afternoon: off
Thursday 05/11/09	Morning: team meeting (only NBE missing) Afternoon: meeting with UNDP: Team (except NBE), Mrs. Sonam Yangchen Rana (Resident Coordinator, UNDP), Mr. Stephan Viche (UNDP Representative, UNDP) Meeting with Arlyne Johnson (WCS) Working dinner with TL, IPE, Andrew Bartlett (SDC/LEAP), Michael Victor (NAFRI)
Friday 06/11/09	Morning: work on overall project concept and implications for farming systems component
	Sangthong District, Vientiane Municipality
Friday 06/11/09	Afternoon: travel to Sangthong district Meeting with District Authorities: Head of PAFO and Head of WREO + Team.
Saturday 07/11/09	Visits to several villages and agricultural projects: agar wood plantation, rubber plantation, silk production village, organic rice farming bamboo trader.
Sunday 08/11/09	Morning: team workshop to redefine project logframe. Afternoon: travel to VTE.
	9-20/11/2009: Off to Vietnam¹
	Vientiane
Saturday 21/11/09	Inception Report writing
Sunday 22/11/09	Inception Report writing
Monday 23/11/09	Meetings with the team and discussed the project outputs
Tuesday 24/11/09	Inception Report writing
Wednesday 25/11/09	Wrap up meeting with Mr. Sameer Karki

¹ The author keep contact via email with the team during the time off in Vietnam 2-3 hours of working per day and almost full time during the week-end

Thursday 26/11/09	Morning: Wrap up meeting with Mr. Sameer Karki Aft: Progress Meeting on project design with MAF, FAO, UNDP
Friday 27/11/09	Morning: Wrap up meeting with Mr. Sameer Karki Aft: Consultant Team Meeting on finalisation of Project design.
Saturday 28/11/09	Literature review on farming systems concept
Sunday 29/11/09	Literature review on farming systems concept
Monday 30/11/09	Off.
Tuesday 01/12/09	Researching data on NAFRI strategy, mandate and structure Meeting with Department of Agriculture, MAF
Wednesday 02/12/09	Writing the on NAFRI's strategy, mandate and structure
Thursday 03/12/09	Morning: Writing the mandate of the NAFRI Afternoon: Meeting with Rice Research Centre
Friday 04/12/09	Literature review and writing the farming system in Lao PDR
Saturday 05/12/09	Literature review and writing the farming system in Lao PDR
Sunday 06/12/09	Literature review and writing the Adapted agricultural techniques help conserve the biodiversity in Agriculture
Monday 07/12/09- 13/12/2009	Farming systems analysis Progress report writing
14/12/2009	Progress report writing Meeting with PPP at MAF and Linda Norgrove
Tuesday 15/12/09	Wrap-up with Team Leader
18/12/2009-31/12/09	Draft report
3/1/2010-27/1/2010	Draft report Presentation of the result Field trip to test the project design Finalisation of the project document