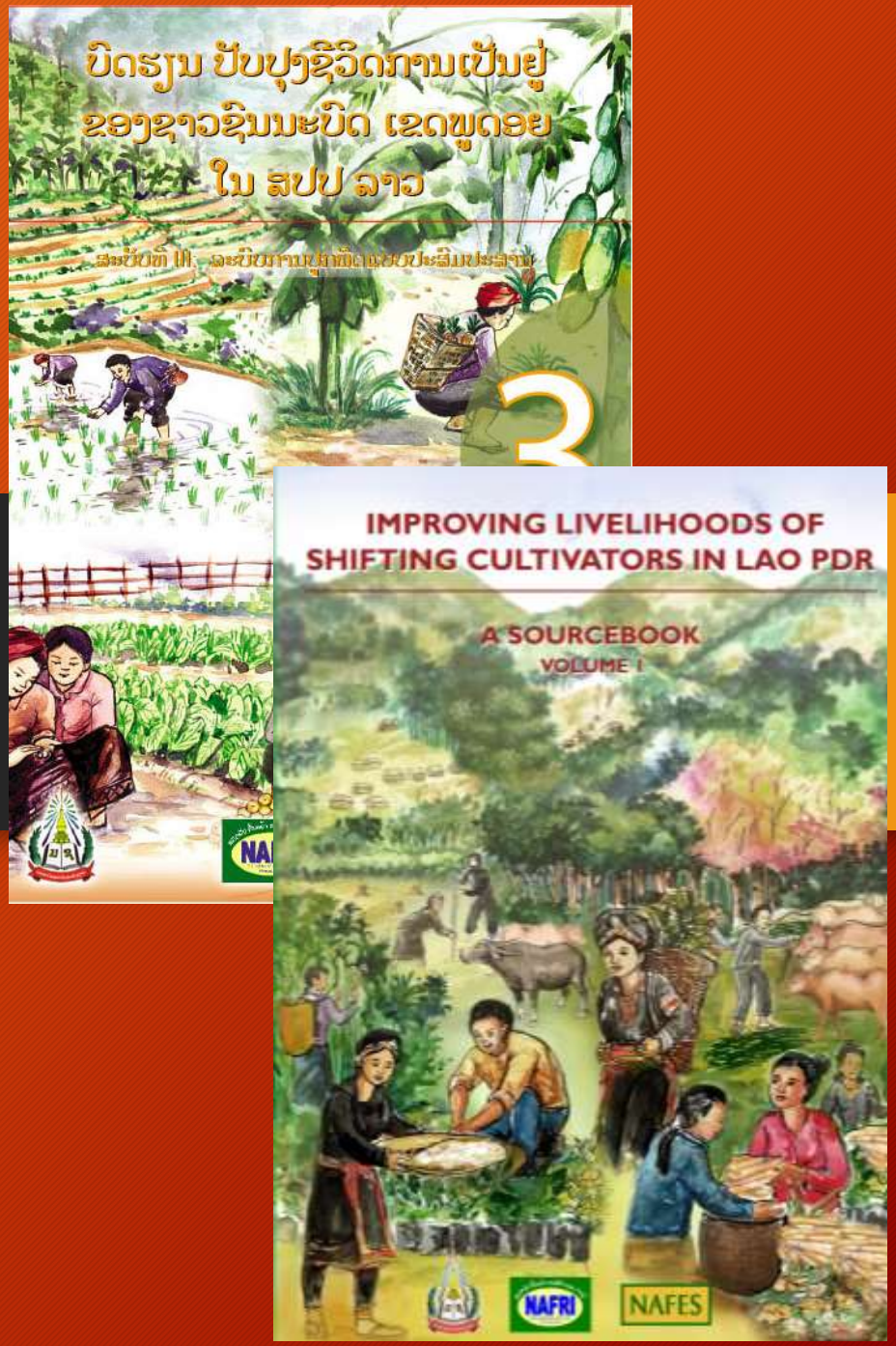

A LONG TIME AGO
IN A GALAXY FAR,
FAR AWAY.....

Developing materials for learning & extension: The Lao Uplands Sourcebook



Presented by Michael Victor
June 13, 2017
ALISEA workshop on

Review of Existing Pedagogical Materials and Initiatives for Mainstreaming AE Practices in Laos

Background

- ***Challenge***: To make research results and past experiences in uplands resource management available to field workers, students and others.
- ***Proposed solution***: Develop process to produce materials which could
  1. provide a menu of choices for those working in the uplands
  2. Bring key actors together to produce joint materials on a continual basis (NAFRI, NAFES, NUOL).

What is the sourcebook

- 72 articles on best practices, methods & tools in Uplands A&NRM
- Balance of concepts, frameworks, principles, approaches, strategies ***as well as*** technology options.
- Build on existing knowledge, proven and field-tested ideas
- Condensed from other sources:
  - Articles are shortened to draw attention to the key messages
  - “Science is simplified and broken into easily understood information
  - Articles are richly illustrated and attractively desktop published.

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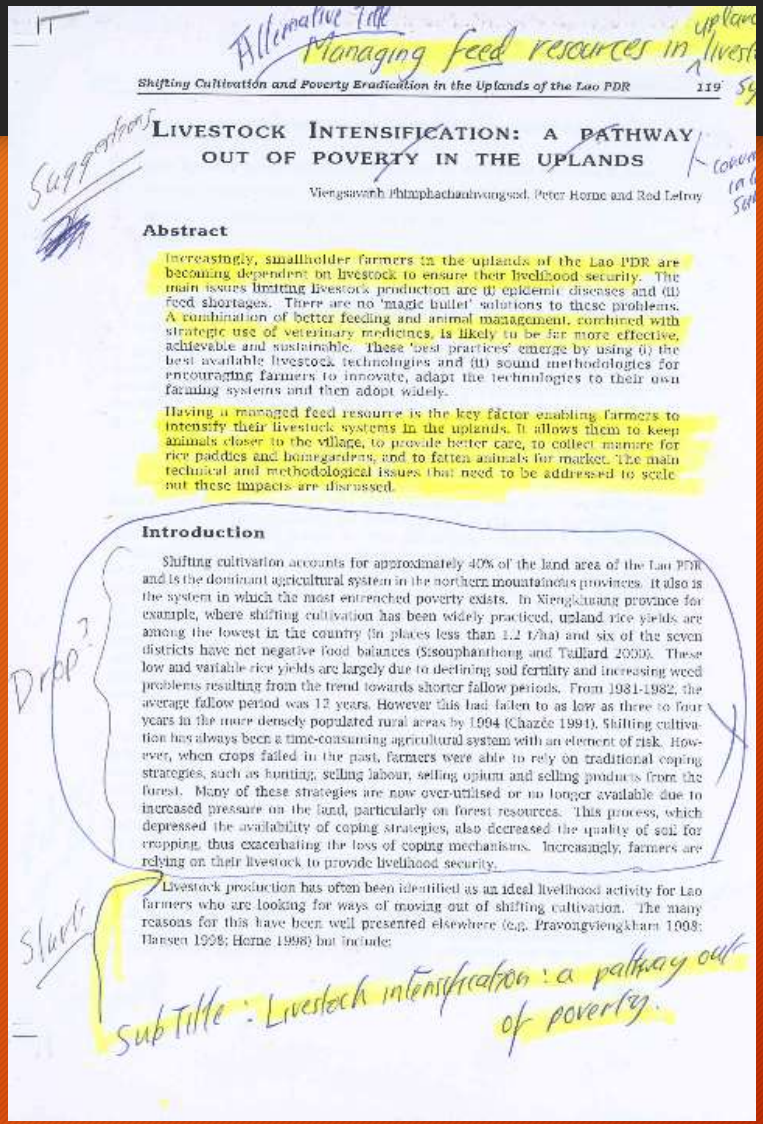


Livestock Intensification: A Pathway Out of Poverty in the Uplands

Viengsavanh Phimphachanhvongsod, Peter Horne and Rod Lefroy

Abstract

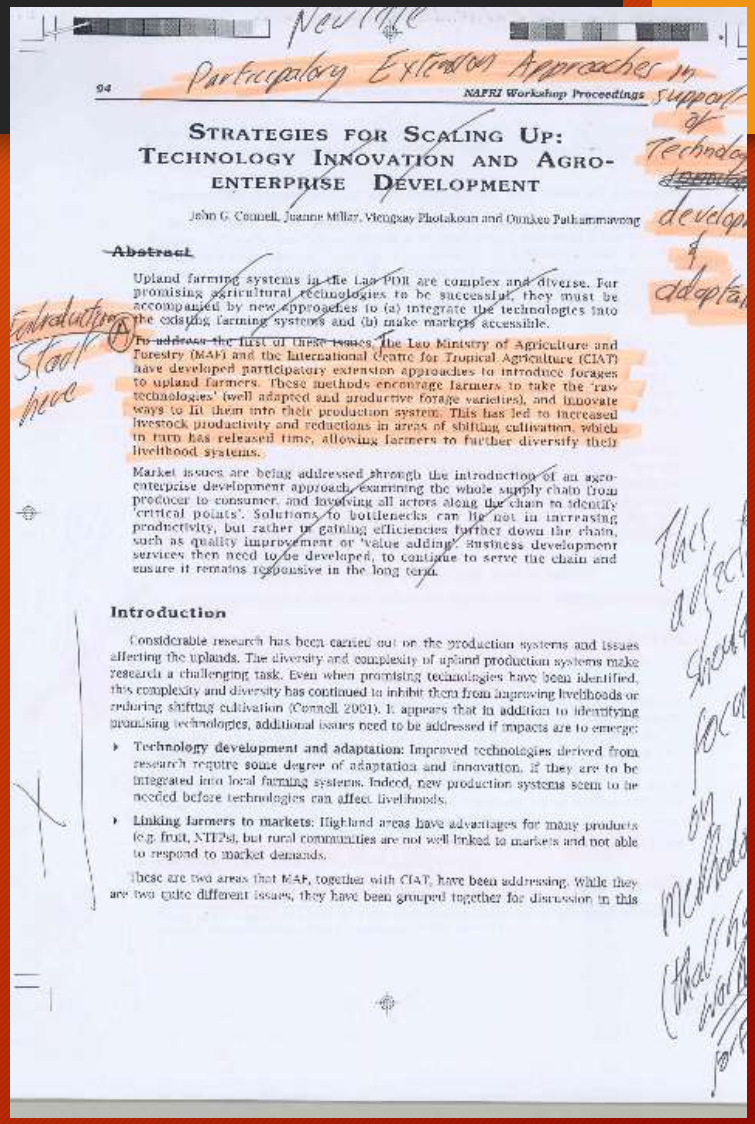
Increasingly, smallholder farmers in the uplands of the Lao PDR are becoming dependent on livestock to ensure their livelihood security. The main issues limiting livestock production are (i) epidemic diseases and (ii) feed shortages. There are no 'magic bullet' solutions to these problems. A combination of better feeding and animal management, combined with strategic use of veterinary medicines, is likely to be far more effective, achievable and sustainable. These 'best practices' emerge by using (i) the best available livestock technologies and (ii) sound methodologies for encouraging farmers to innovate, adapt the technologies to their own farming systems and then adopt widely.

Having a managed feed resource is the key factor enabling farmers to intensify their livestock systems in the uplands. It allows them to keep animals closer to the village, to provide better care, to collect manure for rice paddies and homegardens, and to fatten animals for market. The main technical and methodological issues that need to be addressed to scale out these impacts are discussed.

Introduction

Shifting cultivation accounts for approximately 40% of the land area of the Lao PDR and is the dominant agricultural system in the northern mountainous provinces. It also is the system in which the most entrenched poverty exists. In Xiengkhuang province for example, where shifting cultivation has been widely practiced, upland rice yields are among the lowest in the country (in places less than 1.2 t/ha) and six of the seven districts have net negative food balances (Sisouphanthong and Taillard 2000). These low and variable rice yields are largely due to declining soil fertility and increasing weed problems resulting from the trend towards shorter fallow periods. From 1981-1982, the average fallow period was 12 years. However this had fallen to as low as three to four years in the more densely populated rural areas by 1994 (Chazée 1994). Shifting cultivation has always been a time-consuming agricultural system with an element of risk. However, when crops failed in the past, farmers were able to rely on traditional coping strategies, such as hunting, selling labour, selling opium and selling products from the forest. Many of these strategies are now over-utilised or no longer available due to increased pressure on the land, particularly on forest resources. This process, which depressed the availability of coping strategies, also decreased the quality of soil for cropping, thus exacerbating the loss of coping mechanisms. Increasingly, farmers are relying on their livestock to provide livelihood security.

Livestock production has often been identified as an ideal livelihood activity for Lao farmers who are looking for ways of moving out of shifting cultivation. The many reasons for this have been well presented elsewhere (e.g. Pravongviengkham 1998; Hansen 1998; Horne 1998) but include:



Strategies for Scaling Up: Technology Innovation and Agro-enterprise Development

John G. Connell, Joanne Millar, Viengxay Photakoun and Ounkeo Pathammavong

Abstract

Upland farming systems in the Lao PDR are complex and diverse. For promising agricultural technologies to be successful, they must be accompanied by new approaches to (a) integrate the technologies into the existing farming systems and (b) make markets accessible.

To address the first of these issues, the Lao Ministry of Agriculture and Forestry (MAF) and the International Centre for Tropical Agriculture (CIAT) have developed participatory extension approaches to introduce forages to upland farmers. These methods encourage farmers to take the 'raw technologies' (well adapted and productive forage varieties), and innovate ways to fit them into their production system. This has led to increased livestock productivity and reductions in areas of shifting cultivation, which in turn has released time, allowing farmers to further diversify their livelihood systems.

Market issues are being addressed through the introduction of an agro-enterprise development approach, examining the whole supply chain from producer to consumer, and involving all actors along the chain to identify 'critical points'. Solutions to bottlenecks can lie not in increasing productivity, but rather in gaining efficiencies further down the chain, such as quality improvement or 'value adding'. Business development services then need to be developed, to continue to serve the chain and ensure it remains responsive in the long term.

Introduction

Considerable research has been carried out on the production systems and issues affecting the uplands. The diversity and complexity of upland production systems make research a challenging task. Even when promising technologies have been identified, this complexity and diversity has continued to inhibit them from improving livelihoods or reducing shifting cultivation (Connell 2001). It appears that in addition to identifying promising technologies, additional issues need to be addressed if impacts are to emerge:

- **Technology development and adaptation:** Improved technologies derived from research require some degree of adaptation and innovation, if they are to be integrated into local farming systems. Indeed, new production systems seem to be needed before technologies can affect livelihoods.
- **Linking farmers to markets:** Highland areas have advantages for many products (e.g. fruit, NTFPs), but rural communities are not well linked to markets and not able to respond to market demands.

These are two areas that MAF, together with CIAT, have been addressing. While they are two quite different issues, they have been grouped together for discussion in this

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Shifting Cultivation: The PHUNOY Traditional Management System

Properly managed swidden systems can lead to a balanced and productive environment. When traditional fallow periods are kept, forest regenerates into a harvestable resource.

Shifting cultivation is often described as 'traditional', inflexible and outdated, in contrast with 'modern', mechanised and chemical agriculture. That belief overlooks farmer know-how, which is accumulated over generations to exploit natural resources while adapting itself to the physical, social and economic environment. Research conducted in Phongsaly provides an idea about how complex and consistent a slash-and-burn farming system can be and how farmers optimise family labour but also limit their risks.

Stage 4: Village land use plans

Conduct staff and villager awareness training on the definition, objectives and activities in forest and agricultural land use planning. With support from extension staff, review and use existing village forest and agricultural land management agreements to help prepare initial forest land use zone agreements and define appropriate agricultural land use classes for a variety of locations. Select and demonstrate with participating families suitable land use options based on the above. Year end monitoring should be undertaken in order to facilitate planning and expansion of demonstration activities prior to adopting on going land use plans.

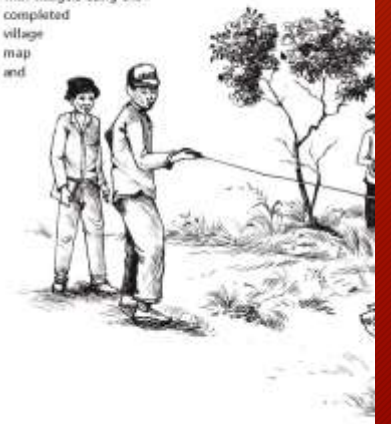
Stage 5: Forest and agricultural land allocation

Use the land use zoning map prepared in stage 2 to discuss land use management with Villagers. It is important to reach agreement on appropriate land uses for each of the land use zones. It will then be necessary to conduct a village meeting to verify land ownership and review land claims before allocating agricultural land.

Stage 6: Field Measurement of Agricultural Land Locate and measure agricultural fields and record information concerning land use. Use survey forms to record land condition, soil type, slope and proposed land use. It is then necessary to mark and identify the location of each agricultural plot measured on a 1:10,000, 1:5,000 or 1:2,000 field maps.

Stage 7: Preparing agricultural and forestry agreements and transferring rights to villagers

Initially, prepare temporary agricultural land transfer form and contracts for each family (these are intended to be transferred to permanent certificates after three years however, this process is in need of review). Using data from stage 6 verify correctness, confirm forest and agricultural land use zones with villagers using the completed village map and



Diversity of Contributions and topics

- More than 20 organizations contributed articles
- A range of topics:
  - Uplands Policies
  - Food security
  - Land management practices
  - Marketing approaches
  - Farming Systems
  - Livestock & fisheries
  - Forestry
  - Cross-cutting issues

Layout and Design

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This book is truly the sum of its parts, and we would like to thank all the organizations which contributed to the sourcebook with ideas, suggestions and articles.

UNITED NATIONS
Office on Drugs and Crime
Lao PDR

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Artwork brings out key messages and concepts

How used

- Sourcebook used for following purposes:
  - Developing posters for community based learning extension
  - Design of projects
  - Inspiration for implementation by projects and NGOs
  - Case studies and learning to supplement curriculum at NUOL faculties and Pakseuang college
  - Teaching english at Vientiane College

Use in Teaching/learning

- Sourcebook is a complementary resource for teaching
- Provides contextual case studies, methods, tools and good practices to complement more theory based curricula
- Used by teachers to help provide examples and learning

Lessons learned

- This sourcebook served as prototype both for deriving secondary products as well as how research-extension-education collaboration can be done in the future.
  - Contributed to better coordination with NAFES-NAFRI and develop of user centered materials.
  - SCV/CA project used similar ideas
- Co-design a bit lacking in the type of product – should have had earlier discussions with NUOL and NAFES on types of products that could be produced
- Wealth of secondary materials to repackage
  - Number of experiences not documented previously demonstrate possibility to use writing workshop for next “sourcebook”
- Did no M&E/impact assessment of the Sourcebook