

TRADE DEVELOPMENT FACILITY
*SCOPING STUDY ON TRADE, FOOD PRODUCTION, AND
SERVICE SECTOR LINKAGES IN LUANG PRABANG*

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Preface

The *Scoping Study on Trade, Food Production, and Service Sector Linkages in Luang Prabang* was financed by the Trade Development Facility, a multi-donor trust fund to support trade and investment, and the Lao Ministry of Industry and Commerce, and administered by the World Bank. The Study was undertaken by Anthony M. Zola, a consultant to the World Bank in February and March 2011.

The Scoping Study presents a description of the current situation related to food production, food trade, and food safety in Luang Prabang Province and the importing of food products from neighboring countries. The reader is advised that the momentum of development of tourism and investments in the hospitality industry in Luang Prabang Province is highly dynamic and is changing almost daily. Thus, the report captures the situation as it existed during the first half of 2011.

The mission received significant support from the World Bank Mission in Vientiane, Lao PDR, the Trade Promotion and Product Development Department, Ministry of Industry and Commerce, and provincial and district officials in Luang Prabang Province. Numerous chefs, hotel and restaurant managers, food traders and representatives of the business community in Luang Prabang also were very generous with their time. Administrative arrangements, travel logistics, and appointments with the numerous people contacted in the course of the assignment were all handled with expertise by the staff at the World Bank Mission, Trade Promotion and Product Development Department, and the Provincial Industry and Commerce Office. The author wishes to express his sincere appreciation to everyone involved throughout the mission.

Anthony M. Zola
Vientiane
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Table of Contents

	Page
Preface	2
Maps of Lao PDR, Luang Prabang Province, Luang Prabang City, Border Crossings in Northern Lao PDR	3
List of Abbreviations, Acronyms, and Conversion Rates	5
Executive Summary	6
1. Introduction	10
2. Methodology	10
3. Market opportunities	12
3.1 Tourism	13
3.2 Growing urban middle-class populations and changing food preferences in Luang Prabang, in Lao PDR, and the GMS	15
3.3 Foreign residents and workers	16
3.4 Expansion of domestic and regional food supply companies	16
3.5 Potential growth of the regional and international markets for safe and environmentally friendly food and organic food products	17
4. Sources of food products in Luang Prabang	19
4.1 Food supply models in Luang Prabang	20
5. Challenges and key constraints	24
5.1 Agricultural production constraints	24
5.2 Vegetable marketing issues	26
5.3 Food quality issues	27
5.4 Institutional capacity	29
5.5 Logistics	30
6. Proposed solutions	31
6.1 Agricultural production	31
6.2 Coordination recommendations	33
6.3 Technical recommendations	33
List of Annexes	
Annex 1: Terms of Reference	36
Annex 2: Itineraries for field visits to Luang Prabang, February and March 2011	42
Annex 3: List of persons and organizations met	48
Annex 4: Comments from a focus group consultation with food industry practitioners	51
Annex 5: Proposed project concept	52
Annex 6: List of references	63
Annex 7: Legal and regulatory framework for food safety in Lao PDR	65
List of Diagrams	
Diagram 1: Éléphant Food Supply Model	20
Diagram 2: Living Land Model	21
Diagram 3: Classical food supply model	23
List of Tables	
Table 1: Provinces with more than 200,000 visitors in 2009	13
Table 2: Partial list of quality hotel and restaurant food outlets in Luang Prabang	14
Table 3: Partial list of international food suppliers serving food outlets in Luang Prabang and types of food products supplied	17
Table 4: Partial list of sources of principal food products for food outlets in Luang Prabang	22
Table 5: Partial list of villages that produce vegetables for sale the year-round for the Luang Prabang market	23
Table 6: Indicative list of food products imported that could be produced in Luang Prabang	27
Table 7: Indicative list of vegetables brought to Luang Prabang from other provinces	27

List of Abbreviations, Acronyms, and Conversion Rates

ADB	:	Asian Development Bank
AFD	:	Agence Française de Développement
AFTA	:	ASEAN Free Trade Area
APB	:	Agriculture Promotion Bank
ASEAN	:	Association of Southeast Asian Nations
CMU	:	Chiangmai University
DAFO	:	District agriculture and forestry office
DICO	:	District industry and commerce office
FAO	:	Food and Agriculture Organization of the United Nations
FY	:	Fiscal year (1 October to 30 September)
GIZ/GTZ	:	German technical cooperation agency
GOL	:	Government of Lao PDR
IPM	:	Integrated Pest Management
ITC	:	International Trade Centre
MAF	:	Ministry of Agriculture and Forestry
MOIC	:	Ministry of Industry and Commerce
MOU	:	Memorandum of understanding
NAFES	:	National Agriculture and Forestry Extension Service
NAFReC	:	Northern Agriculture and Forestry Research Center
NAFRI	:	National Agriculture and Forestry Research Institute
NTFP	:	Non-timber forest products
PAFO	:	Provincial agriculture and forestry office
PICO	:	Provincial industry and commerce office
SME	:	Small- and medium-scale enterprise
SPS	:	Sanitary and phyto-sanitary
SU	:	Souphanouvong University
TDF	:	Trade Development Facility
TICA	:	Thailand International Cooperation Agency
TOR	:	Terms of reference
TPPD	:	Trade Promotion and Product Development Department
UNCTAD	:	United Nations Conference on Trade and Development
UNIDO	:	United Nations Industrial Development Organization
US\$:	United States dollar
WTO	:	World Trade Organization

Conversion Rates

April 2011

8 000 Lao kip = US\$1.00
265 Lao kip = 1.00 Thai baht

Executive Summary

The Scoping Study on Trade, Food Production, and Service Sector Linkages in Luang Prabang was undertaken to better understand the food supply system serving retail food outlets in Luang Prabang. The Study identifies strengths and weaknesses of the current system as well as opportunities for smallholder producers to gain access to food trade expansion and to benefit from increased and more diversified vegetable production. Research for the Study was undertaken during a series of visits to Luang Prabang between February and July 2011. Leadership for the Study was provided by the Ministry of Industry and Commerce and the Trade Promotion and Product Development Department with support from the Trade Development Facility administered by the World Bank.

The tourism industry in Lao PDR, and particularly in Luang Prabang, has grown rapidly and relatively consistently along with the gross domestic product (GDP) in recent years. Since 2000, the LNTA estimates that the number of tourists has increased about 20 percent annually. From 1.7 million overseas visitors in 2008, the industry aims for targets of 3.4 million overseas visitors in 2015, and 4 million by 2020. The Lao National Tourism Authority emphasizes the potential of further expanding eco-tourism in addition to cultural, natural, and historical tourism.

Opportunities for trade expansion

The demand for clean and safe food products in Luang Prabang, particularly for vegetables, is increasing rapidly. Tourism arrivals reached 350,000 in 2010, while the number of students, foreign residents and workers, similarly continues to increase. The growth of tourism in Luang Prabang is particularly evident at the premium end of the market. Several new first class hotels and fine dining restaurants are opening each year, each with an expectation that a local supply of high quality, clean, and safe food is available to feed well-healed traveled and demanding guests.

Luang Prabang hotel and restaurant managers and chefs reported that currently only about one-third of the vegetables consumed are supplied from local sources. The balance is imported from outside the province or neighboring countries. They generally preferred to purchase more food products locally, particularly vegetables, if quality and safety can be verified. Most chefs are willing to pay more for local food products that have been inspected and verified as safe. Due to deficiencies in supplies of vegetables from local sources, a network of local food wholesalers and food supply companies has emerged, with agents in Luang Prabang, Vientiane, and Chiangmai and Nongkhai, Thailand that respond to the requirements of Luang Prabang retail food outlets.

A young, upwardly mobile, and urbanized middle class with diverse taste preferences is influencing consumer demand in Luang Prabang and throughout the Greater Mekong Subregion (GMS). This factor, combined with expanding sub-regional trade and tourism, provides an opportunity for vegetable farmers in Luang Prabang and elsewhere in northern Laos to increase production and sales of clean quality vegetables.

At the same time, commercial liberalization measures increasingly are obstructed by technical and non-tariff barriers to trade. Without the sub-regional harmonization of food safety procedures, sanitary and phytosanitary measures, and good agriculture practices, increases in exports of Lao food products will be seriously constrained.

Current status of vegetable production and marketing in Luang Prabang

In the long-term and with the appropriate incentives, vegetable producers in Luang Prabang and elsewhere in northern Laos should be able to meet the current local demand for clean and safe quality food products and export any surplus. The opportunity exists to transport surplus food products to profitable markets in Vientiane and to

export to neighboring GMS countries, which includes China. Current urban and peri-urban vegetable production in Luang Prabang can be categorized into three supply models: (i) a self-supply model, with a garden being operated by the food outlet itself, which is the case with the Éléphant gardens; (ii) a specialized farm model, producing high quality organic vegetables for mini-marts and local food outlets, represented by the Living Land Company farm; and, (iii) a more traditional food supply model that includes producers, middlemen, transporters, wholesalers, retailers, and consumers, which operates from Luang Prabang's Phosy fresh market.

Numerous farm families in more than one dozen villages and are engaged either part-time or full-time in vegetable production in Luang Prabang Province. Approximately 14 villages in Luang Prabang District; two villages in Xieng Ngeun District; one village in Chomphet District; and, at least two villages in Nam Bak District are the principal vegetable producing areas in the province. Vegetables from these villages are marketed through middlemen and transporters that serve Luang Prabang's Phosy fresh market. A surplus of vegetables is produced during the cool season, driving down prices in the fresh market. During the wet season, when vegetable cultivation is significantly more difficult, prices are driven up because of a shortage of many vegetables. This volatile situation drives many hotel managers and restaurant chefs to depend on a continuous and stable supply of imported vegetables.

Challenges and key constraints

Farming in lowland areas and shifting cultivation in upland areas are dominated by natural farming practices that conform to seasonal climate variations and traditional techniques. But, as a result of low productivity, profit margins are not attractive. Vegetable production is affected by pests, degraded soils, and labor shortages. Urban encroachment and loss of land to expanding tourism facilities and housing development reduces the availability of land for peri-urban agriculture.

Agricultural research, extension, and development institutions in Luang Prabang Province have minimal experience in the systematic and continuous management of a vegetable supply chain for clean and organic produce. Agricultural research and extension technicians are not trained in systematized food supply systems or science-based food inspection procedures, processes, and protocols that guarantee that vegetables are quality products. PAFO lacks the institutional capacity to provide plant protection and inspection services and technical analysis for food safety. Nor is food safety or plant protection included in the current provincial agricultural development plan. This highlights a gap between MAF's national agricultural development strategy and policy implementation at the provincial and district level. At the same time, no national program provides a point of reference for clean food production. There is little understanding of clean production standards among concerned provincial government offices.

Similarly, local communities have no knowledge of community certification of clean and organic vegetables. The pricing of vegetables certified as being safe and organic requires a differentiated price structure. Without a price incentive, farmers will not be motivated to organize farmer producer and marketing groups to produce clean high quality products.

Premium food outlets in Luang Prabang have serious difficulty identifying dependable local sources of food products. Producers are scattered and vegetable suppliers and market traders are wholly dependent on middlemen-transporters who act as collectors to purchase from villages. There is no area of Luang Prabang Province currently producing a critical mass of safe or organic vegetables.

The Provincial Department of Health Office is institutionally weak and ill-equipped to test for residual chemicals in vegetables. It lacks the human resources and necessary equipment and facilities to provide the necessary inspections to ensure food safety for domestic consumption and credible diagnostic analysis for export markets.

Although Souphanouvong University (SU) has eight well-equipped science laboratories, none currently is dedicated to food science. Although the diagnostic laboratory equipment at SU is modern and new, it is mostly unused. There are no laboratory administrators or any plans to train any. SU lacks the human and capital resources required to provide food safety verification services. The low level of awareness among concerned faculty and lack of hands-on experience hinders any clean production outreach program.

Although Luang Prabang has frequent air services to and from Vientiane and other cities in the GMS, because of high transaction costs they are not frequently utilized by food suppliers.

Current plans

Provincial authorities have few plans to promote the production of clean and safe food for local consumption. PAFO has plans to expand organic vegetable production in the Nam Thouam area using resources based at the local agriculture center. They propose having agriculture technicians trained at the Éléphant garden.

Several SU faculty and staff are being trained at Korean and Thai universities in administration, curriculum development, and research. Food and plant scientists currently are being trained at the PhD level at Chiangmai University in Thailand. SU has plans to consolidate some of the eight laboratories to make space for a diagnostic food analysis laboratory for use by researchers. Provincial authorities are eager to use SU facilities to support a food safety program in Luang Prabang Province.

Food suppliers and hotel and restaurant managers and chefs agree that food safety and distribution in Luang Prabang would benefit considerably from a central food distribution and handling center. Any such center should include facilities for grading, sorting, and packing as well as refrigeration.

Recommendations

PICO should initiate a 'Safe Food from Luang Prabang' (LP Safe) campaign. The campaign should be endorsed by the provincial government and include participation by stakeholders from the local business sector (specifically hotel and restaurant managers and chefs), as well as representatives from producer organizations and food suppliers. The 'Safe Food from Luang Prabang' campaign would launch a brand name for vegetables produced in Luang Prabang Province with an appropriate logo (e.g., LP Safe).

The diagnostic equipment at SU's food science laboratory should be used to establish a science-based safe food technical (clean production) center. The center should focus initially on verifying community certification programs for clean and organic vegetables and providing technical backstopping for the 'LP Safe' brand. This center could later serve as a focal point for verifying clean production for the northern region thereby contributing to sustainable and safe food production in Laos.

In anticipation of food distribution centers being developed at strategic locations in the north, the project should finance two small walk-in refrigeration units; one at the Agriculture Development Center at Ban Nam Thouam and one at the Northern Agriculture and Forestry Research Center (NAFReC). The refrigeration units would be located at the agriculture centers but be operated as a public-private partnership (PPP), in collaboration with an experienced Lao or regional trading enterprise.

A feasibility study should be conducted to determine the financial and economic viability of a food distribution center at one or both of these locations. Such a center should include cold storage (for storing surplus vegetables or for keeping them overnight); facilities for cleaning, sorting, and grading; provisions for packing and packaging; office space for on-site inspection and certification of safe food using mobile test kits; and, banking services.

To meet the food security needs of all consumers in Luang Prabang, the production of safe vegetables should be undertaken using resources available in the province capitalizing on the lessons learned at existing successful vegetable production farms in urban and peri-urban areas of Luang Prabang. Training should be provided to agriculture technicians, lead farmers, and student farmers on the production of clean and safe high quality vegetables. Technical training should include production techniques related to integrated pest management (IPM), organic vegetable production, environmental sustainability, social acceptability, and food safety and quality.

The Luang Prabang Food and Trade Linkages Project is proposed (in Annex 5) with the long-term development objective to increase the volume and productivity of vegetable production in Luang Prabang Province. The project emphasizes meeting national and international food safety standards; stabilizing food prices for local consumers; and, exporting any suitable surplus. Over an 18 month period the project will have the following outputs:

- 1) 20-25 concerned provincial officials will be trained in food supply system management;
- 2) The production of safe vegetables in Luang Prabang will have increased by 30 percent;
- 3) At least one clean vegetable production and trading network and one organic vegetable production and trading network will be established in each vegetable producing district of Luang Prabang Province;
- 4) Two small-scale modular walk-in refrigeration units will be installed at agriculture centers in Luang Prabang Province;
- 5) A pre-feasibility study for a modern food distribution center to serve Luang Prabang will be prepared.

The proposed project is expected to be implemented over a period of 18 months and result in the following outcomes:

- 1) Luang Prabang provincial government, farmer organizations, and other key stakeholders will have a greater understanding of local production and marketing of vegetables and the availability of domestic and sub-regional market opportunities.
- 2) The production of safe vegetables and the productivity of vegetable producers will have improved, enabling the demand for quality and safe vegetables to be met from sources in Luang Prabang Province, with surplus vegetables being sold to sub-regional markets.
- 3) Producers of safe vegetables will have been organized into marketing groups and linked into networks and be capable of organizing and managing community certification of safe vegetable production.
- 4) Souphanouvong University will operate a Safe Food Technical Center (SAFTEC) on a self-sustaining basis.
- 5) The financial and economic viability of establishing a modern food distribution center to serve Luang Prabang and other development hubs in northern Laos will have been evaluated; with public-private partnerships profitably operating each center.

1. Introduction

1. The tourism and services sectors in Luang Prabang present a significant market opportunity for local and regional private sector actors in agribusiness and food production. Several new food trade supply services have been launched by local and regional private sector food suppliers in response to increased demand largely from food outlets serving a rising number of visitors. Growth is evident particularly at the premium end of the tourism market. Hotel and restaurant managers and chefs are obligated to protect not only their corporate brands but also their personal reputations, and thus are demanding safety and security in the local food supply chain. Several food product supply models operate in Luang Prabang that include forms of contract farming with unwritten contracts between hotels and restaurants, and between producers and suppliers of fresh food products. The research shows that existing organizations and institutions in Luang Prabang can be upgraded to respond to the demand for higher food standards in the local premium tourism market, as well as moving towards meeting food safety standards in premium export markets in neighboring countries.

2. The scoping exercise may result in one or more interventions that would support the strengthening of institutional capacities of concerned public sector and business organizations at the central, provincial, and district levels, to facilitate the clean food production in support of the tourism Industry; social responsibility to local communities; and, potentially over the long-term, the capacity to export quality food products.

3. In this context, Section 2 of the report presents the methodology for collecting data that was analyzed to complete the study. Section 3 presents potential market opportunities that emerged in the course of the research. Section 4 discusses the current situation related to the sourcing of food products in Luang Prabang, drawing extensively on primary data collection during field visits in February and March 2011, as well as from reports prepared by international organizations, development practitioners, and trade and investment specialists. Section 5 presents the key challenges and constraints to food safety and a more efficient food supply chain, and summarizes the efforts of Luang Prabang provincial authorities to promote development of the food industry sub-sector. Section 6 recommends interventions and policy actions to further support safe food production and marketing in Luang Prabang. Finally, a project concept for a **Luang Prabang Food and Trade Linkages Project** is presented in **Annex 5** that includes ideas and options for linking trade, food production, and the service sector in Luang Prabang.

2. Methodology

4. The methodology used for the research consisted of the following sequence of actions:
- (i) A review of literature related to vegetable production and safe food¹ supplies to fresh markets and hotels and restaurants in Luang Prabang;
 - (ii) An Internet-based search of recent materials related to food safety standards employed by the Government of Lao PDR (GoL) to address food borne disease situations;²
 - (iii) E-mail communications with representatives of various United Nations agencies and non-government organizations;
 - (iv) Formal and informal discussions with officials of the Trade Promotion and Product Development (TPPD), Ministry of Industry and Commerce, regarding the

¹ Safe food means that scientific standards are applied for food handling, preparation, and storage in ways that prevent foodborne illness.

² A list of references and resources accessed is presented as **Annex 6**.

implementation of GoL policies for product development in Luang Prabang Province;

- (v) Meetings with provincial officials, academics and administrators at Souphanouvong University, and the Northern Regional Agriculture and Forestry Research Center (NAFReC) regarding GoL food security and economic development policies, strategies, plans, and programs in Luang Prabang Province;
- (vi) A meeting with administrators and academics at Chiangmai University, Thailand regarding support for development of the food science laboratory at Souphanouvong University.
- (vii) Several meetings with the private sector, including the Luang Prabang Chamber of Commerce and Industry and fresh food suppliers to discuss issues related to food supply services and the quality of agri-food products in Luang Prabang; and, a meeting with Horeca Supply Company, Ltd in Chiangmai, Thailand, to discuss shipping food products to Luang Prabang;
- (viii) Visits to several smallholder farms in and around Luang Prabang to learn about production and supply challenges related to vegetable production; and,
- (ix) Organizing and facilitating a discussion among focus group participants, consisting of hotel and restaurant managers and chefs, to obtain inputs for designing a safe food intervention in support of the tourism industry in Luang Prabang.

5. In addition, two field missions were undertaken to Luang Prabang Province: on 13-19 February 2011; and, on 6-11 March 2011, for meetings with provincial officials and private sector hotel and restaurant representatives, and to collect data from fresh food suppliers and farmers producing vegetables for the Luang Prabang fresh market. Representatives from the World Bank, TPPD, and MOIC participated in the field mission in February. A representative of the Luang Prabang Provincial Industry and Commerce Office (PICO) also assisted with the research in March. The detailed schedules for the two missions are presented as **Annex 2**. A list of persons met during the field missions is presented as **Annex 3**. In the course of the meetings, issues related to the following food production, supply systems, and safe food topics in Luang Prabang were discussed:

- Plans to promote safe food production and marketing;
- Domestic, regional, and international food trade between Luang Prabang and neighboring countries;
- Areas for clean and organic food production;
- Provincial social, economic, agricultural, and trade development plans;
- Plans for food crop expansion and diversification;
- Plans for urban development and special economic development zones;
- Land issues linked to facilitating investments in safe food production;
- Credit availability for smallholder production of agricultural commodities for agri-food production; and,
- Food trade logistics issues.

6. In formulating recommendations for feasible interventions and required policy actions necessary to support expansion of production of safe food for consumers in Luang Prabang that are included in this report, contributions were drawn from the following sources:

- Impressions provided by World Bank, MOIC, and TPPD counterparts, as well as foreign technical advisors at MOIC who participated in the field mission in Luang Prabang;
- Ideas, suggestions, and inputs from provincial and district officials, representatives of the business sector and producer and trade organizations;
- Official documents from the Luang Prabang PAFO and PICO; and,
- Reports and surveys undertaken by other technical assistance projects implementing activities in Luang Prabang Province.

7. Although market opportunities exist in Luang Prabang city and province, and in neighboring provinces for marketing a broad range of safe food products, including meat and fish, the *Scoping Study on Trade, Food Production, and Service Sector Linkages in Luang Prabang* concentrates on vegetable crops.

- Vegetable production is well established in Luang Prabang and elsewhere in Lao PDR and a wide variety of vegetables is abundant in most markets to meet local consumer needs. A diversity of high quality and safe vegetables is in high demand by the increasing number of restaurants and hotels throughout Laos in response to rapidly growing tourism. When information is available, fruit, meat, and fish also are discussed, but any potential intervention proposed will be on improving the supply of safe vegetables. Other agri-food products could be addressed in a subsequent phase.

3. Market opportunities

8. Luang Prabang Provinces consists of 12 districts comprised of 976 villages. The provincial population is about 425,000, of which approximately 25 percent live in Luang Prabang district. Another 25 percent live in other district towns and the remaining 50 percent in rural villages. There are 12 academic institutions in the city with an estimated 17,000 students. The GoL has authorized the construction of 13 hydropower dams in the province, to be developed over the next decade. The Nam Khan 2 Hydropower Project is underway, where an estimated 3,000 construction workers are to be engaged.³

9. Economic growth rates in the Lao economy are projected to increase from around 7 percent growth in 2009 to 7.8 percent in 2010, and to maintain an annual average of 7.7 percent between 2011 and 2015, and 7.5 percent over the period to 2020. The economy is expected to benefit from continued expansion of tourism, development of large hydropower projects, and projected increases in demand for Lao products from markets in the GMS and Europe.⁴ Tourist arrivals increased by 26 percent during the first half of 2010 compared to the same period in 2009.

10. During fiscal year⁵ 2010, an estimated US\$45 million worth of food products were produced in Luang Prabang Province. Agricultural exports from the province were valued at US\$8.24 million, consisting mostly of fodder maize, Job's tears (*Coix lacryma-jobi*), and white sesame (*Sesamun indicum*). The value of all imports into the province was US\$4.37 million, mostly clothing, construction materials, and food. Imported food products consisted of meat (mostly beef, mutton, quail, and poultry pieces) and specialty vegetables (e.g., asparagus and Brussels sprouts, among others).⁶

11. Rapid domestic, regional, and international economic development and changes in consumer preference are factors having a significant impact on local producers and food suppliers. New opportunities exist domestically for the marketing of safe food products to a diverse group of mostly foreign consumers in Luang Prabang city and province and elsewhere in Laos, as well as throughout the Greater Mekong Subregion (GMS). In addition to an increasing number of tourists, significant foreign investment in all economic sectors has brought large numbers of foreign workers to Laos. Furthermore, the young Lao middle-class, including increasing numbers of students living in urban areas, has acquired a taste for foreign foods, requiring a dependable supply of quality food.⁷ Supplying these consumer groups with a systematic and continuous supply of quality and safe food provides market

³ Luang Prabang Provincial Industry and Commerce Office, personal communication, 14 February 2011.

⁴ Lao PDR Development Report 2010, Report No. 59005-LA, Vientiane: World Bank, 2010.

⁵ 1 October 2009 – 30 September 2010

⁶ Luang Prabang Provincial Industry and Commerce Office, personal communication, 14 February 2011.

⁷ Quality food is food with characteristics that are acceptable to consumers including external factors such as appearance (size, shape, color, gloss, and consistency), texture, and flavor.

opportunities for local producers and for local and regional food suppliers. This section examines potential market opportunities in Luang Prabang for the production and marketing of safe food products in response to demands from these groups of consumers.

3.1 Tourism

12. Foreign tourist arrivals to Lao PDR reached more than 2 million in 2009 with revenues officially estimated at US\$267.7 million. Tourism ranked third (after mining and hydropower exports) in terms of generating national revenue in 2009. Luang Prabang registered 237,683 foreign visitors in 2009 and an estimated 300,000 visitors (foreign and domestic) in 2010.⁸ This figure is expected to increase by some 17 percent, to 350,000 in 2011.⁹ In 2009, 39.46 percent of the foreign tourists were from the Asia-Pacific region; 38.97 percent from Europe (increasing 11 percent over 2008); and, 19.65 percent from North America (increasing 6 percent over 2008).¹⁰

13. Other provinces with large numbers of visitors (foreign and domestic) in 2009 are presented on **Table 1**.

Table 1: Provinces with more than 200,000 visitors in 2009

Province	Region	Tourist arrivals in 2009
Vientiane Capital	Central	807,445
Savannakhet	South	791,824
Vientiane Province	Central	290,015
Champasak	South	278,054
Luang Prabang	North	237,683
Luang Namtha	North	244,614
Total for provinces with more than 200,000 visitors in 2009		2,649,635

Source: 2009 Statistical Report on Tourism in Laos, Lao National Tourism Administration, Vientiane, 2010.

14. Tourist arrivals increased by 26 percent during the first half of 2010 when compared to the same period in 2009. Importantly, high spending and more discriminating visitors from Europe and North America increased by 64 percent, while visitor arrivals from the Asia and Pacific region grew by about 22 percent.¹¹ The Lao National Tourism Administration expects that foreign tourist arrivals will continue to increase to 2.86 million by 2015 and to 3.6 million by 2020. With further development of the Luang Prabang airport (underway in 2011), combined with continued macroeconomic expansion and a growing middle class in Laos and neighboring countries (particularly in China, Thailand, and Viet Nam), the tourist industry in Luang Prabang is expected to continue to expand; as has been forecast by the Lao National Tourism Administration.

15. In a survey of the level of tourist satisfaction with tourism products and services of Lao PDR, hotels and restaurants were rated 3.6, out of maximum 5.¹² This compares to a 4.08 level of satisfaction with the Lao people (highest rating); 3.94 with safety; 3.92 with nature; 3.87 for way of life; 3.60 with temples, monuments, and atmosphere; and, 3.2 with cultural activities, handicrafts, and textile products. Satisfaction with ecotourism destinations was the lowest at 3.01. The results of this survey indicate that there is room for improving the quality of hotels and restaurants, of which both safe and quality food are important factors.

16. The continued expansion of tourism, in particular high spending European and American visitors, is expected to provide a dependable market for producers of quality food products.

⁸ Luang Prabang Provincial Industry and Commerce Office, personal communication, February 2011.

⁹ Luang Prabang Provincial Chamber of Commerce and Industry, personal communication, 15 February 2011.

¹⁰ 2009 Statistical Report on Tourism in Laos, Lao National Tourism Administration, Vientiane: 2010.

¹¹ Lao PDR Economic Monitor – September 2010 Update, Vientiane: World Bank, 2010.

¹² 2009 Statistical Report on Tourism in Laos, Lao National Tourism Administration, Vientiane: 2010.

Restaurants and hotels serving visitors to Luang Prabang, in addition to the ecotourism resorts elsewhere in the North, will require a continuous supply of quality and safe food products.

17. Several ecotourism resorts in the northern region also are attracting greater numbers of well-off adventure tourists. The resorts at Nong Khiaw (Ngoy District, Luang Prabang Province); Khoua District, Oudomxai Province; Phon Savanh City, Xieng Khouang Province (Plain of Jars); Singh and Nam Tha districts, Luang Nam Tha Province; and, Vang Vieng District, Vientiane Province; all increasingly have requirements for food that is both safe and high quality.

18. Provincial planning officials¹³ report that there currently are 44 hotels and 260 guest houses in Luang Prabang, with 2,319 rooms and 5,063 beds; in addition to 117 restaurants. The Luang Prabang Chamber of Commerce and Industry reports that there are 2.5 Lao workers for each visitor to Luang Prabang.¹⁴

19. A partial list of hotel and restaurant food outlets in Luang Prabang city that require both high quality and safe food products in ample quantities on a systematic and continuous basis are presented on **Table 2**.

Table 2: Partial list of quality hotel and restaurant food outlets in Luang Prabang

Restaurants and Cafés	
• L'Éléphant restaurant	• Blue Lagoon restaurant
• Café Ban Vat Sene	• Coconut Garden restaurant
• Apsara restaurant (and guest house)	• 3 Nagas restaurant (and guest house)
• Green Éléphant (vegan) restaurant	• Roots and Leaves restaurant
• Tamarind restaurant	• Le restaurant de CaLao
• Le Banneton café	• JoMa Bakery café
• Le Patio café	
Hotels and Guest Houses with Restaurants	
• Grand Luang Prabang	• Le Résidence de Phou Vao
• Maison Souvannaphoum	• Villa Santi and Villa Santi Resort
• Alila	• Amantaka
• Palais Juliana	• Auberge de 3 Nagas
• Apsara	• Ban Lao Hotel
• Mouang Louang Hotel	• Vang Thong Hotel

Source: Data collection in Luang Prabang in February and March 2011

20. Several Luang Prabang hotel and restaurant managers and chefs indicated¹⁵ that currently only about one-third of their vegetable needs were supplied from local sources, with the balance imported from outside the province or abroad. All managers and chefs indicated that it would be their preference to purchase food products locally. They are eager to further increase their purchases of local vegetables if they are assured that they are 'safe.' In addition, some of the chefs stated that they would be willing to pay more for local food products that had been inspected and certified as 'safe.'

21. Although organic products were preferred, they do not require that all vegetables be organic; but all must be 'safe'. In the absence of a comprehensive Government operated

¹³ Luang Prabang Provincial Department of Planning and Investment, personal communication, 14 February 2011.

¹⁴ Luang Prabang Provincial Chamber of Commerce and Industry, personal communication, 15 February 2011.

¹⁵ See results of the focus group meeting with hotel and restaurant managers and chefs in Luang Prabang on 10 March 2011 in **Annex 5**.

food safety system in Luang Prabang,¹⁶ they indicated that a well organized and monitored community certification process for producing safe food would be acceptable to them. Such a program could best be facilitated by the provincial government.

3.2 Growing urban middle-class populations and changing food preferences in Luang Prabang, in Lao PDR, and the GMS

22. Several countries in the GMS, including Laos, have a young, upwardly mobile middle class,¹⁷ and a growing number of students, including foreign students, as well as increasing numbers of returning overseas diaspora living in urban areas. Many young middle-class urban Lao, some of whom have lived, studied, traveled, and worked abroad, and overseas Lao who are migrating back, have acquired a taste for foreign foods. In addition, Lao secondary and university level students¹⁸ are influenced by the neighboring countries' media and advertising, where foreign lifestyles and food products, including fast-foods, are imitated and persuasively promoted. As a result, the demand for quality foreign food products is increasing. This also is reflected in the large increase in supermarkets and 'mini' marts in urban areas throughout Laos that carry a wide assortment of foreign and processed food products.

23. This scenario is very much the same in Luang Prabang. The city of Luang Prabang has a population of about 100,000,¹⁹ of which more than one-half are under the age of 25. In addition to the factors influencing taste preferences mentioned above, a growing number of urban young people are influenced also by the dining habits of foreign tourists and the food outlets that serve them. All consumers expect that a dependable supply of quality and safe food is available through these outlets. However, although the GoL has a legal and regulatory framework in place (presented in [Annex 7](#)) that, if enforced, would guarantee food safety, designated regulatory agencies lack the capacity to ensure implementation of the guidelines.

24. The tastes and food preferences of consumers are changing throughout the GMS. Premium Western and other foreign food products are gaining popularity among young people and particularly within middle to high income segments. Research on consumer retailing in Southeast Asia²⁰ has shown that there is a growing trend towards a modern retail format: hypermarkets and convenience stores in the major cities are popular among middle class consumers. Several such convenience stores and mini-supermarkets already exist in Luang Prabang, following a pattern emerging elsewhere in Southeast Asia and China. In the context of Luang Prabang, as local incomes continue to rise and consumer preferences follow patterns similar to those in neighboring China, Thailand, and Viet Nam, the demand for quality and safe foods among local consumers will increase, along with increased demand from the growing number of foreign visitors.

¹⁶ The Luang Prabang Provincial Department of Health Office reported that inspections of fresh produce occur once or twice each year; personal communication with the Provincial Food and Drug Inspection Unit on 22 July 2011.

¹⁷ In 2015, the median age of the population of Lao PDR is forecast to be 22.2 years; meaning that ½ of the population will be younger than 22 years (*United Nations Population Division [on-line], World Population Prospects, 2008 Revision, Population Database; accessed on 7 April 2011*). The per capita income more than doubled since 1990s, reaching \$880 in 2009 (*World Bank, Lao PDR Development Report, Vientiane: 2010*).

¹⁸ PICO reports that 17,000 students are studying at all educational levels living in Luang Prabang. Many of them are at the secondary and vocational schools, and at the university level. Many also are employed part-time or full-time in the service sector in Luang Prabang and therefore have a stable income. Living in an urban area, with a steady income, and studying to ensure a (relatively high) future income stream qualifies an individual as middle class, in the Lao context.

¹⁹ Department of Statistics, Vientiane: 2005.

²⁰ Lucy Ridley, *Food retailing in Asia: A focus on the China, Indonesia India, Malaysia, Philippines, Singapore, and Vietnam markets*, Melbourne: Department of Primary Industries, 2009.

3.3 Foreign residents and workers

25. Over the past five years (2005-2009), Laos has received an average of approximately US\$400 million per year in official development assistance (ODA).²¹ Foreign direct investment (FDI)²² into the non-natural resources sector over the same period has averaged US\$217 million annually, while local private investment has stagnated and public investment has declined.²³ In light of the GoL's statement that an estimated 20 percent of the financing for the Seventh Five-Year National Social and Economic Development Plan, 2011-2015 (7th Plan) is expected to come from ODA sources and a substantial 60 percent from FDI,²⁴ both sources of funding can be expected to be at least maintained in the short-term. FDI is expected to increase in the medium- and long-term, given that Lao PDR will make commitments under the World Trade Organization (WTO) and General Agreement on Trade in Services (GATS). ODA and FDI are (in the case of Laos) nearly always accompanied by foreign technical advisors and often their dependents. In light of increasingly rigorous performance standards and productivity targets, and corresponding expected shortages of skilled Lao managers and laborers, the number of foreign nationals is expected to continue increasing.

26. In addition to the urban based foreign residents, the number of both Western and non-Western (i.e., Chinese, Vietnamese, Thai) foreign technicians and laborers working on FDI in mega-projects --- hydropower development, mining, railway construction, agricultural land concessions --- located largely in rural areas, also can be expected to continue rising. These workers often are accompanied by dependents who usually remain in urban centers. In Luang Prabang, one hydropower development project is underway (Nam Khan 2) and others are planned. In addition, TPPD officials have been told to expect an estimated 20,000 to 30,000 Chinese laborers to arrive in due course to work in northern Laos on the high-speed rail line linking Kunming to Vientiane (and beyond). They are likely to be accompanied by a large number of construction camp followers.²⁵

27. This growing number of foreign residents and workers also will create increased demand for foreign and Lao food products that are both high quality and safe (*see footnote 1 for a definition of 'safe' food*). Chinese officials have informed the GoL that railway construction companies will only procure agri-food products for Chinese laborers that have been certified as 'safe' by the GoL.²⁶

3.4 Expansion of domestic and regional food supply companies

28. Hotel and restaurant managers and chefs report that they purchase only about one-third of their fresh vegetables locally. The remaining nearly two-thirds is either imported from neighboring countries or transported to Luang Prabang from other provinces. Fruit, vegetables, and many meat and processed food products are imported from Thailand and trucked to Luang Prabang from Vientiane and Kaen Thao District, Xayaboury Province (on

²¹ World Bank Development Indicators, 2011.

²² In this instance, FDI is defined as investments located in or near urban areas specifically in foreign bank branches, manufacturing, trading, small industry and agro-enterprises, and service industries (hotels, restaurants, and tourism services).

²³ World Bank website <http://data.worldbank.org/topic/private-sector>, accessed on 11 April 2011.

²⁴ Personal communication with senior officials at the Ministry of Agriculture and Forestry, December 2010.

²⁵ Luang Prabang Provincial Industry and Commerce Office, personal communication, 14 February 2011.

²⁶ Personal communication with TPPD officials. The high-speed train project discussed early in 2011 had been suspended temporarily in mid-2011; but, is expected to be reinstated in the near future.

the Lao border with Loei Province, northeastern Thailand). In addition, although all air transport enterprises operating at the Luang Prabang International Airport deny that any food products are imported by air cargo, hotel and restaurant representatives, local food suppliers, and Thai exporters of meat and processed foods maintain that some perishable food products (e.g., seafood, frozen chicken parts) are delivered to Luang Prabang by air from Vientiane, Chiangmai, Bangkok, and Hanoi.

29. To meet the demand for imported food products, foreign operated food supply companies have established offices in Vientiane. They supply both fresh and processed food products to the hotels and restaurants in Luang Prabang as well as to many of the mining and hydropower development project sites, some in remote locations in Laos. The reputed names and increasing number of suppliers are indicative of the expanding potential for catering, food services, and food supply in Laos, with Luang Prabang providing a significant portion of the increased demand. A list of food suppliers serving food outlets in Luang Prabang are presented on **Table 3**.

Table 3: Partial list of international food suppliers serving food outlets in Luang Prabang and types of food products supplied

Food supply company	Food items supplied to Luang Prabang
Aman (India); offices in Vientiane and Luang Prabang	Paneer (<i>a soft, non-matured, Indian cheese; has a mozzarella-type texture when cooked</i>), cream, milk protein, cheeses, ham
Aden (China); office in Vientiane	Food catering services: sourcing of all food supplies, cooking, serving, retail shop management, application of international health, hygiene and safety standards as well as strict audit procedures, and staff training
Phonepaseut Import/Export; offices in Vientiane	Processed foods, lamb, poultry
Horeca (Thai); headquarters office in Chiangmai; operates through brokers in Nongkhai, Thailand and Vientiane	Processed foods, seafood, lamb, poultry, bacon, cold cuts, cheese, lentils, dry herbs, lolla rossa lettuce (<i>Lactuca sativa; Asteraceae family</i>) (oak leaf lettuce), parsley, basil
Orca Specialty Foods Ltd. (Canada); retail outlet and office in Vientiane	Frozen salmon steaks, smoked salmon

30. The Aman and Aden companies have offices in Vientiane and are dependable suppliers of imported products required by the hotels and restaurants in Luang Prabang. The Orca Specialty Foods Company only recently opened a retail shop in Vientiane to provide frozen salmon to local food suppliers who supply the Luang Prabang food outlets. Owned by a returning Lao-Canadian, he is planning broaden the types of food products offered and to open a new Western food restaurant in Vientiane.

3.5 Potential growth of the regional and international markets for safe and environmentally friendly food and organic food products

31. Urbanization and the rising incomes of the growing middle classes in China, Thailand, and Viet Nam as well as in Laos are increasing the demand for Western and other foreign foods and safe food products. Regional niche markets for high quality and safe sub-tropical and temperate climate vegetables and herbs offer good commercial prospects for farmer organizations with the appropriate skills. Most Lao farmers continue to employ traditional agricultural production practices, while their counterparts in many locations in China, Thailand, and Viet Nam have used agricultural chemicals intensively for decades. This fact, combined with the increasing costs of petroleum-based pesticides and chemical fertilizers, gives Laos a comparative advantage in producing relatively low-cost, clean, and safe food products.

32. Given that many local vegetable farmers currently do not use any or use only small amounts of mostly bio-pesticides and no chemical fertilizers, this provides market opportunities linked to expanding production of both safe and organic vegetables.

- Regional and global consumers, retailers, processors, and exporters are demanding higher levels of food safety than those required to meet public standards, resulting in the creation of private food standard organizations such as GLOBAL-GAP,²⁷ which assures traceability to the farm level. ASEAN-GAP is expected to affiliate with GLOBAL-GAP in the near future.
- In this regard, due to the higher levels of awareness of consumers, shareholders, and senior corporate managers, the first-class food outlets in Luang Prabang are increasingly sensitive to food safety issues to protect their brand names and guests, as well as local consumers. Food poisoning incidents are embarrassing, costly, and impact on not only the individual food outlet, but also on the good reputation of Luang Prabang and tourism in Laos in general. Outbreaks of gastroenteritis (stomach flu) can be contagious and are a major concern of all hotel and restaurant managers and chefs in Luang Prabang.

33. Throughout the GMS and ASEAN, as well as in China, food retailers are putting in place food safety procedures to ensure quality, traceability, transparency, and accountability to protect food and agricultural product supply chains. In addition, ethical consumerism is on the rise as consumers vote through their selection of food products, bringing about agriculture production that is more equitable and that contributes to environmental enhancement. In this context, Luang Prabang's first vegan²⁸ restaurant has opened (the *Éléphant Vert* or Green Elephant), which only uses vegetables; all produced locally.

34. The ASEAN Free Trade Area (AFTA) that became effective on 1 January 2010 also is driving changes in the cross-border trade in the GMS. The zero tariff rates on agricultural products imported from any ASEAN member country in 2010 (except for food and agricultural products imported *into* Cambodia, Laos, Myanmar, and Viet Nam) have increased political and economic sensitivity to the free flow of food and agricultural products across sub-regional borders. As predicted, technical barriers to trade (TBT) and non-tariff barriers to trade (NTB) have emerged.²⁹

- By constraining the unhindered flow of agri-food products across GMS borders using TBTs and NTBs, contrary to the spirit of AFTA, Laos' largest trading partners are placing pressure on the GoL to accelerate the upgrading of diagnostic laboratory facilities. Such facilities are required to ensure traceability, transparency, and accountability in the food supply chain. This is a requirement of selected WTO agreements, as well as of retailers subscribing to GLOBAL-GAP and other food safety codes, and national food safety authorities of ASEAN member countries.
- Without sub-regionally harmonized and effective food safety procedures and methods, the external demand for Lao agri-food products will decrease.

35. In the long-term, with the appropriate incentives, vegetable producers in Luang Prabang and elsewhere in northern Laos should be able to meet the current local demand for quality and safe food products. The opportunity exists to export any surplus food products to profitable markets in Vientiane and in neighboring GMS countries and China.

- The Lao Department of Agriculture (Crops) successfully initiated a weekly farmers' market for organic food products in Vientiane in 2008. The market currently operates

²⁷ Good Agricultural Practices or GAP: Methods of land use that can best achieve the objectives of agronomic and environmental sustainability. GLOBAL-GAP was organized by 37 chains of food retailers that guarantee 'farm to fork assurance' to consumers. The system is science based; operates in 90 countries representing 130 certification bodies; and, harmonizes food safety standards for retailers.

²⁸ Vegan: a strict vegetarian; someone who eats no animal or dairy products at all.

²⁹ TBTs are linked to anything from residual pesticide content to carbon neutral certification. NTBs are linked to sanitary and phytosanitary standards.

twice weekly at the Vat That Luang temple as a result of increasing demand for safe and organic vegetables by foreign residents, Western food restaurants, and middle-class Lao.

- Only 130 farms are registered as organic in Asia, producing on 2,900 ha of land.³⁰
- Although the largest market for organic food products is in Japan, markets in China, Malaysia, Singapore, and Thailand are also growing rapidly. The non-certified and health food market in Thailand is estimated to be US\$83.33 million annually.³¹
- Studies show that more than 70 percent of Chinese organic consumers were willing to pay a 20 to 50 percent price premium for organic products. China imported organic food products valued at US\$20 million in 2009 and the market continues to grow.³²

4. Sources of food products in Luang Prabang

36. An estimated 13,800 ha of land in Luang Prabang are suitable for paddy rice production, which could be expanded to 14,000 ha. Approximately 18 percent or 2,500 ha is irrigated paddy for dry season production. Upland agriculture is practiced on 4,000 to 5,000 ha.

37. The three main vegetable production systems in Luang Prabang include:³³

- 1) Small lowland plots: Intensive cultivation of high value herbs and leafy vegetables in small lowland plots (200 m² to 3,200 m²) on the urban fringe of Luang Prabang city. This system uses Integrated Pest Management (IPM)³⁴ techniques introduced initially by the *Urban and Peri-Urban Agriculture Pilot Project* (part of the European Union supported Asia Urb Program). At these sites, farmers aim to maximize returns from very small plots of land by producing vegetables the year-round.
 - Wet season crops include: mint, basil, lettuce, leaf celery, and mustard greens.
 - Dry season crops include: leaf vegetables supplemented by other products such as tomatoes.
- 2) Rural lowlands: Cultivation of market vegetables in larger fields (more than 1,000 m²) in outlying districts surrounding Luang Prabang. These comparatively large plots are located on gently sloping and partially terraced hillsides and along perennial streams and rivers that flow through Luang Prabang (e.g., Nam Khan, Nam Ou, Nam Xeuang, Nam Dong, Xebandouane). Many of these farmers produce the year-round. The broad plain called Nam Thouam, Nam Bak District, located on route 13 about 100 km north of Luang Prabang is a new area for vegetable production. Approximately three hectares of organic vegetables have been promoted in five villages on a pilot basis, supported by the Provincial Agriculture Technology Transfer and Knowledge Center at Nam Thouam (Nam Thouam Agriculture Center).
 - Cool season vegetable production includes lettuce, cabbage, cauliflower, beans, Chinese cabbage, and cucumber.
 - Wet season vegetables include local tomatoes, cucumber, coriander and gourds.
- 3) Highland production: Production of upland vegetables and fruit on steep slopes in higher mountain regions concentrated around the district town of Phou Khoun, on route 13 south of Luang Prabang, nearly half the distance back to Vientiane. Phou Khoun is located at the important road junction with routes 13 and 7. Route 7 is the principal access road to Xieng Khouang and northeastern Laos. This production area is dominated by semi-permanent crops that minimize labor required to prepare land

³⁰ International Federation of Organic Agriculture Movements (IFOAM) website: <http://www.ifoam.org>, accessed on 12 April 2011.

³¹ Ibid.

³² International Trade Center, *Organic Food Products in China: Market Overview*, Geneva: ITC, 2011.

³³ Khamxay Sipaseuth, Vienggeune Bouasipaseuth, Andrew Wilson, Helvetas / Department of Agriculture, *Organic Vegetable and Fruit in Luang Prabang Province, Lao PDR, A Pre-feasibility Study, Final Report*. Vientiane: Helvetas Lao PDR/CUSO, 2008.

³⁴ IPM is an ecological approach to pest control with a main goal of significantly reducing or eliminating the use of pesticides while at the same time managing pest populations at an acceptable level.

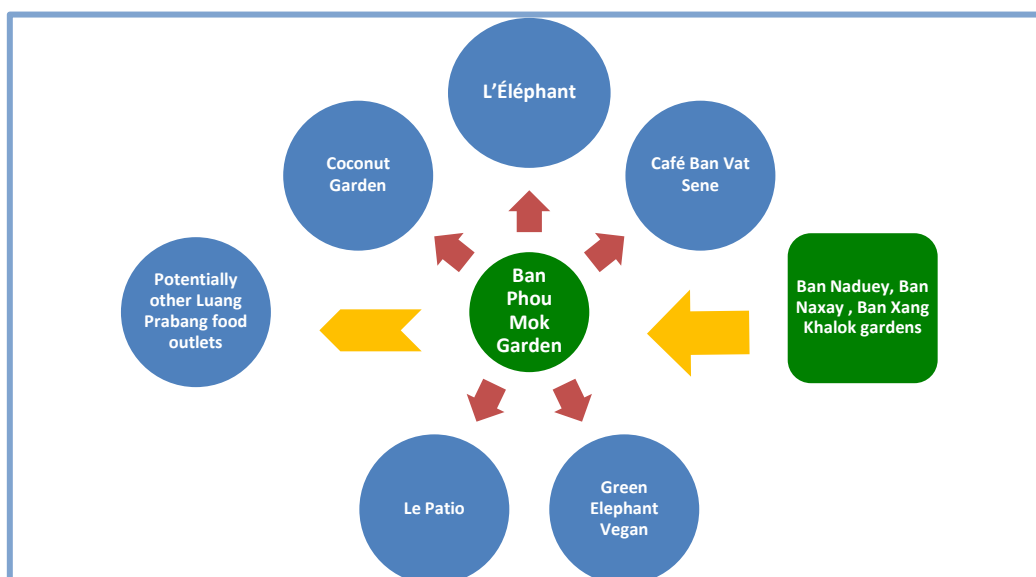
and manage the crops. Pineapples, tubers, and gourds are produced in these areas the year round. A second mountainous area of vegetable production recently developed with support from the Upland Research and Capacity Development Program (URDP) at the National Agriculture and Forestry Research Institute (NAFRI) is located in Phongxay District. Farmer groups have been organized to cultivate safe vegetables (mostly beans, peas, tomatoes, cabbage, and lettuce) for sale in Luang Prabang.

4.1 Food supply models in Luang Prabang

38. Urban and peri-urban vegetable production in Luang Prabang can be categorized into three supply models: (i) a self-supply model, with a market garden being operated by the food outlet itself; (ii) a specialized market garden model, producing high quality organic vegetables for sale to local food outlets; and, (iii) a more traditional food supply model, including producers, middlemen, wholesalers, retailers, and consumers.

39. Self-supply model: The Lao-French partnership of L'Éléphant restaurant has successfully launched (perhaps unintentionally) an 'Éléphant brand'. The owners have established a chain of restaurants and cafés around Luang Prabang (i.e., Café Ban Vat Sene, Coconut Garden, Le Patio, and Éléphant Vert-Vegan). They also sell L'Éléphant t-shirts and other Luang Prabang-related objects. To protect their brand and to ensure that the highest quality vegetables are used at their food outlets, the owners have established a market garden (approximately 3-4 ha, not fully developed). Located at Ban Phou Mok (see **Diagram 1**) in the suburbs of Vientiane, many of the vegetables they use daily are cultivated by local staff supervised by a French agronomist. All farm staff are employees of L'Éléphant group. Significant investment has been made to construct raised beds, boxes, shade, and an irrigation system that permits year-round vegetable production. The herbs and vegetables are considered safe products, but not organic, and include both local and Western vegetables (see **Table 4**).

Diagram 1: Éléphant Food Supply Model

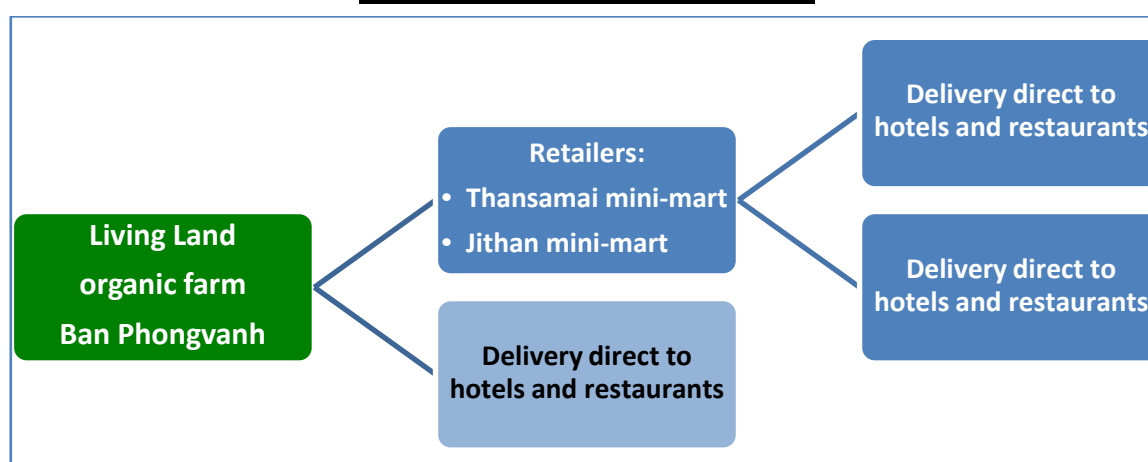


40. Before 2009, this market garden also sold vegetables to other hotels and restaurants in Luang Prabang. However, due to the 2008 financial crisis in North America and Europe, the number of visitors to Luang Prabang decreased and the owners reduced their cash outlays for the garden; concentrating on producing sufficient vegetables to supply the needs of their

four food outlets. The investors also have at least two other plots of fertile and well-irrigated land that can be developed as market gardens to expand production using the same model.

41. Specialized market garden model: The Lao-British partnership of the Living Land farm also has (perhaps inadvertently but successfully) launched a Living Land brand. The 2 ha garden area has been developed on communally owned paddy land in Ban Phongvanh. Several smallholder farm families in the village have traditionally cultivated vegetables for sale in the local market. The Living Land Company produces a wide variety of organic vegetables to meet the needs of high quality food outlets in Luang Prabang (see **Table 4**). The farm provides a direct delivery service to each client (see **Diagram 2**). The vegetables are guaranteed by the farm to be clean, safe, and organic. In addition, the farm is cooperating with a local five-star hotel (the Amantaka) to organize Lao food cooking classes for tourists at the farm. The farm operates with a farm manager, a marketing manager, and a small staff, while the British investor manages company finances.

Diagram 2: Living Land Model



42. The Living Land farm occupies 2 ha of a 10 ha area of paddy land belonging to the Ban Phongvanh community. The farm manager reported that several other farmers in the village are interested in participating in a high-value vegetable production program. The production of organic vegetables could be expanded following consultation with the community and with the participation of the Living Land Company; an organization that has the trust of the local community as well as the food outlets in Luang Prabang.

43. Although the prices at which the organic vegetables are being sold are significantly higher than local market prices, the fact that they are guaranteed as organic by the Living Land farm staff and marketing manager is sufficient assurance for hotel and restaurant managers and chefs. An important element of community trust has been developed that is necessary for any organic or safe food production program.

44. Classical food supply model: The third food supply model operating in Luang Prabang is a more conventional supply chain. Vegetable producers sell their output to well-known and trusted market middlemen or local transporters (who also may be farmers) who carry the produce to the Phosy market, the largest fresh market in Luang Prabang (see **Diagram 3**). The middlemen-transporters act as buying agents for a small group of well-established women vegetable traders (listed on **Table 4**) at the Phosy market who dominate the trade. These women (often assisted by their husbands or other members of their families) play an important role in ensuring the quality of the fruit and vegetables delivered to Luang Prabang food outlets. They perform a valuable service for hotel and restaurant managers and chefs by screening, grading, cleaning, and packing the vegetables for delivery to each food outlet.

- Each food trader-supplier is expected to have a surplus of each vegetable ordered by regular customers and to deliver those products to the food outlet any time a product is required; a form of 'just-in-time delivery.'
- Loyalty, honesty, and dependable service is guaranteed by cash payments to the trader-supplier upon request.

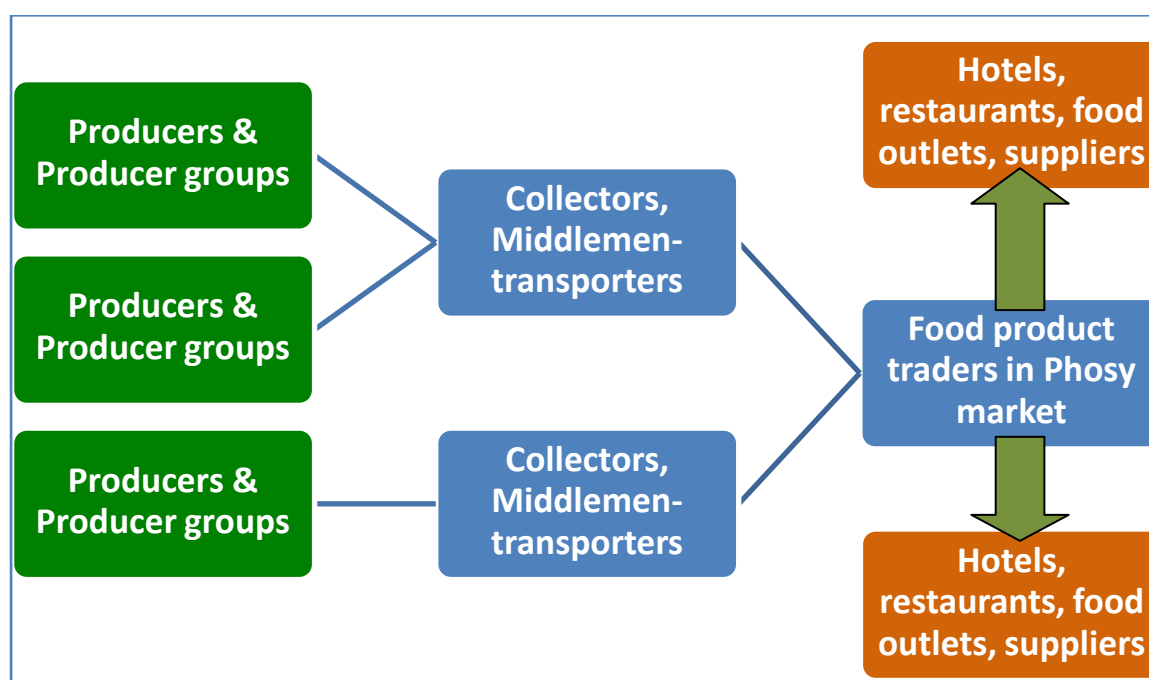
Table 4: Partial list of sources of principal food products for food outlets in Luang Prabang

Name, location, and area (when available)	Products	Technology / Methods	Current Customers	
• L'Éléphant gardens, Ban Phou Mok, Luang Prabang District, 3-4 ha (A Franco-Lao joint venture)	Lettuce, cabbage, and temperate climate Western herbs (e.g., paragon, oregano, curry parsley, fat parsley, thyme, celeric), carrots, cauliflower, corriander	Integrated pest management (IPM)	<ul style="list-style-type: none"> • L'Éléphant • Café Ban Vat Sene • Coconut Garden • Le Patio • Green Éléphant Vegan 	
• Living Land Company, Ban Phonvanh, Luang Prabang District, 2 ha (A British-Lao joint venture)	Lettuces, beet root, rocket lettuce, leeks, Western herbs	Organic	<ul style="list-style-type: none"> • Le Résidence Phou Vao • Blue Lagoon • Amantaka 	<ul style="list-style-type: none"> • Apsara • Luang Xay • Palais Juliana • Thansamai mini-mart
• Mr. Xi Kwahuei, Ban Mah, Luang Prabang District, 1 ha (One of many Chinese producing locally)	Lettuce, Chinese cabbage, tubers	Commercial production using pesticides	<ul style="list-style-type: none"> • Hmong traders selling at retail shops in the Ban Phosy fresh market in Luang Prabang 	
• Ban Nam Thouam, Nam Bak District, Luang Prabang Province, 3 ha	Mixed vegetables	Organic	<ul style="list-style-type: none"> • Retail markets in Luang Prabang 	
• Ban Xiengkeo, Luang Prabang District (formerly; now moved) (Mr. Serge; a Franco-Lao investment)	Fish (perch)	Cage culture in the Mekong River	<ul style="list-style-type: none"> • L'Éléphant • Le Résidence Phou Vao • Villa Santi 	
• S&W Butcher Shop, Ban Phanluang, Luang Prabang District; butchers 30 pigs per week @ 100-120 kg (A German-Lao joint venture)	Pork: sausages, bacon, select European cuts, cold cuts	<ul style="list-style-type: none"> • Butchery using European Union standards • Pigs from (i) Chinese farms at Ban Houay Hia are preferred; or (ii) from selected local farmers; or (iii) from Thailand, transported by truck via Xayaboury Province 	<ul style="list-style-type: none"> • Blue Lagoon • Luang Xay • L'Éléphant • Café Ban Vat Sene • Coconut Garden • Thansamai mini-mart 	<ul style="list-style-type: none"> • Phimphone Supermarket, Vientiane • Vansom Vilaivong, Xieng Khouang • The House
• Thansamai Minimart, Luang Prabang	Imported processed food products: bacon, ham; poultry (frozen duck and chicken); shrimp; salmon	<ul style="list-style-type: none"> • Shipped from Vientiane • Air cargo from Chiangmai 	<ul style="list-style-type: none"> • Le Résidence Phou Vao • Blue Lagoon • Amantaka • Coconut Garden • Luang Xay 	<ul style="list-style-type: none"> • Palais Juliana • L'Éléphant • Café Ban Vat Sene • Apsara • Other food outlets
• Jithan Minimart, Luang Prabang	Imported processed food products: bacon, ham; poultry (frozen duck and chicken); shrimp; salmon	Shipped from Vientiane	<ul style="list-style-type: none"> • Blue Lagoon • Amantaka • Apsara • Luang Xay • Palais Juliana 	<ul style="list-style-type: none"> • L'Éléphant • Café Ban Vat Sene • Coconut Garden • Other food outlets
• Mrs Kham; independent trader	Imported processed food products: bacon, ham; poultry (frozen duck and chicken); seafood	<ul style="list-style-type: none"> • Shipped from Vientiane • Air cargo from Chiangmai 	<ul style="list-style-type: none"> • Le Résidence Phou Vao • Blue Lagoon • Amantaka • Apsara • Luang Xay • Palais Juliana 	<ul style="list-style-type: none"> • L'Éléphant • Café Ban Vat Sene • Coconut Garden • Jithan mini-mart • Other food outlets • Thansamai mini-mart
• Mrs Noy & Mr. Bounthan, Phosy fresh market	Vegetables; all seasons, all types	<ul style="list-style-type: none"> • Deliveries from farmers • Deliveries from importers and middlemen suppliers 	<ul style="list-style-type: none"> • Blue Lagoon • Luang Xay 	<ul style="list-style-type: none"> • Alila • Amantaka
• Mrs Nuang	Vegetables; all seasons, all types	<ul style="list-style-type: none"> • Deliveries from farmers • Deliveries from importers and middlemen suppliers 	<ul style="list-style-type: none"> • Le Résidence Phou Vao • Other food outlets 	
• Mrs Sone	Vegetables; all seasons, all types	<ul style="list-style-type: none"> • Deliveries from farmers • Deliveries from importers and middlemen suppliers 	<ul style="list-style-type: none"> • Le Résidence Phou Vao • Other food outlets 	

45. Many middlemen-transporters are trained by the market traders to pre-screen, pre-sort, pre-grade, and pre-pack the vegetables at the farm level. This pre-delivery preparation process is inspected and sometimes repeated by the market trader and her assistants in the small area in which she operates at the fresh market. Deliveries arrive from different vegetable producing villages twice daily: in the morning at about 04.00 hours and again at about 16.00 hours in the afternoon.

46. The market traders are familiar not only with the quality standards of each product required by each food outlet, but also with the specific villages specializing in the production of various vegetables. They know many of the producer group leaders and some individual farmers. If vegetables are brought in from other provinces (e.g., Oudomxai, Xieng Khouang, Vientiane Province, Vientiane Capital City, etc.) or are imported from China, Thailand, or Viet Nam, the trader-suppliers know and trust the middlemen who deliver the vegetables to them and expect them to pre-screen, pre-clean, and pre-pack the vegetables.

Diagram 3: Classical food supply model



47. A partial list of villages in Luang Prabang, Xieng Ngeun, and Chomphet districts that produce significant quantities of vegetables throughout the year are presented on **Table 5**.³⁵

Table 5: Partial list of villages that produce vegetables for sale the year-round for the Luang Prabang market

Luang Prabang District		Xieng Ngeun District
• Ban Xieng Muak	• Ban Xat	• Ban Suan Luang
• Ban Pak Seuang	• Ban Pha Oh	• Ban Don Moh
• Ban Pongvanh	• Ban Long Laen	
• Ban Thin	• Ban Xaeng Khalok	Chomphet District
• Ban Khoy	• Ban Xung Khalok	• Ban Muang Kham
• Ban Xieng Lomh	• Ban Phou Mok	
• Ban Nadeuy	• Ban Naxay	

³⁵ Luang Prabang Provincial Industry and Commerce Office (PICO), personal communication, 8 March 2011.

Meat, freshwater fish, seafood, and processed products

48. Two mini-marts and one independent trader (see **Table 4**) import frozen meats (beef, lamb, and poultry) and seafood for Luang Prabang food outlets. They also import processed (canned) food as well as herbs, spices, and specialty fruits and vegetables (e.g., strawberries, cherries, other berries, etc.). These products are often brought to Luang Prabang by truck from Vientiane, and occasionally by air from Chiangmai and Hanoi. Many of these products are provided by the Horeca Supply Company, Ltd, a Thailand-based food supply company operating from Chiangmai; and, by the Aman and Aden food supply companies, with offices in Vientiane (listed on **Table 3**).

49. The sourcing of pork in Luang Prabang has been facilitated significantly by establishment of a professional German butcher who rigorously follows European Union standards. The S&W Butcher Shop slaughters 30 pigs and one young cow (age: less than three years) each week. The pigs are five to six months old and weigh 100-120 kg each. The butcher shop sources its pigs from Chinese farms located near Luang Prabang. When livestock is not available from the Chinese farms, pigs are chosen from pre-selected smallholder Lao farmers near Luang Prabang; or, are purchased from middlemen-transporters who import the pigs from Thailand through Kaen Thao, Xayaboury Province, located several hundred kilometers from Luang Prabang. Cattle for butchering also are purchased from middlemen-transporters. Most of the high quality food outlets in Luang Prabang purchase pork and beef from this butcher.

50. Only some of the freshwater fish consumed by clients at Luang Prabang food outlets are produced locally. One Franco-Lao investment in cage-culture in the Mekong River (formerly located at Ban Xiengkeo, Luang Prabang District; see **Table 4**) provides perch (*Anabas testudineus*). Other freshwater fish are brought in from Vientiane, where cage culture of freshwater fish is practiced (at Ban Nong Teng). Some of the freshwater fish is likely to be sourced from one or more of the hydropower reservoirs and / or from Mekong River cage culture fish producers in Champasak Province.

5. Challenges and key constraints

5.1 Agricultural production constraints

51. Although Luang Prabang Province is well-endowed with water resources, smallholder farming in lowland areas and shifting cultivation in upland areas are dominated by natural farming practices. Such methods conform to seasonal climate variations and application of traditional cultivation and animal husbandry techniques, resulting in low productivity. Without additional technical knowledge, improved knowledge of market opportunities, and price incentives, local farmers prefer to minimize risks by adhering to practices with which they are familiar and that ensure food security and reliable income.

- Although water is readily available, only small-scale and marginally effective community irrigation systems exist to channel the water to be used for off-season vegetable production.

52. Total rainfall near Luang Prabang is approximately 1300 mm annually. Average high temperatures in the hot season reach 36°C in April, while average low temperatures are 13°C in January. Temperatures in the highlands are somewhat cooler, and frost is occasionally recorded in some areas during the cold season. Agro-climatic conditions are favorable for vegetable production during the dry season, but are less favorable during the wet season. Lowland areas can produce local vegetables during the wet season and a wide variety of temperate vegetables in irrigated areas during the dry season. Upland areas have the potential to produce temperate climate vegetables year-round.

53. Vegetable production systems face a number of agricultural constraints, mostly related to pest control, soil fertility management, and labor requirements. Trading and marketing constraints also are important limiting factors for both conventional and organic vegetable production, in particular in areas further from the urban center of Luang Prabang.³⁶

54. The operators of urban and peri-urban market gardens reported that a serious constraint for local farmers is urban development. Expansion of Luang Prabang city is underway in all directions. Urban encroachment and loss of land to the expanding tourism industry and housing development is reducing the availability of land for peri-urban agriculture. Over the long term, small market gardens are likely to be forced to move further outside of the city to make way for urban development.

55. Although livestock is not a focus of this scoping study, food suppliers dealing in meat processing and meat products indicated that the quality of livestock available in Luang Prabang is generally poor. All poultry and poultry parts are imported from Thailand, where the Charoen Pokphand (CP) Food Group produces and processes poultry, meeting the high standards required by regional and global markets. Pigs raised by Chinese investors in Luang Prabang District are the first choice of meat processors, while pigs raised by local farmers rank second. However, due to local shortages, pigs are frequently imported from Thailand. Buffalo and cattle from local sources are poor quality.

Current plans

56. Expansion of safe vegetable production: The Luang Prabang PAFO has initiated production of organic vegetables on 3 ha of land with farmers in five villages at the village cluster (*kum baan*) of Ban Nam Thouam, Nam Bak District. PAFO has plans to expand organic and safe vegetable production in the area, using whatever water resources are currently available. The plan is to support the program through the Nam Thouam Agriculture Center. PAFO is designing the program based on the Éléphant garden model at Ban Phou Mok; that does not produce organic vegetables, but does produce high quality safe vegetables.

- Ban Nam Thouam is located about 100 km north of Luang Prabang. Shipment of vegetables to Luang Prabang (or to the Chinese border for export) requires two to three hours by truck. Without cold storage or refrigerated container trucks, spoilage percentages are expected to be high. No distribution center is available for cleaning, sorting, grading, packing, or packaging large quantities of vegetables.
- Provincial and district agricultural technicians have minimal experience in safe and organic vegetable production. They are not trained in science-based food inspection procedures, processes, and protocols that guarantee to buyers that the vegetables are genuinely safe.
- Local communities have no knowledge of community or participatory certification of food safety. The pricing of vegetables certified as being safe or organic requires a price structure that allows differentiation from non-certified products. Without a price incentive, it is unlikely that farmers will be motivated to organize to produce premium products.
- One danger is that local farmers may respond to the increased demand for vegetables by rapidly expanding production to meet the needs of large numbers of railway construction workers. In doing so, and with higher returns expected, farmers may increase the use of agricultural chemicals, including hazardous pesticides. This process may result in increased pest infestations on farms not using insecticides.

³⁶ Khamxay Sipaseuth, Viengneune Bouasipaseuth, Andrew Wilson, Helvetas / Department of Agriculture, *Organic Vegetable and Fruit in Luang Prabang Province, Lao PDR, A Pre-feasibility Study, Final Report*. Vientiane: Helvetas Lao PDR/CUSO, 2008.

57. Urban and peri-urban agriculture: DPI has no plans to create a 'green zone' or to preserve land for urban and peri-urban agricultural production in Luang Prabang city. DPI states that PAFO and the Provincial Land Management Authority (PLMA) are required to undertake land capability and classification surveys to establish zones appropriate for housing, agricultural development, economic development, conservation, and preservation, before a comprehensive urban development plan can be prepared. Currently, investors in urban and peri-urban vegetable production in Luang Prabang city and vicinity are repeatedly confronted with survey engineers designing a road or some other public or private facility, without consultation with project affected people.

- DPI was not forthcoming with any urban development plans.
- Any plan to create a green zone to accommodate urban and peri-urban agriculture is dependent on two other GoL agencies cooperating to create a zoning code for Luang Prabang city.
- Small- and large-scale investors in vegetable production in Luang Prabang city will hesitate to implement their plans if they are not certain that they will not be impacted by uncontrolled urban expansion.

5.2 Vegetable marketing issues

58. Representatives of the regional and international food supply companies (food suppliers) indicated that as much as possible, they prefer to procure food products locally. The most serious constraint is identifying dependable local sources of food products: that is, farmers or farmer organizations that are able to provide a continuous supply of high quality and safe fruit, vegetables, fish, and meat. Because producer groups are scattered, food supply companies and market traders at the Phosy fresh market generally have arrangements with food supply brokers or middlemen-transporters who act as collectors and purchase products directly from villages. No area is producing a critical mass of safe or organic vegetables.

59. Vegetable traders at the Phosy market reported that the most serious problem with vegetables produced locally is their poor quality. At the same time, producers complained that productivity is low because they are unable to afford appropriate fertilizer packages and bio-pesticides. Restaurant managers and chefs pointed out however, that although local farmers had the skills to grow high quality vegetables they were unaware of biological control, pre-harvest, and post-harvest handling techniques that would allow them to increase productivity without significant investment in pesticides. The result is that output varies greatly throughout the year, resulting in irregular deliveries and local supplies being undependable. Even orders for vegetables from the one organic vegetable farm in Luang Prabang District cannot always be filled as ordered by the customer.

60. In addition, local vegetable traders do not offer any price incentive to producers to produce premium quality vegetables that can be marketed easily to the numerous hotels and restaurants in Luang Prabang. Since local traders generally purchase the vegetables wholesale in large quantities (in bulk), they factor into the price a certain percentage for spoilage, waste (to be discarded; or sold as livestock feed), and poor quality vegetables that can only be sold at lower prices to consumers in the local fresh markets.

Current plans

61. Vegetable procurement and distribution: DPI reports that several investors have indicated an interest in establishing a food distribution center for northern Laos in Luang Prabang. However, DPI was not forthcoming about any definite plans regarding a food distribution facility.

62. Increasing the supply of high quality and safe vegetables: PICO reports that the consumer price index (CPI) for Luang Prabang remains stable. No significant price increases

have been observed between 2010 and 2011. However, restaurant managers and chefs reported that based on their carefully kept corporate records, some maintained for as long as five years, vegetable prices are increasing steadily. They also report that vegetable prices are highly volatile, with higher prices in the hot and wet seasons (April to September). Food also is lower quality during that period.

63. Many of the vegetables currently imported from neighboring countries in fact can be grown in Luang Prabang or elsewhere in northern Laos. Examples of imported fruit and vegetable crops that could be produced in northern Laos are presented on **Table 6**.

China	Thailand	Viet Nam
<ul style="list-style-type: none"> • Garlic • Carrots • Potatoes • Oranges 	<ul style="list-style-type: none"> • Carrots • Mango • Lolla rossa lettuce* • Tomatoes 	<ul style="list-style-type: none"> • Parsley • Basil • Celery • Flowers • Oranges
		<ul style="list-style-type: none"> • Large Onions • Flowers

* *Lactuca sativa* (Asteraceae family), Oak leaf lettuce.

64. In addition, vegetables produced elsewhere in Laos that easily could be produced in urban and peri-urban vegetable plots in Luang Prabang are presented on **Table 7**.

Vientiane Capital City	Vientiane Province	Northern Provinces
<ul style="list-style-type: none"> • Green beans (seasonally) • Lettuce • Eggplant • Chinese cabbage 	<ul style="list-style-type: none"> • Green beans (seasonally) • Chili peppers • Cabbage 	<ul style="list-style-type: none"> • Oudomxay: Green (bell, sweet) peppers • Xieng Khouang: mushrooms, asparagus • Asparagus; Xieng Khouang

65. Other than expanding organic vegetable production in the Nam Thouam area (currently an area of 3 ha) about 100 km north of Luang Prabang, provincial officials did not offer any plans to promote urban or peri-urban vegetable production to meet the immediate increase in demand from hotels, restaurants, academic institutions, mega-project development (i.e., hydropower, mining, and railway construction workers), and the growing number of middle-class consumers in Luang Prabang and elsewhere in the Northern Region.

- There is little reason to doubt that the increased demand for vegetables by hotels, restaurants, and foreign workers will cause the CPI to increase, with a negative impact on urban salaried Lao with little time available to raise livestock and grow their own food.

5.3 Food quality issues

66. Food quality can be defined in different ways, including:

- *Holistically*: all the desirable characteristics a product is perceived to have; and,
- In terms of excellence: referring only to characteristics that pertain to a higher, more restrictive or “superior” specification of the product (e.g., organic and fair trade food).³⁷

³⁷ Liesbeth Dries, K.U. Leuven, Maria Cecilia Mancini, Food quality assurance and certification schemes, Brussels: European Commission, 2006.

- Quality food also can be defined as *food with characteristics that are acceptable to consumers* including external factors such as appearance (size, shape, color, gloss, and consistency), texture, flavor, nutritional properties, and shelf life.³⁸

67. Safe food however, requires a more legalistic definition: Freedom from environmental and other contaminants and sources of toxicity (physical, chemical, and/or biological) injurious to health.³⁹

68. The European Union defines food safety as follows:

*Food shall be deemed to be unsafe if it is considered to be (a) injurious to health; (b) unfit for human consumption.*⁴⁰

69. The GoL's Law on Food defines safe food as follows:

*Safe food is food without contamination of bacteria, chemical substances toxic or adulterated agents that are dangerous to the consumer's health.*⁴¹

70. The GoL's *Regulation on the Control on Production, Exported-Imported Safe Food*⁴² does not give a specific definition of 'safe food' but in article 4 does discuss safe food production and processing as follows:

*Safe food process begins from selection of raw material, control of all steps of food production, processing, analysis, packaging, labeling, storage, transportation, distribution in order to ensure quality and safety of food products following Good Manufacturing Practices (GMP).*⁴³

71. Each of the 300,000 to 350,000 visitors to Luang Prabang expects that during their visit the food consumed will be clean and safe. Hotel managers pointed out that they are obligated to make expensive amends to guests who become ill from food consumed at the hotel's restaurant. Even after receiving recompense, some guests voice their displeasure in public at travel websites, leading to lower rankings for individual hotels, hotel restaurants, and hotel chains.

- Consultations with hotel and restaurant managers and chefs of several high quality food outlets in Luang Prabang emphasized the importance of food safety. Each food outlet is willing to pay higher prices for food products so long as they can be assured that it is safe. They stressed the importance of protecting their names, corporate brands, and reputations. They encouraged the local government to take preventative measures to ensure food safety for all consumers in Luang Prabang.

Current plans

72. Food safety: The GoL has a diagnostic Food Safety Laboratory, separate from the other human health laboratories, at the Food and Drug Quality Control office in Vientiane. This laboratory analyzes food samples to trace for pesticides, measure moisture content, and check the quality of packaged foods. The Food and Drug Department is represented at the provincial level by six to eight technical staff who are in charge of inspecting food and reporting food-borne diseases to the Food and Drug Control Department in the Ministry of Health.

³⁸ Wikipedia website, www.wikipedia.org, accessed on 14 April 2011.

³⁹ Margaret Will, Guenther. D., *Food Quality and Safety Standards as required by EU Law and the Private Industry: A practitioners' Reference Book*, 2nd edition, Eschborn, Germany: GTZ, 2007.

⁴⁰ Regulation (EC) 178/2002, http://europe.eu.int/eur-lex/pri/en/oj/dat/2002/l_031/l_03120020201en00010024.pdf

⁴¹ National Assembly, No. 04/NA, Law on Food, 15 May 2004.

⁴² Ministry of Health, No. 586, 12 May 2006.

⁴³ GMP: A set of procedures that ensure hygienic food processing procedures and constitute a prerequisite for the implementation of hazard analysis and critical control points (HACCP).

- The Food and Drug Unit at the Luang Prabang Provincial Department of Health Office has several food testing kits used to test for residual chemicals in vegetables and 2-3 pieces of equipment used to analyze food samples. It lacks the institutional capacity to provide a systematic, continuous, and reliable level of inspection to ensure comprehensive food safety, given the increased level of tourism, large number of students pursuing their studies in the Province, and the growth of foreign residents and workers in Luang Prabang Province.

73. Plant protection: Similarly, with only two inexperienced plant protection officers and no testing or diagnostic laboratory equipment, the Luang Prabang PAFO (Crops Division) lacks the institutional capacity to provide reliable plant protection and inspection services and technical analysis for food safety. Nor is food safety or plant protection included in PAFO's five year agricultural development plan.

- Although the provincial five-year agricultural development plan, 2011-2015, aims to achieve the four goals and to implement the 13 measures promoted by MAF policies in the *Sixth* National Social and Economic Development Plan, 2006-2010, the provincial plan does not take into consideration MAF's measures to implement the *Seventh* National Social and Economic Development Plan, 2011-2015, or the Agricultural Development Strategy to 2020, or the Agriculture Master Plan 2011-2015.
- To expand implementation of clean agriculture measures and increase the volume of safe food products, PAFO is proposing that agriculture technicians from several districts where vegetables are produced (i.e., Luang Prabang, Xieng Ngeun, Phonxay, Nam Bak, Chomphet, Phonthong) be trained at the Eléphant garden at Ban Phou Mok. However, GoL funds are not available for this training.

74. Food inspection: Currently, food quality inspection in Luang Prabang is undertaken randomly by visual examination of products. No instruments, tools or gauges are used during inspection. No inspection reports are issued or other evidence of conformity such as laboratory test reports on the products sampled during inspection.

- Traditional food safety screening and inspection systems cannot respond to existing and emerging challenges to food safety, mainly because they do not provide a preventive approach.
- Although the Luang Prabang PICO, DPI, PAFO, and Department of Health Office all have an awareness of the importance of food safety and stated that food safety was part of their departments' provincial social and economic development plans, none of the agencies had the knowledge or experience to organize a systematic and comprehensive food safety inspection and certification program to enforce food safety guidelines.

5.4 Institutional capacity

75. The lack of knowledge, experience, and full understanding of food safety issues has led to weak leadership on food safety among provincial government agencies. Provincial officials expressed an interest in and are aware of the importance of food safety, but lack the vision that is necessary to formulate a unified strategy.

76. Food security has been a principal national program of the GoL for nearly two decades, with an emphasis on increasing the volume of glutinous rice. The production of safe and nutritious food has not been a priority at the provincial level, likely because safe food is not understood to be included in the meaning of food security.⁴⁴ This situation demonstrates a gap between central government policy and policy implementation at the provincial level as

⁴⁴ Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern. FAO, Trade reforms and food security, Rome: FAO, 2003.

pointed out in an earlier World Bank study on upland development in northern Laos.⁴⁵ In addition, there is no national program for food safety as point of reference and little understanding of food safety standards among concerned provincial government offices.

Current plans

77. Institutional strengthening: Souphanouvong University (SU) in Luang Prabang was established in 2003 in order to provide higher education to students in the eight northern provinces. It receives financial and technical assistance from a private Korean investor whose aim is to make the university the best in Laos.⁴⁶ Lao faculty and staff are being provided with training at Korean universities in several areas related to administration, curriculum development, and research and development techniques. Through the loan, the university has received several fully equipped science laboratories for diagnostic analysis related to food, soils, forestry, plant, pharmaceutical, and animal sciences.

- The university also is receiving technical and academic assistance from the Thai International Development Cooperation Agency (TICA) through Chiangmai University (CMU), with which it has a memorandum of understanding (MOU). CMU is providing technical assistance and training in curriculum development and staff development; equipment to support basic teaching; and, short courses at CMU.
- Two SU faculty members have been trained in food science and two in plant science at the master's degree level at CMU. These lecturers have been granted additional scholarships for doctorate level studies at CMU and are likely to be away from SU for long periods over the next few years, concentrating on their studies.
- The diagnostic laboratory equipment at the university was obtained through the Korean Government loan. The equipment is modern, new, and unused. The master's level faculty in food and plant science has had only basic training in using laboratory equipment. There are no laboratory administrators or technicians and no plans to train any to make use of the eight laboratories: animal production and diseases; animal feed and nutrition; animal reproduction and genetics; plant research and cereal crops; horticulture; soils science and environment; forest management; and forest utilization.
- The university is prepared to rearrange these laboratories and reallocate some equipment to establish a diagnostic food science laboratory.

5.5 Logistics

78. Luang Prabang city is a transportation hub for northern Laos. As the region's center for tourism, Luang Prabang is well served by bus and air transportation services. Regular and dependable bus services are available to and from Vientiane and with all other cities in northern Laos.

- Luang Prabang food suppliers tend to use the Ban Chith Transport Company, located at the Northern Bus Station in Vientiane Capital City to ship food products to Luang Prabang. This company has a truck shipping goods to Luang Prabang every two days.

79. Frequent air services are available to and from Vientiane, Chiangmai, Bangkok, Hanoi, and Siem Reap (Cambodia; via Paksé, Champasak Province), on Lao Airlines, Bangkok Airways, and Vietnam Airlines. Food suppliers in Luang Prabang and Chiangmai who ship food to Luang Prabang, report that easily perishable cargo is sometimes (but not regularly) transported to Luang Prabang by air cargo.

- Hotel and restaurant managers and chefs as well as food suppliers indicated that there were many difficulties shipping food by air cargo. The most serious problem is with the

⁴⁵ World Bank, Lao People's Democratic Republic: Policy, Market, and Agriculture Transition in the Northern Uplands, Washington: World Bank, 2008.

⁴⁶ The Economic Development Cooperation Fund was established in 2006 by a US\$22.7 million loan from a private investor through the Korean government. The loan will be used to manage the university for the next 30 years in collaboration with the GoL. Vientiane Times, September 2007.

charges levied by airport and customs officials at both the exporting and importing airports. Surcharges also are frequently imposed without prior notification or explanation; including airport taxes, cargo fees, and customs duties (often contrary to the AFTA agreement).

80. Food suppliers and hotel and restaurant managers and chefs were in agreement that the food safety and distribution situation in Luang Prabang would benefit considerably from a central distribution center. The Phosy market is an average size urban market, suitable for the city of Luang Prabang, but has no facilities for handling large quantities of agricultural products or for ensuring food safety.

- The owners of the Éléphant garden and Living Land Company and Luang Prabang food suppliers (Thansamai and Jithan mini-marts), as well as Horeca Food Supply Company are small- and medium-scale enterprises. They are operated either by family members or by a small staff managed by the joint venture partners themselves. Although each organization mentioned the need for a central food distribution center, none has the resources to finance such a complex project.

Current plans

81. Air cargo: Airline representatives in Luang Prabang deny shipping food products as air cargo. They indicated that their passenger load was high and that the aircraft currently in use cannot carry any additional weight. In addition, they reported having bad experiences with food shipped by air cargo in the past; with water from melted ice damaging the passengers' baggage.

- The airline representatives in Luang Prabang indicated that they may consider shipping food products as air cargo in the future, following completion of the airport expansion that will allow the use of larger aircraft and greater cargo capacity.

82. Central food distribution center: As noted above, DPI reported that more than one investor has inquired about investing in a central food distribution center, but to date, no investment proposals have been forthcoming.

6. Proposed solutions

83. The recommendations that follow are offered as proposed solutions to address the key issues discussed above. They are proposed as policy, coordination, and technical interventions in support of further development of the food industry in Luang Prabang Province.

6.1 Policy-level recommendations

6.1.1 Food quality and food safety

84. Drawing on the definition of safe food the GoL's Law on Food and *Regulation on the Control on Production, Exported-Imported Safe Food*, which recognizes safe food as a 'process,' PICO should initiate a 'Safe Food from Luang Prabang' (LP Safe) campaign. The campaign should be endorsed by the provincial government, but would include participation by stakeholders from local business (specifically hotel and restaurant managers and chefs), as well as representatives from producer organizations and food suppliers. The campaign should consist of two principal activities: (i) organizing a network of producers of safe vegetable production; and, (ii) defining and put into place the terms, conditions, procedures, and methods of a community certification program for safe vegetables.

85. The farmer organizations that demonstrate the ability to produce sufficient quantities of safe vegetables in a systematic and continuous manner should be provided with a second

phase of training that will introduce practical activities to launch a community certification program for safe vegetables.

- Both the Éléphant garden and Living Land farm already qualify to initiate a community certification program. Technical assistance from these farms should be engaged to introduce a community certification program to other villages.

86. The 'Safe Food from Luang Prabang' campaign would launch a brand name for vegetables produced in Luang Prabang Province with an appropriate logo (e.g., LP Safe). Only vegetables produced by farmer organizations that have had two phases of training and are successfully demonstrating safe vegetable production should qualify to use the logo, which should be controlled by PICO.

- A provincial task force should be created by the Office of the Governor of Luang Prabang to design, implement, and monitor the community certification program for safe vegetables. The task force should include key stakeholders concerned with the food supply chain in Luang Prabang, from the public and business sectors, including Souphanouvong University.
- The GoL's Law on Food and *Regulation on the Control on Production, Exported-Imported Safe Food*, as well as the Joint FAO/WHO Codex Alimentarius Commission (Codex) should be used to develop a set of standards for safe vegetables produced in Luang Prabang (e.g., Luang Prabang Standard for LP Safe).

6.1.2 Strengthening institutional capacity

87. The diagnostic equipment at SU's food science laboratory should be used to establish a science-based safe food technical center for the northern region thereby contributing to sustainable and safe food production in Laos.

88. Food science laboratory technicians should be engaged and trained through the project and based at SU to staff the food science and plant science laboratories, working under the supervision of the master's degree level food science lecturers. These technicians should be provided with short-course training by CMU scientists and international technical assistance, emphasizing laboratory organization and management. At least two laboratory technicians should be trained as laboratory administrators for each laboratory.

89. The SU Safe Food Technical Center (SAFTEC) staff should be contract employees paid by the university. SAFTEC should have two functions: (i) provide technical analysis of food samples brought to the laboratory for testing, for which a technical report from the university would be issued; and, (ii) provide outreach services to vegetable producers and food suppliers in Luang Prabang Province, using mobile diagnostic kits to test samples of vegetables for bacteria, chemical substances, and toxic or adulterated agents that are dangerous to consumers' health. Both services would be provided for a fee sufficient to ensure cost recovery of laboratory expenses by SU.

- The SAFTEC outreach service should be used to periodically verify IPM methods, organic vegetable standards, and community certification programs. In this way SAFTEC would act on behalf of PICO to verify that producers that have been authorized by PICO to use the Safe Food from Luang Prabang logo in fact continue to be entitled to use it.
- With additional technical assistance, the laboratories should be strengthened at a later stage to undertake cleaner production assessments, provide technology advice, and training and information for northern Laos.⁴⁷

⁴⁷ Assistance from UNIDO could be requested for this second phase.

6.2 Coordination recommendations

6.2.1 Logistics

90. The potential exists to establish a food distribution center at two locations: (i) Ban Nam Thouam in Nam Bak District, and (ii) Ban Houay Khot in Xieng Ngeun District. Both locations have agriculture research and development facilities that have buildings and staff that could be used as food supply processing centers.

- Although the principal focus of these centers is agriculture research and development, each should play a role in any proposed intervention to implement the MAF Agricultural Development Strategy to 2020 and the Agriculture Master Plan, 2011-2015. These policy documents require that MAF line agencies and PAFOs play a prominent role in promoting the retention of value-added of food and agricultural products at the village level by promoting pre- and post-harvest technologies, family- and community-based value-added processing, and biosafety.
- In anticipation of food distribution centers being developed at strategic locations in the north, the project would finance the installation of two small (20-30 cubic meters) walk-in refrigeration units; one each at the Agriculture Development Center at Ban Nam Thouam to serve organic farmers in Nam Bak District and vegetable farmers in neighboring provinces (Oudomxay, Phong Saly, Luang Nam Tha); and, at the Northern Agriculture and Forestry Research Center (NAFReC), Ban Houay Khot, Xieng Ngeun District, to serve clean vegetable farmers (using IPM) in Xieng Ngeun District and vegetable farmers in neighboring Xayaboury Province. The refrigeration units would be located at the agriculture centers but be operated as a public-private partnership (PPP), in collaboration with an experienced Lao or regional trading enterprise.
- A feasibility study should be conducted to determine the financial and economic viability of a food distribution center at one or both of these locations. Such a center should include cold storage (for storing surplus vegetables or for keeping them overnight); facilities for cleaning, sorting, and grading; provisions for packing and packaging; office space for on-site inspection and certification of safe food using mobile test kits; and, banking services.

6.3 Technical recommendations

6.3.1 Agricultural production

91. To meet the food security needs of all consumers in Luang Prabang, the production of safe vegetables should be undertaken using resources available in the province. Capitalizing on the lessons learned at existing successful vegetable production farms in urban and peri-urban areas of Luang Prabang, training should be provided to agriculture technicians, lead farmers, and student farmers on the production of safe vegetables. Technical training would include production techniques related to integrated pest management (IPM), organic vegetable production, environmental sustainability, social acceptability, and food safety and quality.

- For an initial period of approximately one year, the training would be organized at the Éléphant vegetable garden where IPM is used; and, Living Land organic vegetable farm. The operators of these farms would be engaged as technical assistance to provide training to future trainers; namely, agriculture technicians and farmer leaders. Training of additional technicians and producers eventually would be conducted at the Nam Thouam Agriculture Development Center and NAFReC, once the capacity had been strengthened and facilities upgraded to respond to training needs.
- Training should be provided to agriculture technicians from the Nam Thouam Agriculture Center, Nam Bak District; from NAFReC, Ban Houay Khot, Xieng Ngeun District; and, from selected districts in Luang Prabang Province.

- Separate short-term food supply management training should be provided to PICO, PAFO, and Provincial DPI staff, and loan officers from the Agriculture Promotion Bank and the Nayobay Bank (and other interested banks); on food supply chain management in Luang Prabang; and, to develop an understanding of the financial and economic aspects of vegetable production and the income generating potential from the production of safe food products.
- Leaders of farmer organizations and especially young farmers should be provided with training in phases that emphasize organic, IPM, and safe agriculture practices. The training would focus on farmers and farmer organizations that have the highest potential to produce safe and organic vegetables (and later other products) for sale to local food suppliers.

92. The urban and peri-urban vegetable producing villages in Luang Prabang District, and those in Xieng Ngeun District, should be targeted to expand the area of IPM and safe vegetable production. The villages in the Ban Nam Thouam village cluster in Nam Bak District, already producing organic vegetables, should be targeted to expand the area of organic vegetable production. Other villages in Nam Bak District should be targeted to produce vegetables using IPM and safe production techniques. The 10 ha of land adjacent to the Living Farm Company in Ban Phonvanh, Luang Prabang District should be targeted for expansion of organic vegetables.

93. Farmer organizations that qualify as safe vegetable producer groups should be registered with district officials and considered for agricultural credit by the Agriculture Promotion Bank and the Nayobay Bank.

6.3.2 Vegetable marketing

94. Although the emphasis of the training provided is to increase the volume of safe vegetables in the Luang Prabang market and the productivity of vegetable farming, an effort should be made to diversify the types of crops being cultivated by local producers. The Nam Thouam Agriculture Center and NAFReC are well placed to undertake tests and trials of vegetables drawing on lessons learned and training at the Éléphant garden and the Living Land farm.

- An emphasis should be placed initially on cultivating vegetables imported from neighboring countries and temperate climate vegetables and herbs that can be produced in northern Laos. Later, vegetables brought in from other provinces should be tried to increase the volume and productivity of locally produced vegetables and to decrease dependency on imported food products.

List of Annexes

	<u>Page</u>
Annex 1: Terms of Reference for a Scoping Study on Trade, Food Production and Service Sector Linkages in Luang Prabang	36
Annex 2: Itineraries for fact-finding missions to Luang Prabang: February and March 2011	42
Annex 3: List of persons and organizations met related to preparing the Scoping Study on Trade, Food Production, and Service Sector Linkages in Luang Prabang February and March 2011	48
Annex 4: Comments from a Focus Group Meeting with Luang Prabang hotel and restaurant managers and chefs, 10 March 2011, at the Grand Luang Prabang Hotel, Ban Xiengkeo, Luang Prabang	51
Annex 5: Proposed Concept for the Luang Prabang Food and Trade Linkages Project	52
Annex 6: List of references	63
Annex 7: Legal and regulatory framework for food safety in Lao PDR	65
• Appendix 7.1: Regulation on the control on production, exported/imported safe food (2006)	
• Appendix 7.2: Regulation on the basic principles in the application of sanitary and technical measures for the management of food safety (2009)	
• Appendix 7.3: Regulation on labeling of pre-packaged food (2009)	

Annex 1: **Terms of Reference for a Scoping Study on Trade, Food Production and Service Sector Linkages in Luang Prabang**

A regional agricultural marketing and agribusiness development specialist (Mr. Anthony M. Zola) was engaged by the World Bank in early 2011, to undertake a *Scoping Study on Trade, Food Production and Service Sector Linkages in Luang Prabang*. The terms of reference for the consultant are presented as **Annex 1**. The assessment was undertaken with support from the World Bank, Trade Promotion and Product Development Department (TPPD), Ministry of Industry and Commerce (MOIC), and Luang Prabang Provincial Industry and Commerce Office (PICO), as part of the Trade Development Facility, a multi-donor trust fund financed by the European Union and the Australian Government and administered by the World Bank. The terms of reference for the specialist follow.

BACKGROUND

The Lao economy has been growing impressively at a rate of averaging 6.5 percent each year since 2001. Real GDP growth reached a high of 7.6 percent in 2006, before dropping somewhat to 7.5 percent in 2008 and 6.7 percent in 2009. While much of this growth is associated with increased foreign direct investment in the hydropower and mining sectors, non-resource sectors like agriculture and tourism have also grown steadily as Lao PDR integrates more closely into the regional economy.

A large majority of the population depends on agriculture and the use of natural resources for livelihoods. Rapid growth in non-agriculture sectors pushed the overall growth rate up to 7.5 percent in 2008, while agriculture's share declined from 2.3 percent in 2007 to 1.1 percent. While the high rate and rural location of poverty indicates that successful agricultural and rural growth are the foundations for further poverty reduction, it is clear that accelerating poverty reduction will depend largely on absorption of labor and job creation in other sectors.

The agriculture sector plays an important role in the Lao economy, constituting 41 percent of GDP and employing 71 percent of the labor force. Most households in rural areas are near-subsistence farmers engaged in rice-based agriculture, collecting forest products, and raising livestock. The sector is dominated by low-productivity rice production and characterized by low-level use of purchased inputs such as improved seeds/breeds and fertilizers. Most rice is consumed by the farm households that produce it, with less than 10 percent marketed. The principal structural characteristics are a low level of input use, traditional production systems especially in the uplands, non-market orientation of production, predominantly household labor, and private land holdings.

Poverty rates have been declining, with the number of poor households falling from 46 percent in 1992/93 to approximately 33 percent in 2002/03 and 27 percent in 2008. The incidence of poverty varies by geographic areas however, with rural poverty at 38 percent being far higher than urban poverty at 20 percent. The development of SMEs is seen as a key element in the creation of employment and providing stable links to markets for food and agricultural products and increasing income in the poorest areas. Since most Lao agricultural produce is exported as primary commodities to China, Thailand, and Viet Nam, significant opportunities for employment and value creation are lost.

One of the main elements of the national development strategy is to increase non-resource exports growth. The Sixth National Socio-Economic Development Plan (6th NSEDP) lays out the objectives of sustaining economic growth, accelerating efforts to reduce poverty, protecting the country's environmental resources, and promoting industrialization and modernization. The goal is to graduate from Least Developed Country

status by 2020. Recognizing the need to diversify exports and ensure that growth is sustained, inclusive and pro-poor, the Government is committed to implementing a strategy of targeting non-resource sector export growth. To achieve this goal, the Government of Lao PDR is:

- 1) *Deepening its integration with regional and international markets through bilateral, regional and WTO accession negotiations;*
- 2) *Expanding its capacity to trade by engaging in multilateral initiatives such as the 'Integrated Framework' (IF) and other trade related projects and programs which focus on addressing key supply-side constraints and the promotion of trade and regional integration; and*
- 3) *Reducing trade barriers and minimizing transaction cost through promoting simplification, harmonization, transparency and automation in customs, trade facilitation and transport procedures.*

The World Bank and other donors are supporting this process through a number of investment projects. The Trade Development Facility, a US\$ 6.8 million multi-donor trust fund administered by the World Bank and financed by Australia and the European Commission, was launched in 2008. Projects on Customs and Trade Facilitation, Rice Productivity Improvement, Uplands Food Security and Local Area Development are also being financed by the World Bank, along with budget support under the annual Poverty Reduction Support Operations.

Significant analytical work on the agriculture sector has been carried out in recent years, much of it linked to assessing the gap between current agricultural and food production standards and those increasingly required in international markets. The 2006 Diagnostic Trade Integration Study⁴⁸ highlighted the key constraints to improved international integration, including in the agricultural sector. Recognizing that addressing issues surrounding sanitary and phyto-sanitary conformity were a key binding constraint, the GoL prepared an SPS Action Plan as a follow-up activity to the DTIS⁴⁹. The literature on how farmers can be better linked to markets points to poor infrastructure, unmet capital needs and weak commercial skills in explaining thin agricultural markets and the limited existence of nonfarm enterprises⁵⁰. High market transactions costs and weak institutional arrangements have also been highlighted as possible explanations for the limited extent to which Lao households and enterprises in rural areas participate in cross-border trade in agricultural produce.

As the Lao PDR has integrated more closely into the regional economy, value chains in a number of agribusiness sectors have begun to be formed more strongly across borders. The evidence suggests that as Lao PDR has integrated with her regional neighbors, the private sector has shown an increased willingness to establish new institutional arrangements to facilitate cross-border agribusiness. A study on agricultural transition in the Northern Uplands pointed to the emergence of provincial contract farming, organized between business associations and provincial authorities, as a possible means of

⁴⁸ The World Bank (2006) "Building Export Competitiveness in Laos – Background Report, East Asia PREM, November.

⁴⁹ The World Bank (2006) "Lao PDR Sanitary and Phytosanitary Standards Management – Action Plan for Capacity Building", Agriculture and Rural Development Department, December.

⁵⁰ Vargas Hill and Christiaensen (2006) "Linking Laotian farmers to markets", unpublished manuscript, December.

⁵¹ Global Development Solution (2005) "Integrated Value Chain Analysis of Selected Strategic Sectors in Lao PDR", draft report prepared for the World Bank, September.

reducing risks associated with cross-border agricultural trade⁵². Given the myriad challenges associated with accessing the three key neighboring markets of the Lao PDR (Thailand, Vietnam and China)⁵³, the emergence of new institutional structures may be seen as a means of addressing the high transactions costs that have previously constrained Lao agribusiness. Such ventures have the potential to allow the Lao agricultural sector to have greater access to larger and more lucrative cross-border markets, to achieve greater economies of scale and move up the value chain into higher processes in key commodity groups. Success in accessing such markets close to home may also allow learning-by-doing and serve as a launch pad for accessing tougher markets further away.

Joint research carried out by the Ministry of Industry and Commerce and the World Bank in 2009 investigated the performance of the growing agro-industrial clusters in Champasak. Here, linkages between producers in southern Laos and buyers in Thailand have grown strongly with rapidly growing exporters of cabbages, green peppers and pineapples, in part facilitated by a series of annual Memorandums of Understanding between provincial authorities on each side of the border. Key constraints identified by this study were placed into three categories, and include the following:

- Production constraints:
 - *For the most part, farmers practice natural agriculture and produce sub-standard food and agricultural products.*
 - *Most farmers cultivate a monocrop of rice during the main planting season to ensure food security, with little crop diversification.*
 - *Most farmers lack secure land tenure resulting in poor management of land and soils.*
- Business constraints:
 - *The granting of land concessions to agribusiness investors is an important GOL policy mechanism for promoting agribusiness development. However, land management policies, laws, and regulations remain imprecise, untested in courts, and lightly enforced.*
 - *Agro-enterprises generally are small; banking and financial services are weak; and labor productivity is low.*
- Trade constraints:
 - *Most entrepreneurs and producers have little understanding of domestic, regional, and global markets.*
 - *Export-oriented enterprises are constrained by decentralized trade rules resulting in time-consuming official procedures, technical formalities, unimpeded collection of ad hoc fees, and high transaction costs.*
 - *Notwithstanding significant recent investments in transport infrastructure in Lao PDR, poor market infrastructure and logistics are significant constraints to cross-border trade.*

In response to the findings of this study, the Ministry of Industry and Commerce prepared a *Champasak Trade Modernization Project*, to be implemented with resources from the Trade Development Facility Multi Donor Trust Fund (financed by the European Union and Australia, and administered by the World Bank). The project aims to facilitate increased private sector compliance with international/cross-border standards, and improve processes for certifying the quality of Lao agricultural export produce in the province.

⁵² The World Bank (2008) "Lao PDR: Policy, Markets and Agricultural Transition in the Northern Uplands", Agriculture and Rural Development Department report, May.

⁵³ The World Bank (2009) "Lao PDR: Sanitary and Phytosanitary Measures – Enhancing Trade, Food Safety and Agricultural Health", Rural Development, Natural Resources and Environment Department, East Asia and Pacific Region report, February.

The tourism and services sector in Luang Prabang also presents a significant market opportunity for the Lao private sector in agribusiness and food production. There is growing evidence, as in other areas of the country, that the private sector in Luang Prabang is responding to increased market opportunities in agribusiness and food production. However, while in Champasak the market was external, in Luang Prabang the market is to serve the rapidly growing tourism and services sector within the country. A large amount of food is imported to Luang Prabang by air from Thailand, particularly to serve the premium end of the tourism market. There is enormous potential to substitute a share of these imports with domestic production, if the right quality standards can be met in sufficient volumes and with consistent supply. Anecdotal evidence suggests that steps have already been taken towards this end with some modest contract farming arrangements between hotels and restaurants, and local suppliers of fresh food products. Gaining the capacity to meet food standards in the local premium tourism market, might also be used as a stepping stone towards meeting food standards in premium export markets.

As a follow up to the Champasak study, the Ministry of Industry and Commerce – together with the World Bank – intend to carry out a second agribusiness scoping study, but now focusing on trade, food production and service sector linkages in Luang Prabang.

OBJECTIVE

The key objective of this assignment is to investigate current and potential market linkages between the tourism and services sector in Luang Prabang and food production suppliers in the surrounding areas. The consultant should seek to identify the obstacles to increased domestic supply of food and food based products, and make recommendations on the possible role of the public sector (if any) to facilitate the acceleration of this process.

The consultant should also provide ongoing implementation support during the first year of implementation of the Champasak Trade Modernization Project.

SPECIFIC TASKS

1. The consultant is expected to carry out the following activities:
2. Conduct a brief desk review of existing analytical work on agribusiness, contract farming and premium food production, including key constraints to development, in Lao PDR.
3. Investigate the current demand for food products in the Luang Prabang services sector, the nature of current linkages with suppliers, and potential for enhanced supply linkages and import substitution.
4. Prepare a draft report based on the findings of field work, and present clear recommendations of feasible interventions and possible policy actions necessary to support increased market linkages between the Luang Prabang services sector and agribusiness suppliers. The report should distinguish between recommendations for the Ministry of Industry and Commerce and other agencies, and (if feasible interventions are identified) should include a concept outline as an annex to the report.
5. Organize a dissemination workshop to present the draft report for critical review.
6. Revise and submit a final report, based on comments provided.
7. Provide ongoing advice, guidance and technical assistance as required during the first year of implementation of the Champasak Trade Modernization Project.

DELIVERABLES

Draft and final reports of no more than 30 pages (excluding annexes) with clear and specific recommendations for policy and feasible interventions. The target audience for this study is the Ministry of Industry and Commerce (National Implementation Unit and Department of Production and Trade Promotion), and the World Bank Vientiane Office.

ANTICIPATED INPUTS

The expected duration of service is 20 days for the Scoping Study on Trade, Food Production and Service Sector Linkages in Luang Prabang, and 10 days for implementation support for the Champasak Trade Modernization Project.

REPORTING

The consultant will report to the Focal Point of the Export Competitiveness component of the Trade Development Facility (Deputy Director General, Department of Production and Trade Promotion), and work closely with the staff of the National Implementation Unit (Ministry of Industry and Commerce) and the PREM cluster staff in the World Bank Lao Country Office.

CONSULTANT QUALIFICATIONS

A minimum of fifteen years experience working on trade, private sector development and agribusiness development. Relevant experience in Southeast Asia and/or Lao PDR is highly desirable.

Annex 2: **Itineraries for fact-finding missions to Luang Prabang: February and March 2011**

Ministry of Industry and Commerce
Department of Trade Promotion and Product Development, and World Bank, Lao PDR
Fact-finding Mission to Luang Prabang Province, Lao PDR
13-19 February 2011
by Mr. Anthony M. Zola, Agribusiness Development Specialist /
Consultant to the World Bank
and Officials and Representatives from the Department of Trade Promotion and Product
Development and the Ministry of Industry and Commerce, Lao PDR

Itinerary

Participants:

I. Department of Trade Promotion and Product Development:

1. Mr. Somvang Ninthavong, Deputy Director General
2. Mr. Sysangkhom Khotnhotha, Director of Trade Information Division
3. Mr. Chalearn Sounichanh, Deputy Director of Compilation and Planning Division
4. Mr. Somvixay Vongthirath, Senior Officer, Trade Information Division

II. National Implementation Unit:

5. Ms. Vilayvanh Bounleuth, Trade Officer, Ministry of Industry and Commerce
6. Mr. Simon Hess, Trade Advisor, Ministry of Industry and Commerce

III. World Bank:

7. Mr. Anthony M. Zola, Lead Researcher and Agribusiness Development Specialist
8. Mr. Richard Record, Trade Specialist, World Bank / Trade Development Facility
9. Mr. Konesawang Nghardsaysone, World Bank / Trade Analyst

Day	Date	Activity	Remarks
1.	Sunday, 13 February	Afternoon: <ul style="list-style-type: none"> • Zola travels by air from Bangkok to Luang Prabang. • MOIC/TPPD team travels to Luang Prabang 	<ul style="list-style-type: none"> • Bangkok Airways PG943, lv Bangkok at 11.40 hours; arr Luang Prabang at 13.40 hours. • Zola stays at Ban Lao Hotel, Thammamikalath Road, Ban Mano, tel: 071 252 078, fax: 071 212 438, email: info@banlaohotel.com.
2.	Monday, 14 February	Morning: <ol style="list-style-type: none"> a) 08.30 hours: Meeting: TPPD, World Bank, and the consultant at Ban Lao Hotel. b) 10.30 hours: Meeting with Luang Prabang Province Industry and Commerce Office (PICO). c) 12.00 hours: Lunch in Luang Prabang 	<p>a) Proposed agenda for TPPD, WB, and Consultant meeting:</p> <ol style="list-style-type: none"> a) Review of the consultant's terms of reference. b) Review of the schedule of meetings for the mission. c) Other issues. <p>b) Proposed agenda for PICO meeting:</p> <ol style="list-style-type: none"> a) Introduction to the scoping study. b) Agricultural trade and agribusiness investments in Luang Prabang that promote local food production for hotels and restaurants. c) Food imports from neighboring countries to Luang Prabang. d) Obtain data / statistics on domestic, regional, and international trade into Luang Prabang, including Luang Prabang Airport. e) Discussion of food prices and current food price increases.

Day	Date	Activity	Remarks
	Monday, 14 February	<p>Afternoon:</p> <p>d) 13.30 hours: Meeting with the Office of the Governor and / or the Provincial Planning and Investment Office.</p> <p>e) 15.00 hours: Meeting with Provincial Agriculture and Forestry Office (PAFO).</p> <p>f) 16.30-17.30 hours: Team Wrap-up Meeting; impressions of the day.</p>	<p>g) Proposed agenda: Office of the Governor and/or Provincial Planning and Investment Office:</p> <p>a) Introduction to the scoping study.</p> <p>b) Discuss investment priorities for Luang Prabang.</p> <p>c) Obtain data on the number of hotels, restaurants, and other potential institutional consumers of agri-food products in Luang Prabang.</p> <p>d) Obtain detailed data on domestic, regional, and international agribusiness investors in Luang Prabang Province.</p> <p>e) Discussion of agribusiness investment environment in Luang Prabang.</p> <p>c) Proposed agenda for PAFO:</p> <p>a) Obtain data on production and area of food and agricultural products produced for local consumption and those produced for for export.</p> <p>b) Obtain list of registered and unregistered vegetable and livestock farmer organizations / producer groups in and around Luang Prabang.</p> <p>c) Briefing on PAFO plans to promote contract farming of food products.</p> <p>d) Briefing on crop and livestock diversification programs.</p>
3.	Tuesday, 15 February	<p>Morning: <i>(Note: These two meetings could be combined)</i></p> <p>h) 08.30 hours: Meeting with the Luang Prabang Chamber of Commerce and Industry.</p> <p>i) 10.00 hours: Meeting with representatives of the Luang Prabang Hotel and Restaurant Association.</p> <p>j) 12.00 hours: Lunch in Luang Prabang.</p>	<ul style="list-style-type: none"> • Proposed agenda for the Luang Prabang Chamber of Commerce and Industry: <ul style="list-style-type: none"> a) Discussion of demand and supply for food by hotels, restaurants, guest houses, and resorts in Luang Prabang. b) Introduction to business groups producing, trading, and providing food products in Luang Prabang. c) Introduction to any individuals supplying food products to tourist services and other institutions in Luang Prabang. • Proposed agenda for the meeting with the hotel and restaurant association and with individual restaurant owners / managers / chefs: <ul style="list-style-type: none"> a) Sourcing of food products; local and regional sources; names of imported food items. b) Prices of food products. c) Quality of food products produced locally. d) Best suppliers of local food to Luang Prabang hotels and restaurants. <p><i>L'Éléphant: either Mr. Yannick Upravan or Gilles Vautrin)</i></p>

Day	Date	Activity	Remarks
	Tuesday, 15 February	<p>Afternoon:</p> <p>k) 13.30 hours: Meeting with airline representatives (<i>Lao Airlines, Bangkok, Airways, Air Viet Nam, etc.</i>)</p> <p>l) 15.00 hours: Meeting with the chef or manager of L'Éléphant restaurant to discuss sourcing of food products.⁵⁴</p> <p>m) 16.30 hours: Team Wrap-up Meeting; impressions of the day.</p>	<p>Discuss food products imported as air cargo from China, Thailand, and Viet Nam.</p> <p>Discuss experience with trying to source food from smallholder farmers around Luang Prabang town.</p>
4.	Wednesday, 16 February	<p>Morning:</p> <p>n) 08.30 Visit to Phosy vegetable market.</p> <p>o) 11.00 hours: Agriculture Promotion Bank to discuss agriculture loans for food production in Luang Prabang.</p> <p>p) 12.30 hours: Lunch in Luang Prabang.</p> <p>Afternoon:</p> <p>q) 13.30 hours: Visit to organic vegetable farm near Luang Prabang; organized by PAFO.⁵⁵</p> <p>r) 15.00 hours: Field visit to farmers' group producing food products for sale in Luang Prabang; organized by PAFO.</p> <p>s) 17.00 hours: Team Wrap-up Meeting; impressions of the day.</p>	<p>Proposed agenda for meeting with APB:</p> <p>a) Describe the agriculture credit program to farmers supplying food products to hotels and restaurants in Luang Prabang.</p> <p>b) List of farmer groups with food production agreements with local hotels and restaurants.</p> <p>c) Most effective method to supply agriculture credit to farmer groups producing food products for local hotels and restaurants.</p>
5.	Thursday, 17 February	<p>Morning:</p> <p>t) 08.30 hours: Meeting with the food and beverage manager of the Résidence Phouvao hotel to discuss sourcing of food products.</p> <p>u) 10.00 hours: Meeting with the chef of the Blue Lagoon restaurant to discuss local sourcing of food products.</p> <p>v) 12.00 hours: Lunch in Luang Prabang.</p> <p>Afternoon:</p> <p>w) 13.30 hours: Field visit to Souphanouvong University laboratories.</p> <p>x) 17.00 Team Wrap-up Meeting; impressions of the day.</p>	<p>Proposed agenda for meetings with restaurant and hotel managers:</p> <p>a) Sourcing of food products; local and regional sources; names of imported food items.</p> <p>b) Prices of food products.</p> <p>c) Quality of food products produced locally.</p> <p>d) Best suppliers of local food to Luang Prabang hotels and restaurants.</p> <p><i>Chef of the Blue Lagoon: Mr. Somsack, tel. 020-55570369.</i></p> <p><i>The Luang Prabang agriculture school is about 15 km from the city of Luang Prabang.</i></p>

⁵⁴ The owner of L'Éléphant also owns or is a shareholder in at least three other restaurants in Luang Prabang. Thus, he is a good person to interview. Other possible hotel and restaurant managers that could be interviewed include the Blue Lagoon restaurant; La Résidence Phou Vao Hotel; Amantaka Hotel; Alila Hotel.

⁵⁵ This organic farm is owned by an Englishman, Mr. Mark Schneebly.

Day	Date	Activity	Remarks
6.	Friday, 18 February	<p>Morning:</p> <ul style="list-style-type: none"> • 08.30 hours: Travel to the Northern Regional Agriculture and Forestry Research Center (NAFReC). • 09.30 hours: Meeting with NAFReC staff; organized by PAFO. • 11.00 hours: Travel to Luang Prabang. <p>Afternoon:</p> <ul style="list-style-type: none"> • 12.00 hours: Lunch at NAFReC. • 14.00 hours: Wrap up meeting with PICO. • 16.00 hours: Final Team wrap-up meeting. 	<p><i>The headquarters of NAFReC is at Huaykot, located around 30 kilometers south of Luang Prabang Town.</i></p> <p>Briefing by NAFReC staff about farmer group approaches to vegetable and livestock production</p>
7.	Saturday 19 February	<p>Morning:</p> <ul style="list-style-type: none"> • 07.00 hours: MOIC/TPPD Team departs from Luang Prabang to Vientiane. <p>Afternoon:</p> <ul style="list-style-type: none"> • Zola travels by air from Luang Prabang to Bangkok. 	<ul style="list-style-type: none"> • Bangkok Airways PG946, lv Luang Prabang at 16.10 hours; arr Bangkok at 18.10 hours.

Ministry of Industry and Commerce
Department of Trade Promotion and Product Development, and World Bank, Lao PDR
Fact-finding Mission to Luang Prabang Province and Vientiane Capital City, Lao PDR
and Chiangmai Province, Thailand
6-11 March 2011
by Mr. Anthony M. Zola, Agribusiness Development Specialist /
Consultant to the World Bank

Itinerary

Participants:

IV. World Bank:

10. Mr. Anthony M. Zola, Lead Researcher and Agribusiness Development Specialist

Day	Date	Activity	Remarks
1.	Sunday, 6 March	Afternoon: • Zola travels by air from Bangkok to Chiangmai.	<ul style="list-style-type: none"> • Thai Airways TG120, lv Bangkok at 18.50 hours; arr Chiangmai at 20.10 hours. • Zola stays at Furama Hotel, Huay Kaew Road, Chiangmai, 51000; tel: (66) 5341 5222 Fax: (66) 5341 5200 email: Chiangmai@furama.com.
2.	Monday, 7 March	Morning: y) 09.00 hours: Meeting with Food Science Department, Chiangmai University. z) 11.00 hours: Meeting with Horica food supply company in Chiangmai. Afternoon: aa) 15.00 hours: Travel to Luang Prabang	a) Proposed agenda for Chiangmai University meeting: <ul style="list-style-type: none"> • Details and timeframe for technical assistance to Souphanouong University in Luang Prabang. Horeca Supply Co.,Ltd. 40/7 Moo 4 Superhighway Road, Tambol Tasala Amphoe Muang, Chiangmai 50000, Thailand Tel. 053-26 2980, website: www.horecasupply.com b) Proposed agenda for Horeca meeting: <ul style="list-style-type: none"> • Introduction to the scoping study. • Discussion of food exports to Luang Prabang. c) Lao Airlines QV645, lv Chiangmai at 15.00 hours; arr Luang Prabang at 16.00 hours. d) Zola stays at Grand Luang Prabang Hotel, Ban Xiengkeo, +856-71-253-851
3.	Tuesday, 8 March	Morning: bb) 04.00 hours: Visit to Phosy and other markets to observe food product delivery. cc) 08.30 Meet with food supplier 1. dd) 10.00 Meet with food supplier 2 ee) 11.30 Meet with food supplier 3. Afternoon: ff) 13.30-17.00 hours: <ul style="list-style-type: none"> • Visit to L'Éléphant organic vegetable farm; meet with Yannick and Benjamin. • Visit to vegetable gardens at Ban Xieng Mouak and/or along Nam Khan. 	Proposed agenda for food and supermarket suppliers: <ul style="list-style-type: none"> a) Define the food supply system for restaurants and hotels. b) Constraints, obstacles, and difficulties encountered. c) Potential solutions; ideas and actions required to overcome constraints.

Day	Date	Activity	Remarks
4.	Wednesday, 9 March	<p>Morning: gg) 09.00 hours: Meeting with Luang Prabang Provincial Industry and Commerce Office (PICO) hh) 10.30 hours: Meeting with Luang Prabang Provincial Division of Planning and Investment (DPI)</p> <p>Afternoon: ii) 14.00 hours: Meeting with Luang Prabang Provincial Agriculture and Forestry Office (PAFO).</p>	<p>a) Proposed agenda for PICO:</p> <ul style="list-style-type: none"> • Discussion of schedule for meetings with food suppliers and producers. • Discuss current arrangements for food delivery for the Nam Khan 2 Hydropower Dam. <p>b) Proposed agenda for DPI:</p> <ul style="list-style-type: none"> • Briefing on provincial socioeconomic development plan related to food production. • Briefing on provincial investment plan related to food production. <p>c) Proposed agenda for PAFO:</p> <ul style="list-style-type: none"> • Obtain list of registered vegetable and livestock farmer organizations / producer groups in and around Luang Prabang and production data. • Discussion of plant protection system for Luang Prabang and diagnostic laboratory capacity..
5.	Thursday, 10 March	<p>Morning: d) 08.30 hours: Meeting with German butcher. e) 10.30-12.00 hours: Meeting with interested food and beverage managers of Luang Prabang restaurants and hotels to discuss a Luang Prabang brand; meet at the Grand Luang Prabang Hotel.</p> <ul style="list-style-type: none"> • Meeting should include representatives of Phou Vao Hotel, L'Éléphant, Blue Lagoon, Alila Hotel, Amman Hotel, Grand Luang Prabang Hotel, and others. <p>Afternoon: f) Visit to Living Land Farm; meet with Mr. Vixay and Mr. Linthong.. g) 18.10 hours: Travel to Vientiane.</p>	<p>a) Proposed agenda for meeting with German butcher:</p> <ul style="list-style-type: none"> • Sources of high quality livestock. • Prices of quality livestock. • Potential for diversification and expansion of livestock butchery services. <p>b) Proposed agenda for meetings with restaurant and hotel managers and chefs and cooks:</p> <ul style="list-style-type: none"> • Creating a Luang Prabang brand.
6.	Friday, 11 March	<p>Morning c) 08.30 hours: Meet with World Bank TDF project staff at World Bank office in Vientiane. d) 09.30 hours: Specialist's debriefing at TPPD for World Bank TDF project staff, MOIC TDF project staff/NIU, and TPPD project staff.</p> <p>Afternoon e) Zola travels to Bangkok.</p>	<p>a) Proposed agenda for meeting with TPPD:</p> <ul style="list-style-type: none"> • Discussion of the proposed structure of the Luang Prabang scoping study. • Outline for the project design • Proposed timeline for preparation of the draft document • Comments, revisions and presentation to stakeholders up in Luang Prabang. <p>TG011, lv Udon Thani at 15.35 hours, arr Bangkok at 16.35 hours.</p>

Annex 3:

List of persons and organizations met related to preparing the Scoping Study on Trade, Food Production, and Service Sector Linkages in Luang Prabang February and March 2011

Date	Name / Position	Principal Contact
Mission to Luang Prabang: 13-19 February 2011		
14 February	Mrs. Inpeng Samuntee President, Pakxong Development Co., Ltd Mr. Montree Chomsamut, Consultant President in Agricultural Economics, Pakxong Development Co., Ltd Pakxong District, Champasak Province	Tel: 031 253 152 Cell: 020 2223 2423 Email: pakxong-development@hotmail.com
	Mr. Houmpheng Phaphonxay, Director Department of Industry and Commerce, Luang Prabang Province	Tel: 071 212 019 Cell: 020 987 6909
	Mr. Sisomphone Phatsanouvong Head of Section on Industrial and Commercial Promotion, Department of Industry and Commerce, Luang Prabang Province	Tel: 071 900 030 Cell: 020 5577 4616
	Mr. Bounlouane Singnakhone, Director Department of Planning and Investment Luang Prabang Province	Tel: 071 255 600 Cell: 020 2235 1109
	Mr. Xayaphanh Lasy, Deputy Director Department of Agriculture and Forestry Luang Prabang Province	Tel: 071 212 980 Cell: 020 2235 0415
15 February	Mr. Khamphieng Manichith Manager, Luang Prabang Chamber of Commerce and Industry, Luang Prabang Province	
	Mr. Samoraphoume, General Manager Merry Guest House, Ban Visoun, Luang Prabang District, Luang Prabang Province	Tel: 071 252 325
	Mr. Somsack Sengta, Chef Blue Lagoon Restaurant Ban Choumkhong, Luang Prabang District, Luang Prabang Province	Tel: 071 253 698
	Mr. Komsan Srichunim, Station Manager Luang Prabang Airport, Luang Prabang Province	Tel: 071 253 253
	Mr. Gilles Vautrin, Managing Director L'Éléphant Restaurant, Ban Vat Nong, Luang Prabang District, Luang Prabang Province	Tel: 071 252 482 Email: contact@elephant-restaurant.com
16 February	Mr. Thay Song, Director Luang Prabang Branch, Agricultural Promotion Bank, Luang Prabang	Tel: 071 252 024 Cell: 020 2235 0411
	Mr. Dokhack and Mr. Somsack Crops Section, Provincial Agriculture and Forestry Office, Luang Prabang Province	Dokhack cell: 020 5582 0205 Somcack cell: 020 2388 8087
	Mr. Visai, Farm Manager, Living Land Co Ltd Ban Pong Van, Luang Prabang District, Luang Prabang Province	Cell: 020 5400 6688 Email: saigarden2008@yahoo.com
	Mr. Xi Kwahuei, vegetable farmer Ban Mah, Luang Prabang District, Luang Prabang Province	

Date	Name / Position	Principal Contact
Mission to Luang Prabang: 13-19 February 2011		
17 February	Mr. Siphanh Chanthaphone, Assistant General Manager, La Résidence Phou Vao, Orient Express, Luang Prabang Province	Tel: 071 212 530 Email: agm@residencephouvao.com
	Mr. Somsack Sengta, Chef Blue Lagoon Restaurant Ban Choumkhong, Luang Prabang District, Luang Prabang Province	Tel: 071 253 698
	Assoc. Prof. Vixay Chansavang, Vice President of Souphanouvong University Ban Don Mai, Km 8, Luang Prabang Province	Tel: 071 254 932 Cell: 020 2220 6949 Email: cvixay@hotmail.com
18 February	Mr. Saysana Inthavong, Deputy Director Northern Agriculture and Forestry Research Center (NAFReC), National Agriculture and Forestry Research Institute (NAFRI), Ban Houay Khot, Xieng Ngeun District, Luang Prabang Province	Tel: 071 212 099 Cell: 020 5540 9043 Email: synsinthavong@yahoo.com
	Mr. Thongsavanh Keonakhone, Deputy Project Coordinator, Northern Upland Rice Based Farming System, NAFReC, NAFRI Luang Prabang Province	Tel: 071 212 099 Cell: 020 5577 1169 Email: thongsavanh.k@nafri.org.la
	Dr. Bounkhong Nammavong, Vice Governor Luang Prabang Province	
	Mr. Somphong Pradichit, Director Provincial Agriculture and Forestry Office Luang Prabang Province	Tel: 071 212 014 Cell: 020 5557 0658 Email: spfadichit@gmail.com

Date	Name / Position	Principal Contact
Mission to Luang Prabang: 7-11 March 2011		
7 March	Dr. Renu Pinthong, Food Scientist (retired), Faculty of Agro-Industry, Chiangmai University, Chiangmai, Thailand	Email: renupin@gmail.com
	Dr. Aphirak Phiammangkhol Faculty of Agro-Industry, Chiangmai University, Chiangmai, Thailand	Email: aphirak@chiangmai.ac.th
	Assistant Professor Dr. Somchai Jomduang Head of Agro-Business Service Center Faculty of Agro-Industry, Chiangmai University, Chiangmai, Thailand	Tel: +66 53 948 247 Email: s.jomdua@chiangmai.ac.th
	Assistant Professor Dr. Noppol Leksawasdi Associate Dean, Research and Community Services, Faculty of Agro-Industry, Chiangmai University, Chiangmai, Thailand	Tel: +66 53 948 247 Email: noppol@chiangmai.ac.th
	Ms Pongphan Intaprom, Purchasing and Sales Manager, Horeca Supply Co. Ltd. 40/7 Moo 4, Super Highway Road, Tambon Tasala, Amphoe Muang, Chiangmai 50000, Thailand	Tel: +66 53 262 981 Email: phi@horecasupply.com

Date	Name / Position	Principal Contact
Mission to Luang Prabang: 7-11 March 2011		
8 March	Mrs. Kham, food supplier in Luang Prabang	Contact through PICO Luang Prabang
	Mrs. Keomane (Ha) Charleunphol Managing Director, Thansamay Epicerie Minimart, Ban Thongchaleune, Luang Prabang City, Luang Prabang	Tel: 071 212 270 Cell: 020 5567 0188 Email: L_onuluangprabang@hotmail.com
	Mr. Bountham and Mrs. Noy Phanouvong Fresh vegetables and fruits supplier Phosy Market, Luang Prabang	Tel: 071 253 159 Cell: 020 5577 0991
	Mr. Rejeev Paul, Restaurant Manager Mr. Sebastien Rubis, Executive Chef Ailla Luang Prabang Hotel Ban Mano, Luang Prabang 0600	Tel: 071 260 777
	Mr. Gilles Vautrin, Managing Director L'Éléphant Restaurant, Ban Vat Nong, Luang Prabang District, Luang Prabang Province	Tel: 071 252 482 Email: contact@elephant-restaurant.com
	Mr. Yannick Upravan, Chef L'Éléphant Restaurant, Ban Vat Nong, Luang Prabang District, Luang Prabang Province	Tel: 071 252 482 Email: contact@elephant-restaurant.com
9 March	Mr. Somsack and Mr. Phonpasith Luang Prabang Provincial Industry and Commerce Office, Luang Prabang	Cell: 020 5577 4620
	Mrs. Siriphone Souphanhthong, Deputy Director, Department of Planning and Investment, Luang Prabang	Tel: 071 260 539 Email: siriphone_s@yahoo.com
	Ms Chanthamaly Souksavanth Head of Administration, Luang Prabang Provincial Agriculture and Forestry Office, Luang Prabang	Tel: 071 212 014 Email: chanthamalys@hotmail.com
	Mr. Pierre Bernard, General Manager Le Palais Juliana Hotel Chao Phetsalath Street, Ban Sankalok Luang Prabang District, Luang Prabang	Tel: 071 254 542 Email: pierre@lepalaisjuliana.com
	Mr. Thomas and Mrs. Soumontha Wilms S & W Butcher Shop, P.O. Box 523, House No. 412, Unit 6, Ban Phanluang, Luang Prabang City, Luang Prabang	Tel/Fax: 071 212 546 Cell: 020 5630 8665 Email: soumonthathomaswilms@ymail.com
	Mr. Linthong Chankongmee, Company Manager, The Living Land Company, 57/3 Khun Sua Road, Ban Phone Heuang, Luang Prabang	Cell: 020 5567 2795 Email: linthong-lt@hotmail.com
	Mr. Visai, Farm Manager, The Living Land Company, Ban Pong Van, Luang Prabang District, Luang Prabang Province	Cell: 020 5400 6688 Email: saiqarden2008@yahoo.com

Date	Name / Position	Principal Contact
Mission to Luang Prabang: 7-11 March 2011		
10 March <i>Private Sector Focus Group Meeting</i>	Mr. Suthep Ratre, General Manager The Grand Luang Prabang Hotel Ban Xiengkeo, Khet Sangkalok P.O. Box 1191, Luang Prabang	Tel: 071 253 851 Email: suthep@grandluangprabang.com
	Mr. Jude Ayeng, Resident Manager Mr. Roberto D., Chef Villa Santi Resort Hotel, Luang Prbang	Cell: 020 9747 5627 Cell: 020 5465 6687
	Mr. Kaoua, Personnel Manager Alila Luang Prabang Hotel Ban Mano, Luang Prabang 0600	Tel: 071 260 777
	Mr. Somsack Sengta, Executive Chef Blue Lagoon Restaurant Ban Choumkhong, Luang Prabang District, Luang Prabang Province	Tel: 071 253 698 Email: sengta.somsack@gmail.com
	Mr. Siphanh Chanthaphone, Assistant General Manager, La Résidence Phou Vao, Orient Express, Luang Prabang Province	Tel: 071 212 530 Email: agm@residencephouvao.com
	Mr. Pierre Bernard, General Manager Le Palais Juliana Hotel Chao Phetsalath Street, Ban Sankalok Luang Prabang District, Luang Prabang	Tel: 071 254 542 Email: pierre@lepalaisjuliana.com
	Mr. Gilles Vautrin, Managing Director L'Éléphant Restaurant, Ban Vat Nong, Luang Prabang District, Luang Prabang Province	Tel: 071 252 482 Email: contact@elephant-restaurant.com
	Mr. Yannick Upravan, Chef L'Éléphant Restaurant, Ban Vat Nong, Luang Prabang District, Luang Prabang Province	Tel: 071 252 482 Email: contact@elephant-restaurant.com
	Ms Diana von Cranach, Chef The Green Éléphant Vegan Restaurant Ban Vat Nong, Luang Prabang District Luang Prabang	Email: diana@puriganesha.com

**Annex 4:
Comments from a Focus Group Meeting with Luang Prabang hotel
and restaurant managers and chefs, 10 March 2011, at the Grand
Luang Prabang Hotel, Ban Xiengkeo, Luang Prabang**

Food Service Industry Focus Group
10 March 2011

Participants

- Éléphant Group (3)
 - Gilles, Yannick, Diana
- Villa Santi Group (2)
 - Mr. Jude Ayeng, Mr. Roberto D.
- Alila Hotel, Mr. Kaoua (1)
- Blue Lagoon, Mr. Somsack (1)
- Phou Vao, Mr. Siphanh (1)
- Palais Juliana, Mr. Pierre Bernard (1)
- Grand Luang Prabang, Mr. Suthep (1)
- Total participants: 10

Important points

- Need for a food chain analysis:
 - Hazard Analysis Critical Control Point (HACCP)
 - Packing, packaging, cool store
 - Sources of seed
 - Water quality issues
 - Impact on vegetables
- Food production environment
 - Need for more controlled production
- Improved communications with food service outlets about products are available
- Emphasize quality control
- Define how to support food suppliers
- Do not stop imports
- Expand to include fruit, mushrooms, meats

Annex 5: Proposed Concept for the Luang Prabang Food and Trade Linkages Project

Background

1. Luang Prabang has emerged as a major center for tourism in northern Laos. An estimated 300,000 to 350,000 people currently visit Luang Prabang annually to participate in a high quality cultural experience. As a world renowned World Heritage Site, initially uncovered by adventure tourists, Luang Prabang is has become a city of enchantment for first-class cultural tourists who demand the highest standards in lodging and food. Luxury brand name hotels and hotel restaurants and stylish theme restaurants with high quality European or European-trained chefs now dominate the charming local landscape. The larger number of premium customers also requires an increase in the volume of high quality and safe food. For a small city that has long been the cradle of Lao civilization, espousing all things Lao, and taking significant pride in the uniqueness of its local food, Luang Prabang is having difficulty producing the type, volume, quality, and dependably safe foods that are required to meet the expanding needs of top-end tourism.

2. Food security for most Lao residents of Luang Prabang has not recently been an issue. The simple Lao diet of fish and glutinous rice, with meat and specially prepared local foods during frequent festivals, has satisfactorily met the needs of the local Lao for many generations. The arrival of the early adventure tourists posed no problem for Luang Prabang residents since as bargain-hunting adventure tourists they were eager to adopt the inexpensive local diet. First class tourists however require more expensive European food with which many Luang Prabang residents are not familiar. The agricultural economy of Luang Prabang has begun to transition; from producing traditional foods for local consumption and classical farm to market trading; to the production of high quality and safe foods for growing numbers of middle- and high-income consumers and a more complex multi-layered marketing system.

Rationale

3. The Lao economy is expected to continue to expand at an annual rate of between 7 and 8 percent over the next ten years. Rapid domestic, regional, and international economic development and changes in consumer preference are factors providing new opportunities for the marketing of safe food products to a diverse group of consumers in Luang Prabang city and province and elsewhere in Laos, as well as throughout the Greater Mekong Subregion (GMS). A young Lao middle-class, including increasing numbers of students living in Luang Prabang, have acquired a taste for Western foods, requiring a dependable supply of quality food. Supplying these consumer groups with a systematic and continuous supply of quality and safe food provides market opportunities for local producers and for local and regional food suppliers.

4. Tourism will contribute significantly to national economic growth, with Luang Prabang being the focus of high-end tourism development. Brand name hotels and hotel restaurants of distinction and pricey restaurants based on local themes have

opened, attracting top-end clients who demand high quality food and services. At the same time, the agricultural economy of Luang Prabang city and its surroundings continues much as it has in the past: focusing primarily on the production of glutinous rice for local food security, and fishing, livestock raising, and vegetable production to meet immediate family and community food needs. Any surplus agricultural output is bartered within the community, or sold in local markets or to itinerant traders. Most farmers continue to employ natural and traditional production practices with low productivity and a quality of food products that is sub-standard for most high-end hotels and restaurants. Imported food products and foreign initiatives to produce selected food products locally have met some of the immediate needs.

5. The capacity of local government to pursue an agro-economic vision linking local production with market opportunities is weak. Provincial officials have not taken the lead in responding to the pull factors for expanded growth. At the same time, generally good governance at the provincial level and an innovative business community provide the opportunity to promote sustainable and safe agricultural production of quality food for all consumers in Luang Prabang. The proposed project would address the weaknesses and threats to modernization of local agriculture and local and regional trading systems. The project also would make available to key government officials, business leaders, and progressive producers the means to expand the local vegetable trade and set the stage for engaging in regional trade in a moderate, sequenced, and sustainable manner.

Objectives

6. The **long-term development objective** of the proposed project is to increase the volume and productivity of vegetable production in Luang Prabang Province that meets national and international food safety standards; sufficient to stabilize food prices for local consumers; and, with any surplus suitable for export. Achieving this objective would contribute toward achieving broader national goals of diversifying agricultural production to improve nutrition and minimize risk to smallholder farmers; making agriculture more resilient to climate change; and, implementing modern agricultural practices to improve food safety.

7. Essential to achieving the long-term objective are several **immediate objectives** to be realized by the proposed project, namely:

- The capacity of local government, farmer organizations, and local small- and medium-scale enterprises (SME) to link local smallholder vegetable production with existing market opportunities will be upgraded through training and upgrading of local facilities;
- Local human and physical resources will be mobilized, organized, coordinated, and upgraded to expand safe vegetable production and improve the productivity of vegetable producers, enabling them to meet the demand for quality and safe vegetables in Luang Prabang and to sell surplus vegetables to regional markets;
- Vegetable producers in selected areas of Luang Prabang Province will be organized into farmer organizations and networks, and be provided with training to undertake community certification of safe food;
- The channeling of financial support and technical assistance to Souphanouvong University (SU) will be facilitated to enable existing laboratory facilities to be used for inspection, analysis, and verification of food safety and quality; and,

- A pre-feasibility study will be prepared to investigate the financial and economic viability of establishing a modern food distribution center to serve Luang Prabang and other development hubs in northern Laos.

Outputs

8. The following outputs will be delivered within the 18 month duration of the proposed project:

9. 20-25 concerned provincial officials will be trained in food supply system management in Luang Prabang Province.

- 10-15 officials from concerned provincial and district offices and GoL development banks will have been trained to understand the food supply system operating in Luang Prabang Province.
- 10 provincial and district agriculture technicians will have been trained in safe vegetable production and 10 technicians will be trained in organic vegetable production in Luang Prabang district.

10. The production of safe vegetables in Luang Prabang will have increased by 30 percent, in terms of area, volume, productivity, and meeting national and international food safety standards.

- Organic vegetable production in the Nam Thouam area will increase from 3 to at least 8 ha in 18 months.
- Safe vegetable production in Luang Prabang and Xieng Ngeun districts will increase by 20 percent over 18 months. The area, volume, cropping intensity, and productivity of safe vegetables will come from year-round production.
- 40-50 farmers representing farmer groups (production or marketing groups or other types of farmer organizations) will receive training in safe vegetable production.
- 20-30 farmers representing farmer groups (production or marketing groups or other types of farmer organizations) will receive training in organic vegetable production.
- The source of vegetables used by restaurants and hotels in Luang Prabang will increase from 30 percent to 60 percent.

11. At least one clean / safe vegetable trading organization will be established in each vegetable producing district (Luang Prabang, Nam Bak, and Xieng Ngeun districts; and other districts if appropriate) to create a critical mass of safe vegetables; to facilitate purchasing by middleman-transporters, vegetable traders, and food suppliers. The safe vegetable trading organizations will form a network of safe vegetable producers and traders.

- At least one safe vegetable trading organization will be registered in each district.
- Each safe vegetable trading organization registered by district authorities is eligible to be considered for vegetable production credit from the Agriculture Promotion Bank or the Nayobay Bank branches or from other banks in Luang Prabang.
- 10 members of each safe vegetable trading organization will receive training on the organization and management of community certification of safe vegetables.

- At least three community certification programs for safe vegetables will be operating (one in each participating district) at the end of the project.

12. The food science and plant science laboratories at Souphanouvong University in Luang Prabang will be operational and provide both in-house and in-field diagnostic food analysis services to all vegetable producers in Luang Prabang Province on a cost recovery basis.

- On-the-job and in-field short-course training and certification of 2 food science laboratory administrators and 3 food science laboratory technicians who will be engaged as contract employees by Souphanouvong University for at least 18 months.
- On-the-job and in-field short-course training and certification of 2 plant science laboratory administrators and 3 food science laboratory technicians, and in-field technical training of 2 plant control specialists assigned to the Luang Prabang PAFO.
- Establishment of a Safe Food Technical Center (SAFTEC) at Souphanouvong University to provide in-house and in-field diagnostic food analysis services to all vegetable producers in Luang Prabang Province on a cost recovery basis.

13. Two (2) small-scale modular walk-in refrigeration (cold storage) units will be installed.

- One at the Agriculture Technology Service Center at Ban Nam Thouam, Nam Bac District.
- One at the Northern Agriculture and Forestry Research Center (NAFReC) at Houay Khot, Xieng Ngeun District, Luang Prabang Province.
- The two 20-30 cubic meter walk-in refrigeration units will be installed only after the project has developed a suitable public-private partnership (PPP) with demonstrated expertise in managing cold storage units.

14. A pre-feasibility study for a modern food distribution center to serve Luang Prabang will be prepared.

- The pre-feasibility study will investigate the financial and economic viability of establishing a food distribution center to serve Luang Prabang and other development hubs in northern Laos.

Outcomes

15. Concerned agencies of the Luang Prabang provincial government, farmer organizations, and other key stakeholders will have a greater understanding of local production and marketing of vegetables and the availability of sub-regional market opportunities.

16. The production of safe vegetables and the productivity of vegetable producers will have improved, enabling the demand for quality and safe vegetables to be met from sources in Luang Prabang Province, with surplus vegetables being sold to sub-regional markets.

17. Producers of safe vegetables will have been organized into marketing groups and linked into networks and be capable of organizing and managing community certification of safe vegetable production. Farmer organizations will be working with

PICO, local hotels and restaurants, and private food suppliers and vegetable traders to promote a Luang Prabang brand of safe vegetables, with an appropriate logo.

18. Souphanouvong University will operate a Safe Food Technical Center (SAFTEC) using existing food science and plant science laboratory facilities to inspect, analyze, and verify the safety and quality of vegetables. SAFTEC will operate on a cost-plus basis to ensure cost recovery of all expenses and long-term sustainability of the center.

19. A pre-feasibility study will have been prepared to document the financial and economic viability of establishing a modern food distribution center to serve Luang Prabang and other development hubs in northern Laos. The Luang Prabang DPI will use the pre-feasibility study to promote investment in the food distribution center.

Activities

20. PICO will take the lead to organize training for 20-25 concerned provincial officials in food supply system management in Luang Prabang Province.

- These officials will receive short-term on-the-job training to include local food chain analysis, safe food standards, and opportunities and weaknesses of local vegetable production.
- Training in safe vegetable production will be organized at the Éléphant garden at Ban Phou Mok, Luang Prabang District; and, in organic vegetable production at the Living Land Company in Ban Phonvanh, Luang Prabang District.

21. PICO will organize and promote a ‘Safe Food from Luang Prabang’ campaign that will include training in safe vegetable production at suitable locations in Luang Prabang Province as follows:

- Staff at the Nam Thouam Agriculture Center will work with farmer organizations to expand year-round organic vegetable production in the Nam Thouam area, Nam Bak District.
- Staff at the Northern Agriculture and Forestry Research Center (NAFReC) at Ban Houay Khot, Xieng Ngeun District will work with farmer organizations to expand year-round production of safe vegetables in Xieng Ngeun and Luang Prabang districts.
- Agronomic specialists at the Éléphant garden at Ban Phou Mok, Luang Prabang District will be engaged through the project to provide training in safe vegetable production to agriculture technicians and farmers.
- Agronomic specialists at the Living Land farm at Ban Phonvanh will provide training in organic vegetable production to agriculture technicians and farmers.

22. PICO will take the lead to organize at least one safe vegetable trading organization in each vegetable producing district (Luang Prabang, Nam Bak, and Xieng Ngeun districts; and other districts if appropriate). PICO will work with representatives of vegetable producers to create a network of safe vegetable producers and traders.

- PICO will work with PAFO and district industry and commerce and agriculture and forestry offices and representatives from government development banks to organize safe vegetable trading groups that will be registered with district authorities.

- PICO will take the lead in advising safe vegetable trading groups on the organization and management of community certification of safe vegetables.

23. PICO will work with the Office of the Governor of Luang Prabang and SU administrators to facilitate operation of the food science and plant science laboratories at Souphanouvong University.

- Operating through the Safe Food Technical Center (SAFTEC) at Souphanouvong University, in-house and in-field diagnostic food analysis services will be provided to all vegetable producers in Luang Prabang Province on a cost recovery basis; with income being applied to off-set costs incurred in the operation of the food science and plant science laboratories.
- PICO will collaborate with SU to engage short-term technical assistance from Chiangmai University (CMU) to provide on-the-job and in-field short-course training and certification of food science and plant science laboratory administrators and technicians; and provide training to plant control specialists assigned to the Luang Prabang PAFO.
- PICO will take the lead to work with technical assistance from CMU to prepare a vegetable crop inspection protocol and set of procedures for verifying the safety and quality of vegetables produced by all vegetable producers in Luang Prabang Province; and, for verifying the credibility of community certification programs. This protocol and set of procedures will be based on the Lao legal framework for food safety; will promote international food safety standards; and, will complement the irregular inspections of the Luang Prabang Provincial Department of Health Office, Food and Drug Inspection Unit, which has legal authority to conduct inspections.

24. PICO will engage technical assistance to prepare a pre-feasibility study for a modern food distribution center for Luang Prabang.

- The pre-feasibility study will be undertaken over a period of three months to investigate the financial and economic viability of establishing a food distribution center to serve Luang Prabang and other development hubs in northern Laos.

25. A project office will be established at the Luang Prabang PICO.

- The project would support the upgrading of one office at PICO, including repainting, air conditioning, and office furnishings (2 notebook computers and 1 printer / scanner / photocopier).
- Vehicle support (petroleum, oil, vehicle maintenance) for project-related activities.
- The following international, regional, and national technical assistance will be required to support PICO:
 - 1) Development Economist / Chief Technical Advisor (international), 9 person-months over 18 months.
 - 2) Senior Horticulturalist / Community Certification Specialist (international), 4 person-months over 18 months.
 - 3) Trade Management / Logistics Specialist (international), 3 person-months over 18 months; to prepare the pre-feasibility study on the Luang Prabang food distribution center.
 - 4) Food Science Laboratory Scientist (Chiangmai University) (regional), 3 person-months over 18 months (potentially supported by parallel financing from the Thailand International Development Cooperation Agency or TICA).

- 5) Plant Science Laboratory Scientist (Chiangmai University) (regional), 2 person-months over 18 months (potentially supported by parallel financing from the Thailand International Development Cooperation Agency or TICA).
- 6) Senior Horticulturalist (national), 12 person-months over 18 months.
- 7) Trade Specialist (national) 3 person-months over 18 months.

Implementation Arrangements

26. The executing agency of the proposed project would be the Ministry of Industry and Commerce (MOIC) operating through the National Implementation Unit (NIU). The Trade Promotion and Product Development Department (TPPD) would be the implementing agency, working in collaboration with the Luang Prabang Provincial Industry and Commerce Office (PICO).

27. The Project Steering Committee (PSC) at the Central Government level would be the principal policy making unit of the project. The PSC would be the existing TDF Steering Committee.

28. A Project Implementation Committee (PIC) would be established at the provincial level to provide regular guidance to the project manager and the PMU. The PIC has an important responsibility to advise, assist, guide, and intervene to support the project manager and the PMU to overcome administrative, institutional, and governance obstacles to project implementation. The PIC would meet monthly, but special meetings could be convened at any time to address urgent matters. The PIC could be comprised of representatives from the following agencies and organizations:

- 1) Vice Governor, Luang Prabang Province (or designee), Chairman
- 2) Director, Luang Prabang Provincial Industry and Commerce Office, 1st Vice Chairman, Secretary, and Member
- 3) Director, Luang Prabang Provincial Planning and Investment Office, 2nd Vice Chairman
- 4) Deputy Director, Luang Prabang Provincial Agriculture and Forestry Office, Member
- 5) Deputy Director, Luang Prabang Provincial Food and Drug Control Office, Member
- 6) Deputy Director, Luang Prabang Provincial Science and Technology Office, Member
- 7) Chairman, Luang Prabang Chamber of Commerce and Industry, Member
- 8) Representatives (2), Luang Prabang Hotel and Restaurant Association, Member
- 9) Dean, Faculty of Agriculture, Souphanouvong University, Member
- 10) Project Manager, Assistant Secretary and Member

29. A PMU would be created at PICO in Luang Prabang responsible for daily implementation of the project. A small (two person) Project Management Unit (PMU) would be established at TPPD in Vientiane, mostly to serve as a liaison office with TPPD, MOIC, and the NIU. All PMU personnel in Luang Prabang and Vientiane would be contract personnel.

30. The project manager would reside in Luang Prabang and be based at the Luang Prabang PICO. He/She would have significant experience as a planner and team leader. The 1st assistant project manager also would be based at the PMU in Luang Prabang.

31. The PMU staff in Luang Prabang would include the following personnel:

1. Project Manager
2. Part-time Chief Technical Advisor
3. Short-term consultants
4. Full-time administrative assistant
5. Part-time financial officer

32. In Vientiane, the TDF team at the TPPD would provide technical and administrative support to the PMU in Luang Prabang.

Duration

33. The project will be implemented over a period of 18 months.

Risks

34. The risk of project failure in Lao PDR is significant. More importantly is that the GoL provides no funds to support project initiated activities following completion of the project. Thus, the proposed project is designed to institutionalize project objectives, in an attempt to achieve sustainability whenever possible. Nevertheless, potential risks are foreseen and are summarized below.

35. Risks related to providing training to concerned provincial officials in food supply system management and participating in a safe food campaign include the following:

- 1) Ownership by Luang Prabang provincial officials.
- 2) Low interest in safe food by key stakeholders.
- 3) Bias against use of facilities of foreign investors as a training site.
- 4) Low priority of safe vegetable production at agriculture research and development centers.

36. Risks related to organizing safe vegetable trading organizations in each vegetable producing district include the following:

- 1) Price incentives for safe vegetables may be insufficient to interest a sufficient number of vegetable producers.
- 2) Middle-men transporters, itinerant traders, vegetable traders at the Phosy market, and local food suppliers fail to cooperate with the proposed project to promote vegetable trading organizations (farmer groups).

37. Risks related to initiating operation of the food science and plant science laboratories at SU include the following:

- 1) The services offered by SAFTEC are not used by key stakeholders.
- 2) The quality of services offered by SAFTEC is unsatisfactory to food suppliers and hotel and restaurant managers and chefs.
- 3) Technical assistance is not forthcoming from CMU.

- 4) Laboratory equipment is not suitable for providing the level of food safety inspection required by clients.

38. Risks related to preparing a pre-feasibility study for a food distribution center include the following:

- 1) Establishment of a food distribution center in Luang Prabang is not a development priority of DPI.
- 2) The pre-feasibility analysis indicates that a food distribution center is not a viable investment at this time.

Indicative Budget

39. An estimated indicative budget summary for the proposed Luang Prabang Food and Trade Linkages Project is presented on **Table 1**.

Table 1: Estimated indicative budget for 18 months

Component	Total Cost
1. Institutional strengthening and training	45,000
2. Major capital cost items	95,200
3. Project management and activities	110,000
Sub-total a	250,200
4. Technical assistance	330,000
Sub-total b	580,200
Contingencies 10%	58,020
Total Project Costs	638,220

Unit: US\$

40. A breakdown of the indicative budget including major items that would be procured under the project is presented on **Table 2**.

Table 2: Indicative budget break-down

Item	Unit cost	Quantity	Indicative budget
Institutional strengthening and training budget			
1. Training for PICO, DPI, PAFO, Public Health officials and technicians in clean/safe food supply chain management at Souphanouvong University; by CMU, TA, and UN-IACP.	\$200 / trainee	<ul style="list-style-type: none"> • 15 trainees for 1 introductory session for 2 days • 10 trainees for 1 advanced session for 1 day • Total = 25 trainees 	\$5,000
2. Training of PAFO, DAFO, NAFReC technicians, farmer organization leaders, women, and youth in IPM and clean food production, marketing, and supply management systems; by specialists at Éléphant gardens, Ban Phou Mok, Luang Prabang.	<ul style="list-style-type: none"> • \$500 / trainee • Includes cost of food, lodging, expert trainer, and administrative costs for 10 days; equipment used during training, and imported seed for planting after competing training. 	<ul style="list-style-type: none"> • 20 trainees for 10 days for introductory training • 10 trainees for 3 days for advanced training • 5 trainees for 2 days for expert training as a trainer • Total = 35 trainees 	\$17,500

Unit: US dollars

Unit: US dollars

Item	Unit cost	Quantity	Indicative budget
Institutional strengthening and training budget			
3. Training of PAFO, DAFO, Nam Thouam agriculture technicians, farmer organization leaders, women, and youth in organic vegetable production, marketing, and supply management systems by technicians at Living Land farm, Ban Phongvanh, Luang Prabang.	<ul style="list-style-type: none"> • \$500 / trainee • Includes cost of food, lodging, expert trainer, and administrative costs for 10 days; equipment used during training, and imported seed for planting after competing training. 	<ul style="list-style-type: none"> • 20 trainees for 10 days for introductory training • 10 trainees for 3 days for advanced training • 5 trainees for 2 days for expert training as a trainer • Total = 35 trainees 	\$17,500
4. Training of food analysis and diagnostic laboratory technicians in laboratory organization, management, and administration at Souphanouvong University; by CMU and UN-IACP.	<ul style="list-style-type: none"> • \$200 / trainee • Includes local transportation allowance and laboratory uniforms 	<ul style="list-style-type: none"> • 10 trainees for 1 introductory session for 3 days; followed by an exam • 5 trainees for an advanced session for 1 month • Total = 15 trainees 	\$5,000
Sub-total institutional strengthening and training			\$45,000
Major capital cost items			
1. Refrigeration units, 20 cubic meters each; pre-fabricated; to be installed during year 2 of the project; includes maintenance for 12 months.	\$30,000 per unit	2 units <ul style="list-style-type: none"> • 1 unit installed at the Nam Thouam Agriculture Center • 1 unit installed at NAFReC 	\$60,000
2. Office equipment for the PMU at the Luang Prabang PICO office	<ul style="list-style-type: none"> • Office renovation and furniture • Air conditioning = \$2,000 • Notebook computers = \$1,500 each • Printer / scanner / photocopier / facsimile machine combination = \$200 	Repainting and repairs; 4 desks & chairs; 1 meeting table with 7 chairs; 2 file cabinets; 2 storage cabinets	\$10,000
		1 unit	\$2,000
		2 computers	\$3,000
		1 printer/scanner/ photocopier / facsimile machine	\$200
3. Additional laboratory equipment for food analysis and diagnostic laboratory at Souphanouvong University; exact instruments to be determined.	Lump sum		\$10,000
4. Food test kits for use by Souphanouvong University laboratory technicians operating the SAPTEC outreach program	Lump sum	Number of test kits should be sufficient for one year operation of the outreach program.	\$10,000
Sub-total major capital cost items			\$95,200

Unit: US dollars

Item	Unit cost	Quantity	Indicative budget
Project management and implementation activities			
1. 'Safe Food from Luang Prabang' campaign; by PICO, PAFO, food producer and trader groups.	Lump sum		\$30,000
2. Safe vegetable trading organizations; by PICO, trader groups.	Lump sum		\$10,000
3. Support for initiating SAFTEC (field / outreach program); by SU.	Lump sum		\$20,000
4. Pre-feasibility study for food distribution center; support for ground transportation and local counterparts; by PICO, DPI.	Lump sum		\$10,000
5. Project management / PMU (not including technical assistance); at PICO.	Lump sum		\$40,000
Sub-total project activities			\$110,000
Technical assistance			
International			
1. Development Economist/Chief Technical Advisor	\$15,000 / person-month	9 person-months over 18 months	\$135,000
2. Senior Horticulturalist / Community Certification Specialist	\$15,000 / person-month	4 person-months over 18 months	\$60,000
3. Trade Management / Logistics Specialist	\$15,000 / person-month	<ul style="list-style-type: none"> • 2 person-months • Prepare the pre-feasibility study on the Luang Prabang food distribution center. 	\$30,000
Sub-total international technical assistance		15 person-months	\$225,000
Regional			
4. Food Science Laboratory Scientist	<ul style="list-style-type: none"> • \$6,000 / person-month • Potential funding by TICA 	3 person months over 18 months	\$18,000
5. Plant Science Laboratory Scientist	<ul style="list-style-type: none"> • \$6,000 / person-month • Potential funding by TICA 	2 person months over 18 months	\$12,000
Sub-total regional technical assistance		5 person-months	\$30,000
National			
6. Senior Horticulturalist	\$5,000 / person-month	12 person-months over 18 months	\$60,000
7. Trade Specialist	\$5,000 / person-month	3 person-months over 18 months	\$15,000
Sub-total national technical assistance		15 person-months	\$75,000
Sub-total technical assistance		35 person-months	\$330,000

Annex 6: List of References

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Annex 7: Legal and regulatory framework for food safety in Lao PDR

Contents:

1. Summary of Food Safety Policy
2. Food Law (2004)
3. Regulation on bottled drinking water (2006) (*intentionally not included*)

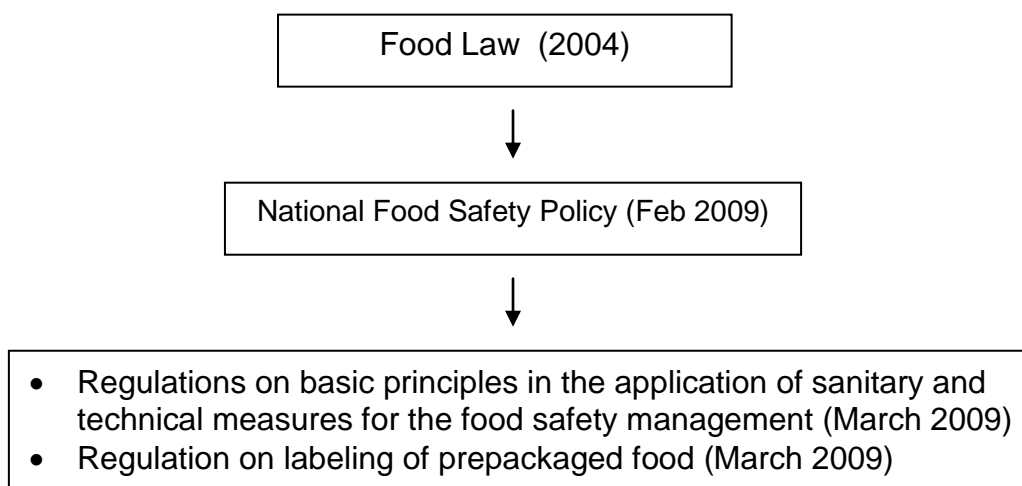
Appendices to Annex 7:

- 7.1 Regulation on the control on production, exported/imported safe food (2006)
- 7.2 Regulation on the basic principles in the application of sanitary and technical measures for the management of food safety (2009)
- 7.3 Regulation on labeling of prepackaged food (2009)

1. Summary of Food Safety Policy⁵⁶

Development and progress:

The Food Safety Policy, signed by MoH in January 2009, was adopted by the Prime Minister in February 2009 (See Annex 7, Doc. 6)). This policy, led by the Food and Drug Department, is detailing the principles of food safety in the country and has for objective “to protect and promote better health for the people of Lao PDR by ensuring that people consume safe, hygienic and nutritious food which would reduce morbidity and mortality due to food borne illness and promote safe food production and international and domestic trade in safe food.” To ensure coordination, the Food and Drug Administrative Committee has been established and comprises of 7 ministries, and 4 agencies/organizations.



There exists the Food Safety Laboratory, separated from the other human health laboratory, under the Food and Drug Quality Control. This laboratory analyses food samples for tracing pesticides, analyzing water, and checking quality of package food.

⁵⁶ Source: WHO, Vientiane, 5 April 2011.

The Food and Drug Department is represented at the provincial level, usually includes 6 to 8 technical staff, in charge of inspecting food and reporting food-borne diseases.

Relevance:

The new Food Safety Polity, under the Ministry of Health, should ideally be integrated in the market guidelines and pilots, but this will require intensive cooperation and coordination from the different sectors, under the lead of the Food and Drug Department. The market pilot projects will be given practical examples of what has and could be implemented.

2. Food Law, 2004



LAO PEOPLE'S DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

National Assembly

No. 04/NA
Vientiane Capital
Date: 15 May, 2004

Law on Food **Part I** **General Provisions**

Article 1. Objective of the Law

The Food Law defines the principles, rules, procedures and measures for the management and inspection of food activities in order to control the quality, standard, particularly the food safety, to assure on nutrition, to protect the health of consumers, to promote food production and business, to instruct the citizen to be aware, understand and select to consumer safe, hygienic and nutritional foods, including to understand the utility and harmful effects of the food, to know how to take care the health, and involve in the protection and development of the country.

Article 2. Food

Food is any substance which the human consumes and drinks in fresh, cooked, raw or processed form, except drugs.

Article 3. Food utility and harmful effects

Food is vital to the human existence and useful to the physical integrity by providing energy, building and relating the human body.

Unsafe, contaminated, decomposed or expired food borne diseases and illness to the body, such as diarrhea, cholera, hepatitis, cancer and other, which may lead to die.

Article 4. Terms of definitions

This Law limits the meaning of the terms as follows:

Nutrition means the consumption of nutritional, useful and safe food in order to enhance the physical growth, regulating and mental development of the body.

Nutrient means ingredients or substances constituted in food which are useful to the physical integrity.

Adulterated food means foods which are substance has been added or removed, then replace by other one, which renders food to be unqualified, substandard, and may be injured to the health of the consumers.

Contaminated food refers to the food contained biological or chemical substance, foreign elements or other substances added wherein or exceeded the requirement of food standard which may be injured to the health of customers.

Dangerous substance in the food refers to toxic chemical substance and other substances, including the bacteria causing the harmful effects to the health.

Falsified food refers to the food using the trade mark of other one which has been officially registered.

Food storage refers to the food warehousing for distributing to the society.

Food keeping refers to the storing of food in the houses for familial use.

Article 5. Obligations of citizen towards food

Lao citizens, aliens, non-citizen people and foreigners residing in the Lao PDR have the obligations to contribute in the management for production, preparation, storage, service, distribution and transportation of food in order to make the food being safe, qualified, standardized linking to the environmental protect sustainability the food resources originated from the nature.

Article 6. Promotion of food

The State has policy of promoting domestic and foreign individuals and organizations to invest in food activities relating to the cultivation, growing, preparation, service, industrial and manual production, storage, distribution, transportation of food that are national, tribal and international characteristic and transform into modern and industrial production to meet the supply of domestic use and exportation by providing the data and information of safe, qualified, nutritious food, including the necessary and suitable importation.

Article 7. International cooperation

The State widely welcomes and supports international cooperation in the field of food by experience exchanges, capacity building trainings, scientific researches others in order to mobilize the assistances, foreign investments and exchanges of goods.

Part II Group and Standard of Food Section 1 Group of food

Article 8. Group of food

Food is classified into 3 groups, as follows:

Group 1: Energy-Giving food
Group 2: Body-Building food
Group 3: Body-Regulating food

Article 9. Energy-Giving Food

Energy-Giving Food is a food group that gives energy and makes the body perfectly functioning, such as: rice, fats, oil, flour, sugar and others that give energy.

Article 10. Body-Building Food

Body-Building Food is a food group that renders the body growing and immunizing against diseases, such as: meat, fish, milk, egg, various beans.

Article 11. Body-Regulating Food

Body-Regulating Food is a food group that is vital to physical and mental development of the body and increases the immunity against diseases, such as: vegetables, fruits, vitamins, iodized salt, and other minerals.

**Section 2
Food Quality and Standard**

Article 12. Food quality

Food quality is a specific characteristic of each food that makes the food safe, nutritional, and useful to the consumer's health.

Article 13. Food standard

Food standard is a norms indicator that measures the characteristic of each type food.

Food shall comply with the standard of the Lao PDR.

The food standard of the Lao PDR shall consist of the basic contents as follows:

- Safety
- Hygiene
- Nutrition

In case of Lao PDR standard do not exist, food shall comply with the standard, regulation and guidance prescribed by the International Codex Alimentarius is the norms indicators that measures food standard which have been approved by the Food and Agriculture and World Health Organization.

Article 14. Safe food

Safe food is a food without contamination of bacteria, chemical substances toxic or adulterated agents that are dangerous to the consumer's health.

Article 15. Hygienic food

Hygienic food is a food that has been produced by using all conditions and necessary measures to ensure the cleanness and safety of food at all steps in food activities starting from the production, processing, packaging, service etc... to the consumption.

Article 16. Nutrition food

Nutrition food is a food that is composed of energy-giving substance and body-building substance and renders regulating body in livelihood, such as flour, protein, fats, oils, vitamins, minerals and others which contain nutrients.

Part III
Food Activities
Section 1
Food activities

Article 17. Food activities

Food activities are comprised of food primary production, preparation, service, industrial and handicraft production, storage, distribution, keeping, transportation, importation, exportation and donation.

Article 18. Food primary production

Food primary production comprises of cultivation, rearing including forest products collection for food.

The cultivation and rearing for food shall be used all conditions and measures to ensure the safety and quality of produced food for the consumers, such as: it shall not contain bacteria, alpha toxin, and toxic chemical or chemical residues exceeded the official standard provided for by laws and regulations.

Forest products collection, hunting or catching of terrestrial and aquatic animals in the nature for food shall comply with the laws and regulations and shall ensure the safety for the consumption. The collected products shall be kept by using all necessary measures in order to ensure the safety and hygiene of such, including the non-destruction of the food resources and environment.

Article 19. Food preparation

Food preparation is the processing of the materials into food that it shall be ensured in term of safety, hygiene and quality as the followings:

- Raw materials for food preparation shall be assured the safety, hygiene and nutrition.
- Food preparation shall be assured the safety, hygiene, such as meat, fish, snail, shrimp, etc... must be clean and cooked. Vegetables, fruits must be cleanly washed.

- Premises and utensils, such as bowls, plates, spoons and other equipments using for food preparation shall be assured in term of safety and cleanness.
- Food processors shall be free of communicable diseases, have personal hygiene and cleanly dress.

Article 20 Food service

Food service shall be undertaken in a manner that assures the safety, hygiene and quality of food by providing the standardized food and following the food hygienic principles prescribed by the laws and regulations, such as the hygiene of food premises and the place for eating, utensils and other equipments used in food preparation and the personal hygiene of food service.

Article 21. Food industrial and handicraft production

Food production in industrial and handicraft processes shall comply with the prescribed principles, such as premises design, raw material selection, sanitation, hygiene practice, use of progressive and modern technology; that established or approved by the food management and inspection authorities of the Lao PDR or complied with the International Codex Alimentarius in order to ensure the safety and quality of food for consumers.

Article 22. Domestic food distribution

Domestic food distribution which comprises of wholesale, retail, storage and transportation of food shall be undertaken in conformity with the laws and regulations in order to ensure the safety and quality of food for consumers.

Article 23. Food exportation

Food exported from the Lao PDR shall comply with the standard as prescribed in Article 13 of this Law and with the other regulations concerned. With regard to the food quality, it depends upon the needs of the importing country.

Article 24. Food importation

Food importation may be imported for familial consumption or for servicing the society.

Food importation for familial consumption should be taken into account on safety, hygiene and quality.

Food importation for servicing the society, such as distribution, preparation, service of food, shall be undertaken in a manner that assures the quality and standard as provided in Article 12 and Article 13 of this Law and other regulation concerned. Food for refilling, repackaging and re-labeling shall be certified in term of quality and standard by the food management and inspection authorities.

Article 25. Donation of food

Food received from domestic and foreign donation or assistance shall be safe, qualified, standardized, unexpired and certified the quality by the competent authorities.

**Section 2
Food activities Characterization**

Article 26. Characterization of food activity

Food activities provided in Article 17 of this Law may be undertaken in a manner of familial economic and business characteristic, except food donation.

Article 27. Food activities of family characteristic

Food activities of family characteristic comprise of food primary production, preparation, handicraft production and keeping for family servicing.

Article 28. Food activities of familial-economic characteristic

Food activities of familial-economic characteristic comprise of food primary production, preparation, handicraft production, storage and distribution for family and social servicing.

Article 29. Food activities of trade-business characteristic

Food activities of trade-business characteristic comprise of food primary production, preparation, handicraft production, storage and distribution, importation and exportation for social servicing.

**Section 3
Food business operation**

Article 30. Food business operation

Individuals or legal entities wishing to operate a food business shall apply through the public health sector and other sectors concerned to the trade sector for making decision as provided in the business law.

Article 31. Obligations of the food business operator

Food business operator is required to ensure the safety, hygiene and quality of food. In the case that the unsafe food causes damages to consumers, the business operator is liable before the law. In addition the food business operation shall cooperate with food inspection Authorities for facilitating their duties.

Part IV Prohibitions

Article 32. Prohibitions in food production and preparation

In cultivation and growth for food it is forbidden to use the methods that may cause unsafe food or methods that are contrary to the food law of the Lao PDR. The use of unsafe water or fertilizer is also prohibited. The use of pesticide, hormone or anti-biotic in excess dose of determined standard is forbidden.

It is strictly prohibited to use the toxic chemical substance, narcotic substance, paint dangerous to the health, and it is prohibited to use the saccharine, preservative, nitrate, food color in the food production and preparation; in excess of determined standard that prescribed by law and regulations. Smoking when preparing the food is prohibited.

Article 33. Prohibition in food storage

It is strictly prohibited to use the methods leading to unsafe food or unsuitable for food quality, such as mixture of dangerous chemical substance in the food, particularly formaldehyde or other chemical substance; the control of heat, cold and humidity that is inconsistent to the food law and regulations of the Lao PDR.

Article 34. Prohibition in food importation and distribution

Importation or distribution of unsafe, unqualified, non-standardized food or food not in conformity with the food law and regulations of the Lao PDR, such as contaminated, adulterated, decomposed, fraudulent, expired, unlabelled, or quality non-certified food is prohibited, except fresh food that do not need label, such as meat, fish, crab, snail, and fresh fruits, importation of nearly expired food is also prohibited.

Food distribution by using the methods that are inconsistent with the food law and regulations of the Lao PDR is prohibited, such as open of boxes and packages, food refilling from its origin that may causes the food unsafe, adulterated, contaminated, incomplete, decomposed, substandard, fraudulent or expired.

Article 36. Prohibition on food exportation

It is prohibited to use the toxic, contaminated or unsuitable materials for the food containing and packaging by which the safety and hygiene of the food are not assured, such as newspapers, printed papers, fertilizer bags, feds bags, cement bags and other materials.

Article 37. Prohibition in food advertising

Food advertising by any means over the reality, conducting the consumers to misleading and may cause injuries to the health is prohibited.

Part V

Rights and obligations of the consumers

Article 38. Rights of the consumers

Consumers have the following rights:

- receive information on food;
- receive the safe, qualified, nutritional adequacy, and suitable food;
- instruct, warn producers, handles, services, and distributors of the food that considered as unqualified and non-standardized;
- change back the food or claim for damage reparation from the suppliers of toxic, expired or unqualified, non-standardized food in case of receiving harmful effects resulting from such food;
- Other rights as prescribes by laws and regulations.

Article 39. Food consumption

For the health of the consumers the followings conducts should be observed:

- select food in each group as provide for in Article 9, 10, and 11, which provide safety and quality food for the physical and mental development and strengthen health;
- safety prepare and handle food, follow five key principles of food at all time as: cleanly keep food, separate raw food from cooked food, cook food thoroughly, use safe water and raw materials, perform good hygiene practices at all steps of food preparation;
- Consume safe, qualified, nutritionally adequacy and suitable food, including good hygiene practices.

Article 40. Obligations of the consumers

Consumers are entitle to report to the relevant authorities on the processing, production, service, storage, distribution, importation of food that are unsafe, contaminated, adulterated or expired which are undertaken by the food business operators and suppliers to the society in order to take appropriate measures by the such relevant authorities for resolution.

Part VI

Food Management and inspection

Article 41. Food management and inspection authorities

Food management and inspection authorities are comprised of:

- at central level: Ministry of Public Health
- at provincial level: Provincial Public Health Authority/City
- at district level: District Public Health office/Municipality.

Article 42. Roles of the food management and inspection Authorities

Food management and inspection authorities have the role to control the food quality, monitor, inspect and instruct on food activities, mainly the food of trade-business and familial economic characteristics supplied to the society, and donation. In addition, the food management and inspection authorities have to give instructions to the people who undertake the business activities of familial characteristic to comply with the food law and regulations and encourage the society to produce and consume the safe and qualified food.

Article 43. Rights and duties of the Public Health Ministry

The Ministry of Public Health has the main rights and duties in food management and inspection as follows:

1. draft the policy and strategic plan on food management and inspection for proposing to the government for consideration;
2. turn the policy, plans and decisions of the government on food management and inspection activities into plans, programs and projects in details, and lead for implementation at the same time;
3. draft and adjust the provisions, rules and standard on food;
4. technically lead and monitor the implementation of the food law and regulations in food management and inspection activities;
5. suspend or cancel the agreements, orders, instructions and notices which are contrary with the laws and regulations of the relevant food management and inspections authorities at the lower level;
6. consider the complaint or proposal of the population relating to the food quality, standard and food activity management and inspection;
7. coordinate with the concerned sectors in food management and inspection in order to effectively realize the implementation of the adopted and promulgated laws and regulations on food;
8. cooperate with the foreign countries and international organizations in order to create all conditions favorable to facilitate the food management and inspection activities;
9. Perform other rights and duties as prescribed by the laws.

Article 44. Rights and duties of the Provincial Health Authority/City

The Provincial Health Authority, City has the main rights and duties in food management and inspection as follows:

1. turn the policy, plans and decision of the government on food management and inspection activities into plans, programs and projects in details;
2. implement the policy and strategic plans of food management and inspection activity, issued by the Ministry of Public Health and by oneself;
3. lead the District public health offices, Municipality in food management and inspection activities;
4. manage, inspect and control the quality of food produced, processed, distributed, imported, exported, donated in the area of its own responsibility in order to render the food qualified and standardized;
5. manage and inspect the food advertising in the area of its own responsibility;

6. instruct, disseminate the information data and promote the society to produce and consume safe and qualified food;
7. consider the complaint or proposal of the population relating to the food quality, standard and food activity management and inspection;
8. coordinate with the concerned sectors in food management and inspection in order to effectively realize the implementation of the adopted and promulgated laws and regulations on food;
9. Perform other rights and duties as prescribed by the laws.

Article 45. Rights and duties of the office of District public health office/Municipality

The of public health office of the district, municipality has the main and duties in food management and inspection as follows:

1. implement the policy and strategic plans of food management and inspection activity, issued by the Provincial Public Health Authority, municipality;
2. manage, inspect the food quality and monitor food advertising in the area of its own responsibility;
3. instruct, disseminate the information data and promote the society to produce and consume safe and qualified food;
4. consider the complaint or proposal of the population relating to the food quality, standard and food activity management and inspection;
5. coordinate with the concerned sectors in food management and inspection in order to effectively realize the implementation of the adopted and promulgated laws and regulations on food;
6. Perform other rights and duties as prescribed by the laws.

Article 46. Food inspection

Food inspection is the examination of food, raw materials, production, processing, packaging, service, storage, distribution, importation, exportation and donation of food, including the testing of the food productivity and food products commencing from the primary production to the finished products in order to ensure that food comply to quality and standard as prescribed by the laws.

Food inspection divides into three types as follow:

- Regulation systematic inspection;
- Inspection by advance notice;
- Surprise inspection.

The regular systematic inspection is an inspection conducted regularly following to the plans and in fixed periods.

The inspection by advance notice is an inspection conducted out of the plan, when deemed necessary that food business operator shall be notified in advance.

The surprise inspection is an urgent inspection conducted without any notice in advance to the food business operator to be inspected.

During the food inspection process, the inspectors shall properly and strictly implement following the laws and regulations.

Part VII Rewards and sanctions

Article 47. Rewards

Individuals or organizations having good deeds in implementing this law shall be rewarded and privileged from treatments determined in detail by the government.

Article 48. Measures towards violators

Individuals or organizations supplying food to the society that violate the provisions of this law shall be educated, fined or criminally punished, depending on the gravity of the breached acts, including the compensation of the damages occurred.

The food manager and inspector officials committing an offence in their duty performance, such as duty abandon, unlawful use of title, abuse of power, receiving of bribes, shall be educated, disciplined or criminally punished accordingly to the gravity of the violated acts.

Article 49. Educational measures

Individuals or organizations supplying food to the society produce, process, service, store, distribute, import, export or donate the food which are unqualified and dangerous to the health of the population shall be educated.

Article 50. Fines

Individuals or organizations as defined in Article 49 of this law that continue to commit such acts shall be fined.

Individuals or organizations that have supplied to the society the unsafe, non-standardized, adulterated, contaminated or expired food shall be fined.

The rates of the fines shall be separately determined in a specific regulation.

Article 51. Civil measures

Individuals supplying the food to the society that cause the damages to the consumers resulting from the production, processing, importation, exportation, service, storage, distribution, donation of unsafe, unqualified, non-standardized, adulterated, contaminated or expired food shall be repaired the damages occurred.

Article 52. Criminal measures

Individuals supplying the food to the society who produce, process, import, export, service, store, distribute, donate the unsafe, unhygienic, unqualified, non-standardized, adulterated, contaminated or expired foods

which are dangerous to the life or health of the consumers shall be punished accordingly to the criminal law.

Part VIII
Final Provisions

Article 53. Implementation

The government of the Lao PDR shall issue the detail provisions and implement this law.

Article 54. Effectiveness

This law shall be effective ninety days after the date the President of the Lao People's Democratic Republic issues its promulgating Decree.

Rules, regulations and provisions contradicting this law are hereby cancelled.

President of the National Assembly

Samane VIGNAKET

Appendices to Annex 7:

- Appendix 7.1: Regulation on the control on production, exported/imported safe food (2006)
- Appendix 7.2: 2 Regulation on the basic principles in the application of sanitary and technical measures for the management of food safety (2009)
- Appendix 7.3 Regulation on labeling of prepackaged food (2009)

Appendix 7.1: Regulations on the control of production, exported, and imported safe food (2006)

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Health No 586/MoH
Vientiane Capital, 12 May 2006

REGULATION ON THE CONTROL ON PRODUCTION, EXPORTED-IMPORTED SAFE FOOD

- **Reference to:**
 - The Food Law No. 04/PP, dated May 15, 2004
 - The Prime Minister Regulation No. 020/PM, dated March 19, 1999
 - The submission of the Food and Drug Department, dated December 26, 2005

The Minister of Health issued the regulation on the production, exported-imported safe food as follows:

Part I General Principles

Article 1: Objective and outputs

1. Objective

This regulation defines the principles, rules, measures for production, processing, import and export and distribution of food in Lao PDR in order to manage, control, strengthen and promote food businesses units in terms of development.

2. Outputs

To be as a tool of monitoring, control of the production, processing, import and export and distribution of food; in order to ensure the quality and safety for consumers, making the food business units and food activities function smoothly undertake accordingly to the defined rules and principles.

Article 2: Terms and definitions

Food products registration: Means the information of formula in writing from that demonstrated; the list of ingredients used in food composition; and, including weight or quantity of each item clearly.

Food additives: Means the substances added in food for production, processing, treatment, packaging, and transportation or storage purposes. These food additives are not including substances that enhance the nutritional quality and other contaminants.

Food chain: Means the process of food production, processing, treatment, packaging, transportation and storage.

Article 3: Scope and utilization

This regulation is used for food business units dealing with production, processing, import and export and distribution of food in Lao PDR;

This regulation defines only basic principles, rules and measures; while other standards, quantity and other facilities such as material, ventilation, and lighting; drainages and treatment of disposal in food premises or production rooms, utensils, packaging equipment, quantity of food additives to be used in food production and processing will be separately defined.

Part II Safe Food Processing Section 1 Process of safe food processing

Article 4: Safe food production and processing

Safe food processing begins from selection of raw materials, control of all steps of food production processing, analysis, packaging, labeling, storage, transportation, distribution in order to ensure quality and safety of food products following with Good Manufacturing Practices (GMP).

Fermented food shall be processed in a manner that protects, as much as practicable, the food from the growth of pathogens. This shall mean that the process should aim for a rapid drop in pH.

Food or raw materials drying should proceed with pre-cleaning and drying in hygienic areas that are free from pathogens, chemicals, and toxic dust, with covers to protect from flies, insects or others that will be vehicles of pathogens and toxins.

Article 5: Food additives

Quantity and standard of food additives used in food should comply with the Codex Standard for food additives (Codex STAN 192-1995); the detail of quantity standard of food additives will be in the specific list.

The following food additives and substances added in food are not allowed to be used in Lao PDR:

- Borax (including sodium baborate, sodium tetraborate, and sodium pyroborate);
- Diethylene glycol (including Diethylene glycol, monoethyl ther)
- Formaldehyde
- Chloramphenicol
- Nitrofurans or nitrofurazole

Article 6: Equipment and utensils for food processing

Equipment, utensils, and other facilities that are directly in contact with the food such as machines, tables, chopping blocks, knives, bowls palates, and other surfaces should be smooth, impervious to water non-absorbent, durable, non-toxic; non-chemical releasing, non-corrosive, and easily maintained, cleaned; and disinfected according to the principles and characteristics of the food activity.

Utensils made from plastic, metal, or others used in food, drying autoclaving, cooking, steaming or storage of raw materials should be heat resistant; ensuring the toxics releasing into the food or raw material that will be harmful for consumers' health.

Article 7: Packaging

Packaging directly in contact with food shall be clean and free from foreign matters; chemical hazardous, and be suitable to keep the quality of food in a manner for each characteristic of the food.

Article 8: Storage of food products

Food products that have been passed through steps of processing, production, finished, and semi-finished products shall be separated from raw materials and stored in suitable temperatures and specific areas, shall not be mixed with foreign matter and chemicals according to the characteristic of each product.

Article 9: Raw materials and storage

Raw materials used for processing and production of food shall be from sources that are free from pathogens and chemicals that harm consumers; storage, containers, packaging, transportation shall ensure the temperature, standard and quality of each raw material according to the specific characteristic requirements for food that will be produced or processed.

Article 10: Processing, production and storage areas

To ensure safe food, beside applying the regulations of related organizations, food handling, food production, storage areas such whole establishment or specific areas shall be separated from the rest rooms and located in a manner that is not built up of waste, solid waste; ensuring that there are no impacts from chemical factories, pesticides, cement, dense communities, and roads with dust.

Processing, production, and storage areas shall have proper and suitable ventilation; floor, walls, ceiling, windows, and door sills shall be durable, smooth, non-absorbing, non-building up with dust, easy to clean and maintain; ensuring prevention of the growth of molds and micro-organisms; shall have drainage and waste water treatment and disposal systems that are required by standards and principles of waste disposal.

Section 2 Cleaning

Article 11: Cleaning and disinfection

Processing, production, and storage areas shall be regularly kept in good hygiene condition to avoid contamination of food.

Before and after food processing, production, each time it is recommended to clean and disinfect equipment, utensils, machines and others related to food production and processing.

To ensure adequate hygiene and disinfection of food premises, sufficient, suitable, and effective hygiene equipment should be available according to the hygiene principles.

Article 12: Personal hygiene practices

Food handlers shall be in good health which is checked and approved by health authorities at least two times each year.

Before being in contact with food, food handlers shall always wash their hands each time according to Good Hygiene Principles.

PART III

Registration and importation-exportation of food

Section 1

Food registration and registration validity

Article 13: Food product registration

All food businesses must obtain a permit to operate the business of food production and shall register all products with processing procedures, formula, and ingredients with the Food and Drug Department to take consideration of issuing the registration of food products.

For registration of imported food, the registration will be undertaken for only for risky food and the list of risky food will be determined separately.

Article 14: Consideration of food product registration

Any food business wishing to register food products shall provide all documents that are required in the forms from the Food and Drug Department, which will consider and be satisfied with such documents, field inspection, and procedure of the production and take samples for analysis.

The duration of the consideration for issuing of the registration is four months.

Article 15: Validity of registration and re-registration

The registration of food products is valid for two years. Three months before the validity expires, the food business shall undertake re-registration procedures and provide re-registration documents with a copy of the issued registration and additional documents if there have been any changes in the business.

Article 16: Withdrawal of registration

The registration will be withdrawn from the food business in case of:

- Business in crisis or stop business
- Food business did not apply for re-registration when the validity of registration is expired and not follow the recommendations of authorities
- The result of the analysis indicated that the food had not complied with standards or not followed the written recommendations (non-conformant report) of the food inspector
- It is officially certified that it is distributed and sold unsafe food that is harmful to consumers' health.

Section 2

Import-Export and transit of food

Article 17: Food importation

Any food business that imports food into Lao PDR shall provide all documents that require in form and submit to Food and Drug Authority and other concerned institutions according to the food import requirements in order to get approval and obtain permission to import.

After obtaining the approval and permission for importation required by regulations, for practical importation food business handlers shall declare all documents to Food and Drug Inspectors and concerned staff at the checkpoint.

Article 18: The approval of food quality for re-packaging and refilling

Food importers whose purpose is to import food for re-packaging or refilling shall provide documents and all details of the original package and units of new packages and shall be authorized from the exporter and submit to the Food and Drug Authority.

In case the documents and quality of food do not comply with standards, it is forbidden to obtain permission to import.

Article 19: Food exports

Food exporters who have the purpose to export food from Lao PDR, besides complying with export principles, shall provide documents and submit to the Food and Drug Authority for consideration and to be issued an export certificate.

Article 20: Transit of food

Food business handlers, who have the purpose of transporting food through Lao PDR, shall inform the Food and Drug Authority and related institutions on the documents approved for export of food from the country of origin and approved documents for importation of food of the third country.

Part IV
Food management and inspection
Section 1
Food management and inspection authorities

Article 21: Roles and functions of food management and inspection authorities

Roles and responsibilities of food management and inspection authorities are defined in Part 6 of the food Law.

Section 2
Roles and functions of food inspectors in entry ports

Article 22: Roles and functions of food inspectors at the checkpoints

Food and drug inspectors at checkpoints are government staff under the Food and Drug Control Authority, and have the role of providing assistance directly to the food safety authorities in each level of monitoring and control of documents, raw materials, and food imported-exported to and from Lao PDR.

Article 23: Rights and duties

Food and drug inspectors at checkpoints have the following rights and duties:

- 1) To inspect documents in comparison with the real goods; and to permit imported food in collaboration with concerned authorities;
- 2) To reject the import of food and to seize food in case the documents are not complete and are incorrect; the food does not comply with standards that is noted in the documents; food is not certified and approved from the food and drug control authorities;
- 3) Take samples according to the rate as officially defined (goods that do not comply with documents and unpackaged, storage and others);
- 4) Urgently report to the Food and Drug Control Authority on the details of the import and export or seizure of goods;
- 5) Regularly report to the Food and Drug Control Authority that the inspector belongs to, on the results of food and drug control activities;
- 6) Perform other rights and duties assigned by higher authorities.

Part V
Prohibition, rewards, and measures
Section 1
Prohibition

Article 24: Prohibitions in food production, processing, and advertising

Any food products distributed in Lao PDR shall comply with quality and safety implemented through the following principles:

- 1) Prohibit using hazardous chemicals and narcotic substances into the food.
- 2) Prohibit using textile colors and other colors that are not approved as food colors.
- 3) Prohibit using other chemicals that are not approved as food additives.
- 4) Prohibit use of food additives over the quantity that is officially defined.
- 5) Prohibit faking formulas labeled as registered.
- 6) Prohibit advertising the usefulness of food beyond the nature of the food.

Article 25: Prohibitions in food packaging

Food produced under Good Manufacturing Practices must have packaging that complies with the following principles:

- 1) Prohibit using packages that are not compliant with standards and not approved.
- 2) Prohibit use of fertilizer bags, cement bags, feed bags, and other bags that are used (with the exception of the specific packaging).
- 3) Prohibit using used or printed papers for raw materials or not dried food (with the exception of the specific papers).
- 4) Prohibit using plastic packaging to pack when raw materials or food is still hot.

Article 26: Prohibitions in food importation and distribution

- 1) Prohibit importing and distributing food that does not comply with quality and safety requirements that are officially defined by the competent authority.
- 2) Prohibit importing raw materials or food that is not checked and certified by competent authorities of exporting countries.

Section 2
Rewards and sanctions

Article 27: Rewards

Individuals, companies or organizations having good deeds in implementing this regulation shall be adequately rewarded and privileged from treatments determined by the Ministry of Health.

Article 28: Measures towards violators

Individuals or organizations having violated this regulation shall be educated, warned, fined, and punished, depending on the gravity of the cases as follows:

1st violation: Educate, warn and record in the file.

2nd violation: Seize goods and fine 10 percent of the goods according to the market value and record in the file.

3rd violation: Seize goods and fine twice the value of the goods according to the market price, record in the file and/or collaborate and submit to the concerned authority for temporarily closing the business depending on the case.

Any violation in the first, second, or third instance, if significant consequences to the health, economy, or life of consumers, the violator shall be punished according to the criminal law.

Part VI
Final provision

Article 29: Implementation

The Food and Drug Department, Ministry of Health in collaboration with concerned organizations has to develop and implement this regulation for achieving real results.

Article 30: Effectiveness

This regulation is effective from the date that is signed by the Ministry of Health. Any Decree or regulations contrary to this regulation is repealed.

Minister of the Ministry of Health

Appendix 7.2:
Regulation on the basic principles in the application of sanitary and technical measures for the management of food safety (2009)

Appendix 7.3:
Regulation on labeling of pre-packaged food (2009)