



FFTC Agricultural Policy Platform (FFTC-AP)

Available online at: <http://ap.ffc.agnet.org/index.php>

Youth and Agri-Entrepreneurship in Lao PDR

Dethsackda Manikham
Deputy Director, Department of Agriculture and Forestry,
Kammouane Province, Lao PDR

Email: dethsackda_km@hotmail.com

ABSTRACT

Half of the population of Lao PDR is under 23.5 years old giving Lao PDR a demographic opportunity to accelerate economic development. About 59% of the country's population is still living in the rural areas, where the poverty rate is 2.9 times more than those living in the urban areas. Nearly 60% of the population is below the age of 25 years old and more than 30% of the population is between 10 and 24 years old, making young people constitute a large proportion of the Laos population. Clearly, addressing the needs of young people is a big challenge, which brings with it both enormous opportunities and challenges now and for the future of the country. Farming is largely practiced at the subsistence level and productive conditions for farmers are generally poor and faced with labor shortage and increasing labor cost. The potential of increased productivity and quality to gain new agricultural technique have been transferred to the farmers especially the adoption of mechanization system and associated with the intervention of the private sector to promote and enhance the value chain in agriculture.

Keywords: Laos, Young population, Mechanization, value chain

INTRODUCTION

The Lao PDR is a land-locked and mountainous country. The country has a total area of 236,800 square kilometres and borders with the Kingdom of Cambodia, the People's Republic of China, the Republic of the Union of Myanmar, the Kingdom of Thailand and the Socialist Republic of Vietnam (Fig. 1). Some 80 percent of the land area is hilly or mountainous terrain ("midland" or "upland"), including areas that are remote and difficult to access. Lowland areas account for only 20 percent of the land area, but accommodate over half the country's population (56 percent).² Only one-quarter of the country's land area is

considered as cultivation. Administratively, the country is divided into 17 provinces and Vientiane Capital, with 145 districts and 8,600 villages.

The current population is estimated at 6.8 million. The lack of vital registration and of statistics on international migration makes such estimates imprecise. The population is relatively young, with 58 percent under the age of 25 and an estimated median age of 22 years in 2015. Life expectancy at birth is estimated at 65.8 years for both sexes. With current trends in infant and under-five mortality rates, life expectancy in Lao PDR is not expected to reach 70 years until 2036.

Lao PDR has one of the youngest populations in the region. Nearly 60 percent of Lao PDR's population are estimated to be less than 25 years of age. Projections show a rapid increase in working-age population and a falling dependency ratio.³³ Thus, in the medium-term, Lao PDR is set to benefit from the "demographic dividend" to the economy. However, the full benefits of the demographic dividend will be realized only if new jobs are able to keep pace with the growth of the working age population and only if young women and young men are better equipped with the

The agriculture and forestry sector continues to be one of the key sector contributing to the reduction of rural poverty. Accelerating of the poverty reduction depends largely on delivery an adequate contribution of public investment, foreign direct investment liberalization to the sector. The agriculture natural resource sector's overall contribution to national poverty reduction and aggregate economic growth has so far remained relatively modest and below its potential. Moreover, the contribution of agriculture sector to overall national economic development has the potential to be very effective, as over 4 percent growth of agriculture translate into over 7 percent overall growth.

Around 80 % of the population is relying on agriculture. Agriculture is considered as of cultural and traditional value, especially rice farming. It is in an interim phase from subsistence agriculture towards a more intensive system. Lao PDR is a diverse country. People belong to many different ethnic factions. . In some rural areas rice is considered as a 'second currency' next to money. It is commonly used in exchange with other commodities.

Lao planned till 2030 to grow rice on 2 mill ha of which 1 mill ha will be irrigated. To enhance the amount of rice produced the area along the Mekong and its tributaries, a more intensified production system is needed to increase the surplus and export to neighboring countries. The yield of wet season rice is 3 t per ha and the yield of irrigated fields during dry season is around 4 t per ha, which result in a production of 3.6 mill tons. The surplus production is 1.15 mill tons per year. Currently 2.45 mill tons of rice per year are consumed by 7 mill people, which corresponds to 350kg paddy rice per person and year.



LAO PEOPLE'S DEMOCRATIC REPUBLIC

FAO - AQUASTAT, 2011

Disclaimer
The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Fig. 1. Map of the Lao People's Democratic Republic

DEMOGRAPHIC CHARACTERISTICS

Half of the population of Lao PDR is under 23.5 years old giving Lao PDR a demographic opportunity to accelerate economic development. About 59% of the country's population is still living in the rural areas, where the poverty rate is 2.9 times more than those living in the urban areas. Nearly 60% of the population is below the age of 25 years old and more than 30% of the population is between 10 and 24 years old (Fig. 2), making young people constitute a large proportion of the Laos population. Clearly, addressing the needs of young people is a big challenge, which brings with it both enormous opportunities and challenges now and for the future of the country.

There are 70% of the young population resides in rural. The labour force participation of young people is high. For young people aged 15-19 years it was 48.9% and 83.7% for 20-24 year olds. Literacy rates of young women aged 15-24 years are lower than their male

counterparts, 69% and 77% respectively and Early marriage is common. More young women than men aged 15-19 [19% vs 6%] and 20-24 years [59% vs 36%] were married. Lao PDR has one of the highest adolescent birth rates in the region, 94 births per 1000 girls (age 15-19) of the 6.8 million total population, 69 per cent were of working age (15 years and above). The share of working age population in urban area was 75.4 per cent, while in rural areas; this was much lower at 66 per cent due to a larger number of younger cohorts aged less than 15 years old. This results in higher dependency ratio of 62 per cent in rural areas, compared to 43 per cent in urban areas. Among working age population, around two-third have primary education or less, mainly because of large incidence of less educated people in the rural areas.

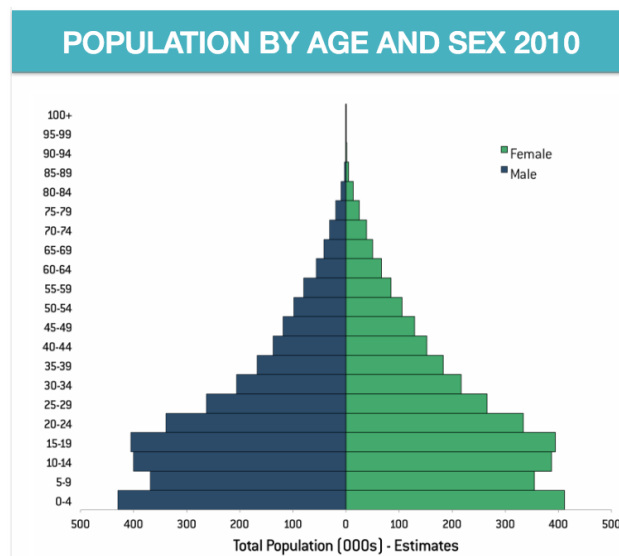


Fig. 2. Population by age and sex

Nature and intensity of children’s work

As most Lao households depend on agriculture and its related subsectors, it is not surprising that the agriculture sector accounts for by far the largest share of children’s employment (Fig. 3). For the 6-13 years age group, almost all (97 percent) of children in employment are in the agriculture sector. The composition of employment is slightly more varied for children in the 14-17 age range but agriculture still predominates. Over 88 percent of 14-17 year-olds are in agriculture, with the remainder distributed across the manufacturing (3.6 percent), commerce (3.6 percent), services (2.9 percent) and other sectors (1.8 percent) (Fig. 3). Non-agricultural work plays a relatively larger role in urban than in rural areas for both the 6-13 and 14-17 years age groups, but agricultural work predominates in rural and urban areas.

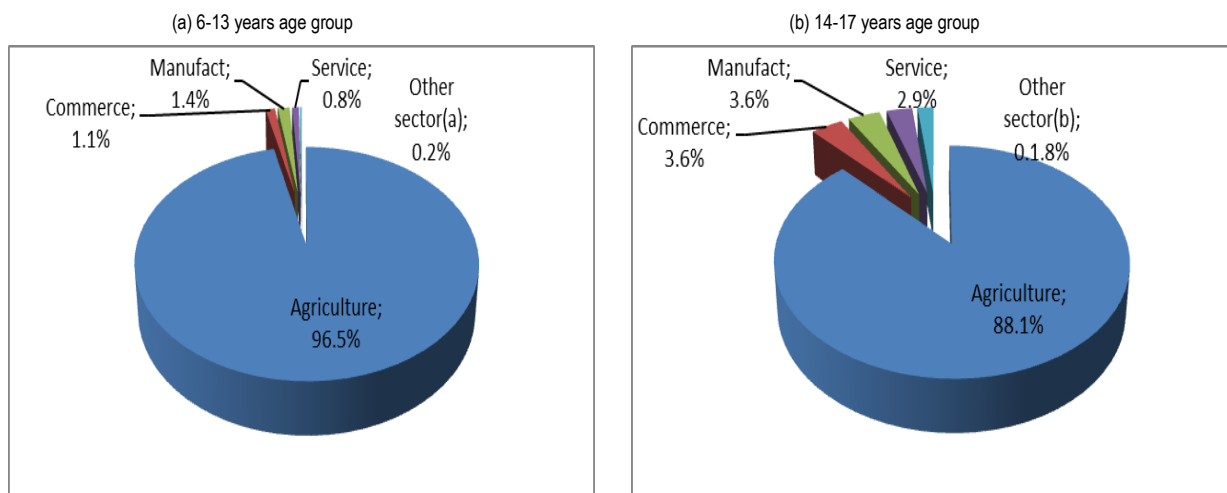


Fig. 3. Children in employment by sector, 6-13 and 14-17 age groups.

Youth employment

Youth employment is dominated by low-productivity, unremunerated work concentrated in the agriculture sector. Three-quarters of youth workers are found in agriculture and about half (51 percent) of employed youth are non-wage family workers. Paid employment, by contrast, accounts for only 17 percent of young workers. Less than 30 percent of youth in wage work enjoy written contracts, underscoring the high degree of precariousness characterizing youth employment in Laos.

Levels of working poverty are extremely high among Lao youth: three of every four employed youth are poor despite having a job. Levels of working poor are especially high among young person working in agriculture. Over fourth-fifths of youth working in agriculture (86 percent) are poor, compared to 43 percent in manufacturing, 40 percent in services and 35 percent in commerce. In terms of status in employment, working poverty is highest for non-wage family workers (82 percent) and for those who are self-employed (79 percent). These high levels of working poverty are perhaps the most revealing indicator of the low quality of youth jobs – for too many Lao youth, employment does not offer a route out of poverty.

The Fig. 4 show that the number of working age population are 4,75 million, while labour force 1,94 million and 1,75 are employed and unemployed 0,18 million. Beside of that out of labor force are 2,81 million and 2,45 million they work for own-use production worker.

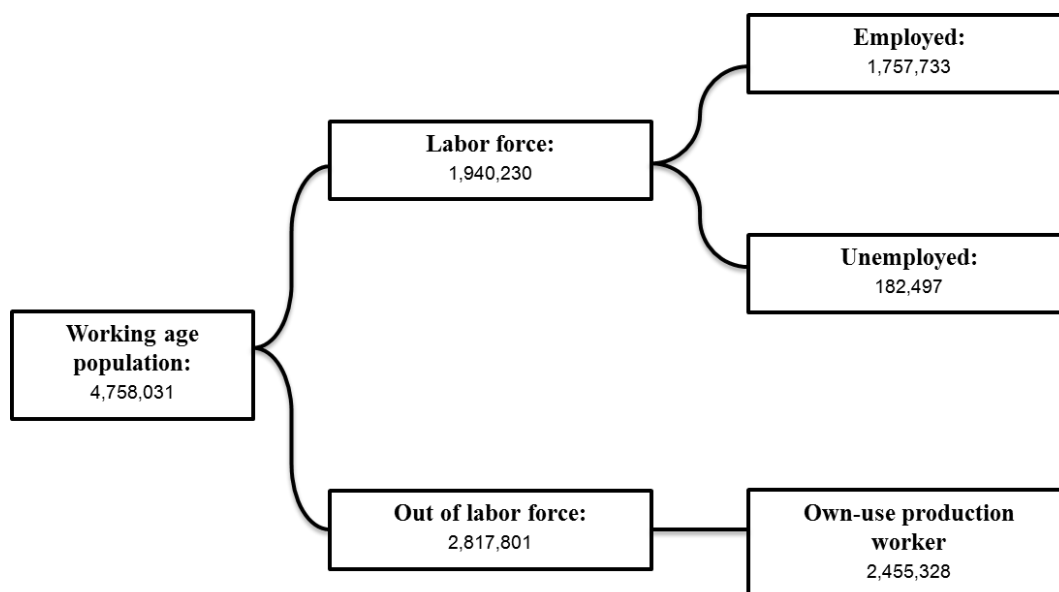


Fig. 4. The composition of the working age population (15 +) by labor force status

Migration

A majority of those who had moved from their birthplace can be found in Vientiane Capital and Vientiane province. The reported reasons for moving mainly constituted family-related, marriage and job-related reasons. Women were much more likely to move for family-related reasons than men, while job-related reasons were more important for men than for women. A fairly small number of 127 thousand persons were at present living in another country for more than 6 months. Almost 60 per cent of them were women. A large majority (87 per cent) were abroad for job-related reasons, sending cash and/or goods back home.

EMERGING TRENDS AND CHALLENGES

Several emerging trends are expected to pose challenges for agricultural sector, making it more difficult for small holder producers to participate in value chain when acting alone, in particular. Lao is expected to be seriously affected by adverse impact of climate change which will particularly affect low-income rural populations that depend on traditional agricultural system or on marginal land. In addition, price and quality competitiveness will increase the risk of farmer and smallholders. New challenges also higher grades and standard requirement and demand for higher level of food safety. Moreover, the rural labor shortage and increased labor cost are mainly affected to agriculture sector.

With AEC entry, greater economic integration may increase regional disparities, at least initially. The economic activity in more affluent Member States and demographic factors would stimulate demand for low-skilled workers in specific sectors and create a temporary “migration hump.” Thailand could thus benefit early on from free trade by employing more migrant workers from the poorer countries as Laos. Regardless of AEC integration, the flows of low-skilled workers are expected to continue in the short and medium-term. In Thailand, for example, the labour force is expected to shrink by 2022 and the demand for the low- and medium skilled migrant workers will rise, providing that Thailand sustains production and continues its economic growth.

Internal migrants constitute a significant population in Lao PDR. Approximately 17% of the population were considered 'lifetime migrants' in 2015, though this figure includes individuals migrating from abroad (Lao Statistics Bureau 2016). UNDESA (2017) estimates that approximately 45,500 foreign nationals were residing in Lao PDR in 2017, which would account only for a very small fraction of this 17%. By comparison, just over 1.3 million Lao PDR citizens are residing abroad as of 2017 (UNDESA 2017), representing around 18% of the population. In 2015, 7.4% of the population were recent migrants³. Of these migrants, 206,000 (4%) moved from one province to another (Lao Statistics Bureau 2016). In 2015, 7.4% of the population were recent migrants³. Of these migrants, 206,000 (4%) moved from one province to another (Lao Statistics Bureau 2016).

YOUTH IN AGRICULTURE SECTOR

Rural youth have considerable potential as a workforce and a willingness to help develop their rural communities. But they need good income-generating opportunities to remain in the rural areas. The limited education remains one of the primary obstacles to the development of rural youth. This includes lack of options or access to vocational training and has a limitation to access to credit and markets discourages youth farmers from intensifying their production.

The ongoing shift from subsistence to commercial agriculture is accompanied by increased *connectivity* (eg. roads and phones), which brings opportunities and problems compared to their parents, rural youth are better informed, increasingly mobile, and have access to a wider range of products. They are also more exposed to the threat of trafficking, drugs, debt...and more likely to leave the village. Migration from rural we know hundreds of thousands of young people are moving to cities in Laos and going to work in Thailand.

THE NEXT GENERATION OF FARMERS

In 2015, the Lao Upland Rural Advisory Service (LURAS) carried out focus group discussions in 8 villages. In *all* villages, parents said they did **not** want their children to continue in farming although child labour is widespread in rural areas, but the education of children *is* a priority, contrary to the findings of earlier studies. The value of education, as stated by parents, is to ensure that children get a job (preferably with Government) and send money back home. Villagers repeatedly stated that farming was hard and dirty work, with uncertain returns. They see themselves as having low social status and few opportunities for advancement. The lack of self-esteem among villages, or a positive vision for the future of farming, should be a great concern to everybody involved in rural advisory services

A study in 2015 of students at Agricultural College showed that most of them want to work for the Government, rather than returning to their village. Education is a means for escaping farming, not becoming a better farmer! Employment in Govt is only possible for a minority, but this is not the only escape route for rural youth. Other studies in Laos show that the aspiration for a 'better life' leads to paid employment rather than unpaid labour on the family farm. The search for a cash income may involve migration to urban areas (eg. construction, textiles) but equally important is paid labour in the agric sector (eg. plantations, processing). In many rural households, one child will stay with the parents while others leave. This is often a child with less formal education. Although those who leave the village may not want to return, the family farm does provide a safety net in times of crisis, or if paid labour is seasonal.

RICE PRODUCTION AND MECHANIZATION DEVELOPMENT IN KHAMMOUANE

Rice based cropping in Khammouane

The average farm size is about 2ha per household and most farms are managed by families with the average family labor of just over two. Labor availability in rural areas has decreased recently as young people move out from rural villages to work in the industry sector, and this encourages the farmer to adopt mechanization. Rice is the most important crop, and is mostly grown in rainfed lowlands in the province.

The central Lao Government defined Khammouane Province as a rice hub, and has selected the province to produce rice for national food security and also for export together with other ASEAN countries. Rice value chain development is regarded as a gateway to the local economic development. According to 2016 annual reports from different provinces in the country, wet season rice occupied an area of 80,380ha, with yield of 4.29t/ha resulting in rice production of 345,000 tons. In the dry season, irrigated rice area was 9,040ha with yield of 5.37t/ha and production of 48,500 tons. This production is about 10% of that of the whole country in the year. Of the total produced rice, about 82,000 tons or 20% is traded, including exporting to other provinces (about 7,400 tons of mill rice and 20,000 tons of paddy rice), and other countries (about 3,400 tons of milled rice and 1,600 tons of paddy rice). In 2017, the production was slightly reduced due to flood problem in wet season and irrigation water supply issue in dry season. While rice production for marketing purpose has increased in recent years, the low quality of local rice, high production cost, and limited marketing and trading opportunities are the main barriers for the rice sector development in Khammouane.

Mechanization Development in Rice Sector

Central Lao provinces of Savannakhet and Khammouan are considered as the most advanced in rice production and processing technologies in the country. Thus, these provinces have often been involved in research, development and extension rice projects in which new technologies are disseminated to increase rice production and improve livelihood of farmers and others involved in the rice industry. Key mechanized technologies for crop establishment and harvesting have been trialled, and combine harvester and drum seeder have been used to some extent. This paper describes the current status of mechanized rice production as a result of recent attempts by the people involved in the rice industry in Khammouan province, and suggests potential future activities that would further enhance the mechanization and possibly improved marketability of rice.

While mechanized planting devices are important in reducing labour requirement and possibly enhancing productivity under some conditions, such as the advantage of drill in dry soil conditions (Xangsayasane et al. submitted b), the adoption of combine harvesting service often has a much larger effect. This is because the adoption of combine will not only reduce labor requirement at the time of harvesting but also affect postharvest operations such as drying high moisture grain harvested by combine.

Recent changes in machinery availability

The recent change in the number of each machinery type in the province is shown in Table1. By 2015 most households had a hand-held 2 wheel tractor, and harvested rice was threshed mechanically, but the number of hand tractors and threshers increased further in the following 2 years. During this period, the number of most other machinery increased sharply. Thus, in

2015 there were very limited number of 4 wheel tractors but the number increased by more than 50 fold and the popularity of ploughing with 4 wheel tractor is increasing. Combine harvester was already available but there was more than a 10 fold increase in Kubota DS70 combine harvesters in the same period. Similarly, seed spreaders increased in the same manner, this is held on the shoulders like a backpack, and the seed is spread like hand broadcasting. This is less tiring to operate compared to hand broadcasting. Prior to 2015, some mechanized planting devices such as seed drill and transplanters were provided to villages by external funding bodies. Only 5-10 seed drills and drum seeders were available in 2015, but the number increased to 31 and 22, respectively. Seed drill has been imported from Thailand, and is sold in machinery shops at around 300USD for 4 row planter and slightly higher price for 6 rows planter. The number of transplanters almost doubled in the 2 year period, but they appear to belong to institutions rather than individuals. Most of farmers prefer to use because of transplanting was done in 1 day by 3 people/ha when fields were large and people do not take a rest, but a larger number of people are required in practice (see table 2). For hand transplanting 24-26 people transplanted the area of 1 ha, but the spacing was wider in WS than in DS and 5 people would spend the whole day pulling, thus a total of about 30 people were required. The feedback from farmers on the advantages of transplanter is as follows: it saves labour cost (3-4 labourers/ha/day including 1-2 labourer for planting and 2 labourers for seedling tray transport, Table 2) The number of small dryers (4 ton capacity flatbed dryers) increased little in the 2 year period, but the number of medium size dryers exceeding 20 ton capacity increased from 1 to 4, and they can be used to dry combine-harvested grains with high moisture content. One reason for increased machinery number is the Government policy of exempting import tax if the machinery cannot be produced in the country.

Table 1. The number of different types of machinery in Khammouan. Source- Agricultural Extension and Cooperative of Khammouan

Items	2015	2017
Thresher	1055	1482
Small size tractor (2 wheel)	23,198	31,597
Medium size tractor (4 wheel)	28	1993
Seed drill (attached to hand tractor)	10	31
Seed spreader	2	25
Drum seeder	5	22
Transplanter	8	15
Combine harvester	2	24
Grain dryer	10	14

Table 2. Labour requirement (the number of people required for planting 1ha in 1 day) and the cost of hiring labour and machinery for different methods of rice crop establishment. (Xangsayasane et al. submitted b)

Methods	Hand transplanting	Broadcasting	Seed drill	Transplanter
Labour requirement	20-30	1-2	2	3-4
Crop establishment cost	\$190-300	\$10-15	\$50-60	\$110-150

Rice commercialization model in the province

Currently there are 159 rice producer groups, 12 rice seed producer groups and 5 miller groups working together to develop the rice value chain in the province. The rice commercial development model of Khammouan is shown in the Fig. 4 below. In addition to the private sector, public sector, the Provincial Agriculture and Forestry Office (PAFO) and Provincial Office for Industry and Commerce (PoIC) play key rolls for the development of commercial rice production. The responsibility of PAFO is to work with the rice producer sector including the rice seed producer groups and to research and develop the rice seed to ensure the quality of rice grain will meet the standard of internal and external markets. PAFO promotes Good Agricultural Practice (GAP) to ensure rice is produced under specified conditions for quality assurance. The main responsibility of PoIC in this value chain is to work closely with millers to develop appropriate rice processing methods for production of quality milled rice and to facilitate for millers' access to the regional and global markets. Good Management Practice (GMP) is developed for millers and PoIC certify each miller with GMP to ensure the mills work in specified, high quality environment. The unique nature of the approach of the province is that the two provincial offices are working together across the whole span of the rice value chain from production to marketing, and this appears to have worked well for the development of commercial rice sector in the province.

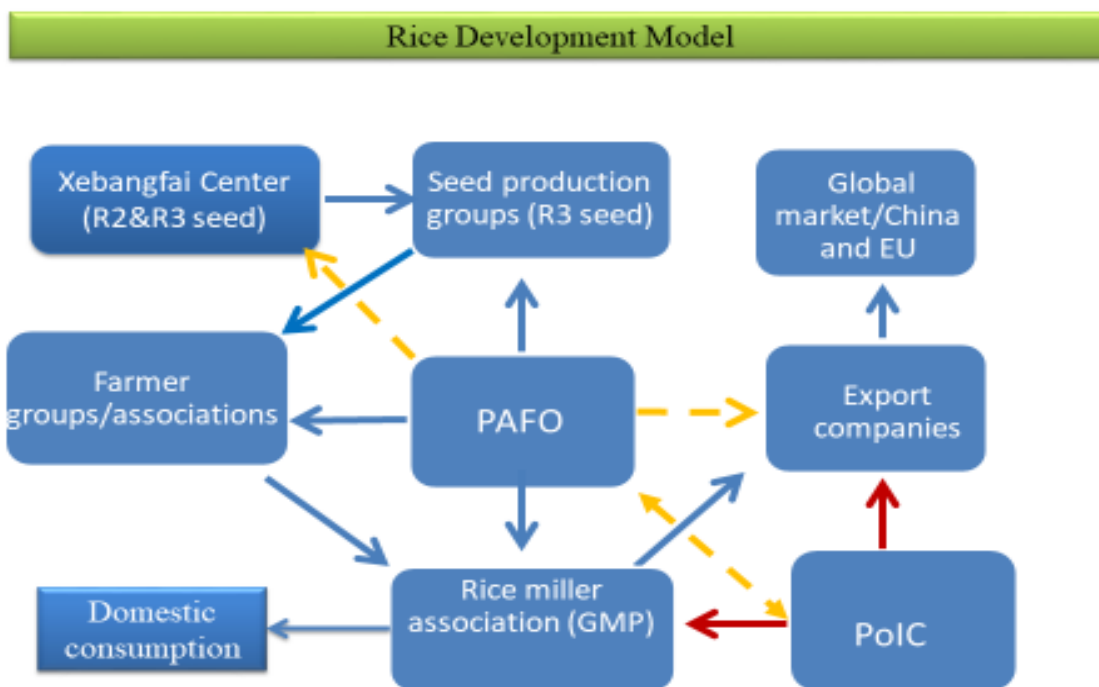


Fig. 4. The commercial rice development plan of Khammouan province. PAFO-provincial agriculture and forestry office, PoIC- provincial office of investment and commerce

INSTITUTIONAL LINK YOUTH WITH AGRICULTURE SECTOR

The Lao Farmers Network is a network of farmer organizations of 25 farmer organizations from 11 provinces. The network has more than 2000 members. The Lao Farmers Network was setup in 2014 by 17 Farmer Organizations with a purpose to strengthening cooperation among small holder farmers. Key activities include information sharing, farmer to farmer learning and policy dialogues. The network also support each members in different ways including organizational development, organizational management, improving farming techniques, processing and marketing. There is an activity to link students with agricultural small-medium sized enterprises (SMEs). The SMEs hire the youth to work of processing the goods outside the school hours. The LFN membership composition is 3 out of 10 are young people, which under 35 years old. At the national level there has been movement to put more on youth participations on policy making. Innovation is one of the key parts, for example in Lao people tend to assume that farming is a hard-working job, however with the using of advanced technology, farming can be considered as an enjoyable work.

POLICY MEASURES

When Laos PDR is able to join the Asian Economic Community (AEC), free trade between 10 Asian countries will be possible and open up a huge new potential market. To be prepared the government has started an initiative to boost agricultural production by modern technology, reducing human labor through long term investments. This includes a switch in the rice cultivation system from a labor intensive rice nursery to a less labor intensive broadcasting and direct seeding. The initiative also includes new technologies in the post-harvest processes, such as modern mills for processing and grading, as well as land

consolidation, land development, an adjusted loan interest rate for agricultural investments and irrigation systems.

The Ministry of Agriculture and Forestry (MAF) is currently working on 5 main areas that include Agriculture land, Irrigation, Varieties, Extension and Mechanization and Good Agriculture Practice (GAP) to contribute the development of the rice sector. On the other hand MAF also develop the 13 policies as below:

1. Agricultural Investment
2. Land management and development
3. Promotion of production and processing
4. Finance and banking
5. Good Agricultural Practices
6. Energy
7. Marketing and price stability
8. Agricultural Labour
9. Intellectual property standards and measurement
10. Research and production of seeds
11. Evaluation
12. Rural development
13. Foreign investment

The Strategy for agricultural development 2011-2020 have been focused on food security, Promote and encourage commercial production as Encourage production and service units using results from science and technology to improve production and services, productivity and quality of products, to be able to compete domestically and internationally. Meanwhile, promote close cooperation between suppliers of raw materials and producers of commercial commodities. In addition to develop promotional strategies for each product and Improve the technology of post-harvesting by study and develop new technology for farmers as well. Moreover, promote the establishment of business associations for local processing of agricultural products, for example, farmers' groups, processor's groups, exporters' groups, etc. to ensure farmer can access to market.

CONCUSSION

Ensuring food security with adequate nutrition and safety for consumers' health is a key development task which will require upgrading production performance, improving physical and mental health (especially for disadvantaged youth and children, and women of reproductive age) in order to contribute to solving poverty, reducing malnutrition and improving their livelihoods in a sustainable and inclusive manner.

Young person and juvenile must promote independence, ownership, self-reliance and self-strengthening, actively contribute to all development sectors particular agricultural sector at the grass-roots level; the implementation should be associated with supporting competitive slogans set by the Lao People's Revolutionary Youth Union to make it widespread at grass-roots level with focus and a pilot area and must have clear success with effectiveness.

Apply promotion policy on the commercial production of agricultural commodities of national priority and local products in order to create linkage between agricultural production and the tourism industry; encourage more private participation and investment in agriculture; and clearly divide responsibilities between public and private participation in each province.

Use of mechanization and new technologies are very important to reduce labor, input cost and increase rice production, improve livelihood and increase income of farmers and others involved in the rice industry.

REFERENCES

- Adolescent and Youth Situation Analysis Lao People's Democratic Republic "Investing in young people is investing in the future" Lao People's Revolutionary Youth Union, LYU, Lao PDR. United Nations Population Fund, UNFPA, Lao PDR 2014.
- Current status and issues for mechanised rice production in SE Asia: a case study from Khammouan in Lao PDR: Phetmanyseng Xangsayasane, Dethsackda Manikham, Jaquie Mitchell and Shu Fukai:
- Country Analysis Report: Lao PDR Analysis to inform the Lao People's Democratic Republic– United Nations Partnership Framework (2017-2021)
- Country Report January 2014: Understanding children's work and youth employment outcomes in Laos.
- Economics of Southeast Asian Rice Production: Bernhard Liese, Somporn Isvilanonda, Khiem Nguyen Tri, Luan Nguyen Ngoc, Piyatat Pananurak, Romnea Pech, Tin Maung Shwe, Khamsavang Sombounkhanh, Tanja Mallmann, Yelto Zimmer.
- FINAL REPORT ASEAN – EU Youth Forum Youth Engagement in Food Crops Production and Value Chain From Ideas to Impact: What supports are needed for youth in agribusiness and entrepreneurship along the value chain.
- Laos Statistics Bureau (LSB). LAO PDR LABOR FORCE SURVEY 2017 (LFS 2017) June 2018.
- Lao Statistics Bureau (2016). *Results of Population and Housing Census 2015*. Lao Statistics Bureau. [online] Available at: <http://ec2-54-210-230-186.compute1.amazonaws.com/wp-content/uploads/2016/11/Lao-Population-census.pdf>.
- Lao Upland Rural Advisory Service, Andrew Bartlett , Mekong Extension Learning Alliance Yangon, June 2016.
- Strategy for agricultural development 2011-2020, Sector Framework, Vision and Goal: agriculture and forestry for sustainable development food and income security. Lao PDR, Ministry of Agriculture and Forestry. September 15, 2010.
- Souvanthong Namvong, Department of Technical Extension and Agro-Processing (DTEAP) Ministry of Agriculture and Forestry Lao PDR. 4th MELA Meeting, Bangkok 21-23 August 2018.
- United Nations, Department of Economic and Social Affairs (UNDESA) (2017). *International Migrant Stock: The 2017 Revision*. [online] Available at: <http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.shtml>
- Xangsayasane P, Phongchanmisai S, C Vuthea, Ouk M, Chay Bounphanousai, Mitchell JH and Fukai S (submitted b). Evaluation of potential for seed drill and transplanter for rice production in Central Laos and Southern Cambodia. Submitted to Plant Production Science 25.
- 8th FIVE-YEAR NATIONAL SOCIOECONOMIC DEVELOPMENT PLAN (2016–2020) (Officially approved at the VIIIth National Assembly's Inaugural Session, 20–23 April 2016, Vientiane) 26 October 2017, Jakarta.
<http://laofarmers.net/about-us/>

Date submitted: Oct. 1, 2018

Reviewed, edited and uploaded: Oct. 23, 2018