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# FOOD SECURITY RELATED TO MARKET-ORIENTED AND FUTURE DIRECTION OF AGRICULTURE IN LAO PDR

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# ABSTRACT

The economic theory is to assist farmers to shift from subsistence to market-oriented production in order to increase food security. Usually this means they obtain cash to cover rice shortages. A common understanding is that production technology is the key. There are risks associated with this shift, because markets are not well understood. The main focus has been on the production side, but market unpredictability has been problematic. The approach of developing a crop technology first and then searching for a market outlet increases risk. Therefore, the government will focus more on the two main aspects in the agricultural sector, the food security and the commercialization of agriculture are to be promoted till year 2015. Technology-driven market transition has been risky. Cash crops should not be promoted unless the market is well-understood. The local-level organization should focus not only on production, but also on processing and marketing. Equity in access to opportunities is the key to understanding the economic impact of markets. And the skills to support market-oriented production are still lacking at the local level. There is a need for not only technical expertise, but also the experience with contracts, marketing and negotiation, etc.

## KEYWORDS

Food security, Subsistence, Market, Production technology, Processing, Local government



Food Security related to market oriented and future direction of agriculture in Lao PDR”

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1

## Food security and markets

- The economic theory is to assist farmers to shift from subsistence to market-oriented production in order to increase food security
  - Usually this means obtain cash to cover rice shortages
  - The common understanding is that production technology is the key

2

## DECLARATION OF THE WORLD SUMMIT ON FOOD SECURITY ( 2009 )

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

- ❑ The four pillars of food security are availability, access, utilization and stability.
- ❑ The nutritional dimension is integral to the concept of food security.
- ❑ Lao PDR adds: socio-cultural acceptability linked to conserving & commercializing on biodiversity

3

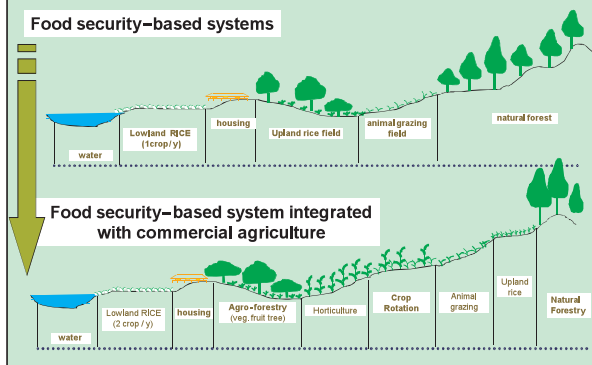
## The Situation

- Laos achieve basic self-sufficiency in Year 2000 – 350 kgs/cap/yr but productivity still low and deficiency in the Uplands...However from a nutritional standpoint very much deficient ...
- **Food security and diversification:** The most significant constraint to the availability of food in Laos is the low level of domestic production of food items. The low level production is mainly the result of low levels of productivity and high risks in the agricultural sector.

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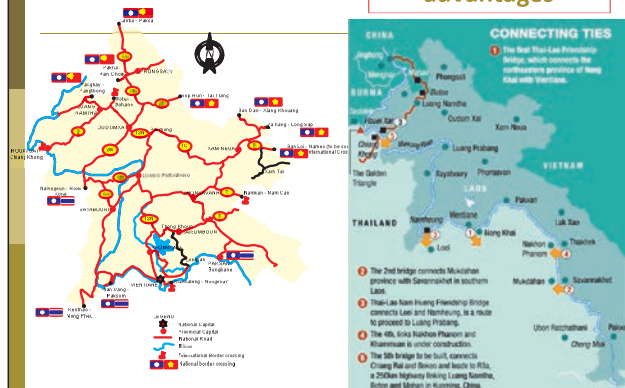
## Lao Smallholder agriculture is in transition

### Food security-based systems



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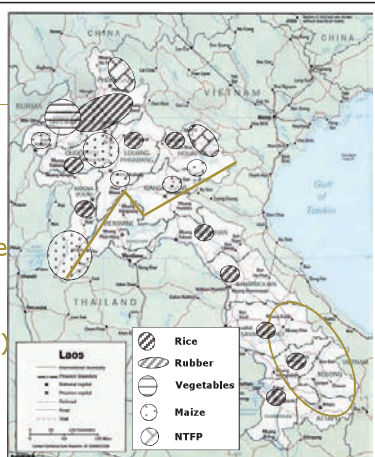
### Land-linked advantages

Lao PDR: Northern Province Strategy Study:  
Local and International Border Crossings

6

## Regional Economic Integration :

**Opportunity for the Lao PDR :**  
Turn land-linked transport corridors into economic corridors : increase in land-based investments (concessions, contract farming...) to produce & supply food & ANR goods to the Region & World



7

## Emerging Challenges of Agricultural Development

- ❑ Low intensity and low productivity, inducing limited competitiveness of agriculture on regional and global markets for major basic unprocessed crops.
- ❑ Minimum use of inputs e.g. new improved crop varieties, animal breeds, livestock healthcare....
- ❑ The marketing of agricultural products tends to be limited to the Greater Mekong Sub-region (GMS), resulting in significant variation in market prices between northern, central, and southern provinces.
- ❑ Poor and ineffective infrastructures and public services such as irrigation systems, roads, extension.
- ❑ Traders/external investors take advantages, since low education level of farmers.
- ❑ Vulnerable to climate change impacts.
- ❑ Weak institutions and support from concern agencies to rural remote areas.
- ❑ Limited public human resources and budget to support the agricultural sector.

8

- ❑ **Producers lack**
  - market information
  - infrastructure
  - logistical knowledge
  - processing and marketing capabilities – value chains
- ❑ **Markets are fragmented**
  - Prevents farmers from capturing potential benefits from producing high quality products.
- ❑ **Supply chains have many participants**
  - use of informal channels to deliver products to neighbor country markets.
- ❑ The large number of participants causes prices to be set at low levels by collectors.
- ❑ National product standards for food and agricultural products are lacking.

### Challenges to maintaining food security



9

## Risk and opportunity

- ❑ There are risks associated with this shift, because the markets are not well understood
- ❑ The main focus has been on the production side, but market unpredictability has been problematic
- ❑ The approach of developing a crop technology first and then searching for a market outlet increases risk

10

## SWOT Analysis: Opportunities

- ❑ Useless of chemical and pesticide which is a good opportunity for producing organic products to niche market;
- ❑ Regional integration can increase cooperation in exchanging knowledge and products;
- ❑ AFT can reduce low cost of imported agricultural inputs;
- ❑ Changing the country from "land lock to land link" policy through the development of regional linkage as roads and bridges provide more opportunities for agricultural exports;
- ❑ Increased Public Private Partnership (PPP) on value adding of agricultural production for export;
- ❑ Develop agro- and eco-tourism;
- ❑ FDI policy attracts more foreign investments.
- ❑ Domestic, regional, and global markets are playing increasingly important roles as 'pull factors' in agricultural, natural resources and rural development processes;
- ❑ Increasing demand of agricultural products, especially organic agricultural products, in EU countries, USA, Japan, ASEAN and China markets;
- ❑ Organic products carry price premium, helping to improve farmers' income and reduce poverty; and
- ❑ Member of WTO / AEC increases the country's recognition in the world.

11

## Strategic objectives have been formulated to guide the preferred strategic interventions :

1. Increase and Diversify Domestic Food Production – including biodiversity
2. Improving Access to Food
3. Improve Environmental Health and Food Safety
4. Access to nutrition and health services
5. Increased commodity-based value chains – focus on comparatively advantaged products: niche / biodiverse, clean agriculture , Asean market needs ( rice, maize, sugar cane.... )

12

### Holistic approach to achieving food security

- Understanding of rural land use systems
- Aim for family-based food security
- Aim for community-based food security
- National food security derived from an integrated food supply chain analysis
  - Analysis => awareness of strengths and opportunities
  - Analysis => investments to overcome weaknesses and threats
- Food security more than rice : increased commodity & trade = increased income & safety net

Agroforestry



Shifting cultivation



Mixed farming



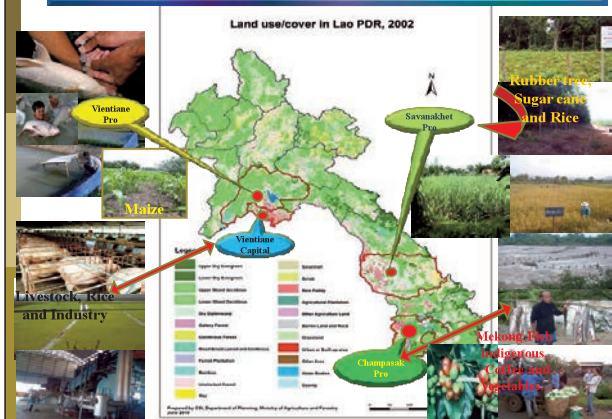
13

## Lao Agriculture is Open to Investment



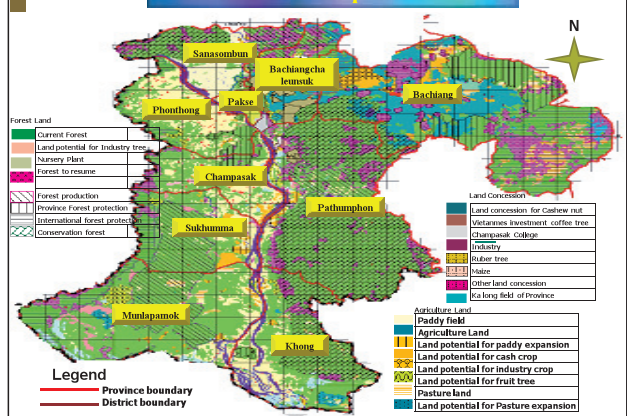
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### Investment Potential in Lao PDR in ANR Sector



15

### Land Use of Champasak Province



16

### P-P & P-P

- A network of **PARTNERSHIPS** : case-by-case basis
  - **Public & Public**: Government to Government
    - MOU: Lao Government and Singapore Government
  - **Public & Private**: Government to private company:
    - MOU: Lao Government and private company
  - **Private & Producers**: Private company to producers
    - Contract farming: Private company and producers
- Example** : Case of rice or any commodity production in a given Province.
- Partner Govt : varieties & breeds; technology; capacity building
  - Partner country Private Sector : capital; market; certification
  - Lao Govt & Private Sector complement : land lease; policy & other investment incentives; TA; capital & internal market; liaising & business support...

17

### P-P & P-P Alternative #3 -- Terms and Conditions:

- Barren land available as a land concession
  - 30 year renewable lease
  - 30 ha – 1,000 ha
  - Operate as a nucleus estate
  - Contract farming outreach program with local farmers
  - Lease land from farmers
  - Use farmers as workers while transferring technology

### Case Study:

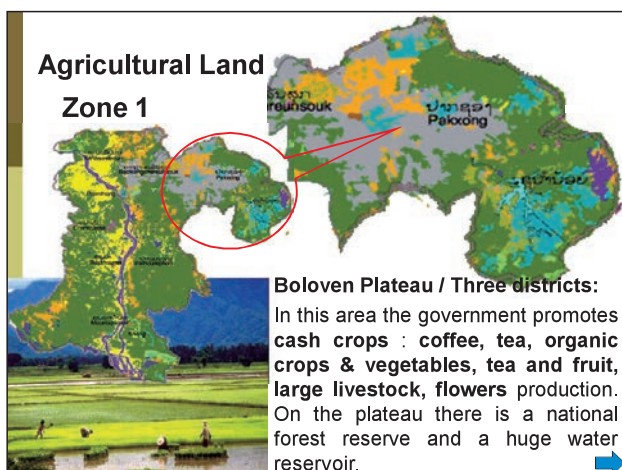
Taniyama-Siam, Thateng District, Sekong Province

**Okra:**  
Sekong to Japan in 72 hours

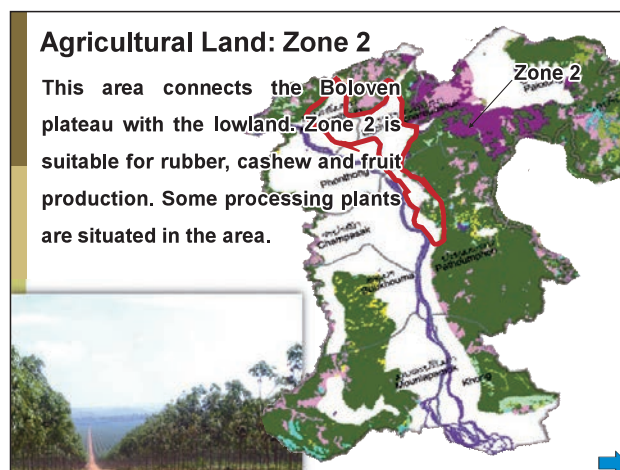


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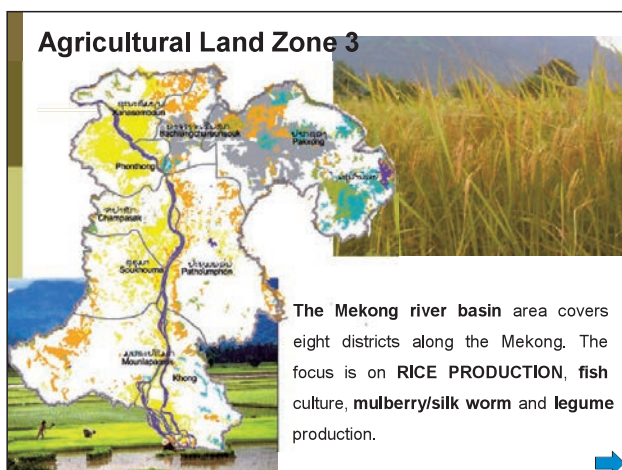




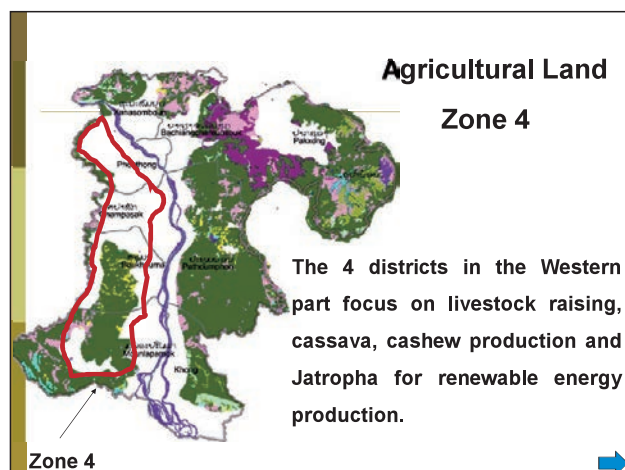
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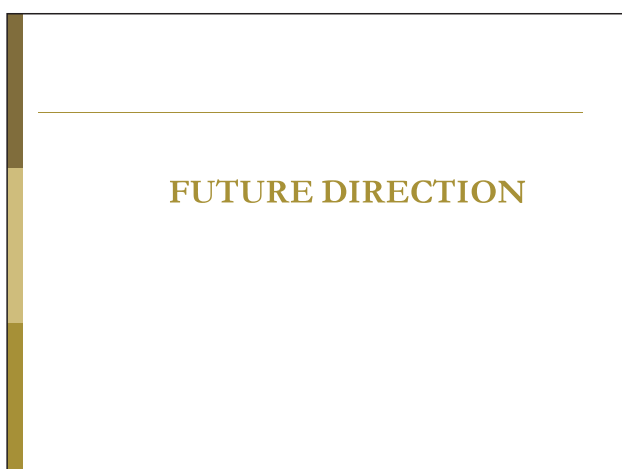
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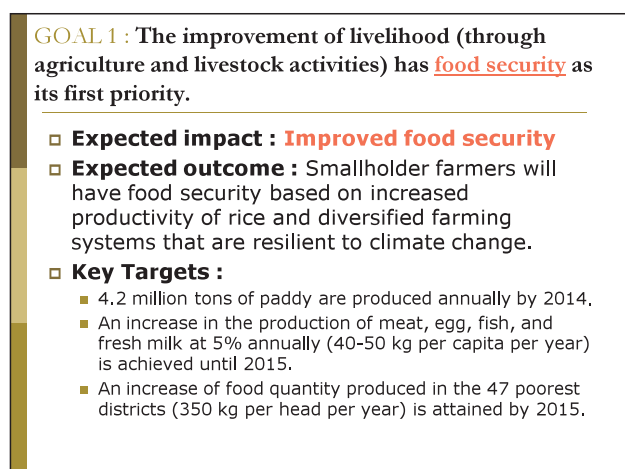
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23



24

GOAL 2 : *Partnering investment for commodity production*, aiming to **develop Value chains** to domestic, regional, and global markets (Commercialization of agriculture)

- ❑ **Expected impact : Significant increases in production, productivity and domestic value added for agricultural commodities**
- ❑ **Expected outcome :** MAF will be engaged in a network of PPPs that will facilitate integration of smallholder farmers to domestic, regional, and global value chains.
- ❑ **Key Targets :**
  - **By 2015, agriculture and forestry sector product exports represent 1/3 of the total Lao PDR exports.**
  - **By 2015, the value chains of the 7 keys Lao agricultural commodities are organized.**

25

## THE AGRICULTURE DEVELOPMENT MASTER PLAN 2011-2015

26

### Program 1 : food production

- ❑ **Food security is the highest priority in the agriculture sector.**



**Together of  
the implementation of the  
National Nutrition Strategy  
and Food Safety**

27

### Key areas of intervention

- ❑ **Improved management of irrigation systems** for smallholder farmers and simultaneous **development of public-private partnerships for medium- and large-scale irrigation projects.**
- ❑ **Crop intensification.**
- ❑ **Diversification of agricultural production.**
- ❑ **Reducing pre- and post-harvest losses.**
- ❑ **Improved food safety** for domestic consumption through the application of good agriculture practices (GAP).
- ❑ **Community-based food preservation and processing** to meet increases in domestic demand for processed food products.

28

### PROGRAM 2 : COMMODITY PRODUCTION

- ❑ MAF will be engaged in a network of PPPs that will facilitate the integration of smallholder farmers into domestic, regional, and global value **"pro-poor and green value chains."**
- ❑ MAF will work on **improving productivity** and to retain **local value added** of produced commodities by notable catalyzing **organization of farmers** (groups, coops).
- ❑ MAF will ensure by appropriate measures of **value chain governance** that smallholder farmers and local SME can retain a fair share of the value added.
- ❑ MAF will provide an **appropriate regulatory framework**, monitoring instruments and a set of effective sanctions to ensure that commercial agriculture and possessing will have no negative impacts on the natural environment, human health or other aspects of national interests.
- ❑ **Develop production-based and post-harvest activities** at farm-level that will strengthen the capacity of smallholder farmers to **international food safety and SPS standards.**

29

### Conclusions

- ❑ Food security remains in Lao PDR an important challenge and Lao PDR.
- ❑ Greater investment in food and agriculture as well as in natural resource management is fundamental to meeting the MDGs, in particular the goals concerning poverty, hunger, and health.
- ❑ Food security can only be achieved in Lao PDR if a broad range of stakeholders are partnering and aligning to a common objective.
- ❑ Different stakeholders need to be more present, working efficiently at community levels, and increasing local authorities' capacities.
- ❑ FDI and Domestic investment can play an important role in boosting agricultural production, "importing" food safety standards....
- ❑ Increase focus on food security in environmental impact assessments (EIA) for investments in agro-based industries and plantations, bio-fuel industries, mining, hydro-power and others.
- ❑ Lao PDR National strategy needs to be further articulated with the regional food security strategy.

30

## Conclusions (Continue)

- ❑ Agricultural sector is one of the most important sectors together with other non-resource sectors contributed approximately 13 percent in 2012. The growth also contributes to poverty reduction.
- ❑ Both quantity and productivity of important agricultural products such as crop products (rice, coffee, maize, sugarcane, and other vegetable crops), livestock products (buffalo, cattle, swine, goat, and poultry), and agro-processing products (tobacco, polished rice, meat, cassava flour, sugar, noodle, bakeries, and coffee) had been gradually increasing.
- ❑ Market demand for the agricultural products had also been dramatically increasing.
- ❑ Regional integration and globalization through different facilities and the reduction of trade barriers enhance agricultural development in the country for both domestic and export markets.

31

## Conclusions (Continue)

- ❑ The GOL has also been developing and improving favorable institutional framework to facilitate FDI to speed agricultural value chain investment and promote agricultural production, processing and marketing.
- ❑ However, the agriculture still faces several problems and challenges such as low production quality and efficiency which remain the country uncompetitive with neighboring countries.
- ❑ The low production productivity and quality are resulted from many factors such as degradation and limitation of natural resources (land), limitation of access to inputs, production, processing, markets, and technical knowledge, poor and inefficient infrastructures and the support from the GOL.

32

## Recommendations

In order to overcome the challenges, the GOL should adapt to the agenda in:

- 1.improving and publicizing institutional frameworks such as policies, rules, regulations related to the agriculture and agro-processing products;
- 2.enhancing agricultural productivity and facilities;
- 3.initiating agricultural and environmental risks vulnerability management;
- 4.connecting to markets; and
- 5.ensuring social and environmental sustainability.

33

## Lessons learned

- ❑ Technology-driven market transition has been risky
- ❑ Cash crops should not be promoted unless the market is well-understood
- ❑ Local-level organizations should focus not only on production, but also on processing and marketing
- ❑ Equity in access to opportunities is the key to understanding the economic impact of markets
- ❑ The skills to support market-oriented production are still lacking at local levels – need for not only technical expertise, but also for experience with contracts, marketing and negotiation

34

## Thank you



35



**Chair Ando:** Shall we restart the symposium? My name is Masuo Ando. I will serve as the moderator of this first session. In the beginning of this session, I would like to explain the concept of this session. As you know, the economic globalization is promoted rapidly, so the relationships among countries are getting closer year by year. Focusing on the Asian countries, such as NIES countries, ASEAN countries and China, they have remarkably developed their economies, so our Asian countries now take a leading role in the world market, the world economy.

It is true that these countries are economic rivals or competitors with one another in the world market, but also at the same time they can be good partners to share or help each other. So there are various economic stages or economic development among the Asian countries. In this session, I will pick up three representative countries. The first is Lao PDR, which has just begun to develop its economy. The second is the People's Republic of China, which is on the way to developed country. The last one is Japan, as you know well, which has already developed and matured its economy.

So considering such different economic stages or economic conditions or structures in these countries, the direction of agricultural technology development or research is different from each other. So based on these analyses of the different situations or structures of the consumption or distribution of agricultural products, we would like to identify the direction of the technology development in each country, and I hope these three presentations will give us good issues to discuss later.

So now I am very pleased to introduce the first speaker, Dr. Linkham Douangsavanh from Lao. He is now Deputy Director General of National Agriculture and Forestry Research Institute, so-called NAFRI, in Lao PDR. The title is "Food Security Related to Market-oriented and Future Direction of Agriculture in Lao PDR." So please, Dr. Linkham, come to the stage.

And at the beginning of the presentation I would like to give one notice that each speaker is allowed 20 minutes, and after the three presentations we will have a discussion for 20 minutes. The time is limited. I'd like to ask each speaker, sincerely ask speakers to be punctual. So please start, Dr. Linkham.

**Dr. Linkham Douangsavanh:** Thank you, Chair. First of all I would like to thank JIRCAS for giving me the opportunity to present and share the experience of Lao PDR in this important conference. As you know, Lao PDR is, as the chairman just mentioned, we are just developing, and agricultural activities are the basic foundation of the country, that's why we consider it as still important and contributing a lot to the GDP of Lao PDR.

So first of all, let me share a few things with you before I go into the details. The economic theory is to assist farmers to shift from subsistence to market-oriented production in order to increase food security. In this case usually this means obtain cash to cover rice shortages. That means sometimes the people, especially in the upland areas, they try to find a way to get money to buy rice. This one is the meaning of this one.

Secondly, the common understanding is that the production technology is the key as the highlight of the content.

The declaration of the World Summit on Food Security, let me brief you on a few things, especially food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

The four pillars of food security are availability, accessibility, utilization, and stability.

The nutritional dimension for Lao now is considered as one of importance that can support food security as well.

And Lao PDR adds socio-cultural acceptability linked to the conserving and commercialization on biodiversity.

As you know, Lao, if compared in the countries among Asia, we have more forest cover and we have more than 40 percent of forest cover. This one we consider as one of the potentials of our country.

For the situation in Lao, food security and diversification, the most significant constraint in the availability of food in Laos is the low level of domestic production of food items. The low level of production is mainly the result of the low levels of productivity and high risks in the agricultural sector. Also, it includes climate change as well.

For the smallholder agriculture in transition, nowadays the farmer transfers from the food security-based system into the food security-based integrated commercial agriculture, especially in the upland area of Laos.

Before, many people know our country as a landlocked country, but now we consider it as a land-linked country. That means we try to link to the other countries in the region like Thailand, Myanmar, Cambodia, Vietnam, and China as well.

The regional economic integration is also one of the opportunities for Lao PDR. Turn the land-linked transport corridor into the economic corridor, increase the land-based investments, concessions, contract farming, and so on. As you know, the area here is where we do the land-use planning and land allocation, specific crop already planned it in this area.

One thing that I would like to emphasize also is emerging challenges for agricultural development: the low intensity and low productivity, inducing limited competitiveness of agriculture on the regional and global markets; the minimum use of the inputs; the marketing of agricultural products tends to be limited to the Greater Mekong Sub-region, especially in the GMS; the poor and inefficient infrastructures and public services, such as the irrigation systems, roads, extensions, and so on; traders and external investors take advantage, since there is a low education level of farmers; the weaker institutions and support from concerned agencies to the rural and remote area. Limited public human resources and budget to support the agricultural sector as well.

The challenges to maintaining food security we consider as key, as the producers lack, especially market information, infrastructure, logistical knowledge, processing and marketing capacity of the people, especially for the small farmer.

And also we consider the other thing, also markets are fragmented. The supply chains have many participants, the use of informal channels. The large number of participants causes prices to be set at low levels by collectors. The national product standards for food and agricultural products are still lacking and need to improve.

The risk and opportunity. For the risks and opportunity, there are risks associated with this shift because the markets are not well understood. The main focus has been on the production side but the market unpredictability has been problematic. The approach of developing crop technology first and then searching for a market outlet increases the risk.

A few opportunities we can see. The least use of chemicals in the agriculture activity. Regional integration can increase the cooperation in the exchange of knowledge and products. AFT can reduce the low cost. Changing the country from land-locked to be land-linked, that means we can connect to other countries after we produce the agricultural products. Increased public-private partnerships. This one, PPP, also we highlight as a very important thing that can collaborate between public and private partnership and farmer linkages.

FDI policy attracts more foreign investment. Domestic, regional, and global markets are playing an increasingly important role as a “pull factor.” Increasing demand of agricultural products, especially organic agricultural products, especially demand from the EU, from the USA, from Japan as well, and from ASEAN countries, and

the China market as well.

Organic products carry a price premium helping to improve the farmers' income and reduce poverty. And the other thing also, we are a member of the WTO. That's why we need to increase the country's recognition in the world.

Strategic objectives have been formulated to guide the preferred strategic intervention, especially to increase and diversify the domestic food production, including biodiversity. Improve access to food. Improve the environmental health and food safety. Before we are talking about only food security, but now the time is not only food security, we have to be talking about the food safety and nutrition as well together with food security and markets. Access to the nutrition and health services. Increased commodity-based value chains, focused on the comparative advantaged products, and niche/biodiversity, clean agriculture, ASEAN market needs, like rice, maize, sugar, sugarcane, and so on.

For a holistic approach to achieve food security. Understanding of the rural land use systems. This one is one urgent thing that the government has to emphasize. And also aim for the family-based food security and for the community-based food security. National food security derived from an integrated food supply chain analysis. And food security more than rice: increased commodity and trade.

And the government now, since 1986 the government has tried to open agricultural investment. That means as I mentioned in the beginning, now we emphasize more in the PPP.

Investment potential in Lao PDR we identify in different areas and different soil in the country. Different areas have different potential for the agricultural sector. And this one is one of the examples of land-use planning at land location, that particular case in Champasak Province in the southern part of Laos.

And PPP is also very important. The network of the partnership, the public-public, public-private, private-producer, and so on. The government, the partner government and Lao government-private sector complement.

Some case study in Sekong also, the result from the PPP highlighted in the northern part of Lao, based on the barren land available as the land concession. That one is joint between investors and people in the area.

Now the government is trying to emphasize agricultural land into four zones, like one zone is in the Boloven Plateau. This area we consider as perfect soil, that's why we consider like cash crops, like coffee, tea, organic products, vegetables, and some fruit and livestock.

And zone 2, in the area of the Boloven Plateau, is also considered as industrial crops suitable for rubber, cashews, and fruit tree production.

The zone 3 also. Zone 3 is located around the Mekong River Basin. This one is suitable for rice production.

And agricultural land, zone 4 is considered as uplands. The uplands here we focus more on livestock production.

These four zones that the government tries to consider and tries to make the land-use planning and land allocation based on these areas and the potential of the area and the region.

For the future direction of the country, the strategy of the agriculture ministry, we try to emphasize only two things as main. The first one emphasizes food security and secondly is the commercialization of agricultural production.

For food security as goal number one, and we consider as very important together with commercialization of agriculture, is to improve the food security and we have a few key targets.

For the second important, as I mentioned, it's the commercialization of agriculture. This one is a significant increase in the production and productivity and domestic value for agriculture commodities; that includes processing as well.

We also have the target up to 2015 that agriculture and forestry sector products must export a percentage, one-third of the total of the Lao PDR exports. That means consideration for the agriculture sector is still important for this future direction.

The agriculture development master plan, also we consider as the two main thing based on the strategy vision, also food production as an area of the intervention to improve the management of irrigation systems, crop intensification, diversification of agricultural production, reducing pre- and post-harvest loss, improved food safety for domestic consumption, and so on.

Community production, also pro-poor and also green value chains, improving productivity, local value-added, organizations of farmers, farmer organizations are also very important. If you would like to achieve for the second goal you must push on how to build up the capacity of the farmers themselves. That means farmer organizations are also very important and also learn from Japan's experience as well.

The third one is an appropriate regulatory framework, develop a production base and post-harvest activities in international food safety and SPS standards we have to consider as well.

For the conclusion, I base on my presentation, I tried to highlight the things that we would like to achieve based on our targets and our goals in the near future.

The first one is food security remains in Lao PDR as an important challenge for Laos. Greater investment of the food and agriculture as well as in natural resource management is fundamental to meeting the MDGs of the country and the region. Food security can only be achieved in Laos if a broad range of stakeholders are partnering and aligning to a common objective.

The different stakeholders need to be more present and work together closely. FDI and domestic investment can play an important role. Increase the focus on food security in the environment and impact assessments as well. We need to consider also seeing the good way to conserve our biodiversity. The Lao PDR national strategy needs to be further articulated with the regional food security strategy.

The agricultural sector is one of the most important sectors but until now still contributed a lot to the GDP of the country. Both quantity and productivity of important agricultural products, such as crop products like rice, coffee, maize, sugarcane and so on. The market demand for the agricultural products has also been dramatically increasing. Regional integration and globalization through different facilities and reduction of trade barriers enhance agricultural development in the country for both domestic and export markets.

The Lao government has also been developing and improving the favorable institutional framework to facilitate FDI to speed the agriculture value chance in investment and promote agricultural production, processing, and marketing.

However, agriculture still faces several problems and challenges such as low production quality and efficiency which remain country uncompetitive with neighboring countries. The low production productivity and quality results from many factors, such as the degradation and limitation of natural resources, land, limitation of access

to inputs, production, processing, markets, and technical knowledge, poor and inefficient infrastructures and support from the government of Lao.

Based on the conclusion, I would like to highlight a few recommendations also. In order to overcome the challenges, the government of Laos should adopt to the agenda, especially in improving and publicizing the institutional frameworks such as policies, rules, regulations related to the agriculture and agro-processing products. Secondly is have to enhance agriculture productivity and facilities. Thirdly it needs to initiate agriculture and environmental risks vulnerability management. As some of you may know, because now we are just facing the problem with climate change, especially drought damage in the northern area of Laos, and more than 20 people die. And also number four is connecting to the market. And lastly, ensuring social and environmental sustainability.

If you would like to talk about sustainable agriculture, you have to be concerned about social, economic, and environment as well.

The lessons learned. The lessons learned are the technology-driven market transition base has been risky. Cash crops should not be promoted unless the market is well understood. The local-level organization should focus not only on the production but also processing and marketing as well. Equity in access to opportunities is the key to understanding the economic impact of the markets. The skills to support market-oriented production are still lacking at the local level. There is a need for not only technical expertise but also experience with contracts, marketing, and negotiation for the people.

That's all of my presentation. Thank you very much for your attention.

**Chair Ando:** Thank you very much for a very, very punctual presentation. Now if you have a simple question I would like to accept a few questions, two or three questions. If you have a question, please raise your hand. Okay? No, no. Okay. So I'd like to move on to the second presentation.