

CHAPTER VII

URBAN-BASED DEVELOPMENT PLAN

In SKR, the urban areas have not been developed yet except for the capitals of Savannakhet and Khammouan provinces (i.e., Khantabuly and Thakhek). Besides, nearly one-third of the urban population is distributed in the district centers. The SKR development plan intends to develop these district centers and inner towns, as well, so as not to concentrate the population and services excessively in the capital cities. It is for these reasons that urban area development and urban-based development plan are discussed in this Chapter.

7.1 Position of SKR Urban Area

The urban area is where urban dwellers make their living and where various urban-based activities take place. Many of these activities are peculiar to urban areas and contribute to the development of its servicing area that includes the surrounding rural areas. In the light of the current situation and perspectives, the functional position of the SKR urban areas is summarized as follows:

1) Consumption and Marketing Centers

In general, the majority of urban dwellers are consumers of rural products. SKR cities are the closest and the most familiar consumer markets for rural products, as well as the most stable markets against various socioeconomic changes and influences.

Cities perform a function of a market linkage to/from national and international markets, which enables the movement of goods among markets over long distances. It should be noted that the market linkage function is not limited to distribution of goods, but it also exchanges information on supply and demand generated by both sides of production and consumption.

To promote a physical linkage between the urban consumer market and rural production areas, village to market roads will be fully utilized. Products will be first collected in rural towns and then forwarded to primary cities. Although local products currently are not differentiated, products will gradually gain area-based uniqueness. Subsequently, transportation demands between the urban and rural areas will increase significantly. These demands should be satisfied by a direct distribution system rather than the one focused in the primary cities. To this end, rural core towns must have the capability to handle direct trade, reciprocally.

Regarding export commodities, it is practical to collect all goods in the primary cities because they have more information on international markets and have better logistics. Savannakhet will be the logistics center for the entire SKR, while Thakhek and Seno will serve as domestic distribution centers. In order to secure global competitiveness for SKR products, it is necessary to reduce transportation costs by a highly established logistics system. To this end, the “competitiveness initiative” should be pursued.

2) High Value-added Production Centers

The urban area accommodates non-agricultural industries that usually produce higher value-added products than that from agriculture. Since the SKR cities are located at international node points, they have an advantage over other cities in Lao PDR in terms of establishment, investment, and expansion of service and manufacturing industries.

Most of factory based industries will be established and operated in the primary cities. These resource-based industries are the most important industries in SKR. Systematic cooperation between the primary cities and the resource centers is a key factor for success. It will require high-quality resource management skills, as well as a sufficient labor force located in the resource center towns, while marketing analysis and processing will be concentrated in the primary cities. Some factory industries may well be established along arterial roads. The products at these factories will be marketed in the opposite direction to rural products. In this case, rural core towns will be the marketing centers.

SKR is the largest industrial region, after Vientiane. SKR has a considerable number of small and medium sized enterprises (SMEs). They are promoters of the market-oriented economy and are the main actors of economic development

as is aimed at under the national policy. As SKR has a better opportunity in getting information earlier than the other parts of the country, SKR is in need of realizing market-oriented economic development with the active participation of SMEs. The experience of SKR must be shared country-wide, since it may become a model of national development efforts.

Regarding the tourism industry, it is desirable that Thakhek be a tourism center in the long run. In this context, Thakhek should promote tourist inflows rather than commodity exchange. In the short term, however, it is practical to consider Khantabuly as the tourist center. Those personnel who have gained skills in Khantabuly tourism enterprises will be transferred to Thakhek. For successful cooperation between Khantabuly and Thakhek in the tourism industry, the establishment of a circulation tour course will be a key component.

3) Higher Education and Training Centers

Urban areas offer suitable conditions for higher education. Consequently, private enterprises are located in the urban area and sizeable businesses are operated. Cities can provide opportunities for higher education and training required by various industries, as well as experience in authentic business.

Since practical knowledge on management, technology and services is developed in the real business world, it is necessary to promote education and training in the primary cities. At the beginning, it is necessary to concentrate on Khantabuly because of its earlier experiences in industrial development. Regarding education and training of agricultural management and technology, it is also necessary to provide practical training in modern farming technique near the primary city to have information exchange among market centers. Graduates from these education and training centers will shift their base to rural core towns and will be engaged in production activities there.

4) Information Centers

Various levels of information are collected and accumulated in the urban areas through everyday activities. Consequently, the SKR urban areas become information centers for various entities seeking information in their specific fields. SKR cities provide information on production technologies as well as changes in

market demands to which their products are to be supplied. This information may be through direct conversation.

Although each entity is to be recognized as an information source under the market economy system, an information center that will provide collective and guiding information on specific needs will be required. Information processing such as objective analysis and/or forecasting should be conducted by the public sector in the primary cities as a part of the information infrastructure development. Founded on the above structure, a direct communication between the supply side and demand side will be formulated in a practical manner.

From the above, the function of the urban area in SKR development is defined as “engines” for development efforts, accommodating higher value added industries, human resource development, and information exchange.

7.2 Urban Potential and Constraints

1) Future Urban Population

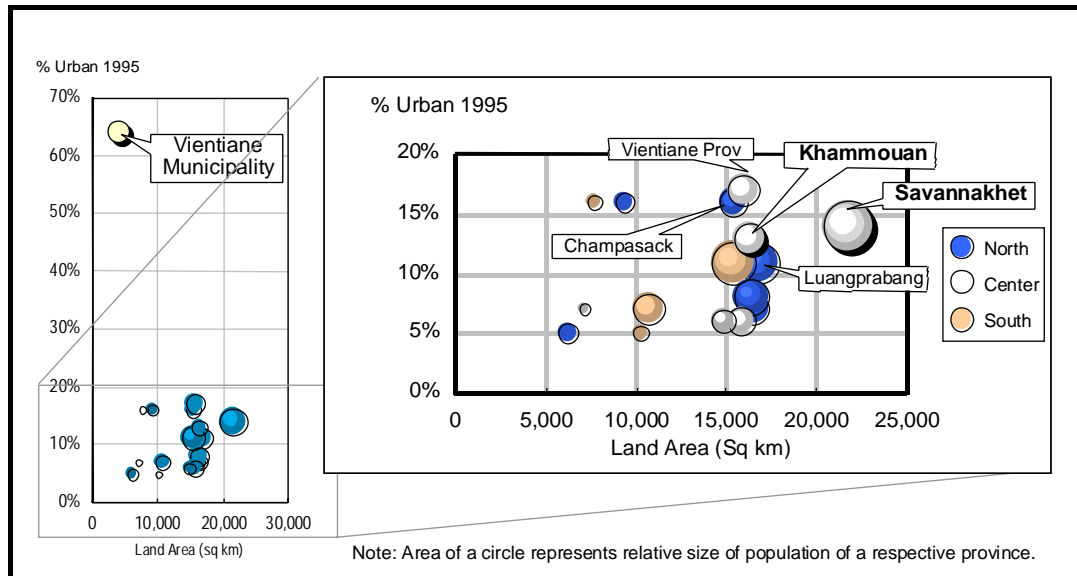
SKR Urban Area

Figure 7-1 shows the current share of urban population and land size of each province. It demonstrates the following characteristics of the SKR provinces:

- Savannakhet is the most populated province with 15% of total population. The share of the urban population is 14%, which is comparatively high, but well below the rate of Vientiane Municipality.
- Kammouan is an “average province” in terms of population size. The share of the urban population is 13 %.

Although the current level of urban accumulation is relatively low compared to surrounding nations, the prime cities of SKR serve as urban centers for the southern part of Lao PDR. The SKR cities, therefore, have the fundamental conditions to grow as leading city of the country in parallel with improvements to the international transportation infrastructure.

Urban-Based Development Plan



Source: JICA Study Team

Figure 7-1 Share of Urban Population and Land Size by Province

Future Urban Population

In line with the social framework, future urban population is projected as summarized in the table below. Future urban population in SKR may reach 300,000 in the year 2020. It is nearly double the level of 2000.

Table 7-1 Projected Future Rural-Urban Population Distribution

(1,000 prs.; %)

	1995	2000	2005	2010	2015	2020	Increase Rate (200-2004)
SKR	944.2	1,072.5	1,209.0	1,363.0	1,514.0	1,681.7	2.27
Urban	136.9	164.8	196.8	233.9	277.9	330.3	3.54
Rural	807.3	907.7	1,012.2	1,129.1	1,236.1	1,351.4	2.01
Savannakhet	671.8	763.2	860.5	970.1	1,077.6	1,196.9	2.28
Urban	100.3	120.8	144.4	171.4	203.7	242.0	3.53
Rural	571.5	642.4	716.1	798.7	873.9	954.9	2.00
Khammouan	272.5	309.2	348.6	392.9	436.4	484.8	2.27
Urban	36.6	43.9	52.5	62.5	74.3	88.3	3.55
Rural	235.9	265.3	296.1	330.4	362.1	396.5	2.03

Source: JICA Study Team estimates

Future Population of Primary Cities

As most of the urban population resides in the primary cities in SKR, future urban population will be concentrated in these cities. Therefore population in the servicing area of Khanthabuly and Thakhek will grow faster than the total urban population increase. Projected population of primary cities is presented in the table below. The urban population in Thakhek and the Khantabuly Cluster will become nearly double the level of 2000.

Table 7-2 Primary Cities Urban Population

(1,000 prs.; %)

	1995	2000	2005	2010	2015	2020	Increase Rate (2000-2020)
KMN Total	272.5	309.2	348.6	392.9	436.4	484.8	2.27
KMN Urban	36.6	43.9	52.5	62.5	74.3	88.3	3.55
Thakhek	25.8	28.5	33.3	38.9	45.9	54.4	3.29
Rest of KMN	10.8	15.5	19.2	23.6	28.4	33.9	4.01
SVN Total	671.8	763.3	860.5	970.1	1,077.6	1,196.9	2.28
SVN Urban	100.3	120.8	144.3	171.4	203.7	242.0	3.53
Khantabuly	62.2	74.4	84.9	96.2	106.9	118.7	2.36
Cluster	76.7	82.7	97.0	113.2	133.6	158.2	3.30
Rest of SVN	23.5	38.2	47.3	58.2	70.0	83.8	4.01

Source: JICA Study Team estimates

2) Potential Urban Cores

The urban cores in SKR will formulate a hierarchical system as discussed in Chapter 3.3. These urban cores will develop reflecting the characteristics of respective servicing areas as well as flow of people and commodities on the roads connecting them. The potential urban cores in SKR are planned as shown on the following page.

3) Future Concerns

Although SKR has potentials as discussed above, several risks in future development are conceivable as described below.

Major risks in spatial issues

- (i) Although the annual urbanization ratio may reduce in the future, the population may continue to increase. Major SKR cities may experience a

Major risks in functional issues

- (i) In the fierce industrial competition that may come along with the international trade liberalization schemes, Lao enterprises may confront hard fights due mainly to less capital accumulation, less developed management skill, and less developed technology.
- (ii) Foreign investments may not be expected in a large number, due to less developed industrial infrastructure.
- (iii) Industries that utilize SKR resources may not manage well the valuable resources and may export them with less value added.

4) Counter-Measures

To overcome such future concerns as noted above, it is planned that the following counter-measures will be planned for SKR urban area development:

- (i) Widely balanced cities/towns distribution:

The urban area will be widely distributed over the entire SKR territory, aiming at (i) spatially balanced development by encouraging and supporting rural activities in the entire region, and (ii) securing the growth of the primary cities within a manageable range of urbanization. To this end, resources will be allocated as far as possible to rural town development.

- (ii) Introduction of characteristic core functions in strategic cities:

Along with promoting widely balanced development, several core functions will be introduced in some strategically important cities. These core functions will have specific characters introduced on the basis of the physical and/or social features of the city.

- (iii) Formulation of public transport oriented linkage system:

Similarly, a firm and reliable linkage among cities/towns will be formulated, preferably by public transportation means such as bus and tuk-tuk operation, as well as truck operations. This will further encourage the formulation of a widely balanced cities/towns distribution pattern at cheaper transportation costs.

(iv) Decisive control over land use conversion:

Expansion of the urbanized area, especially in the outskirts of the existing central urban districts, will be minimized in order to avoid ineffective public investment and raise the property value of the existing urbanized areas. To this end, outward urbanization should be prevented by decisive restrictions on land use.

(v) Full use of public sector investment:

Private sector investment is usually the largest force for spatial development in a city area. In the SKR cities, however, private sector investments will not spontaneously be expected under the current situation. Therefore, public funds may be used to induce private sector investments, in the form of a joint venture, for example. It should also be noted that the public sector investment should be made in an integrated manner so that more return from investment is expected compared to separate investments.

(vi) Full use of citizens' efforts:

Except for the mainstay infrastructure in the arterial road's right of ways, community infrastructure should be constructed by the contribution of citizens as much as possible. Citizens' own efforts should be induced through internalization of external diseconomy within a community, and restoration of the increased property value brought by construction of mainstay infrastructure. Under a proper urban control system, momentum will be gained among citizens in a spontaneous manner. The public sector should encourage this, seeking efficient land use and providing a sufficient number of housing units.

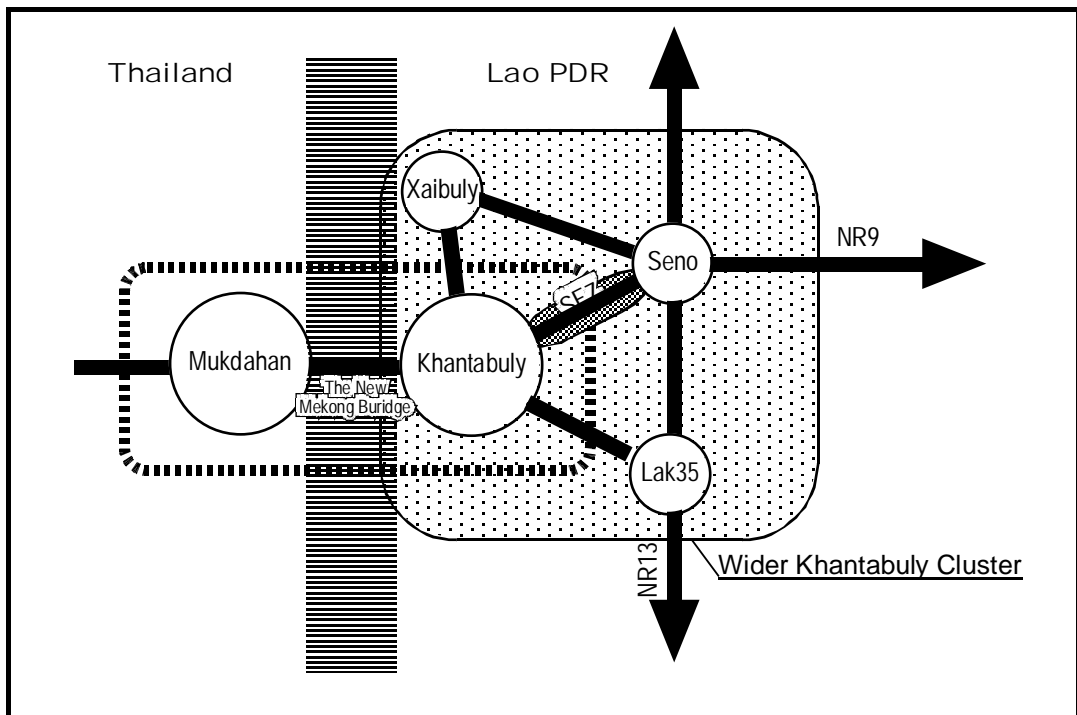
7.3 Major Town Development Plan

7.3.1 Wider Khantabuly Area

Following the implementation of the Secondly Towns Urban Development Project (STUDP) funded by ADB, Khantabuly municipality is established with better infrastructure. It is expected that a strong population growth will continue in Khantabuly municipality. This is partly an advantage, but it is also a risk for urban development. In other words, Khantabuly should maximize the advantage of strong population growth while minimizing the risk of rapid and unplanned

exploration of the city. To cope with this, migration toward Khantabuly should be dispersed in Seno, Xaibuly, and Lak 35, forming a combination of urban clusters within a wider area around Khantabuly.

The cluster of four cities/towns in the wider Khantabuly area will function as a single city as a whole. To realize this, they will be connected to each other by both efficient transportation and telecommunications infrastructure and services. In this study, the cluster is tentatively called the “Wider Khantabuly Cluster Towns” (hereinafter referred to “the Khantabuly Cluster”). A conceptual structure of the Cluster is illustrated below.



Source: JICA Study Team

Figure 7-3 Long-term Conceptual Structure of Khantabuly Cluster

Khantabuly should have integrated urban functions while a characteristic function should be introduced to each of the other three towns as a core function of the town. Desirable future direction of each town is described below.

Khantabuly

In Khantabuly, a strong urbanization has been taking place. From the old districts originally formulated in the French era, the urbanized area is sprawling outwards

along the Mekong river, NR9, and NR11. These are respectively directed to Xaibuly, Seno, and Lak 35 in the future. It is important to prevent further expansion of the urbanized area by introducing the policy of Khantabuly Cluster formation.

Seno

Seno is located at a junction of NR9 and NR13. The town has a sizable area of urbanized districts and urban population. Therefore it is expected to accommodate transit goods and commodities, many of which are international and of SKR origin and then forwarded to domestic consumer markets and exports.

Xaibuly

Xaibuly is located along the Mekong river to the north of Khantabuly municipality. Accordingly, the town basically is a center of a typical Mekong coastal agricultural district. Considering the close location to Khantabuly, Xaibuly has the potential to become a major supply area of agricultural products, especially urban consumption oriented products. Therefore, it is desired to introduce a training/information center on market-oriented agricultural production and management. (The Agricultural College is proposed to locate at Xaibuly.)

Lak 35

Lak 35 is located along NR13, having a vital market place. Most of the goods collected in Lak 35 are from Xe Chanpone district which is the most productive agricultural area in SKR. The agricultural production in the Xe Chanpone area will be further strengthened and a modern wholesale function will be introduced in Lak 35.

At the same time, urban function of Khantabuly must be strengthened especially in the following fields (it is noted that Xaibuly, Seno and Lak 35 are not functioning yet as urban centers):

- Human resource development in a close cooperation with private businesses and industries.
- Processing technology to enhance the value added to the SKR resources,

- Means and technologies to support mutual benefit among the East-West Corridor component regions.
- Services and supporting industries to support operation of FDI enterprises.
- Tourist accommodation and amenity.
- Transportation terminal that serves for communications and transport of people and goods.

In order to realize functional strengthening in Khantabuly, it is necessary to formulate a close coordination between facilities development and land use management. A zoning plan has already been prepared by the relevant organizations of Lao PDR, with 10 year planning period. Recommendations for longer-term planning are proposed in the following, based on the review of the existing urban plan.

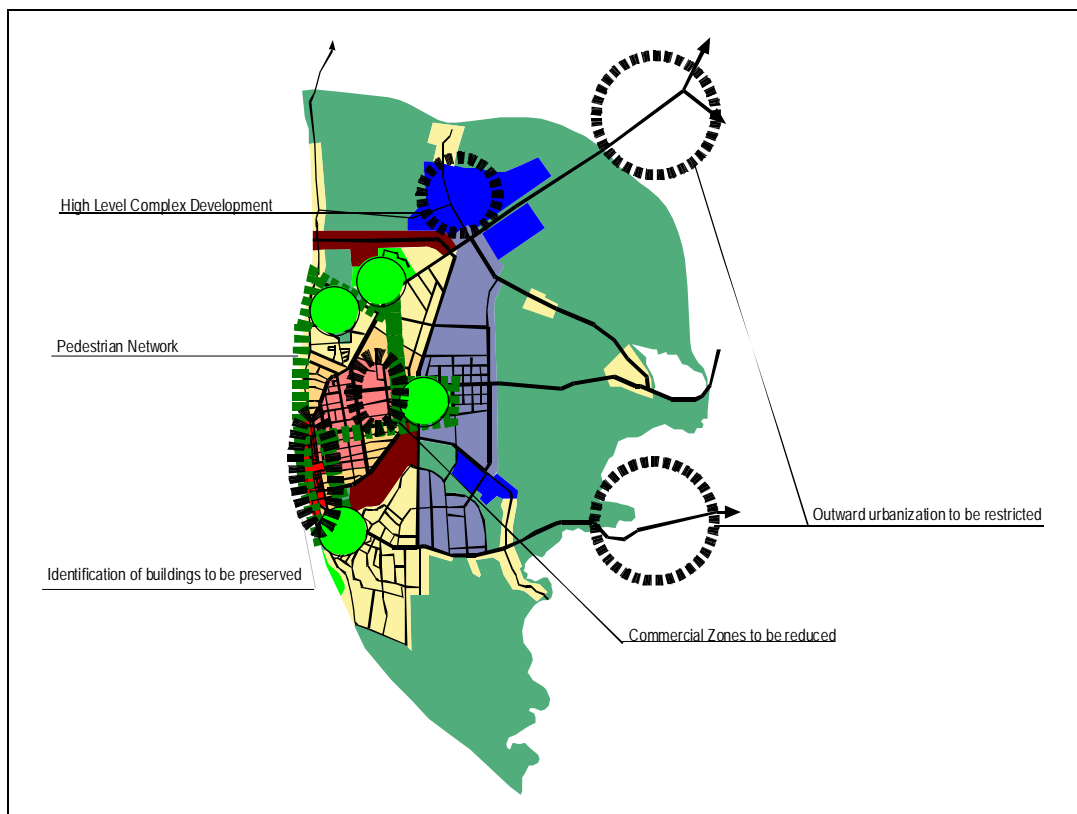
- A planning boundary is presented in the existing urban plan with a fair size but limited area. It is important to restrict urbanization outside the planning boundary. A forceful regulation should be introduced to prevent urbanization outside the planning area.
- In the existing urban plan, a zone for industrial use is designated along the access road to the New Mekong Bridge. In this zone, it is recommended that a complex of high level urban function be developed as an immediate measure to encourage FDIs. The complex might be small in scale compared with an industrial estate but it will function as a model of future urban development.
- A large area is designated for business and commercial activities, clearly separated from residential zoning. From the longer-term planning point of view, it is recommended that the size of business and commercial districts be reduced, and the mixture of housing and commercial uses be encouraged, because the population will increase to double the current level and there is not enough space for detached houses. Construction of apartment and town shops buildings will be encouraged in order to secure urban community in the central district.
- Several clusters of forests are to be preserved in the urban plan. Those clusters should be connected with each other and formulate a pedestrian

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network within the city. This will increase the amenity of the city for residents as well as for visitors.

- Historical buildings for preservation should be specifically identified. These buildings should be utilized by the private sector under fair regulations on preservation and renovation. Building construction that takes place in the surrounding areas should be encouraged to provide a favorable atmosphere by design matching the preserved buildings.

A conceptual urban structure of Khantabuly is presented below: This conceptual structure will not be modified substantially even if a pair-city concept (Khantabuly and Mukdahan) is introduced.



Source: JICA Study Team

Figure 7-4 Conceptual Urban Structure of Kantabuly Area

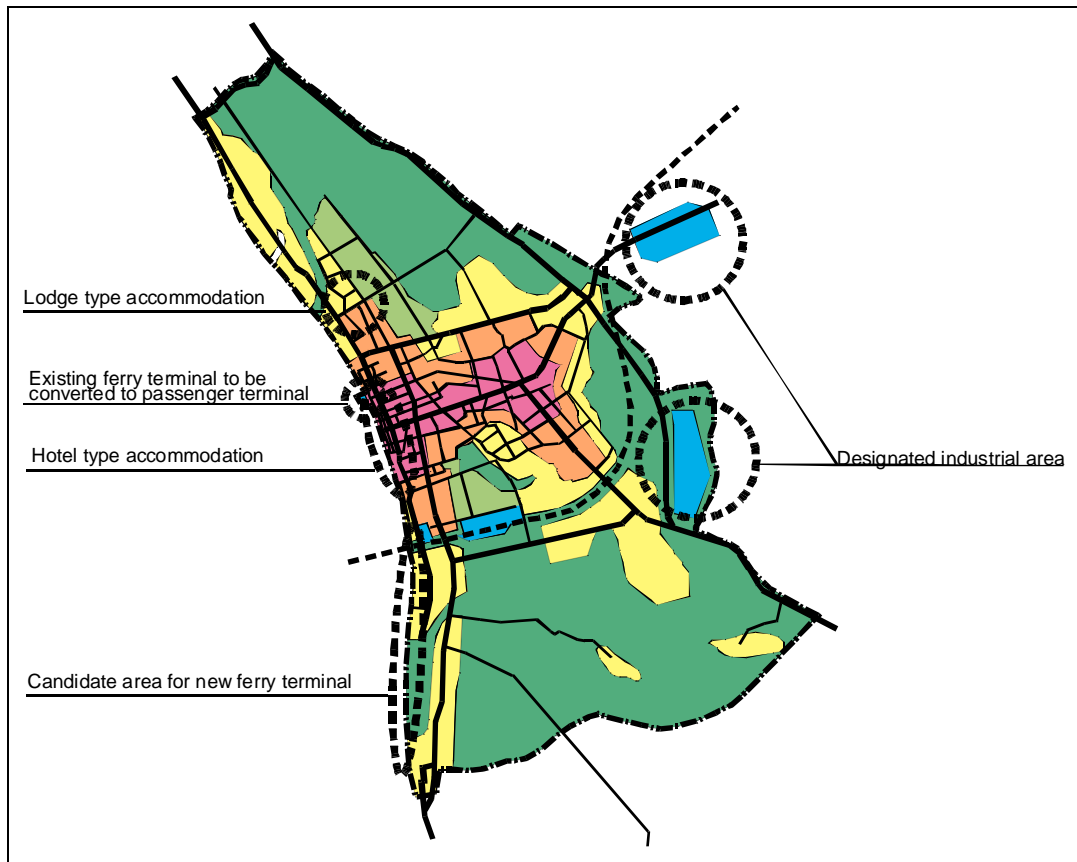
7.3.2 Thakhek Area

Thakhek will continue to have a rapid population increase. Since there is no prominent towns around the city, the pattern of urbanization in Khammouan is likely to be a dominant concentration in the Thakhek urban area, and sprawling of urbanization is likely to occur along the Mekong river.

Thakhek should become a gateway for tourism, as well as an industrial city for the resource-based manufacturing industries. Therefore, the urban functions in Thakhek should be strengthened in conformity with these activities.

Based on review of the existing urban plan, recommendations are presented as follows:

- (i) The historical scenery should be preserved, and preferably regenerated, as a part of creating the identity as a gateway for tourism. To realize this, it is necessary to identify the buildings to be preserved and building construction that takes place in the surrounding area should be encouraged to adopt appropriate designs.
- (ii) The construction of tourism related facilities should be controlled and settled in suitable locations. Presently, there are mixtures of hotel and lodge type accommodation facilities developed within the residential areas. Taking the current pattern of accumulation into consideration, the hotel type facilities should be induced to the riverside area, while the lodge type facilities be encouraged to locate at the new district in the northern area.
- (iii) Although Thakhek has a relatively clear urban structure, especially after construction of a by-pass route of NR13, there is a crossing of people and goods between the industrial needs and tourism and/or residential needs. From the designated industrial zone, it is necessary to pass the central district on the way to the ferry terminal. In fact, there is much industrial truck traffic along the Mekong coast which is a precious tourism attraction. To improve the situation, the existing ferry terminal should be converted into a passenger terminal, and a new ferry terminal should be constructed in the outskirts of the urbanized area, taking the possible location of new bridge construction into consideration.



Source: JICA Study Team

Figure 7-5 Conceptual Urban Structure of Thakhek Area

7.3.3 Inner-land Towns Development

In line with the future spatial structure, as well as promotion of the functional linkage system, basic directions for inner-land town development are proposed. Major points are summarized below. It is noted that the function of marketing center will be specifically promoted at these inter-land towns in order to disseminate a market-oriented economy.

1) Inner Core Towns

Mahaxai (Khammouan)

Mahaxai is located at the junction of NR1 and NR12. Since these roads are major arteries to transport rural products in Khammouan to domestic and international markets, the town will become an important distribution center serving the inner-land area in Khammouan province.

Lan Khan (Khammouan)

Lan Khan is located along NR1, close to the Vietnamese border, serving as a gateway to Boualapa district. Therefore the town should become a center for local industry, as well as a trade and distribution center serving inter-local trading demands.

Atsaphonethong (Savannakhet)

Atsaphonethong is located along NR12 at the crossroads of the tourism circulation route heading to Boualapa. The town therefore should provide services to meet tourist demands. The town has also been an important gateway to the northern part of the Xe Chanpone agricultural area, and has a comparatively large market place. This function will be further enhanced by improvement of NR12.

Phin (Savannakhet)

Phin is located at the junction of NR1 and NR13. Like the case of Mahaxai in Khammouan, the town will become an important distribution center serving the inner-land area of Savannakhet province, as well as the southern provinces.

Dansavan (Savannakhet)

Dansavan is located along NR13 at the border to Vietnam. The town also is accommodating a large number of newly settled villages that have been encouraged to quit shifting cultivation. Therefore the town should be an inter-local trading center, as well as an access point for the newly settled villages to the wider consumer market.

2) Rural Center Towns

Nakai (Khammouan)

After completion of the Nan Theun II project (scheduled for 2006), a large part of the existing plain land will be converted into a vast artificial lake. Since the lake will become one of the major tourist destinations in SKR, the town of Nakai will become a mother town for tourists visiting the lake, as well as the center of a wood-based local industry.

3) Rural Towns

Rural towns are the district centers currently serving as purely agricultural districts. Local industry might be promoted in these rural towns in the future. Expected direction is proposed by zone as follows:

Lowland (Mekong) Zone

In the rural towns in the coastal flat zone, collection and shipping of rice to domestic market is one of the most important functions. In addition, a quick and reliable distribution of perishables to the primary cities will play a key role.

Central Zone

In the central plain zone, new farming systems are to be promoted widely. A key function of the towns is to popularize the new farming techniques such as semi-intensive animal raising. At the same time, these towns need to have capacity of market linkage promotion, some of which will require relatively large investment for operating trucks for distribution of animals. The rural towns will also serve for promotion of local industry.

Eastern Mountainous Zone

Towns in the eastern mountainous zone are the gateways of various forest-based products to the outer world. Those towns need to have a strong tie and information exchange with the primary cities in order to enhance the value of products in a sustainable manner. Market information and analysis will be sent from the primary cities, while these towns will manage the production.

7.4 Urban-Based Development Plan

1) Urban Area Territorial Plans

Legal and Institutional System Improvement

Institutional Building

UDAAs have been established in Khantabuly and Thakhek as the implementation bodies of STUDP projects and are expected to become the

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administrative body of the municipalities established or to be established in the urbanized parts of the districts. UDAs, however, do not have sufficient staff to cover all the requirements in conducting urban management. Construction of mainstay infrastructure is to be directly managed by UDAs but there are few staff who have experience in construction management. The role of UDAs on the other hand will shift from construction management to administrative management. Capacity building of staff in the public sector is quite important for urban development, too.

Basic Legal System Enhancement

In order to promote private sector driven economy, as well as to maintain close cooperation between the public and private sectors, it is necessary to have a clear and firm land-related legal system. Without a clear land transfer and collateral system, the private sector economy will never grow.

Local administration offices have accumulated significant knowledge through tax collecting works. If necessary, the local administration should promulgate regulations based on their own experience. It is also important to collect information on land value and open it to the public.

Urban Management System Enhancement

For development of the SKR urban areas, it is necessary to improve facilities and infrastructure. Since the public funds are quite limited, establishing the urban land use control system such as regulation and inducement means is an urgent task.

Urban Infrastructure Improvement

Infrastructure in cities/towns and along the arterial roads inside the urban area need to be improved by the public sector. The following infrastructure will be required:

Telecommunications: is a basic infrastructure for industries, especially for promoting FDIs. (refer to Sector Report, Chapter VI-2 for detail)

Electrification: is further required because power demand will shortly exceed the supply capacity at substations. (refer to Sector Report, Chapter VI-3 for detail)

Wastewater Treatment: needs to be developed at least in the primary cities where increase population is expected in the near future. The current practice of septic tanks should be further enhanced.

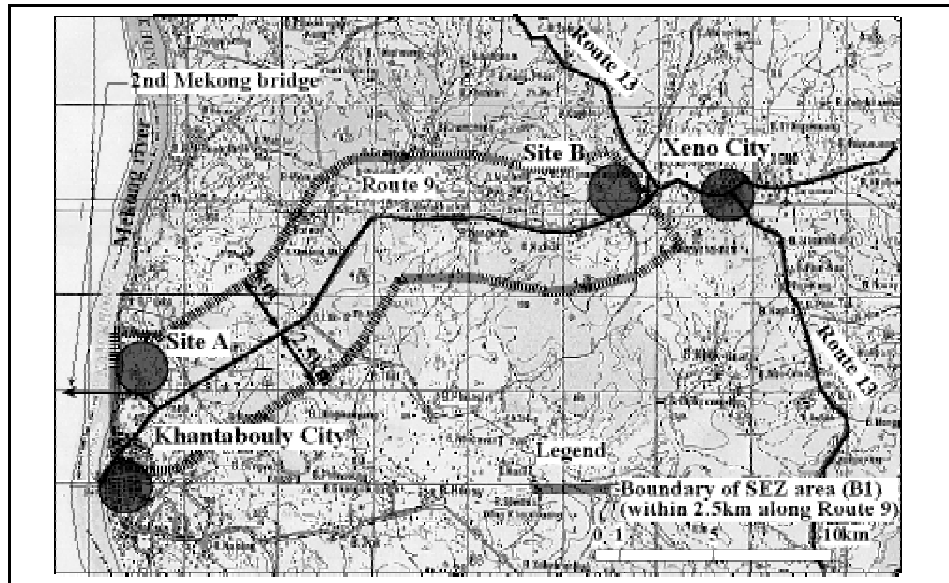
Drainage: needs to be improved especially in the primary cities. Main canal should be improved and maintained. There needs to be several pumping stations installed along the Mekong river.

2) Major Urban-based Development Plans

Several urban-based development plans have been formulated and proposed for implementation in and around the primary cities through sector-wise planning. Some representative programs proposed in Khantabuly and Thakhek are reiterated below. These programs will strengthen the functional position of the SKR urban area as discussed in Chapter 7.1.

Savannakhet Special Economic Zone (SEZ)

It is proposed that an SEZ be set up in the location adjacent to the New Mekong Bridge to make utmost use of the East-West Corridor. SEZ is designed to have multiple functions, including promotion of logistics (e.g., bonded warehouse, cargo-terminal), processing of export-oriented and resource-based industries, free markets, and promotion of the service industry (e.g., hotel, recreation and other services). A belt along NR9 from the Bridge to the junction of NR9 and NR13 at Seno will be designated as SEZ. Enterprises located in SEZ will enjoy incentives under the proposed SEZ law.



Source: Study on Special Economic Zone in Savannakhet, JICA, 2001

Figure 7-7 Belt Zone Proposed for SEZ in Savannakhet

Woodworking Industrial Park in Thakhek

A woodworking industrial park is planned in and around Thakhek integrating the currently operating small-scale sawmills. It will have a facility for the log auction market, as well as facilities for designing, marketing, and testing for wood-processing industries. The furniture industries will also be invited to locate in the park.

Savannakhet Agricultural Collage

The proposed Agricultural College is located near the primary city. It is proposed to be located at Xaibuly to the north of Savannakhet. Practical education and training in diversified, integrated and rotational farming (e.g., crops, livestock, fisheries, forestry) will be programmed for village leaders and extension workers. The College will also provide short-term courses for training farmers. Crops harvested in the College will be marketed to sustain its operations and it should be financially self-supporting.

Savannakhet Technical School (Renovation)

The existing facilities at the Savannakhet Technical School are obsolete and insufficient to meet the requirement for technical education. It is proposed that

the School be restructured and renovated to offer demand-oriented training in business, engineering and construction, as well as education to promote entrepreneurship.

Khammouan Polytechnic

Since the current vocational school is insufficient to meet the future requirements, it is proposed to set up Polytechnics in and around Thakhek in Khammouan. The proposed Polytechnics are designed to serve for capacity building of the younger generations and to promote entrepreneurial minds among them.

3) Inter City Development Plans

Inter Cities Infrastructure Enhancement

Khantabuly – Thakhek Route (Sunset Corridor) Improvement

Between Khantabuly and Thakhek, there extend important agricultural areas (e.g., Nongbok in Khammouan). These agricultural areas, however, have frequently suffered from floods due to poor drainage. Access to the area is also cut during the flood season, and the dwellers are isolated in an unsanitary environment. The route along the Mekong river between Khantabuly and Thakhek is a key link that formulates a circular tourism route in SKR. Though the link is already secured by NR13, it runs through the inner areas in this segment. Therefore it is impossible to see the scene of sunset on the Mekong river, which is one of the most important tourism resources of Lao PDR. The program aims to construct a riverside road between Khantabuly and Takhek as a sight seeing route, as well as for the river bank protection and agricultural drainage system improvement.

Atsaphonethong – Boualapa Route Improvement

As the distance between NR13 and NR1 becomes larger in Savannakhet, the service coverage by the existing national route network becomes lower. There are productive agricultural areas in the center of Savannakhet, but they are not effectively utilized due to the disadvantage of accessibility. This program aims at connecting Atsaphonethong and Boualapa in order to supplement the national route network and consequently to fully utilize the Atsaphonethong area as a

productive agricultural base. The route also provides a short-cut connection between Khantabuly and Boualapa, and therefore will form a key segment of the circulate route for the SKR tourism.

Inter Cluster Cities Infrastructure Enhancement

Telecommunications Improvement

The current telecommunications capacity is limited and it is required to expand the services to the Cluster cities. To this end, it is necessary to improve the main backbone system from the gateway to Savannakhet.

Public Transport Enhancement

Presently, bus services are provided as a back and forth operation between the Khantabuly Cluster cities. It is desired to provide a circulate route operation, in order to enhance unity of the Cluster cities as well as to formulate a public transport based system within the Cluster area. This will help a smoother transition to the park and ride system when motorization becomes significant.

Tourism Free Zone

Designation of a Tourism Free Zone (TFZ) along the East-West Corridor will be effective for promotion of the tourism industry in SKR. The following activities are proposed for TFZ:

- Integrated tourism development and natural/cultural preservation.
- Joint promotion of international Mekong Tour and Thai tourists.
- Comprehensive tourism management (one-stop visa control for international tourists).
- Joint training/education of tourism related human resources.
- Incentives for FDIs in the tourism industry.

CHAPTER VIII

RECOMMENDED PROGRAMS AND ACTIONS

The “development initiatives” in Chapter V, as well as the rural-based and urban-based development plans in Chapters VI and VII, propose various programs and sub-programs for implementation to attain equitable development in SKR. In reality, they are challenging tasks, and the combined efforts of the public and private sectors are required to realize the proposed initiatives and programs. This Chapter summarizes the recommended programs to be implemented for SKR development.

8.1 Recommended Programs

The development initiatives proposed in Chapter V elucidate various sub-programs for implementation. Likewise, the rural-based and urban-based development plans in Chapters VI and VII recommend additional programs for execution for equitable and balanced development in SKR. In addition, the Sector Study in Part 2 presents some projects that have not been incorporated into the development initiatives and rural/urban-based plans where programs for short and medium term implementation have only been listed.

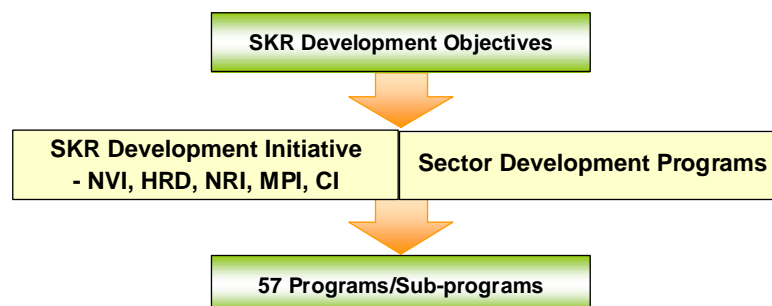


Figure 8-1 Formation of Recommended Programs

All programs/sub-programs recommended under the master plan are listed in the table on the following pages. The table also shows the implementing agencies and tentative schedule for implementation.

Table 8-1 Recommended Programs/Sub-Programs

Code	Initiative/sector	Program/sub-Program	Program Linkage	Implementing Agency	Implementation Schedule			
					2001-05	2006-10	2011-15	2016-20
NV	New Village Initiative (NVI)		(refer to Fig. 5-4)					
NV-1		Enhancement of Integrated Farming (incl. formation of associations)		MAF	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
NV-2		Promotion of Local Industry	(RM-4)	MIH	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
NV-3		Village infrastructure improvement	(TP-3) (TP-4)	MCTPC	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	□□□□□□□□	□□□□□□□□
HR	Human Resource Development Initiative (HRDI)		(refer to Fig. 5-6)					
HR-1		100 Primary Schools (incl. promotion of community centers)	(NV-1)	MOE	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨		
HR-2		Agricultural College (incl. training of community leaders)	(NV-1)	MAF	▨▨▨▨▨▨▨▨▨▨			
HR-3		Renovation of Technical School		MOE	▨▨▨▨▨▨▨▨▨▨			
RM	Resource Management Initiative (RMI)		(refer to Fig. 5-7)					
RM-1		Delineation of conservation, production and protection area		DOF	▨▨▨▨▨▨▨▨▨▨			
RM-2		Appraisal of long-term concessions	(MP-1)	DOF	▨▨▨▨▨▨▨▨▨▨			
RM-3		Utilization of commercial and non-commercial species	(NV-3)	DOF	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨		
RM-4		Marketing of small-size wood and non-wood products	(NV-3)	DOF	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨		
RM-5		Agro-forestry demonstration	(NV-1)	MAF	▨▨▨▨▨▨▨▨▨▨			
RM-6		Rehabilitation of Degraded NBCA Forest Areas	(NV-1) (NV-3)	DOF	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
RM-7		Tree planting for production		DOF		▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
RM-8		Promotion of environmental education	(HR-1) (HR-2)	MOE	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
MP	Market Promotion Initiative (MPI)		(refer to Fig. 5-9)					
MP-1		Log auction market	(RM-2)	DOF	▨▨▨▨▨▨▨▨▨▨			
MP-2		Export Marketing Center of resource-based industries (incl. Market information dissemination)		MIH	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
MP-3		Local Product Promotion Center	(NV-2)	MIH	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨
MP-4		Marketing system for agricultural products		MAF	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨	▨▨▨▨▨▨▨▨▨▨

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Code	Initiative/sector	Program/sub-Program	Program Linkage	Implementing Agency	Implementation Schedule			
					2001-05	2006-10	2011-15	2016-20
CI	Competitiveness Initiative (CI)		(refer to Fig. 5-10)					
CI-1		Creation of an SKR image (eco-products)		MCT MIH	▨	▨	▨	▨
CI-2		Accelerated legislation to enhance competitiveness		MCT MIH	▨			
CI-3		Empowerment of private sector to enhance capability to evaluate information, marketing, quality, stable supply		Private Sector	▨	▨		
CI-4		Quality improvement in increased value added products		Private Sector	▨	▨	▨	
CI-5		Special Economic Zone (SEZ) in Savannakhet to enhance competitiveness of resource-based industry		PMO MIH	▨	▨	▨	▨
PH	Public Health							
PH-1		District health system strengthening	NV-1	MOH	▨	▨	▨	▨
PH-2		Reproductive health improvement	NV-1	MOH	▨	▨	▨	▨
PH-3		Child health improvement	HR-1 NV-1	MOH	▨	▨	▨	▨
ED	Education	(Other than proposed in HRDI)						
ED-1		Teachers' quality upgrading (possibly combined with HR-1)	HR-1	MOE	▨	▨	▨	▨
ED-2		Renovation of Savannakhet Art School	HR-3	MOE	▨	▨		
ED-3		Establishment of Khammouan Polytechnic	HR-3	MOE	▨			
UD	Urban Development							
UD-1		Legal and institutional system improvement	UD-4	UDAA	▨	▨		
UD-2		Urban infrastructure improvement	TC-1 EL-1/3	MCTPC	▨			
UD-3		Inter cites infrastructure enhancement	TR-14	MCTPC		▨	▨	▨
UD-4		Inter cluster cites infrastructure enhancement	TR-2	MCTPC		▨	▨	▨
ID	Industry							
ID-1		Industrial development forum	MP-2	MIH	▨	▨	▨	▨
ID-2		Formulation of provincial industrial development plan	MP-2 MP-3 HR-3	DOI		▨		
ID-3		Industrial statistics improvement	CI-2	PMO MIH	▨			

Code	Initiative/sector	Program/sub-Program	Program Linkage	Implementing Agency	Implementation Schedule			
					2001-05	2006-10	2011-15	2016-20
TR	Tourism							
TR-1		Development of tourist attractions along NR9	TP-7	MCT	■	■		
TR-2		Promotion of tourism free zone	UD-4	MCT		■		
TR-3		Development of high grade accommodations in capital cities	UD-2	Private	■		■	
TR-4		Study on tourism development policy of SKR	UD-3	MCT		■		
TP	Transportation							
TP-1		Trunk-road network development	TR-1	MCTPC		■		
TP-2		District centers road networking	UD-2	MCTPC		■		
TP-3		Village-to-market road development	NV-1	MCTPC	■		■	
TP-4		Rural accessibility improvement	NV-1	MCTPC	■			
TP-5		Strengthening Savannakhet and Thakhek as growth poles	UD-2 ID-2	MCTPC		■		
TP-6		Savannakhet airport upgrading	CI-5 TR-4	MCTPC	■			
TP-7		Repair and maintenance capacity building	HR-3	MCTPC	■	■	■	■
TP-8		Local freight forwarding enterprise promotion	ID-2 MP-4	MCTPC Private	■			
TC	Telecommunications							
TC-1		International telecom gateway	UD-2	MCTPC	■			
TC-2		Rural telecommunications improvement	NV-1	MCTPC		■	■	■
TC-3		Main backbone improvement	CI-5 UD-3/4	MCTPC	■			
EL	Electric Power							
EL-1		Power receiving capacity improvement for Thakhek system	UD-2	EdL	■			
EL-2		115KV extension to the mining project with 22kV system reinforcement	NV-1 EL-4	EdL	■			
EL-3		115KV line between Thakhek and Pakbo	UD-2	EdL	■			
EL-4		Distribution system extension (after SPRE)	NV-1 PH-1	EdL		■	■	■
EL-5		115KV line: Paksam – Thakhek and Chanphone – Xeset	ID-2	EdL	■	■		
EL-6		Additional 115/22KV substations	EL-4	EdL		■		

Recommended Programs and Actions

In the event that the programs/sub-programs are executed as recommended, the framework and objectives set for SKR development (as discussed in Chapters 3.3 and 4.1) will be attained, namely:

- (i) Rural population will find increased job opportunities, and excessive migrations to the urban areas will be prevented. Thus, a balanced rural-urban population distribution will be maintained.
- (ii) Employment in agricultural activities has been elaborated in such a manner that farmers and their families are able to manage their farmlands and to enjoy increased income from integrated farming.
- (iii) SKR will continue to be a supplier of surplus rice production so that the national target for self-sufficiency in staple food can be attained and maintained.
- (iv) Health and education services will be improved. Particular attention has been paid to improvement in primary education so that a target set for the primary school enrollment ratio can be attained. A new method is proposed to make primary schools operative in a more sustainable manner.
- (v) Farmers' household income in SKR will double within 10 years, and the income gap between the rural and urban population can be kept at a minimum.
- (vi) Agricultural and industrial GDP set under the economic framework for SKR development will be attained as far as the proposed programs/sub-programs are implemented as planned.
- (vii) Gradual improvement of transportation networks will form a spatial structure as proposed in Section 3.3, including better utilization of the East-West Corridor in medium term.

To implement the proposed initiatives and programs, however, various actions should be taken by the public and private sectors. Likewise, some external cooperation will be required to support these actions technically and financially. The programs of actions required by the public and private sectors are discussed in the following Sections.

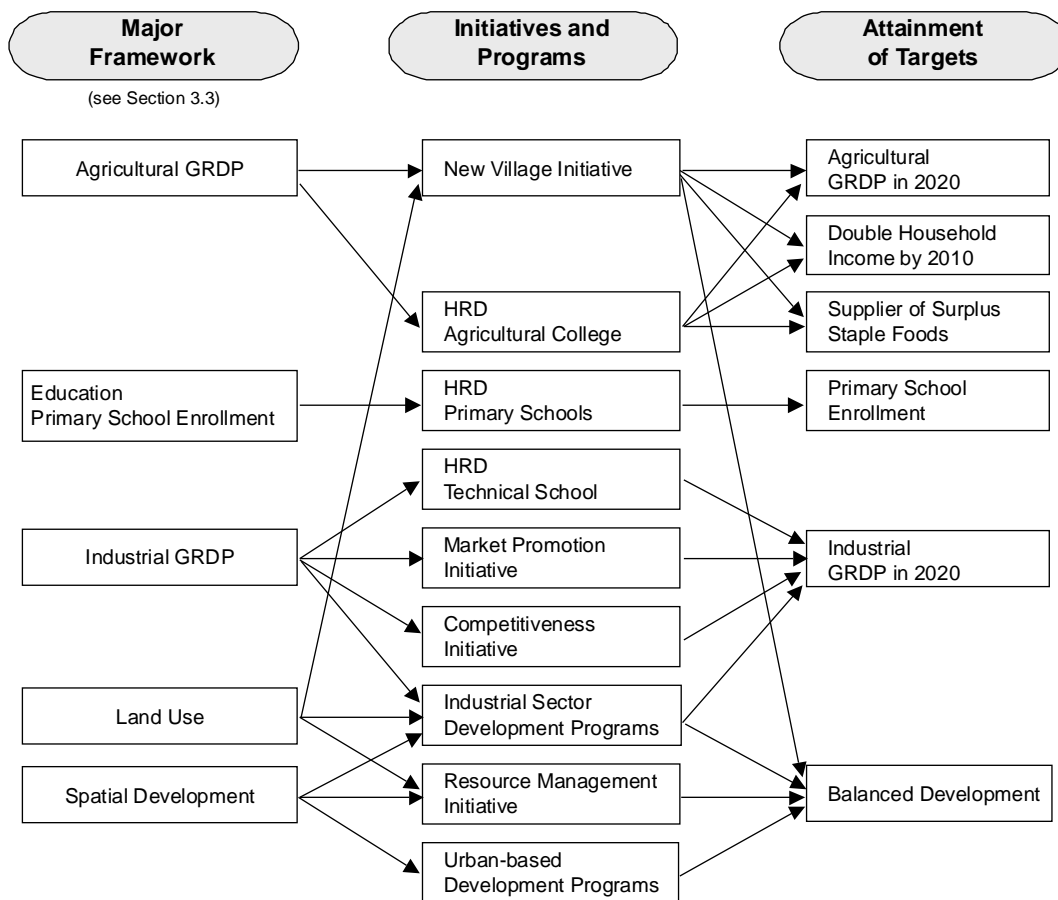


Figure 8-2 Recommended Programs and Attainment of Targets

8.2 Actions to be Taken by the Public Sector

It is desirable that a bottom-up approach be taken for rural and regional development. However, in SKR, rural and urban people are at present unable by themselves to work out plans for implementation, to program the required actions, and to execute the programs. It is therefore recommended that a leadership role be taken by the public sector to implement the SKR development plan at least during the initial stages.

1) Legislative and Administrative Setting

The Lao government has been trying to consolidate a legal framework to promote social and economic development of the country. A dozen laws have been newly enacted and put into force. However, some legal settings are found

Recommended Programs and Actions

to be less practical and difficult to enforce. Some Decrees and cabinet orders are issued but are not widely promulgated.

An example is the Forest Law (dated October 1996) and the latest Harvesting Decree (dated October 2000). According to the law and decree, a short-term concession based on the extracted volume of logs is granted. This legislation is acceptable as far as an appropriate number of trained forest officers are available to supervise log extraction in the field. Unfortunately, the fact is different. It is for this reason that the Resource Management Initiative (RMI) has proposed to study/appraise alternative measures to extend long-term concessions by area, not by volume of extracted logs. Further, a new system of log auction market is proposed as an alternative to the current system of concessions that are often said to be not so transparent. These issues are to be addressed and appraised for better legislative settings for SKR development.

The current Foreign Investment Law is evaluated as being not so attractive to foreign investors. Besides, the foreign enterprises invested in the country have some difficulties with the government orders and decrees, as well as with interventions in the form of production quotas. More difficult is the frequent change of the government orders. These issues are to be re-appraised to promote foreign investments in the short and long terms.

On the other hand, the current systems of decentralization for development planning and budgetary allocation are encouraging for implementation of the proposed SKR development plan. The provincial governments are authorized to earmark some of their revenues for their own planned development programs. It is on this background that a Regional Development Fund is proposed for establishment at the provincial level under the SKR development plan. It is also encouraging that coordination among the provincial departments is maintained to a certain extent in order to take up multi-sector development programs in an integrated manner.

In conclusion, it is recommended that the legislative impediments for SKR development, as cited above, be re-appraised so as to facilitate the implementation of the proposed initiatives and programs.

2) Institutional Setting

The proposed initiatives and programs will be executed under the leadership of line Ministries in the respective fields. The Ministries will be responsible for basic policy for program implementation, while the respective departments in the provincial office will assume the responsibility as executing agencies. For some development initiatives, it is desirable that a specific organization be set up for execution and/or coordination for implementation of the initiatives.

An example for such a special organization is the institutional setting for implementation of the New Village Initiative (NVI). Since the initiative requires involvement of several departments at the provincial level, it is recommended that an NVI Promotion Center be set up in each province. The Center will coordinate various activities programmed under the initiative, and guide those activities at the village and district levels, as well as at the level of villagers' association.

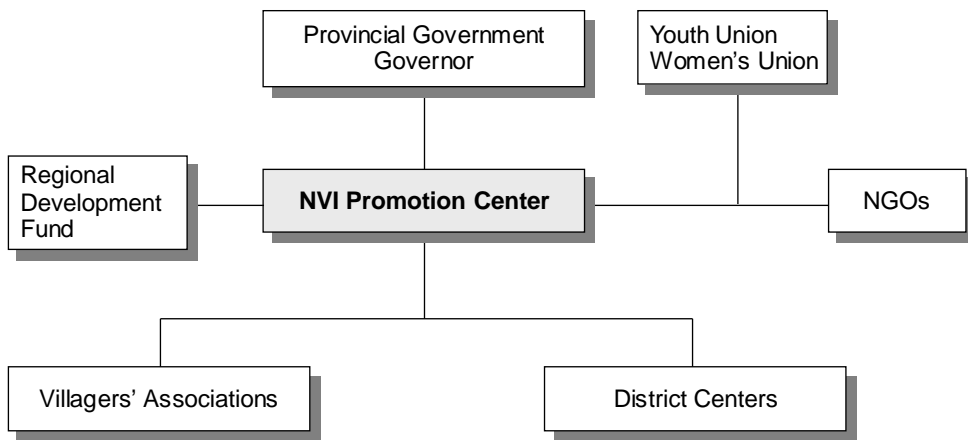


Figure 8-3 Institutions for NVI Promotion (An Alternative)

Alternatively, the current Rural Development Committee (RDC), formed for development of Focal Sites, may be modified to incorporate the programs planned under NVI. In this case, attention should be paid to strengthen the RDC function for implementation of the integrated farming enhancement program. It is therefore recommended that the institutional setting for NVI be decided by discussions among the Ministries concerned, departments in charge, and the provincial governments.

Recommended Programs and Actions

As noted previously, the proposed development initiatives are closely inter-related. In this context, coordination among the Ministries and concerned departments is indispensable. It is recommended that such coordination be first made at the level of provincial departments, and that an inter-department task force be formed for each development initiative.

The task force formed at the provincial level should encourage district offices to take initiative in discussing with village leaders and formulating detailed plan of operations for implementation of the proposed programs.

District offices are management units of implementation and they will gradually turn their responsibility to the village level in accordance with the decentralization policy adopted by the central and provincial governments.

Notwithstanding the decentralization for implementation, some programs or sub-programs proposed under the development initiatives will call for direct involvement of the Ministries. For instance, the Agricultural College to be established in Savannakhet will require direct involvement of the Ministry of Agriculture and Forestry. In such a case, it is recommended that a coordination committee be set up for the specific purpose. The Ministries will also be responsible for securing external assistance required for implementation of some of the development initiatives.

3) Capacity Building

Capacity building is one of the most important factors for successful implementation of the proposed initiatives and programs, since the public officers are currently found to have less experience and knowledge in management for implementation.

An example is the extension workers for implementation of the integrated farming enhancement program under the New Village Initiative. Currently, Farming System Extension Workers (FSEWs) at each district and Subject Matter Specialists (SMSs) at each province are not well trained to guide farmers in integrated farming and market-oriented agriculture that requires not only crop diversification but also livestock raising, fish cultivation, tree crop cultivation and environmental management. Practical education and training for these extension workers is to be made at the Agricultural College proposed under the HRD Initiative, but it will take some years before the College comes into full operation.

Unfortunately, the existing short-term training courses for extension workers is incapable of extending multi-disciplinary knowledge required for integrated farming enhancement. A possible solution is to provisionally count on training at the on-going Thai assisted project in the Vientiane plain. Another alternative solution is to take short-term training courses for integrated farming available in neighboring countries.

Capacity building for provincial officers in charge of promotion of local industry is also important. Training opportunities should be sought for them at the existing local industry (e.g., at the textile firm engaged in weaving cotton with natural dye) or at the private enterprises in neighboring countries. Since provincial officers are unfamiliar with marketing of local industry for exports, it will be required to have a foreign advisor as in the case of the product/market development at the above cited textile firm.

Capacity building in medium and long terms has been programmed at the Agricultural College and Technical School under the HRD Initiative. Public officers will also have chances to train or retrain at these facilities. It is therefore recommended that the HRD Initiative be accorded the higher priority for implementation, and capacity building be enhanced through the Initiative. It is no exaggeration to say that SKR development is largely dependent on education, training and capacity building through successful implementation of the proposed HRD Initiative.

4) Technical Cooperation

Human resources available at the central and provincial government are relatively limited and they are insufficient to execute all the initiatives and programs proposed for the SKR development plan. External technical cooperation will be required to assist in the following fields:

- (i) Technical assistance will be required for demonstration and promotion of the New Village Initiative (NVI). It is desirable that foreign advisors be retained in the field to train local officers in integrated farming and marketing of local industries.
- (ii) Technical assistance will also be required to secure veterinary experts, as the SKR development plan envisages a sizable expansion of livestock raising.

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- (iii) Technical assistance will be sought for improvement of the investment environment in SKR and the country as a whole. A foreign advisor will assist in its improvement, as well as in the legislative setting for the establishment of SEZ and in investment promotion.
- (iv) Technical assistance will be required for operation of the Agricultural College and Technical School. Teaching staff should be secured through international cooperation.
- (v) Technical assistance will also be required for further studies on sub-programs proposed under the Resource Management Initiative (RMI) and the section-wise development projects/programs.

Additionally, active involvement of NGOs is recommended for implementation of the SKR development plan. NGOs involvement is expected, among others, in the following fields:

- (i) Implementation of microfinance programs to be executed for the New Village Initiative (NVI).
- (ii) Expansion of public health programs, particularly for the reproductive health improvement program and the child health improvement program.
- (iii) Promotion of local industry through product design and marketing.

It is recommended that the provincial governments take appropriate measures to guide the NGO activities towards implementation of the SKR development plan.

5) Financial Arrangements

For implementation of the recommended programs, public finance should be arranged program by program. Some programs may be implemented by budget allocated by the central and provincial governments. Some other programs may count on external financial cooperation. At the initial stage of SKR development, external financial cooperation will be sought, among others, for the following:

- (i) Financial assistance is required for demonstration and promotion of the New Village Initiative (NVI) through establishment of a Regional Development Fund and Microfinance (see Part 3, Chapter I.6).

- (ii) Financial assistance is sought for construction of 100 primary schools, the Agricultural College and Technical School proposed under the Human Resource Development Initiative (HRDI).

In medium term, more funds will be required for implementation of the road networking programs, telecommunications expansion, rural electrification and other infrastructure development programs planned for SKR development. External financial will be sought program by program.

8.3 Actions to be Taken by the Private Sector

Farmers in the rural area are the principal players for rural development and people in the urban area are promoters for development in the industrial and service sectors. They are expected to play their roles individually and collectively.

1) Formation of Associations

SKR farmers are not organized yet at the provincial, district and village levels. As they are operating individually they have limited access to public services and limited marketing power. An exception is the recently organized association of livestock farmers in Savannakhet. They were successful in getting a loan collectively from APB. Such an association of producers should be disseminated widely.

For implementation of the New Village Initiative, villagers should be organized in one way or another to share the visions and ideas for development of their villages. Information exchange between villages and districts will also be promoted if villagers are organized. This organization or association of producers is particularly important to cope with the market-oriented economy. As noted in the programs for community development (refer to Chapter 6.4.2), it is recommended that associations be formed by villagers or farmers in every village where the New Village Initiative is implemented. It is noted, in this context, that collaboration with NGOs will greatly facilitate the formation of these associations.

Association by industrial category should be organized for development in the industry and service sectors. Formation of associations is an initial step to

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promote the Competitiveness Initiative, as individual enterprises are too weak to confront competition in the global economy. Associations will make it possible to collectively evaluate information, control the quality of products, ensure an stable supply of materials and marketing of products. It is recommended that associations be formed by private enterprises to implement the Competitiveness Initiative proposed for the SKR development plan. The Chamber of Industry should take initiative in forming these associations.

2) Participatory Implementation and Management

Rural-based development can be implemented successfully only when villagers are vigorously participating in implementation and management of the initiatives and programs.

An example is the planned construction of 100 primary schools in SKR. Construction of school buildings and facilities will be programmed in such a manner that villagers will provide work forces. The planned school forests, school orchards and/or school livestock gardens is to be initiated by villagers and maintained by pupils with support of their parents. The farm-to-market roads will also be implemented by active participation of villagers who will provide their work forces and will be responsible for maintenance.

The participatory approach is also proposed for operation of the Agricultural College. Students at the College will be educated through practical training on the College farmlands, and its products will be marketed to get revenues for operation and maintenance of the College. If adequate revenues are obtained from product sales, graduates from the College will receive a small fund to initiate farming businesses in their home villages. At the proposed Technical School, on-the-job training and/or internship at enterprises or construction sites will be programmed so as to get some revenues for maintenance of the School. Otherwise, the College and School operations may not be sustainable.

Expansion of rural electrification may also be programmed under a cost-sharing system by the beneficiaries in accordance with the rules applied by EdL. In this case, the financial burden on villagers should be minimized, applying a loan of the Regional Development Fund. Maintenance of trunk roads in SKR should also be programmed in such a manner that the road users will bear the cost of maintenance.

CHAPTER IX

KEY PRIORITY PROGRAMS

Out of 57 programs recommended in Chapter VIII for implementation of the Integrated Regional Development Plan in SKR, some key priority programs have been selected for further pre-feasibility level study. The selection of these key programs has been made on the basis of their impacts on poverty reduction, capacity building and balanced regional development in the short and long run, as well as a scale of financing for implementation. Although the Scope of Work agreed between SPC and JICA specified to carry out the pre-feasibility level study on a couple of key programs (see Chapter 1.2), the following five programs have been taken up through discussions between SPC and JICA Study Team:

- (1) New Village Initiative as a Pilot Program in SKR,
- (2) Primary Education Expansion and Improvement Program,
- (3) Savannakhet Agricultural College Program,
- (4) Savannakhet Technical School Renovation Program, and
- (5) Degraded NBCA Forest Area Rehabilitation Program
(A Pilot Program in Nakai-Nam Theun NBCA).

The pre-feasibility level studies on these five programs, as presented in Part 3: Key Program Study Report and as outlined in this Chapter, endorse that these programs should be implemented as early as possible and that actions should be immediately taken by the authorities concerned.

It should be noted that the priority programs for SKR development are not limited to these five key programs, but other programs should also be realized through further studies and arrangements.

It is also noted that some key priority programs studied in the Cross Border Region are compiled and reported separately. Likewise, the feasibility study on establishment of the Savannakhet Special Economic Zone has already been completed and submitted by JICA separately.

9.1 New Village Initiative (A Pilot Program for Savannakhet and Khammouan)

The New Village Initiative (NVI) is a key program for SKR in reducing rural poverty and attaining balanced development in the region. NVI has the principal objectives as follows:

- (i) To enhance household income through the introduction of integrated farming based on crop diversification, promotion of livestock, fisheries and tree crops,
- (ii) To enhance additional income through promotion of local industries,
- (iii) To alleviate burdens in securing water supply and other social infrastructure,
- (iv) To ultimately alleviate rural poverty and build up strong, healthy and hearty villages in SKR.

Out of 2,347 villages in SKR, about a fourth (or 567 model villages) will be targeted for stage-wise implementation of NVI in 10 years. At the initial stage, 12 villages will be developed as experiment/demonstration villages, as shown below.

Table 9-1 Number of Target NVI Villages

Region	Total Villages	Target Villages	Initial Stage Implementation			Full-scale Implementation
			Y-1	Y-2	Y-3	Year 4 to 10
Khammouan						
Lowland	260	78	0	1	0	77
Central	320	96	1	0	3	92
Eastern	220	22	0	1	0	21
(sub-total)	(800)	(196)	(1)	(2)	(3)	(190)
Savannakhet						
Lowland	558	167	0	2	0	165
Central	528	158	1	0	1	156
Eastern	457	46	0	0	2	44
(sub-total)	(1,543)	(371)	(1)	(2)	(3)	(365)
Total	2,347	567	2	4	6	555

Technically, it is planned that five Menus are prepared for promotion of integrated farming and seven Menus for promotion of local industries. Villagers are suggested to select one or two Menus of their interest. In addition, a Local Product Promotion Center will be set up for assistance in technology transfer and marketing of local products.

It is planned that pamphlets for each menu are prepared and technical assistance is extended to villagers by PAFO and the Savannakhet Agricultural College after its completion.

Key Priority Programs

Table 9-2 Menus Prepared for Villagers

Menus for Integrated Farming Promotion	Menus for Local Industries
1) Diversified crops (peanuts/maize/cassava)	1) Natural dye material
2) Cattle and chicken raising	2) Medical herbs
3) Fishculture and chicken	3) Bee-culture (apiculture)
4) Fruit tree and field crops	4) Bamboo products
5) Coffee and field crops	5) Sericulture
	6) Cotton processing
	7) Natural fibers

Financially, a new scheme is proposed for the initial stage implementation (three years). A budget of US\$162,000 will be earmarked for the initial stage implementation (microfinance, costs of training and village infrastructure). Farmers/villagers will be able to repay loans for each Menu within three years. After financial and institutional arrangements during the initial stage, a full-scale financial scheme will be put into operation for NVI. A fund of about US\$5.8 million will be required to complete this program, and the fund will be raised in the form of the Regional Development Fund (RDF) and Microfinance.

With the full-scale operation in 10 years, the area and production of the integrated farming promotion are estimated as tabulated below.

Table 9-3 Estimated Area and Production under Pilot NVI Program

Menu	Units/Area	Production
Menu-1 Diversified crops	1,410 units 845 ha.	Peanuts: 282 tons Maize: 451 tons Cassava: 1,127 tons
Menu-2 Cattle and chicken raising	1,410 units	Cows: 5,700 heads Bulls: 2,171 heads Calves: 1,475 heads Chicken: 42,200 heads
Menu-3 Fishculture and chicken	Fishpond: 280 ha 1,410 units	Fish: 920 tons Chicken: 42,200 heads
Menu-4 Fruit tree and field crops	1,410 ha	Fruit: 4,230 tons
Menu-5 Coffee and field crops	1,410 ha	Coffee: 845 tons

The proposed pilot NVI program, once implemented, will have noticeable impacts to reduce poverty in such model villages. The household income will double within 10 years if the proposed Menus are implemented as planned, except for the case of Menu-1 which should be supplemented by additional activities.

9.2 Primary Education Expansion and Improvement Program

Primary education is one of the most critical issues for development. In view of the current low enrollment ratio at primary schools in (55% in Savannakhet and 51% in Khammouan), their expansion and improvement has been taken up as a key priority program. This program has the following objectives:

- (i) To improve access to primary schools and to raise enrollments,
- (ii) To expand facilities of the existing teachers' training school to secure adequate number of teachers for new primary schools,
- (iii) To secure some incomes through the operations of school gardens for provision of teaching materials, and
- (iv) To serve the school facilities as a village community center.

Under this program, 100 primary schools will be newly constructed (50 core schools in Savannakhet and 50 schools in Khammouan). The existing Savannakhet Teachers' Training College (TTC) will be expanded (classrooms, dormitories, and income-generating facilities). At the core primary schools, some facilities will be provided to generate some incomes to procure teaching materials. The primary schools will also have some facilities (deep well and first aid kits) to serve as a village community center. These programs are summarized as tabulated below.

Table 9-4 Programs/Facilities for Primary Education Expansion

Program	Savannakhet		Khammouan	Total
1) Primary Schools:	Core	50	50	100
	Satellite	36	61	97
2) TTC Expansion:	Classroom	8	(Equipment and facilities)	8
	Dormitory	12 rooms		12
3) Income-generating facilities	Fruit garden	50	50	100
	Fishponds	18	13	31
	Livestock	32	37	69
4) Community Center	Deep well	50	50	100
	First aid kits	50	50	100

It is estimated that a total of about 13,000 pupils will be newly enrolled in SKR (about 8,300 pupils in Savannakhet and 4,700 in Khammouan). The enrollment ratio may rise from 55% to 63% in Savannakhet and from 51% to 61% in Khammouan.

Key Priority Programs

The initial investment required for implementation of the proposed program is estimated as summarized below.

Table 9-5 Estimated Cost of Primary School Expansion

		(US\$1,000)		
Program		Savannakhet	Khammouan	Total
1)	Primary school construction	4,413	5,455	9,868
2)	TTC expansion:	538	107	645
3)	Income-generating facilities	241	237	478
4)	Community center facilities	112	60	172
5)	Consulting/management	796	871	1,667
Total		6,100	6,730	12,830

For implementation of the proposed program, it is recommended that some actions be taken by the central government for the following:

- (i) To request financial cooperation of international donors (bi-lateral and multi-lateral) in constructing and providing proposed facilities,
- (ii) To request assistance in implementing a school feeding program in the eastern districts where majority of pupils are the Lao Theung,
- (iii) To further discuss and come to agreement with villagers for implementation of the income-generating activities at each village,
- (iv) To discuss and come to agreement with villagers for operation and maintenance of the community center facilities (deep well and first aid kits), and
- (v) To program monitoring and evaluation of the proposed program.

9.3 Savannakhet Agricultural College Program

Agriculture and rural development in SKR should be accelerated through the dissemination of market-oriented and integrated farming. Capacity building of extension workers and farmers, both currently engaged in farming and the younger generations, is of prime importance to reduce rural poverty and to attain balanced regional development in SKR. To this end, it is planned to set up the Savannakhet Agricultural College (SAC). SAC has been planned with the following objectives:

- (i) To educate 11th graduate school students in market-oriented agricultural knowledge and skills to become community leaders and extension workers,
- (ii) To introduce practical education and training through the learning-by-doing approach,
- (iii) To educate and train students to have entrepreneur minds in agriculture and agriculture-related business, and
- (iv) To operate the College as a self-financing institute with revenues from the college farm operations.

The courses for education and training at SAC are designed as follows:

Table 9-6 Courses Proposed at Agricultural College

Course	Qualifications/ target	Period	Nos. per year
1) 3-years diploma	11th graduate	3 years	50 students x 3
2) Short-term training-1	DAFO/PAFO staff	1 month	10 per group, 10 groups
3) Short-term training-2	Farmers/Community leaders	2 weeks	10 per group, 10 groups

The number of students and trainees will be gradually increased. During the full operation period, 50 students in each year (150 students for 3-year education) will learn at SAC. The courses are designed for (i) crops, (ii) livestock raising, (iii) fishculture, (iv) agro-forestry, (v) agro-industry/business, and (vi) irrigation/agricultural machinery. Additional courses and curricula are designed for short-term training. Education on entrepreneurship will be taught in both 3-year educational courses and short-term training courses.

The existing agricultural training center in Ban Nake (about 11 ha) will be gradually shifted to the new SAC to apply new education/training programs. Location of the new SAC has been selected at Xaybouly, about 30 km to the north of Savannakhet. A state land of about 800 ha is readily available for the SAC campus. Major facilities planned for SAC are as follows:

Key Priority Programs

- (i) Campus buildings: 10-classrooms, 10-practice rooms, 5-teachers' rooms, 1-conference room and 1-cafeteria; (total floor area of 6,320 m²)
- (ii) Dormitories: 2-dormitories for all students (1,120 m²)
- (iii) Workshops: 5-workshops, livestock houses and a machinery center
- (iv) Farm lands: Paddy field (30 ha), upland crop fields (30 ha), pasture land (50 ha) orchards (6 ha), and fishponds (1 ha)
- (v) Irrigation facilities: Pump-up from the Mekong river
- (vi) Equipment: Heavy equipment, farm machinery, vehicles

It is provisionally estimated that the initial investment cost will amount to US\$11.4 million as shown below.

Table 9-7 Estimated Investment in Agricultural College

Description	Amount (\$ '000)
Buildings	3,821
Farm Infrastructure	4,340
Equipment/Vehicles	1,746
Engineering Services	1,493
Total	11,400

Source: JICA Study Team

For the operation of SAC, revenues will accrue from tuition/accommodation fees, sales of farm products and rent of heavy equipment. A preliminary cash flow analysis, indicates that SAC could be managed as self-supporting as far as some additional funds are secured during the initial years.

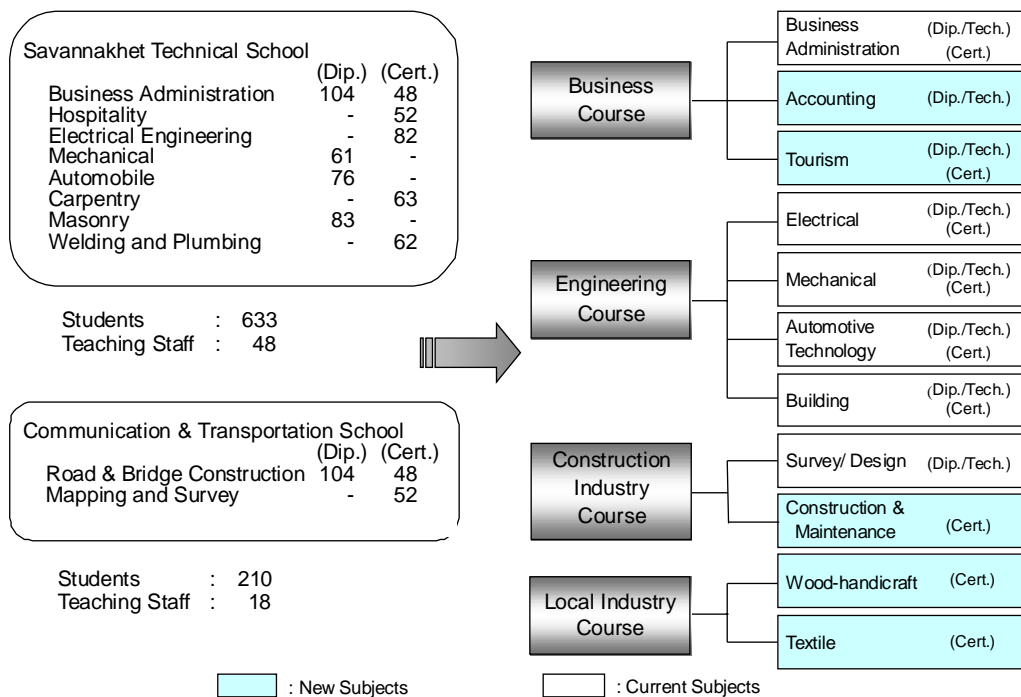
For the implementation of the proposed Agricultural College, it is recommended to take the following actions:

- (i) To request financial support in construction and procurement of facilities, including support by the international foundations and private enterprises
- (ii) To request technical assistance to secure teaching staff,
- (iii) To tie-up with similar agricultural colleges (e.g., Rajamangala Institute in Thailand and Zamorano College in Central America).

9.4 Savannakhet Technical School Renovation Program

The existing Savannakhet Technical School (STS) offers two levels (diploma/technician and certificate levels) and 10 courses. Against a normal student-capacity of about 300, STS has 843 students at present. Nine buildings are serving for them in a compound of about 1 ha. Renovation of STS is required to satisfy the increased number of applicants (reported to be more than double the accepted students) and to improve the quality of technical education (courses, curricula and teaching staff) in order to meet the requirements for trained worker in the industrial and service sectors.

It is planned that STS will be expanded to have a 1,500 student-capacity with 75 teaching staff. STS courses will be restructured as shown below. Curricula for each course will be newly designed with particular emphasis on education to bring up an entrepreneur mind.



Source: JICA Study Team

Figure 9-1 Proposed Restructuring of Savannakhet Technical School

Since the existing compound and facilities are insufficient, it is planned to set up a new campus on the state land located at Km 7 (about 11 ha behind the Savannakhet TTC) or Km 9 (about 9 ha). The new campus will be mainly used for the Construction Industry Course, Building Course and Automotive Technology Course. Main buildings (12,540 m²), workshop buildings (1,980 m²), dormitories

Key Priority Programs

and teachers' housing will be newly built at this campus. The existing compound will be used for other courses. The training equipment and facilities in each course will also be renovated.

In order for STS to generate some income by itself to cover its operation and maintenance cost, it is planned that STS offer several short-term workshops for local people (e.g., accounting, computer and information technology, entrepreneurship) and some repairing services for the public (e.g., automotive technology, electrical technology). STS will also sell articles produced through practical training (e.g., wood-handicraft and textile) and introduce internships for students to work at enterprises.

It is preliminarily estimated that the initial investment required for the proposed renovation will amount to US\$10.9 million. Revenues will accrue from the income-generating activities to cover half of the annual operation cost of STS, as shown below.

Table 9-8 Estimated Cost and Income of Savannakhet Technical School

Initial Investment Cost (US\$)	Operation Cost (US\$)	Operation Income (US\$)
Building construction	Salary	Workshop
Equipment	Teaching materials and maintenance	Repairing services
	Others	Product sales
		Internship
Total	Total	Total
10,930,000	151,000	70,600

Source: JICA Study Team

It is planned that about 1,820 skilled workers will be provided by the renovated STS in 2000-2005 and additional 2,900 skilled workers in 2006-2010. Through education in entrepreneur mind, it is expected that graduates would initiate new business and enterprises (expectedly about 250 new SMEs) in SKR.

For implementation of the proposed STS renovation, it is recommended that the following actions be taken by the authorities concerned:

- (i) To review the proposed restructuring of courses and curricula (including the incorporation of road/bridge construction/maintenance course),
- (ii) To request financial cooperation for construction of a new campus and for procurement of training equipment/facilities,
- (iii) To tie-up with similar technical schools in neighboring countries (e.g., Kalasin Technical School and Sakon Nakhon Technical School in Thailand).

9.5 Degraded NBCA Forest Area Rehabilitation Program (A Pilot Program in Nakai-Nam Theun NBCA)

In SKR, there extend seven National Biodiversity Conservation Areas (NBCAs) totaling about 1 million ha (see Chapter 2.2). They cover 43% of the total land in Khammouan and 17% in Savannakhet. In these NBCAs, all production activity is officially prohibited. According to the GIS survey in 2000, however, about 19% of NBCAs is found to have been degraded due to shifting cultivation, expanded agriculture and illegal logging. Restoration of the degraded areas is urgently needed to reserve such a national and international asset.

The Nakai-Nam Theun NBCA (NNT NBCA) is one of the most important conservation areas not only for conservation of fauna and flora but also for watershed protection of the Mekong tributary. Out of NNT NBCA of about 315,900 ha, the GIS survey revealed that approximately 38,000 ha are degraded. In this degraded area, there are 25 enclave villages with the estimated population of 5,000. For rehabilitation of this degraded NNT NBCA, it is planned to carry out 11 sub-programs as follows:

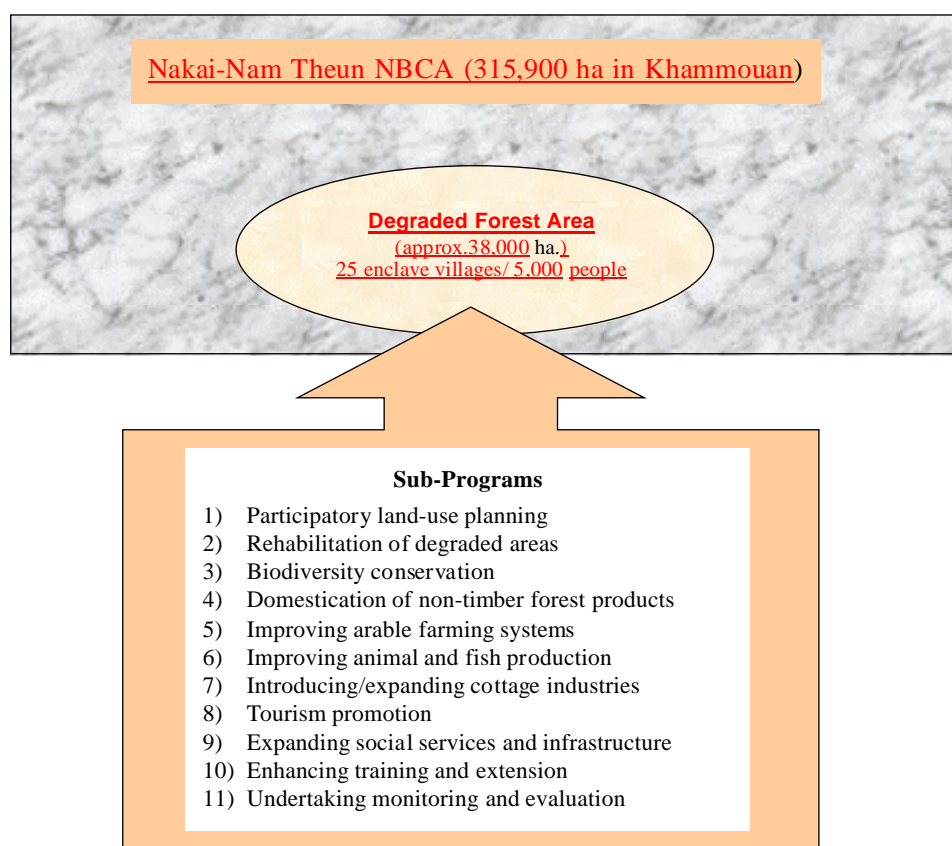


Figure 9-2 Proposed Sub-programs for NNT NBCA Rehabilitation

Key Priority Programs

The social settings in this NNT NBCA have been studied by the World Conservation Union (IUCN) in 1997-1999. The proposed program puts emphasis on reforestation in addition to the IUCN social action plan that would amount to around US\$5 million for implementation. This program is of specific significance for watershed management, if and when the Nam Theun II hydropower project is put into implementation.

For implementation of the proposed NNT NBCA rehabilitation program, it is planned to apply a consultative and participatory process through Participatory Rural Appraisal (PRA), Participatory Research and Development (PR&D) and Participatory Monitoring and Evaluation (PM&E). Through this process, it is required to formulate a definite plan for implementation of the proposed program. Therefore, it is proposed to carry out a feasibility level study inclusive of an experimental implementation at one or two villages.

The proposed feasibility level study (study period of about 1.5 years) will incorporate the following:

- (i) Execution and managerial methodology of each sub-program,
- (ii) Environmental and social impact assessment in and around NNT NBCA,
- (iii) Institutional building,
- (iv) Indigenous local industry and marketing opportunity,
- (v) Detailed cost estimate and financial analysis,
- (vi) Infrastructure and network services,
- (vii) Capacity building

In order to execute the proposed study, it is recommended to take the following actions:

- (i) To request technical assistance by a bi-lateral or multi-lateral agency for the execution of the feasibility study, and
- (ii) To organize a joint committee of the parties concerned (e.g., Department of Forestry, National Mekong River Commission, provincial government, IUCN, the World Bank, NGOs and JICA).

The key priority programs selected and proposed above will no doubt contribute to the attainment of the development objectives defined in Section 4.1. The table below summarizes the relations between the key priority programs and the development objectives.

Table 9-9 Relation between Key Priority Program and Development Objectives

Key Priority Program	Enhancement of livelihood thru income generation					Estimated Cost
	Attainment of a balanced society		Protection of the environment			
	Promotion of partnership			Creation of New Initiative		
1. New Village Initiative (A Pilot Program)	⊙	○			○	\$5.8 million
2. Primary Education Expansion	○	⊙	○		○	\$12.8 million
3. Savannakhet Agricultural College	○	⊙	○	○	○	\$11.4 million
4. Savannakhet Technical School	○	⊙		○	○	\$10.9 million
5. Degraded NBCA Rehabilitation	○	○	⊙	○	○	(\$5.0 million)

CHAPTER X

OVERALL RECOMMENDATIONS

Through this study, a master plan has been formulated for the Integrated Regional Development in SKR towards the year 2020. The master plan suggests a number of ideas and strategies to realize rural-based and urban-based development, as well as to execute programs in each sector and sub-sector. In concluding the master plan study, a dozen suggestions are presented as overall recommendations.

Recommendations on Strategic Planning

- 1) One of the focus on social and economic development in Lao PDR is the reduction of poverty. Currently, a Poverty Reduction Strategy Paper (PRSP) is being prepared by the Lao government. For the poverty reduction, a holistic approach is indispensable. This master plan for SKR has been formulated on the basis of a strategy that more attention should be paid on how to elevate household income in the rural areas, rather than how to improve social infrastructure at the village level. It is recommended that PRSP be prepared with due attention to the elevation of household income in the rural areas. The New Village Initiative aimed at elevation of household income based on the introduction of integrated farming and local industries, would be referable for the preparation of the PRSP.

- 2) Attainment of balanced development is a basic policy of the Lao government. Under the master plan for SKR development, emphasis has been strategically placed on the promotion of rural-based development. It will contribute to attain a balance between the rural area and the urban area, mitigating a gap between the agriculture-based rural life and the urban life based on the industrial and services sectors. It is recommended that limited resources for development be strategically allocated in the future to the implementation of the rural-based development programs.

- 3) Development of human resources should be prioritized in any social and economic development program in Lao PDR, because the shortage of educated people and skilled personnel has been and will continue to be one of the major constraints in development. In longer perspectives, the improvement of basic education is indispensable. In shorter terms, capacity building should be programmed in the execution of any development projects. This master plan for SKR has been prepared on the basis of this strategy. It is recommended that focuses of the PRSP and any project implementation be strategically put on education, training and capacity building to attain sustainable development in Lao PDR.

Effective Utilization of the SKR Master Plan

- 4) The master plan for SKR development has been formulated as a first regional development plan in Lao PDR. It is expected that the master plan would be referred to by both Savannakhet province and Khammouan province. In this context, it is recommended that a vision 2020 for respective provinces be prepared jointly by the public and private sectors in each province. Likewise, the provincial 5-year plan would better be reviewed and updated on the basis of such a vision and the programs suggested in this SKR master plan. The ministries concerned in the central government may also suggest on the formulation of such a long-term and medium-term plan through its provincial offices.
- 5) The master plan for SKR development proposes various ideas for strategic development in each sector and suggests to take some strategic approaches for implementation. It is therefore recommended that this master plan be thoroughly reviewed by the ministries concerned in the central government and that the appropriate ideas and approaches be adopted in their sector-based planning and implementation. It is also desirable that the ideas and approaches proposed in this master plan be incorporated, where appropriate, into the sector development strategies to be prepared by respective ministries concerned.
- 6) Under the SKR master plan, five key programs have been studied and some recommendations have been presented for their implementation. These programs are priority programs in the proposed Development Initiatives. It is therefore recommended that appropriate actions be taken by the central and provincial governments for the earliest realization of the proposed key programs. It is advisable that requests for financial and technical assistance be placed without delay.

Overall Recommendations

- 7) In addition to the SKR master plan, some additional programs are proposed under the development plan for the Cross National Region (Lao-Thai cross border region), as presented in the separately compiled report. These programs will include (i) a cross-border business development forum, (ii) pair-city development, including utilization of the Savannakhet airport, and (iii) maintenance of the East-West Corridor. It is advised that these cross-border programs be also studied by the Lao authorities concerned and discussed jointly with the authorities concerned in neighboring countries for implementation.
- 8) On the other hand, JICA has been cooperating in the execution of sector-wise master planning, including a master plan study on agriculture and rural development, a master plan study on health sector development, and a master plan for development of the electric power transmission. These studies are still underway, and they would propose various programs applicable to development in SKR. It is therefore recommended that these master plan studies, when completed, be referred to and some additional programs be incorporated into the SKR development plan.

Pioneer Implementation as a Model

- 9) The five Development Initiatives of this master plan are programmed and proposed as a model for future application in other regions and provinces. Therefore, the proposed Development Initiatives are pioneering programs. If and when they are proved to be effective and successful, the Development Initiatives would be disseminated to other regions and provinces. It is recommended that the pioneer implementation of the Development Initiatives in SKR be duly monitored and evaluated throughout the period of their execution.
- 10) The SKR development plan has been formulated through the master plan level studies. These studies suggest that a country-wide development plan be formulated on the basis of a model plan proposed in SKR. For instance, development of local industries has been studied and proposed under the SKR development plan as a pioneering program. It is recommended that, based on the SKR local industry development plan, the national development strategies for local industry development be formulated with a model to be implemented in SKR. Likewise, it is suggested that an integrated regional development plan in the southern region (four provinces) be formulated as the SKR development plan has proved to be effective for promotion of balanced development.

Basic Information and Updated Plan

- 11) The execution of the SKR master plan study had some difficulties in obtaining basic data and information. For instance, there is no reliable data on GPP, and no agricultural and industrial census. It is therefore recommended that census and periodic surveys be executed in line with the international classification and standards. It is suggested that technical assistance of the international organizations be sought to compile such basic data and information.

- 12) This SKR master plan has been formulated on the basis of the available data and information. If and when the census is executed, the master plan should be reviewed accordingly. Likewise, the economic and social circumstances surrounding SKR might substantially change in the coming decade. It is therefore recommended that the SKR master plan be updated in 2010. Any change in value of SKR people should be reflected in such an updated plan.