



# Workshop on Research-Extension Linkages



Jointly organised by NAFES and NAFRI

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## EXECUTIVE SUMMARY

Effective linkages among stakeholders in the agricultural sector are necessary to bring about greater productivity and better livelihoods of rural people. The linkages between extension, research and farmers are especially important. This was the subject of the workshop jointly organised by the National Agricultural and Forestry Extension Service (NAFES) and the National Agricultural and Forestry Research Institute (NAFRI), between November 1-2, 2005.

The workshop was opened by the honourable Vice-Minister, Dr. Ty Phommasack, and the sessions were chaired by the Directors General of NAFRI and NAFES. The 120 participants included Heads of Divisions within NAFES, NAFRI and other Departments of the Ministry of Agriculture and Forests, Heads of all 18 Provincial Agriculture and Forestry Offices (PAFOs) and Provincial Agriculture and Forestry Extension Centres (PAFECs), as well as representatives of various projects, donor agencies and NGOs.

The purpose of the workshop was to explore opportunities for greater and more effective interaction among stakeholders in the agriculture sector. The programme started with an overview of international experiences on extension, research, and farmer linkages, followed by six presentations on successful cases of collaboration from Laos. The second day was dedicated to work in eight groups to elaborate concrete plans for collaboration between research, extension and farmers in priority areas.

In his closing speech, the Vice Minister concurred with the major proposals made during the workshop, particularly the emphasis to be placed on human resource development in the agriculture sector. He also expressed the view that good collaboration between research, extension and farmers, with the additional involvement of private enterprises, will result in true benefits for the Lao rural people.

### Synthesis of outputs from the workshop

Improvements in collaboration between research, extension, farmers and other stakeholders is a precondition for effective service delivery at the village level that will lead to greater productivity and better livelihoods. To achieve this, the following steps are proposed:

- Firstly, ensure that mandates, functions and job descriptions are clearly defined and put into practice. *For example*, staff at the Provincial level need a better understanding of their role in setting priorities for research and extension, and in coordinating development projects.
- Secondly, develop and disseminate practical procedures, methods and materials. *For example*, processes and tools should be made widely available in support of participatory planning and M&E at village and District level, as well to support farmer-led experimentation and adaptation of innovations to local conditions and the needs of the poor.
- Thirdly, establish jointly managed information systems. *For example*, at the central level a working group on information management should be created with representation of both NAFRI and NAFES. The working group should aim to make technical information and practical experience more accessible to Provincial and District staff, and create channels for feedback.
- Fourthly, undertake extensive human resource development. *For example*, District staff should get basic training and coaching for their new role as Farming System Extension Workers (FSEW). Training of trainers is urgently needed, and educational institutions should assess future requirements of the sector.
- Fifthly, test new strategies for input supply. *For example*, farmers and the private sector can fill gaps in capacity for seed multiplication and animal breeding. This will allow research and extension to focus on other roles, such as technology development, education and quality control.

# 1 INTRODUCTION

## 1.1 Context, goals and expected outputs

The Ministry of Agriculture and Forests is consolidating its efforts to promote sustainable agriculture in the Lao PDR. Over the past few years, important developments have taken place in the Ministry of Agriculture. The creation of the National Agriculture and Forestry Research Institute (NAFRI) has strengthened the network of research stations and research programmes. The creation of the National Agriculture and Forestry Extension Service (NAFES) has enhanced the potential for service delivery to rural people, and the recent development and adoption of the Lao Extension Approach (LEA) is seen as an important means to achieve that potential. These developments are in line with the policies of the Government of Lao PDR which aims to increase food security and reduce poverty.

Further steps are now required to consolidate these developments. In particular, the cooperation between researchers and extensionists needs to become more effective in order to respond to the pressing needs and emerging opportunities of Lao farmers.

Improving the interaction between research and extension is an ongoing effort in many countries with a large rural population. Laos is no exception to this. Experience in others countries shows that effective measures can be taken to improve the interaction, but they have to be adapted and made to fit with the social, cultural and technical conditions in each locality. There are also a number of promising experiences in various programmes and projects operating in Lao PDR. It is timely to learn from these and derive appropriate procedures for interaction between Lao farmers, extensionists and researchers.

NAFES and NAFRI have already successfully cooperated in producing the source-book “Improving livelihoods in the uplands of the Lao PDR”. Based on this experience, both agencies intended to take the momentum forward by jointly organising this workshop on linkages and collaboration between extension, research, farmers and other actors.

The workshop constitutes part of the process to enhance the utility of services for rural people and will contribute towards the implementation of government policy relating to food security and poverty eradication by exploring opportunities for greater and more effective interaction. The graph below depicts the expected outcomes of the workshop based on the inputs flowing into it.



## 1.2 Programme overview

<b>Day 1</b>	Day 1 was devoted to a series of case study presentations (see Section 3). These were preceded by an opening address on the policy context of extension and research collaboration in Lao PDR of the honourable vice minister of MAF, Dr. Ty Phommasack and a keynote presentation which provided an overview of international experiences regarding research and extension collaboration.
<b>Day 2</b>	At the centre of day 2 was group work to develop concrete ideas for action regarding eight areas of current research/extension link issues. The discussion was designed to draw upon the lessons that have been learned from the cases presented on the first day. The workshop was rounded off by a plenary discussion, remarks by the Directors General of NAFES and NAFRI, and finally a concluding address by the honourable vice minister.

## 1.3 The vice-minister's opening address

The box below provides a summary of the opening address by the honourable vice-minister of the Ministry of Agriculture and Forests (MAF), Dr. Ty Phommasack.

NAFRI, the department of research was established in 1999, followed in 2001 by NAFES, the department for extension. Both departments crucially contribute to the agriculture development of the country.

The main recommendations for research concentrate on three issues:

- Experiments at research stations are important, but on-farm experimentation, where farmers are involved in testing their own varieties, is equally, if not even more, important.
- The most important and appropriate varieties have to be identified.
- Research should concentrate on finding ecological and environmentally friendly technologies, which are practical for farmers to adopt.

The main recommendations for the extension sector concentrate on:

- An important recent change has been to give more importance to the district level. In order to be able to perform its role successfully, the districts require skilled and experienced staff. Upgrading training and coaching for involved staff is necessary and should be a focus of the near future.
- Extension should operate at cluster level. Staff should be posted at cluster level based on their potential and the required needs of the area. Markets should be developed according to cluster zones.
- Farming systems need to integrate production for the market and for own consumption in order to enable the farmers to generate income.

Both, NAFES and NAFRI, are important for the development of the agriculture sector in Lao PDR. In the next five years both departments should improve the agriculture sector focusing on commodity production. There is a need for establishing coordination and cooperation mechanisms with a clearly defined common focus. Coordination should involve an active participation of farmers and private enterprises. The villagers should become the leaders of the development process. All efforts should be based on their needs. Special support should be given to develop the upland areas. Good experiences must be disseminated quickly. Good cooperation between NAFES and NAFRI will be a present for the Lao farmers.

## 2 WORKSHOP OUTPUT: CONSOLIDATED ACTION PLANS

This section contains the chief outputs of the workshop, i.e. the concrete action plans for improved extension and research cooperation emanating from the topical working groups in a consolidated form. The original group work results are summarised in Section 4 and presented in detail in Annex II.

ACTIONS IN THE COMING YEAR	WHO	WHEN
<b>1 Ensure that mandates, functions and job descriptions are clearly defined and put into practice</b>		
Define roles of PAFECs/PAFOs, DAFEOs, research and other actors (including farmers) at village, district, province and national levels in determining extension and research agendas/priorities	PAFO/PAFEC, projects, DAFEO at province level NAFRI, NAFES at national level	1/06 – 3/06
Establish mechanisms to base planning at province and district level on village level plans and needs	PAFO, PAFEC, DAFEO	4/06 – 6/06
Establish mechanisms that enable PAFOs to take the lead in effective coordination of project and other activities in provinces	PAFO, projects, MAF, NAFRI, NAFES	4/06 – 6/06
Identify and establish mechanisms to make research and other technical information available to PAFOs and DAFEOs in a useful format	NAFES, NAFRI, PAFEC, PAFO, DAFEO, projects	1/06 – 3/06
Develop mechanisms for PAFOs to link with the central level and the districts	PAFO, MAF, NAFES, NAFRI, DAFEO	4/06 – 6/06
Determine budget allocations to districts that are required to fulfil their new mandate and implement	MAF, NAFES, NAFRI, Minfin?	1/06 – 3/06
<b>2 Develop and disseminate practical procedures, methods and materials</b>		
Pilot the development of processes and tools for farmer-led experimentation and adaptation to local conditions of the many available innovation options that have potential for disadvantaged areas and people	NAFES, NAFRI, projects PAFEC, DAFEO	Start 1/06 in a few pilot villages
Develop procedures, tools and materials to identify, adapt and disseminate improved animal husbandry practices, particularly regarding nutritional aspects	DLF, NAFRI, NAFES, projects PAFO, PAFEC	
<b>3 Establish jointly managed information systems</b>		
Each institution determines a unit or persons responsible for coordinating information management	NAFRI, NAFES, MAF PAFEC, DAFEOs in PPDs	1 May 2006
Establishment of a joint working group consisting of representatives from NAFES and NAFRI	NAFES (lead), NAFRI (support)	End of December 05
Inventory of available information into an “information map” as a basis to identify interfaces, overlaps and linkage needs (by the working group)	Working group	End of May 06

<b>4 Undertake extensive human resource development</b>		
<p>Enable DAFEOs to work effectively as Farming Systems Extension Workers</p> <ul style="list-style-type: none"> <li>▪ Train DAFEO and village extensionists in the use of processes and tools for experimentation and adaptation to develop innovations in collaboration with farmers</li> <li>▪ Build PAFEC capacity to coach and train DAFEO staff in their new role as FSEWs using LEA, and in developing and adapting extension tools, aids and materials</li> <li>▪ Train DAFEO staff in planning and priority setting for research and extension together with villagers</li> </ul>	<p>NAFES, NAFRI, PAFEC, DAFEO, VES, projects</p> <p>PAFEC, NAFES/Master Trainers</p> <p>PAFEC, DAFEO, projects, VES</p>	<p>Once the processes and tools are developed</p> <p>1/06 – 6/06</p> <p>12/05 – 6/06</p>
<p>Adapt the curricula of agriculture education institutions to the needs of the new agricultural professionals:</p> <ul style="list-style-type: none"> <li>▪ Jointly assess the training needs of future agricultural professionals</li> <li>▪ Integrate the new needs into the curricula</li> <li>▪ Build up linkages between research, extension and educational institutions to allow students to undertake useful research within the frame of their studies/theses.</li> </ul>	<p>Educational institutions, NAFES, NAFRI, SNV</p>	<p>12/05 – 3/06</p> <p>3/06 – 4/06</p> <p>12/05 – 3/06</p>
<b>5 Test new strategies for input supply</b>		
<p>Enhance access to the right rice seed varieties, particularly in remote areas:</p> <ul style="list-style-type: none"> <li>▪ Explore and assess different mechanisms to establish rice seed multiplication at village level (e.g. production groups, private enterprises)</li> <li>▪ Develop mechanisms to estimate demand for different varieties</li> <li>▪ Set-up pilot quality control units for rice seed</li> </ul>	<p>Thasano centre, other centres, PAFEC, DAFEO, VES</p> <p>NAFES, PAFEC, DAFEO, VES</p> <p>DoA</p>	<p>In some places in progress, in others to start in 06</p> <p>2006</p> <p>2006, as soon as funds available</p>
<p>Expand access to improved livestock and fish breeds:</p> <ul style="list-style-type: none"> <li>▪ Prepare a strategic plan for livestock and fish breed development.</li> <li>▪ Develop livestock and fish breeds adapted to different eco-systems and socio-economic conditions</li> <li>▪ Enhance capacity (quality and quantity) of stations to do research and to multiply animal and fish breeds</li> </ul>	<p>DLF</p> <p>NAFRI, NAFES, PAFO, DLF</p> <p>NAFRI, NAFES, PAFO, DLF</p>	<p>6 months</p> <p>After workshop</p> <p>After workshop</p>



### 3 CASE STUDIES PRESENTED

Six case studies focusing on different aspects of collaboration between extension, research and farmer were presented on the first workshop day (see box below). These were preceded by a keynote presentation on international experiences regarding extension-research linkages. In the following the abstracts of these workshop inputs are presented, while the Powerpoint files are available on the workshop CD and are hyperlinked from here.

#### Case studies

- Farmers' needs are the link (presented by Somxay Sisanonh, Deputy Head of Extension and Project Coordination Division, NAFES & NPD of LEAP)
- Provincial Agriculture and Forestry Office (PAFO) as a bridge between research and extension (presented by Thongdy Chanthavong, Deputy Head of PAFO Saravane)
- The seed multiplication station as a centre for both extension and applied research (presented by Dr. Phoudalay Latvilayvong, Head of Thasano seed research and multiplication centre)
- Farmers as the key to overcoming constraints in rice production (presented by Kouang Douang-sila, head of NRRP, NAFRI and project coordinator of Lao-IRRI Rice Research and Training Program, and Khamla Phantaboun, Head of Hoykhoat Research Station, NAFRI)
- Research and extension linkages to address complexity and diversity of the uplands (presented by Viengsavanh Phimpachanvongsod, NAFRI, Viengxai Photakoun, NAFES, and John G Connell, CIAT)
- Information services: an entry point to improve research-extension linkages (presented by Khamphay Manivong, Head of the Information Management and Strategic Planning Division, NAFRI)

#### 3.1 Farmer/extension/research collaboration – overview of international experiences

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Presented by: By Elisabeth Katz, Swiss Centre for Agricultural Extension and Rural Development

**Introduction.** To improve their livelihoods, rural people (women and men, poor and well-off) need “new things and ways that work” or in other words innovations. This may be solutions to particular constraints or new opportunities. New things that work can be manifold (better varieties and breeds, improved production/husbandry practices, new crops/animals, more profitable marketing channels, more ecological land use practices, new ways of organising themselves). To achieve its very purpose (improve livelihoods of rural people) extension workers need to know about new things and ways that work for the different people of their area – solutions to their constraints and new opportunities for more income, more food security, less drudgery, employment etc. There are many sources for such useful innovations; for this workshop we concentrate on research as source of new things, but we should not forget that there are others, notably farmers, but also other countries, markets, enterprises.

**Why discuss collaboration between extension and research?** In many places neither research nor extension are satisfied with the work of the other. Research agendas are often set by scientists only.

Economic realities are often not adequately considered in research. Sometimes institutional mechanisms for talking to each other are simply lacking.

The main acknowledgement mechanism for research is publication of scientific papers targeted at peers. Usefulness for farmers and potential for poverty reduction is rarely an official criterion for judging the quality of research.

**Extension and research collaboration to find new things that work.** In a traditional, now outdated view, the roles distribution is as follows: Research develops innovations, extension transfers the innovations to farmers, and farmers adopt the innovation. Nowadays it is recognised that farmers, extension and research need to collaborate to develop useful innovations. There are many ways to do this. Efforts can be research-, extension- or farmer-led. The involvement of farmers can vary from just doing the physical labour in an on-farm research plot in traditional On-farm Research, over a being a source of information and consultation in Farming Systems Research, and being a partner in the design and implementation of research (in Participatory Innovation Development and Farmer Participatory Research, to taking the lead in local research with extension and research in the role of advisers in Farmer-led Research. Please note that these expressions are often used for different things.

**Research/extension collaboration to decide what to research.** Research agendas are set too often by committees consisting of scientists only. At least extension (public or private) and farmer representatives, and, even better, concerned private sector actors should have an equal voice in deciding in which research public funds should be invested. The criteria to judge quality of research are usually novelty and scientific soundness. Why not include usefulness to farmers and potential for poverty reduction in the quality criteria?

Extension is in its daily work with farmer gaining vast experiences on what works and what not, where new problems are coming up, where external recommendations are not adequate, and how farmers adapt new things to fit their own condition. These insights are very valuable for research for fine-tuning their research. A lot of these insights tend to be lost if there are no systematic feedback mechanisms. There are many ways to organise feedback mechanisms – electronic and face-to-face.

**Extension/research collaboration to process and synthesise knowledge.** Research results, scientific knowledge, and insights from practical experiences need to be synthesised and translated first into information usable for extension workers' and then to farmers' level. While the step from extension to farmer level is usually a task of extension, the first step may involve collaboration between research and extension. The joint sourcebook on upland farming of NAFRI and NAFES is an excellent example of how the result of such collaboration may look.

**Extension/research collaboration in access to means of production.** When new varieties, crop types, animal breeds, tools and other materials are identified as being “new things that work” for many people, of course the question arises how to make these available to on a large scale to all the people for whom they constitute an opportunity. With seed for example the question arises who does the bulk-ing. Possibilities are private sector companies, specialised farmers and cooperatives or government seed farms. Experience in many countries shows, that government alone is unable to fulfil the demand for really useful new varieties. New tools and equipment can only be made available on a large scale by encouraging private sector actors to manufacture and market them.

**Extension/research collaboration in information management.** Often various uncoordinated information databases are built up a country, mostly for research information. Information for extension and from extension makes its way to databases much more rarely. Coordination of such efforts, clear division of responsibilities, and in electronic databases, the possibility to search all databases in one go, and the systematic inclusion of extension information would make information management systems substantially more useful.

**Extension/research collaboration to assess outcomes and impact of extension work.** Basically the monitoring of outcomes of extension work is a task of extension itself. However occasionally there

may be a demand for more in-depth studies of certain aspects, e.g. to find out about social and economic impact. These are beyond extension capacity and thus for such work extension and research best work together.

**Some conclusions.** Collaboration between farmers, extension and research (and other actors!) is a must to identify solutions to constraints and new opportunities for better livelihoods. There are many experiences on how this may be done, in Laos and in other places, and there are many examples of failure too. Collaboration needs to be institutionalised, made a feature of organisational procedures. Otherwise it depends on too much on personal inclinations and initiatives.

### 3.2 Farmers' needs are the link

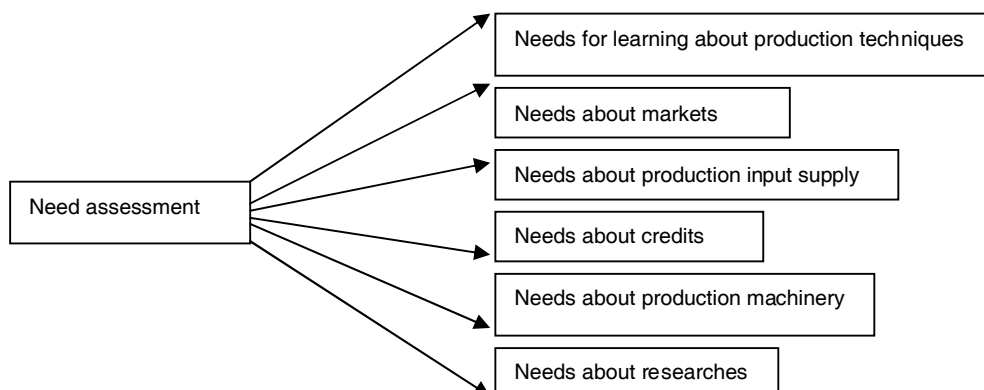
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Presented by: Mr. Somxay Sisanonh, Deputy Head of Extension and Project Coordination Division, NAFES & NPD of LEAP

The National Agriculture and Forestry Extension Service was established in 2001 to improve the implementation of extension based on the related policy plans, decrees and the strategic vision for agriculture and forestry sector. NAFES's main role is to implement and coach extension activities across the country. In the past NAFES faced difficulties related to the lack of an appropriate countrywide extension system, under which technical services should take the diversity of production practices and socio-economic conditions into account. This lack of an overall structure led to inappropriate and inefficient extension activities.

Over a period of about 3 years NAFES developed and tested an extension approach, named the Lao Extension Approach (LEA). The LEA consists of the Village Extension System (VES) and the Government Extension Service (GES). The LEA has been adopted by NAFES and approved by MAF earlier in 2005 as the unified extension system. LEA will be used across the country to ensure efficient extension activities that serve the needs of the farmers in an inclusive manner (men and women, rich and poor, all ethnic groups, upland and lowland, old and young, etc). Other principles of the LEA are: decentralised, pluralistic, participatory, integrated, gender-sensitive, group-based and self-motivated.

**Farmers' needs** are the heart of the LEA. All stakeholders, the government, the private sector and international organizations have the responsibility to assist and support production improvement based on the farmers' needs. As part of the LEA, participatory needs assessment is needed, taking into account that the farmers themselves understand best about farm production constraints and potentials. To increase the capacity for suitable services to meet farmers' needs, systematic collaboration between all relevant organizations is needed. LEA can be the vehicle for all stakeholders to spread techniques, technologies, information and experiences to field.



Analysis of production problems and opportunities – as part of needs assessment - is a key process in the Village Extension System. The diagram above shows that, there are a various needs. Extensionists' main responsibility is to coordinate with other stakeholders for supporting extension activities, such as: coordinate with research institutions for testing the seeds with farmers, request research institution to do a market study, coordinate with private sector to work on production input supplying, coordinate with NGOs to support training, etc.

### **3.3 Provincial Agriculture and Forestry Office (PAFO) as a bridge between research and extension**

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Presented by: Mr. Thongdy Chanthavong, Deputy Head of PAFO Saravane

The Provincial Agriculture and Forestry Office is one part of the government structure which implements the country's policies following the national socio-economic development strategies and the provincial development plan. PAFO's main role is strategic planning of the provincial agriculture development activities, including coaching of extension activities in the districts and supporting the District Agriculture and Forestry Extension Offices.

The experience in Saravane shows that PAFO's main responsibility is to **compile lessons learnt** on technologies (what?), on stakeholders involved (who?) and on methodologies used (how?). Those lessons learnt are **spread to districts and villages** according to the identified needs of farmers, the production conditions and the socio-economic environment of the local area. More over PAFO acts as **a bridge for connecting services** to support extension implementation on field level. This means that PAFO attracts and synchronizes projects working in the districts, coordinates with the private sector to provide production inputs, informs and links up with credit and marketing facilities and coordinates with the technical units to solve farmers' production problems or to test new things.

Based on these experiences PAFO Saravane would like to further improve its performance by increasing coordination, adjusting reporting and improving the information sharing system of all stakeholders within PAFO. This improved system will enable PAFO not only to act as a bridge between researchers and extensionists, but also be the coordinating focal point for all stakeholders, involving business people, traders, bankers, contactors, projects and other relevant organizations. A functioning coordination and cooperation will help improving farmers' production and consequently lead to better livelihoods.

### **3.4 The seed multiplication station as a centre for both extension and applied research**

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Presented by: Dr. Phoudalay Latvilayvong, Head of Thasano seed research and multiplication center

Total rice area of the country for both rainy and dry seasons is about 676,997 ha and total rice production is 2.3 million tons. Rainy season rice accounts for 89.5% of the total area. Uses of improved varieties in rainy season is 60-70% of the total rice production area while 100% in dry season. In general, farmers use the same varieties for a long period, over 10 years, which causes impurity and low yields.

The government has policies to promote the use of improved varieties for higher productivity. Seed research and multiplication centers are operated as the main mechanism to provide seeds, quantitatively and qualitatively, but marketing and distribution systems have not been developed. One problem

is that a lot of seeds are left over in storage each year. A cause of the problem is that seed multiplication never has any projections for seed demand or orders (in advance for 1 season or 1 year).

Thasano center has experiences on seed research and multiplication since 1986. Thasano center has been producing original varieties, foundation seeds or F1, F2 and F3, but normally F2 and F3 are produced in collaboration with extension together with farmers. Seed production was increased from 47 tons in 1998 up to 255 tons in 2001 and the multiplication network was extended to over 100 households (with contracts).

Thasano center has been cooperating with international organizations and other research institutes on seed research and multiplication. Thasano also cooperates with educational institutes, for instance hosting students every year, sharing and reporting to relevant organizations, etc. But linkages between the center and extension and private sector are very weak. To strengthen the linkages, Thasano center has planned to link with extension on setting up and managing production groups, in order to identify seed demand systematically.

### **3.5 Farmers as the key to overcoming constraints in rice production**

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By Mr. Kouang Douangsila, head of NRRP, NAFRI and project coordinator of Lao-IRRI Rice Research and Training Program, and Mr. Khanla Phantaboun, Head of Hoykhoat Research station, NAFRI.

A top priority for the government of Lao PDR is to modernize the agriculture sector in a sustainable manner to achieve food security and improve the livelihoods of all Lao people. Rice production in Laos is constrained by the cost, availability, and use of well-adapted rice varieties with high yield potential, fertilizer, and water. While pests and weeds can reduce yields, it is varieties, fertilizer and water which determine yield potential. Crop management research, including the management of soil nutrients and water, has long relied on on-farm and farmer participatory research to develop practical recommendations. Plant breeding, however, has often been conducted in isolation of farmer evaluation. In relatively homogeneous environments, such as irrigated rice agroecosystems, it has been possible to develop popular varieties without farmer evaluation in the breeding process. In contrast, farmer feedback on yield, adaptation, and end-use quality is needed to increase the effectiveness of breeding in socially and environmentally variable rainfed environments. This feedback has been difficult to obtain using conventional breeding methods. Low-cost and effective Participatory Varietal Selection (PVS) methods have been developed for rainfed rice breeding programs, based on the Mother-Baby model. These methods use farmer ratings rather than expensive crop-cuts to assess varietal performance, permitting replication over many farms. In the Mother-Baby model, a set of all potentially useful rice varieties are grown in a demonstration plot (the Mother plot). Farmers are then free to choose any combination of varieties they consider potentially useful and test them on their own farms in small plots (the Baby plots). Farmers' visual ratings for grain yield are highly correlated with ratings for overall preference and plans to plant the variety next year.

PVS trials in Lao PDR are conducted in the uplands and lowlands by researchers, extension agents, and farmers. The major rice varieties are first developed or evaluated on experiment stations of the National Agriculture and Forestry Research Institute (NAFRI), through the National Rice Research Program (NRRP). NAFRI plant breeders work with plant breeders of the International Rice Research Institute (IRRI) to identify promising rice lines. Provincial and district field officers take seeds of promising varieties to villages and work with farmers to set up Mother-Baby trials. Through the NRRP varietal recommendations are harmonized with recommendations for crop protection, nutrient management, agronomy, and farming systems. Farmers are exposed to these recommendations on Farmer Field

Days, when farmers are brought to experiment stations to learn about the rice breeding program, seed multiplication and rouging practices, PVS, and seed germination testing.

To date, the plant breeding and PVS programs have resulted in 14 released Lao improved varieties, 12 recommended introduced varieties, 23 recommended traditional varieties, and 5 promising lines which should be ready for release next year. Recent increases in rainfed production are largely due to the adoption of improved varieties. These varietal improvements and recommendations were made possible by the farmers' evaluations and by the collaboration of national, provincial and district research and extension systems.

### **3.6 Research and extension linkages to address complexity and diversity of the uplands**

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Presented by: Mr. Viengsavanh Phimpachanvongsod (NAFRI), Mr. Viengxai Photakoun (NAFES), and Mr. John G Connell (CIAT)

To affect livelihoods in the uplands, systems changes will be needed, rather than small changes in the existing agriculture activities. Systems changes are complex, with 'improved technologies' being only a component of any system. In addition, the uplands are highly diverse, so no 'one system' will be adequate. Rather a range of systems will be required to suite local conditions. The introduction of forages for livestock development illustrate strategies to address the challenges of complexity and diversity in the uplands

Participatory research (1995-99) had already selected 8 robust species of grasses and legumes. Despite working closely with farmers, there was little uptake of forages. Research needed to go a step further, to identify new livestock systems which used the forage, that delivered impacts. The key to identifying new livestock systems has been farmer innovation, with researchers and extensions mentoring the process.

Farmers' innovation was stimulated by: (a) conducting Problem Diagnosis to enable farmers to identify constraints they had with finding time and labour to provide feed to their livestock. Time and labor represented their 'immediate problem', and so planting forages were seen as a solution to this. (b) providing a number of forages species for farmers to evaluate. Together, these engendered a problem solving attitude with farmers, and thus provided a springboard for innovation.

Innovation is unpredictable. To provide opportunity for innovation, staff worked with large numbers of farmers by the extension of forages to save time and labor. A few farmers innovated further than this original aim and the emerging impacts and new systems were 'captured' by carrying out follow-up in a supportive manner. Supportive follow-up was a dialogue with farmers to reveal how they were using forages and what benefits they were gaining. The emerging systems were then consolidated by farmer-to farmer mechanisms within the villages (e.g. focus group meetings). As new systems were identified, the use of forages was scaled-up by introducing these new systems directly to new villages through cross visits, posters with cases studies etc.

In this process, researchers mentored the process and identified new systems as they emerged. The extension staff provided the participatory interface with farmers. The introduction of forges can be seen as an example of the more general challenge addressing complexity and diversity of the uplands. The key mechanisms were; (a) engendering a problem solving attitude with farmers, (b) working with a population of farmers to provide opportunity for innovation, and (c) then carrying out supportive follow-up to capture emerging new systems. This strategy could be applied with other initiatives where systems change is needed in the uplands.



### **3.7 Information services: an entry point to improve research-extension linkages**

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Presented by Khamphay Manivong, Head of the Information Management and Strategic Planning Division

The Strategic Vision for the Agriculture and Forestry Sector as well as the National Growth and Poverty Eradication Strategy emphasize the need for technology development that is based on farmers' needs and in-line with market signals. One way to achieve this will be for improved linkages between different actors in the sector. Unfortunately, some of the key bottlenecks to improved production are often ineffective technology delivery systems, including poor information packaging and inadequate communication systems.

Improving sharing of information and communication between different actors can be seen as one of the essential strategies for strengthening linkages between different actors within the "Lao Agriculture Knowledge and Information System" (AKIS).<sup>1</sup>

This paper looks at the role the information services (both at NAFRI and NAFES) can play in strengthening the linkages between different actors. The presentation is broken into three parts.

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<sup>1</sup> In an agricultural knowledge and information system people and institutions are linked together to promote and enable mutual learning and generate, share and use agriculture-related technology, knowledge, skills and information. The system integrates farmers, agricultural educators, researchers and extensionists and the private sector (support and input services, traders) to harness knowledge and information from various sources for better farming and improved livelihoods (FAO 2004)

The first part looks at the development of information services at NAFRI. The information service strategy emphasizes capacity building, partnerships and networking as means to improve sharing of information between different actors in the agriculture and forestry sector.

Four case studies of different communication and information processes are highlighted in the second part of the presentation. The four cases are briefly:

1. Development of the Lao Agriculture Database
2. Lao Uplands Sourcebook “Improving Livelihoods in the Uplands of Lao PDR”
3. Lao-IRRI Edutainment radio program
4. Technology information sheet development

Two themes bring these case studies together. First, there needs to be a variety of mechanisms to disseminate information to different stakeholders. Different forms of media will be appropriate for different actors and there is a need to develop a range of information dissemination mechanisms if all actors are going to be able to effectively access information. The second theme is that information cannot just be “handed over” from research to extension but that both have a role to play in developing materials and information. For information to be effective, there needs to be partnerships and dialogue between research and extension and mechanisms in place to support continuous interactions between all stakeholders.

The final section provides some recommendations and ideas for further improving the Lao AKIS. In particular, it is recommended to identify key linkage points at NAFRI and NAFES for collaborative work and that roles and responsibility for collaboration need to be clearly defined. The development of agreed upon relations can assist in improving the effective flow of information and technology between farmers, research and others organizations involved in agriculture and forestry sector. In relation to this, there are recommendations for a number of joint activities in which both research and extension can work on to begin to strengthen the Agricultural Knowledge and Information System in Laos.



## 4 GROUP WORK SYNTHESIS

On the second day of the workshop the participants worked in groups to develop concrete ideas for action regarding eight areas of current research/extension link issues. The discussion was designed to draw upon the lessons that have been learned from the cases presented on the first day. Topics have been selected that address key policy issues and are relevant to different levels in the organisational system (national, provincial and district). The outcomes of the discussion will ensure that the process of collaboration among research, extension and other stakeholders will expand after the workshop.

### 4.1 Group work topics

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The box below shows the eight areas and the facilitators assigned to each group.

1. **Seeds and Planting Material:** How can NAFRI, NAFES, DoA and other stakeholders work together more effectively to make sure farmers have the required quantity and quality of seeds and planting materials?  
*This covers seed multiplication, tree nurseries, the market for - and distribution of - planting materials etc. Plant breeding is not considered to be a problem under this topic.*
2. **Livestock Systems:** How can NAFES, NAFRI, DoLF and other stakeholders work together to improve livestock systems throughout the country?  
*This covers research and extension of production practices for cattle, pigs and poultry, especially disease management and improved feeding.*
3. **Information Management:** How can MAF, NAFRI, NAFES and other stakeholders work together to ensure a better exchange and more relevant processing of agricultural information?  
*This covers technical and marketing information, and includes collaboration in the maintenance of databases, libraries and the production of informational materials to be used by extension workers and farmers.*
4. **Agenda-Setting:** How can PAFOs, PAFECs and other stakeholders working outside of Vientiane make a greater contribution to setting objectives and determining the content for research and extension.  
*This covers the vertical linkage that connect the needs and experiences of farmers and extension workers, with the planning and management of research and extension programmes.*
5. **Provincial coordination:** How can PAFOs and PAFECs improve planning and coordination among all agricultural development stakeholders at the provincial level?  
*This covers horizontal linkages among subject matter specialists, experts from research and extension projects, NGOs and private sector. What can be done to improve local ownership of - and synergies between - development projects and programmes?*
6. **District capacity building:** How can all stakeholders working at the District level strengthen the ability of DAFEO staff to be effective in their new role as 'Farming Systems Extension Workers'?  
*This covers how NAFES, NAFRI, PAFO/PAFEC and other stakeholders can contribute to developing the skills and resources needed by District extension workers, taking into account the new job descriptions of DAFEO staff. The role of foreign projects and NGOs should be considered.*
7. **PTD and poverty alleviation:** How can participatory processes be mainstreamed at the District and Village level to ensure that agricultural innovations are more useful for the poor?  
*This covers how all stakeholders – including research and extension institutions - can improve farmer participation during needs assessment, technology development (PTD), and monitoring and evaluation (PM&E). Innovations for the poor can be can be technical, social or economic.*
8. **The next generation:** How can educational institutions and other stakeholders help to ensure that the future researchers and extension workers possess the required knowledge, skills and attitudes?  
*This covers how the National University, the Agricultural Colleges, NAFRI, NAFES, projects etc can help to make sure that the next generation of agricultural experts is equipped for the evolving needs of the sector. How can we make sure they will be willing and able to work together in an effective manner?*

## 4.2 Actions to be started in next six months

In the following the outputs of the group work are presented in a synthesised form. For the consolidated action plan compiled on the basis of the group work, see Section 2, and for the detailed outputs of each group as well as the group work instructions and other supporting materials see Annex II.

Area of collaboration	Suggested actions
<p><b>1. Access to seed</b></p> <p>Working together to make sure farmers have the required quantity and quality of seeds and planting materials</p>	<p>Seed production centres in collaboration with PAFO to promote seed multiplication at village level e.g. through seed multiplication groups</p> <p>DAFEO and seed production centres to develop mechanisms to estimate demand for seed of different varieties (annually)</p> <p>DoA to pilot the establishment of quality control units for rice seed</p>
<p><b>2. Livestock systems</b></p> <p>Collaboration to improve livestock breeds and health throughout the country</p>	<p>Develop a strategic plan for the production and dissemination of improved breeds, and establish further research and breeding stations</p> <p>Expand or establish capacity for disease diagnosis and vaccination at province level and improve the network of village veterinarians</p> <p>Improve understanding of animal husbandry practices. Promote the integration of nutrition including forages into the livestock keeping systems.</p>
<p><b>3. Information management</b></p> <p>Working together to ensure a better exchange and more relevant processing of agricultural information</p>	<p>Each institution to determine a unit or persons responsible for coordinating information management</p> <p>Establishment of a joint working group consisting of representatives from NAFES and NAFRI</p> <p>The WG to inventorise available information into an "information map" as a basis to identify interfaces, overlaps and linkage needs</p>
<p><b>4. Agenda setting</b></p> <p>Increasing the contribution of Provincial staff to setting objectives and determining the content for research and extension</p>	<p>Clarify the roles of PAFEC and DAFEO in determining research and extension priorities and establish procedures for collaboration in innovation development at village level.</p> <p>Develop the capacity of DAFEO staff in supporting research work with farmers through training of trainers and then training of DAFEO staff.</p>
<p><b>5. Provincial coordination</b></p> <p>Improving planning and coordination among all stakeholders at the provincial level</p>	<p>Base provincial annual plans on village needs to be collected by DAFEO staff through supporting villages and clusters in planning</p> <p>Build mechanisms to make relevant research and other technical information accessible for PAFO and DAFEO staff</p> <p>PAFO to take a greater role in coordinating between projects.</p>
<p><b>6. DAFEO capacity building</b></p> <p>Strengthening the ability of DAFEO staff to be effective in their new role as 'Farming Systems Extension Workers'</p>	<p>Build PAFEC capacity in training and coaching FSEWs through training of trainers using LEA, and in developing and adapting extension tools, aids and materials</p> <p>PAFO to develop coordination and linkage mechanisms to the central level as well as to the district level</p> <p>PAFO to make new DAFEO role and mandate widely known</p>
<p><b>7. Opportunities for the poor</b></p> <p>Mainstreaming participatory processes at District and Village level to ensure that agricultural innovations are more useful for the poor</p>	<p>Pilot the development of processes and tools for farmer-led experimentation and adaptation to local conditions of the many available innovation options</p> <p>Extensionists at village and district level to learn to use these processes and tools in collaboration with groups of farmers</p> <p>More resources to be channelled to the district level to enable extensionists to work closely with groups of farmers</p>

<p><b>8. The next generation</b></p> <p>Helping to ensure that future researchers and extension workers possess the required ability</p>	<p>Conduct a joint training needs assessment to determine the basic know-how requirements of future professionals</p> <p>Adapt curricula of educational institutions according to assessment results</p> <p>Identify topics for practical research to be undertaken by the educational institutions in collaboration with research and extension, with the involvement of both teachers and students</p>
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## 5 CONCLUDING REMARKS FROM THE INTERNATIONAL FACILITATOR

From the point of view of the international facilitator, this workshop was interesting and stimulating. Many good ideas emerged and fairly concrete plans were elaborated; I sincerely hope that the corresponding action will materialize in good time.

All aspects of research-extension-farmer linkages which are important according to international experiences came up during the workshop in one way or the other – in case examples and/or in group work.

In the concluding panel discussion the government reconfirmed that it considers effective and equality-based collaboration in the triangle of extension, research and farmers an important ingredient to enhance utility and reach of services to farmers and so achieve the Party's goal of a swift transition from subsistence to commodity production.

In the following some remarks relating to particular areas of the action plan which I consider particularly vital, and finally two more general remarks:

**Joint information systems.** The current action plan appears to focus on joint efforts for information storage and retrieval, which is essential but not enough. A substantial number of information systems around the world end as a kind of information dump where a lot of information is stored, but not much used because it is not in a useful form. On a longer term it is essential that the Lao AKIS (or whatever its name may be) serves as a learning system – not just an information system – at all levels. This implies a) that not only technical information is recorded, but also experiences with processes, methods and ways of working, b) that procedures are in place to enable easy access at least at district, or even better at the village level, with the implication that the information is in a form adapted to that level, c) that feedback from the village level, and adaptations made regarding technical and other recommendations is systematically fed into the system, d) that procedures are developed to analyse and synthesise feedback and experiences from the field, e) that the joint work of processing scientific and research information to district and village level is given much emphasis.

**Procedures to disseminate complex innovations.** Spreading complex innovations widely is a challenging task, because they need to be adapted to the local circumstances in every new place. Many of the innovations that emerged from recent activities are complex. Thus, to enable many rural families and areas to benefit from these innovations, developing dissemination and adaptation mechanisms and enabling their application at the district and village level is key.

**Capacity building at DAFEO for FSEW.** The new role of DAFEO staff is closely linked to LEA. This implies that the FSEWs do not only need new competencies, but also the VES to be effective in their new role. If this is to be done in good quality within reasonable time, NAFES needs support in DAFEO capacity building and VES establishment from more actors than only LEAP.

**Input supply strategies – example rice seed.** I heard on one hand that quantities of the right seed is a problem, and on the other hand Thasano centre cannot sell all the seed it produces. Before designing strategies, it is important to be clear about the real situation with respect to supply and demand in each location. Which varieties farmers like to grow? Which price are farmers willing to pay for improved varieties? Do farmers know where what is available? Is there enough promotion/advertising of the seeds produced by the stations? etc. Regarding multiplication, it appears advisable to look in each location at different options and choose suitable ones (village producer groups, small-scale commercial seed entrepreneurs etc.). The VES and district levels can be involved in one way or the other.

**Institutionalisation of research-extension linkages.** Collaboration between institutions often functions fairly well on case by case on the basis of personal relations; however, collaboration must become systemic and institutionalised. The process initiated with this workshop and the action plans,

thus needs to go on to develop procedures and mechanisms which ensure that linkages continue to function also if people are changing.

**Financial sustainability.** A last point I would like to make: Many remarkable and highly useful things are being done and built up in Laos by the agricultural institutions and projects. However, there is a big question of sustainability as a consequence of the dependency on external funds: institutions and structures are built up with donor funds and it is questionable whether the Lao government will later be able to finance them all from its own resources. All over the world there are scores of examples of institutions and departments built up with donor money that collapsed when donors withdrew or changed their priorities. It appears absolutely essential that the Lao institutions as well as the donors carefully consider what to fund with external funds and what needs to be Lao funded without putting longer-term sustainability at risk.



## ANNEX I – WORKSHOP PROGRAMME

### Day 1: Tuesday, 1<sup>st</sup> November, 2005

Time	Content	Responsible person
8:00	Registration	Secretariat
8:30	Welcome and objectives of the workshop	Dr. Tienne
	Opening remarks and policy context	Vice-Minister
	Programme and announcements	Facilitator team
	Group photo	
9:15	<i>Break</i>	
9:45	Keynote address: “International experience of linking farmers, extension workers and researchers”	Elisabeth Katz, LBL
10:30	Presentation on: “Farmers’ needs are the link”	NAFES Extension System Unit (Somxay)
11:15	Presentation on: “The role of PAFO as a bridge between research and extension”	Head of PAFO (Saravane)
12:00	<i>Lunch</i>	
13:00	Informal walk and talk among the displays	
13:30	Presentation: “The seed multiplication station as a centre for both extension and applied research activities”	Thasano Station (Savannahet)
14:10	Presentation: “Farmers as the key to overcoming constraints in plant breeding”	Lao-IRRI Programme
14:50	<i>Break</i>	
15:10	Presentation: “The farming system approach as a methodology that brings together all stakeholders in the field”	Lao-CIAT Forage and Live-stock System Project
15:50	Presentation: “Improving access to information for all stakeholders in the agriculture knowledge system”	Information Management Division of NAFRI + LSUAFEP
16:30	Wrap up	Chair person
17:00	<i>Closing</i>	
18:00	<i>Dinner party at Angkham hotel</i>	

**Day 2: Wednesday, 2<sup>nd</sup> November, 2005**

Time	Content	Responsible person
8:00	Review of the day 1 activities + introduction of the group work	Facilitator
8:30	<p>Group work: "How can we bring research, extension and other stakeholders together to achieve government policy objectives?"</p> <p>Group 1: Enhance access to seed and other inputs</p> <p>Group 2: Livestock systems development</p> <p>Group 3: Information management</p> <p>Group 4: Setting research and extension agendas</p> <p>Group 5: Enhancing coordination between stakeholders in provinces</p> <p>Group 6: Enabling DAFEO staff to be effective in their new role as 'Farming Systems Extension Workers'</p> <p>Group 7: Mainstreaming participatory processes to ensure that agricultural innovations are more useful for the poor</p> <p>Group 8: Adapt education to new requirements of future researchers and extensionists</p>	Facilitator team
10:00	<i>Break</i>	
10:30	Continue discussion and prepare charts to summarize the results. Charts are put on display boards.	Facilitator team
12:30	<i>Lunch</i>	
13:15	Display of group work: Continue to walk and talk among the displays	
14:00	Plenary: Short presentation from each group about the most important points arising from discussion	
15:00	<i>Break</i>	
15:30	Panel discussion: The response from policy makers and Director Generals to the outputs of group work.	Panel: MAF, NAFES, NAFRI
16:00	Final comments from participants	
16:30	<i>Closing</i>	

## ANNEX II – GROUP WORK

### Group work instructions

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#### Organisation of group work:

Two facilitators are appointed, one Lao and one foreigner.

They guide the discussion process, manage time, ensure that notes are taken, and report the outcome.

#### Time:

8.30 – 12.30 (including a tea break around 10.00)

Have your flipcharts ready on display and be back on your seats in the main hall at 12.30 sharp!

Although this look like a long time for the group work (including tea), you will have to manage time well!

#### Discussion steps:

1. Getting started: identify the main relevant issues within the given topic.
2. Reviewing: for each issue, what are the strengths and weaknesses of the current situation?
3. Visioning: what should the future situation look like?
4. Brainstorming: what options are available for moving towards the desired future situation?
5. Prioritising: which three options are most important and offer most potential for concrete action in the next six months?
6. Action planning: what needs to be done to put each of the three selected options into practice? Who should do what, where, when and how? Who takes the lead?

#### Write up:

Write on a few flipcharts the main points discussed for each step, the three options selected, and the action plan.

Write legible! The writing should be readable from a distance of 3 m.

#### Reporting:

1hr walk and talk among the displayed group work outputs (after lunch 13.30-14.15).

5 min. presentation and no discussion in the afternoon (14.15-15.15). Point 1-4 should be presented with 1-2 sentences each, while you can expand a bit more on the three selected options and their action plans.

Your charts will be photographed and the photos displayed on the screen to support your presentation



## Detailed group work outputs

### Group 1 – Access to seed, other planting materials and inputs

Facilitation: Dr. Phoudalay Latvilayvong, Gary Jahn

The group concentrated on rice seed as a case which is of key importance in Laos.

#### *Strengths and weaknesses of the current situation*

STRENGTHS	WEAKNESSES
<b>Production/multiplication</b>	
<ul style="list-style-type: none"> <li>▪ Seed multiplication stations exist in every province</li> <li>▪ All important stakeholders – government, farmers and private enterprises – play a role in seed multiplication</li> <li>▪ HRC has technical know-how for rice, and HHRC has know-how for vegetable seed production</li> <li>▪ A range of appropriate varieties is available</li> <li>▪ Provision of vegetable seed to farmers including information (germination, origin, cultivation practices)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No mechanisms to estimate seed demand and plan production accordingly</li> <li>▪ Lack of funds for seed production</li> <li>▪ No seed certification process</li> <li>▪ No improved seed production techniques</li> <li>▪ Problems with quality and quantity</li> </ul>
<b>Strategy</b>	
<ul style="list-style-type: none"> <li>▪ 5 years master plan (does it include seed multiplication and distribution?)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No specific policy and plans on how to produce and distribute rice seed</li> <li>▪ No clear understanding of seed demand in different areas</li> <li>▪ No classification of seed production zones</li> </ul>
<b>Distribution</b>	
<ul style="list-style-type: none"> <li>▪ NAFRI can get seed to provincial stations and to farms for on-farm participatory variety trials</li> <li>▪ Existence of multiplication stations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Seeds do not get to farmers in remote areas</li> <li>▪ No seed producer groups</li> </ul>
<b>Coordination</b>	
<ul style="list-style-type: none"> <li>▪ NAFES and NAFRI have a desire to work together</li> <li>▪ In some areas – participatory variety selection for example – they do work together</li> <li>▪ Some fact sheets and handouts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Roles of government organisations (research and extension) and other actors in seed multiplication and distribution are not clear, e.g. who should be the main multipliers</li> <li>▪ Inadequate coordination between NAFRI, NAFES and DoA</li> <li>▪ Lack of monitoring and evaluation</li> </ul>
<b>Information</b>	
<ul style="list-style-type: none"> <li>▪ Existence of Lao Agricultural Database</li> </ul>	<ul style="list-style-type: none"> <li>▪ No mechanisms in place to know what farmers want (varieties, quality, quantity)</li> <li>▪ No active marketing/promotion of improved seed, particularly in remote areas</li> </ul>

**Action plan**

<b>ACTIVITIES</b>	<b>WHO</b>	<b>WHERE</b>	<b>WHEN</b>	<b>HOW</b>
Promote seed multiplication with farmers at village level	PAFO, ARC	Thasano Phonggam Vientiane	April 06 June 06 In process	With JICA seed funds
Develop (mobile?) seed quality control unit	DoA	Focus on provincial level	2006, as soon as project approved and funds available	Start with pilot project in Vientiane
Develop and test mechanisms for assessing seed demand  Gather data	ARC, PAFO, DAFEOs	Focus on district level	2006  &-12 months before each rice season	
Establish pilot farmer seed multiplication groups	ARC, DAFEO	Selected districts	2006	Identify interested household and build capacity

**Comments**

- Production groups should play a role in assessing seed demand of group members and communicate it to other stakeholders
- Is there sufficient understanding of which farmers want which varieties?
- How do farmers get to know what seed is available where?

## Group 2 – Improving animal husbandry systems

Facilitation: Viengsavanh Phimpachanhvongsod, Nivath Phanaphet

### *Strengths and weaknesses of the current situation*

STRENGTHS	WEAKNESSES	SOLUTIONS
<b>Animal breeds</b>		
<ul style="list-style-type: none"> <li>▪ Sources of traditional varieties</li> <li>▪ People are familiar with live-stock and fish production</li> </ul>	<ul style="list-style-type: none"> <li>▪ No strategy for breed develop-ment and expansion</li> <li>▪ Low investment in livestock</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strategic planning for animal breeding</li> <li>▪ Improve and build more centres for developing and multiplying animal breeds (incl. fish)</li> <li>▪ Develop livestock and fish breeds adapted to different eco-systems and socio-economic conditions</li> </ul>
<b>Livestock nutrition</b>		
<ul style="list-style-type: none"> <li>▪ Sources of natural feeds</li> <li>▪ People understand the use of production waste as feed</li> <li>▪ Govt has policies to promote feed production, and has learnt lessons from various projects</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inadequate management sys-tem for natural feed</li> <li>▪ Insufficient understanding of natural feed sources</li> <li>▪ Limited spread of forage use</li> </ul>	<ul style="list-style-type: none"> <li>▪ Study on possible natural feed sources</li> <li>▪ Expand and improve use of for-age</li> </ul>
<b>Animal health</b>		
<ul style="list-style-type: none"> <li>▪ Rules for livestock and fishery management exist</li> <li>▪ Suitable climate</li> </ul>	<ul style="list-style-type: none"> <li>▪ Insufficient supply of vaccines</li> <li>▪ Weak village level veterinarian network</li> <li>▪ Livestock registration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Devise improved animal hus-bandry systems</li> <li>▪ Further expand the implemen-tation of livestock and fishery rules, particularly livestock reg-istration</li> <li>▪ Expand and improve village veterinarian network</li> </ul>

### *Action plan*

ACTIVITIES	WHO	WHERE	WHEN	LEADER
Strategic plan for develop-ment of improved breeds	DLF, NAFRI, NAFES	DLF	6 months	DLF
Build more breeding stations and improve existing ones	NAFRI, NAFES	Across the country	After the workshop	NAFRI, NAFES and PAFO
Develop procedures to im-prove livestock and fish breed multiplication and dis-tribution	NAFRI, NAFES	Across the country	After the workshop	NAFRI, NAFES and PAFO

**Comments**

- Build diagnosis labs at provincial and central levels
- Build adequate capacity of veterinarians at each level to cope with various serious animal disease problems like bird flu, BSE etc.
- Expand service centres for vaccine supply to all parts of the country (Northern, middle and Southern parts)
- Animal feed storage is a problem, particularly to preserve feed during the dry season

### Group 3 – Information management

Facilitation: Khamphay Manivong, Bandith Ramangkoun, Michael Victor

#### Key issues

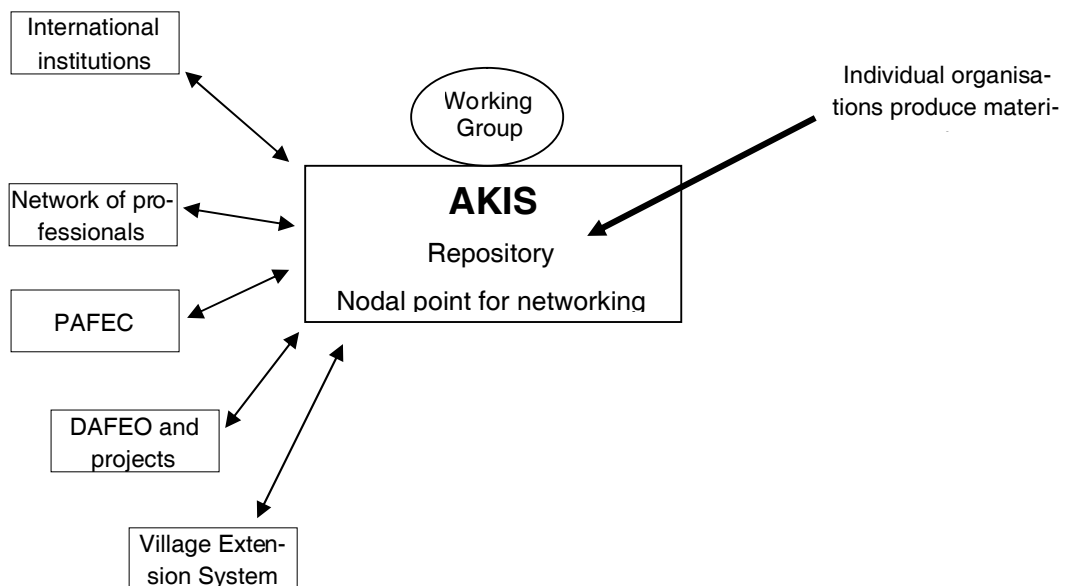
- There are many informal linkages but no formal linkages between institutions.
  - There are no policies and structures for information management within organisations and for sharing between organisations.
  - There are no assigned responsibilities for information management at different levels (national, provincial and district).
  - There is no operational system in place to share and exchange information within and between organisations.
- ⇒ There is a need to clarify roles.
- ⇒ It should be within the mandate of each organisation to manage information and communication.

#### Vision ⇒ the right information gets to the right people

#### Options for action

- Each organisation develops a strategy for information and communication management
- Produce an information map
- Identify a unit or people within each organisation to be responsible for information and communication management
- Establish a formal working group and networking system (comprised of individuals from option 3) to develop AKIS, AFKIS, AFLKIS ...
- Develop a policy to guide the operation of AKIS and linkages between organisations

#### AKIS structure and concept



**Action plan**

<b>OPTION</b>	<b>ACTION</b>	<b>WHO</b>	<b>WHEN</b>
Identify a unit or people within each organisation to be responsible for information and communication management	<ul style="list-style-type: none"> <li>▪ Nominate contact point or person</li> <li>▪ Formal letter from NAFES to each PAFEC and DAFEOs (in Priority Poverty Districts) to explain their information management responsibilities</li> </ul>	NAFRI, NAFES, MAF PAFEC, DAFEOs in PPDs	1 May 2006
Establish a formal working group and networking system (comprised of individuals from above) to develop AKIS, AFKIS, AFLKIS ...	<ul style="list-style-type: none"> <li>▪ Meeting between NAFRI and NAFES to clarify tasks, responsibilities and arrangements for improving information linkages</li> <li>▪ Assign people to working group</li> </ul>	NAFES (lead) NAFRI (support)	End of December 05
Produce an information map	<ul style="list-style-type: none"> <li>▪ Make an inventory of existing information sources</li> <li>▪ Compile information map</li> </ul>	Working group	End of May 06

## Group 4 – Setting the research and extension agendas

Facilitation: Silavanh Savathuong, Carl Mossberg

### ***Strengths and weaknesses of the current situation***

Attapue and Savannakhet province were taken as examples to assess the current situation:

<b>Attapue province</b>	<b>Savannakhet province</b>
<ul style="list-style-type: none"> <li>▪ Research activities are only carried out in the context of projects; there are no funds for other research</li> <li>▪ Transmission of information to, and feedback from, farmers is scattered and unsystematic</li> <li>▪ Coordination between institutions and projects is weak</li> </ul>	<ul style="list-style-type: none"> <li>▪ Thasano research centre has little connections to extension system, particularly to DAFEO</li> </ul>

### ***Vision for the future***

- PAFECs/PAFOs and DAFEOs have clearly defined roles in the collaboration between research, extension and farmers at village, district and province levels, and work according to these roles.
- NAFRI maintains a research centre for the Southern region, and a research network operates in all provinces.
- Extension workers work closely together with researchers and farmers in testing and experimenting in the farmers' fields.
- For Savannakhet: Thasano Centre cooperates with DAFEO to identify demonstration areas and expand farmer seed multiplication.

### ***Action plan***

<b>ACTIVITIES</b>	<b>WHO</b>	<b>WHEN</b>
Clarifying roles of PAFECs and DAFEOs in determining extension and research agendas/priorities	PAFO and projects	11/05 – 12/05
Identify knowledge and skills required for these roles	NAFES, NAFRI, PAFO	11/05 – 12/05
Plan TOT (research and extension planning at village and district level etc.)	NAFRI, NAFES, projects	12/05 – 6/06
Training DAFEO staff in research and extension planning (1:10)	PAFEC, DAFEO, projects	12/05 – 6/06
Assess existing research stations/centres in all provinces and determine gaps in order to build a research and extension network.	PAFO, NAFRI	11/05 – 12/05
Develop research and extension network	PAFO, NAFRI, NAFES	12/05 – 6/06

*Note that all the suggested activities do not have yet any budget for implementation!*

***Comments by non-group members***

- Is it possible to further change the roles of PAFECs and DAFEOs, just after their new roles have been approved?
- Human resource issues should be added to the difficulties, not only the lacking budget.
- Research and extension must link also to the commercial sector and private entrepreneurs in order to ensure that farmers can sell their products well.
- The agenda setting process must involve not only government institutions but also farmers and the private sector.



**Group 5 – Improving planning and coordination among all stakeholders in provinces**

Facilitation: Dr. Tienne Vannasouk, Charles Alton

**Current situation**

- Roles, mandates and working approaches of PAFO and PAFEC need to be reviewed
- Planning at province level needs to be more relevant to local situation
- Technical information should be coordinated/exchanged before doing extension

**Solutions:**

- Continue to identify and disseminate priorities
- Regularly and systematically check and monitor implementation
- Clearly define tasks within the sector

**Action plan**

1. To send staff to work with development village groups in preparing plans
2. Provincial annual plan must address farmers needs
3. To establish information coordination system between R&E before applying in the production or possibly to establish advising committee to define technology.
4. To organize seminar to disseminate roles and mandates DAFEO

No	Activities	Nov 05	Dec 05	Jan 06	Feb 06	Mar 06	Apr 06
1	Staff go to field						
2	Prepare annual plan						
3	Establish R&E coordination						
4	Dissemination seminar						

**Comments**

- There should be a research unit for NAFRI in each PAFO
- Need to have a training team, equipped with necessary training facilities at district level
- Shift projects (staff, budget, vehicle, equipment) to District level to strengthen the production

## **Group 6 – Enable DAFEO staff to work effectively as FSEW**

Facilitation: Somxay Sisanonh, Andrea Schroeter

### ***Weaknesses in current personnel and working situation***

- Staff quantity and quality (too many staff but lack of adequately qualified ones)
- Inappropriate working facilities (vehicles, budget, rules and regulation, TOR)
- Inappropriate reward system for extensionists
- Field work is limited
- Lack of tools, aids and materials for and on extension
- Extension activities focus only on project target groups
- Inadequate analysis of farmers' situation and needs, and prioritisation of extension activities at village level
- Inadequate research and extension collaboration methods, resulting in limited participation
- Lessons learnt and insights gained are not shared and spread
- Agriculture development at village level still heavily depends on external assistance and is not linked or relevant to the village potentials

### ***Ways towards improvement***

- Review knowledge/skills of DAFEO staff
- Improve DAFEO structure and send staff to the field
- Make the new roles and mandates of DAFEO widely known and understood
- Spread LEA fast and on a large scale
- Create provincial and district training teams in order to carry out extension effectively
- Establish coordination mechanism to allow better participation in research and extension at all levels (central, provincial, district, village)
- Establish system to monitor and evaluate the research and extension results at district level
- Develop wide range of extension tools and aids to serve villagers
- Make the government/party policy more relevant to staff

### ***Priority actions (to be initiated latest until June 06)***

1. Train the trainers on FSEW intensively (PAFEC), disseminate LEA, support PAFEC and PAFO in the adaptation and development of extension tools, aids and materials
2. Establish mechanisms to enable PAFO to coordinate to encourage higher participation in extension, including monitoring and evaluation
3. PAFO to make sure that the DAFEO's new roles and mandates are widely known and understood

	Jan 06	Feb 06	March 06	April 06	May 06
NAFES disseminate LEA to department, provincial centre, projects to build capacity of extensionists		Planning			
		Training of provincial trainers, extension approaches (NAFES with existing projects)			
In "LEAP provinces" trainers from PAFEC work with DAFEO					
		To be done by PAFEC in collaboration with existing projects			

**Comments**

- Train DAFEO staff in PID (Participatory Innovation Development), VDP (Village Development Planning), and FFS (Farmer Field School) so that they are able to assist in preparing village development plans, exploring innovations and facilitate Farmer Field Schools.
- Improve coordination mechanisms between PAFES, DAFEO and other stakeholders so that extension reaches villages and farmers.

## **Group 7 – Enhancing opportunities for the poor**

Facilitation: Bong Mieunxayaphom, John Connell

### ***Current situation regarding R&E results that are useful for the poor***

- Problems of the poor and opportunities for them are not well understood
- Inappropriate technologies are promoted
- Unclear roles of different actors and consequently unclear coordination
- Budget constraints
- Inadequate dissemination approaches, particularly for complex innovation

### ***Ways forward***

- Increase farmers' participation so that they can continue the activities later on
- Extension system must be continuous and related to the market
- Extensionists must go to the field and work closely and effectively with the poor farmers ( through introducing techniques and methods)
- We must study and research the needs of the villagers in the area, the natural potentials in the area and use the local materials
- We must carry out activities in one area to demonstrate to other areas
- Extensionists must go for field visit and take the lead
- Extension system and staff skills must be strengthened
- Consult and formulate plan together with villagers – provide training – lead the work
- Innovations should be appropriate to local situation
- Study the way to apply the technology
- Study the market/distribution channel, needs
- Research must match reality
- Extension system must be strong

Q. How to increase the important role of the participatory development process at the provincial and district level in order to ensure that the changes are useful for the farmers? A. Good extension must start from the interest of the farmers. Problems must be thoroughly analyzed. Only things that are useful should be promoted

Q. How to make research relevant to farmers? A. The research should not be centralized, but carried out together with farmers and extensionists in different areas, following local conditions.

Q. How can extension really reach farmers? A. The Ministry should shift the projects to the district level in order to channel resources to extensionists (vehicles, budget)

**What to do next?**

Research which benefits the poor	Extension methodology	Coordination Marketing
Identify constraints and needs of the target group	Participatory assessment by extension institution and target group	
Identify options for solutions from the many available innovations	Consider local potentials, environment, capacity of target group	
Conduct local adaptive trials	Group formation From small to big scale	
Monitoring and evaluation		

**Action plan**

<b>Where</b>	Priority 2 to 4 villages
<b>When</b>	Starting January 2006
<b>Who takes the lead?</b>	PAFO, NAFES, NAFRI, PAFEC, DAFEO
<b>Inputs</b>	Budget 10 to 20 mil. Kip Staff Training Commitment of staff

**Comments by other participants**

- The poor still do not know the problem in developing themselves
- The identified technical innovations must be considered as a production system. The farming system is not only for the model families.
- Establish Village Extension Workers to liaise and cooperate with Farmer System Extension Workers

**Group 8 – Adapting competencies of future researchers/extensionists to new needs**

Facilitation: Thongphan Kusonsavath, Joost Fobbes

**Problems**

1. Lack of coordination between educational institutions with NAFES and NAFRI and other projects (different information)
2. Educational institutions do not have the same organizational situation (different organizations follow different ways of working)
3. Education curriculum does not match research and extension approaches
4. The activities to raise the awareness and the interest of the young generation on agriculture-forestry related occupation are limited.
5. Teacher’s competencies and skills are still limited
6. The education does not match the labour market
7. Educational facilities are not sufficient

**Strength**

All organizations have made big efforts to improve themselves.

**Vision**

The next generations of rural development workers have acquired competencies that are in line with the requirements of the new approaches so that they can effectively work in the field of agriculture and forestry.

**Priorities**

Priority 1: problem 3

Priority 2: problem 5

Priority 3: problem 4

**Action plan**

No	Activities	Time						Responsibilities	Location
		12	1	2	3	4	5		
1	Organize joint planning workshop		■					NAFRI, NAFES	VTE
2	TNA (identification of new skill and knowledge needs)	■	■	■	■			Educational institution	All provinces
3	Adapt current curricula				■			NAFRI, NAFES, SNV, college, NUOL	VTE
4	Identify research topics for students	■	■	■				NAFES, NAFRI, SNV, college, NUOL	VTE
5	Implement joint research		■	■	■	■	■	NAFRI, NAFES, NUOL	VTE

## **Guidelines for walk and talk among the group output displays**

1. At least one Lao and one English speaking group member has to be present at the own display at any time as discussion partners for visitors.
2. The others can walk around freely from display to display.
3. Look at the outputs of the groups, discuss with the group members who are present.
4. Write up your thoughts, remarks and additional ideas on one of the empty sheets available at the display, to complement the output of the respective group.
5. You are encouraged also to write if you disagree with something, or if you think something is unrealistic.
6. At the end of the display time the group facilitators or presenter checks if there are very important remarks and adds these to the presentation.

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