
3 DEVELOPMENT OPTION AND FRAMEWORK

Policy Framework

The regional development options have been formulated on the basis of some policy framework of the Lao government, as well as in the light of development potentials, constraints and on-going development programs.

Lao Vision 2020 is referred to as a long-term policy framework for the planning of SKR development. The Vision 2020 prioritizes eight programs; i.e., (i) attainment of self-sufficiency in staple foods, (ii) reduction of shifting cultivation and protection of forest assets, (iii) increased commercial production and marketing, (iv) development of social and economic infrastructure, (v) improved socioeconomic management, (vi) rural development, (vii) human resource development, and (viii) service sector development. Under the Vision 2020, the government has expressed its determination to develop an economic and social profile so that it leaves the ranks of the least developed nation by the year 2020.

A Poverty Reduction Strategy Paper (PRSP) is under preparation by the government. The Interim PRSP presented in November 2000 focused on fighting poverty through (i) human resource development, (ii) rural development, and (iii) people's participation. It also defined that the "new actors" for development are provinces, districts and villages. The Interim PRSP focused more on development of social infrastructure. For poverty alleviation, however, a holistic approach is required and attention should be drawn at the same time to income generation for households. Consequently, the SKR development plan will pay more attention how to enhance rural household income.

SKR Development Option

By referring to the policy framework, three alternative development options have been conceived and evaluated for SKR development. These alternatives are:

- | | |
|----------------------|---|
| Alternative-1 | Rapidly open regional development
This option may count on accelerated development of transportation networks, freer movement of people, and accelerated industrial development in the urban area. It will lead to a high grown scenario with an average GDP growth rate of 8 to 10% per annum. |
| Alternative-2 | Moderately open regional development
It will lead to the moderate but steady economic growth of SKR with an average GDP growth rate of 5 to 7% per annum. |
| Alternative-3 | Relatively closed regional development
It will lead to the fairly low economic growth in SKR (2 to 4% per annum), but the environment may be more protected. |

Through comparison of these alternative options, as tabulated below, it is recommended that the **Alternative-2** be selected as the most appropriate option for SKR development.

Table S-3 Comparison of Development Options

	Alternative-1	Alternative-2	Alternative-3
Reference	Rapidly Open Regional Development	Moderately Open Regional Development	Relatively Closed Regional Development
Vision 2020	<ul style="list-style-type: none"> • The market economy will more widely penetrate the rural areas. • Commercial production will be promoted rapidly. • Infrastructure will be quickly improved. • The gap between rural and urban economies will be enlarged. • HRD will be retarded. 	<ul style="list-style-type: none"> • The market economy will gradually penetrate the rural areas. • Commercial production will be promoted gradually. • Infrastructure will be gradually improved. • The gap between rural and urban economies will be mitigated. • Capacity building and HRD will be promoted. 	<ul style="list-style-type: none"> • The subsistent livelihood will remain widely. • Commercial production will be less promoted. • Less investment is expected in infrastructure. • The gap between rural and urban economies will remain narrow. • Capacity building and HRD will be retarded.
PRSP	<ul style="list-style-type: none"> • The gap between rural poverty and urban wealth will be enlarged. • Social infrastructure in the rural area will be quickly improved. • Rural to urban migration will be accelerated. 	<ul style="list-style-type: none"> • Rural poverty may be strategically reduced. • Social infrastructure improvement will be retarded. • Inner towns are developed to mitigate migration. 	<ul style="list-style-type: none"> • Reduction of the rural poverty will be retarded. • Social infrastructure improvement will be retarded. • Development of inner towns will be retarded.
Sustainability	<ul style="list-style-type: none"> • The environment may deteriorate. • The self-reliance motivation may be discouraged. 	<ul style="list-style-type: none"> • Resource management will be introduced. • Self-reliance will be encouraged. 	<ul style="list-style-type: none"> • The environment may be more protected. • Subsistence livelihood will widely remain.
On-going Programs	<ul style="list-style-type: none"> • Impacts of the on-going programs will be enlarged. 	<ul style="list-style-type: none"> • Impacts will gradually spread in the rural and urban areas. 	<ul style="list-style-type: none"> • The on-going programs will have less impact on rural development.
GDP Growth	8~10% per annum	5~7% annum	2~4% per annum
Recommendation		<u>Adopt</u>	

Source: JICA Study Team

Social Development Framework

The population growth rate is projected to gradually decrease from 2.8% in 2000 to 2.1% by 2020. The SKR population will increase to 1.36 million in 2010 and 1.68 million in 2020. The rural population will increase from 807,000 in 1995 to 1.35 million in 2020, while the urban population will increase from 137,000 in 1995 to 330,000 in 2020. The employment structure will gradually change, and the agricultural employment rate will decrease from 89% in 1995 to around 80% in 2020.

Some targets are set for improvement of the health status and educational level. For instance, the infant mortality rate will be decreased from 70/1,000 in 2000 to 20/1,000 in 2020. The primary school enrollment ratio will be improved from 72% in 1996 to 90% in 2020.

Table S-4 Projection of Population and Employment in SKR

	1995	2000	2010	2020
Population				
SKR	944	1,072	1,363	1,682
Savannakhet	672	763	970	1,197
Khammouan	272	309	393	485
Rural/Urban				
Rural	807 (86%)	908	1,129	1,351 (80%)
Urban	137 (14%)	165	234	330 (20%)
Employment				
Agriculture	422 (89%)	491	603	613 (80%)
Industry	11 (2%)	13	17	31 (4%)
Services	41 (9%)	48	64	121 (16%)
Total	474 (100%)	552	684	765 (100%)

Source: JICA Study Team

Macroeconomic Framework

SKR has been and is expected to be one of the leading regions for national economic development. Thus, the growth of the SKR economy will be set at a higher level than that of the national targets. Both in Savannakhet and Khammouan, the industry and service sectors will be the largest growth engines, while the agriculture sector will grow steadily. An economic framework for SKR development is planned to grow as summarized below.

Table S-5 Economic Framework for SKR

(Billion Kip at 1999 price)

	1995 (%)	2000	2005	2010	2020 (%)	Growth Rate (%) 2000-2020
GDP	1,578 (100)	2,640	3,810	6,140	10,740 (100)	7.3
Agriculture	1,033 (65)	1,490	1,960	2,470	3,500 (33)	4.4
Industry	204 (13)	350	570	1,130	2,200 (21)	9.6
Services	296 (19)	790	1,270	2,510	5,000 (46)	9.7
Import duties	45 (3)	10	10	30	40 (0)	
GDR per Capita (US\$)*	217	319	409	585	830	4.9

Note: *US\$1 = 7,700 Kip

Source: JICA Study Team estimate

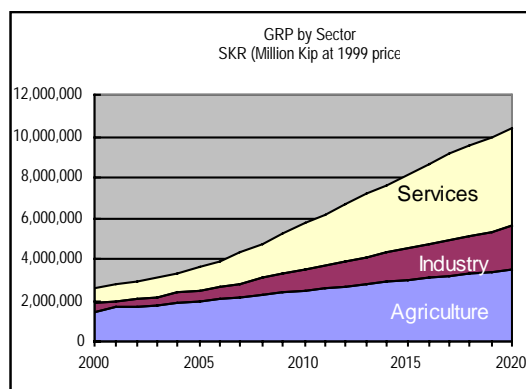


Figure S-2 GDP by Sector

Land Use Framework

The land use plan for SKR is elaborated through simulation on the basis of current land use, forestry conservation and protection, watershed classification and land suitability, as well as the macroeconomic settings. The specific criteria applied for the land use plan are as follows:

- (i) Conservation areas are respected and should not be reduced,
- (ii) Total forest area, inclusive of conservation areas and protection forests, should exceed the national target (60% of the total land), and
- (iii) Land for agriculture use will be planned to secure agricultural production envisaged under the economic framework.

Table S-6 Land use Plan for 2020

Land Use in 2020	(1,000 ha, %)			
	Khammouan Province		Savannakhet Province	
Forestry	1,107.8	66.41	1,356.0	63.36
Protection Forest	780.1	46.77	666.3	31.14
Production Forest	244.3	14.65	517.6	24.19
Fruit & Forest Plantation	83.4	5.00	172.1	8.04
Agricultural Land	287.6	17.24	747.5	34.93
Rice Paddy	133.5	8.00	295.3	13.80
Grazing Land	125.5	7.52	282.0	13.18
Other Agriculture Land	28.6	1.71	170.2	7.95
Other Area	272.6	16.34	36.5	1.71
Barren land & Rocks	197.5	11.84	3.0	0.14
Swamp	14.3	0.86	13.6	0.64
Urban Area	1.2	0.07	3.5	0.16
Water	59.6	3.57	16.4	0.77
Total	1,668.0	100.00	2,140.0	100.00

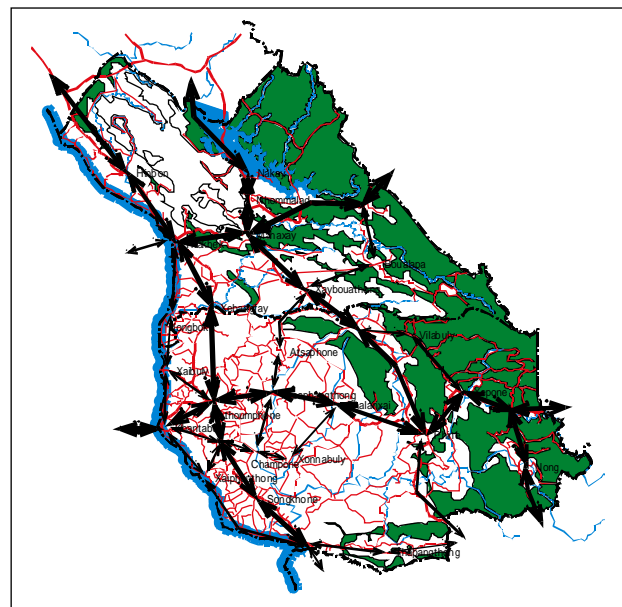
Source: JICA Study Team estimates

The land use is planned for 2020 as summarized on Table S-6. The proposed land use plan in 2020 is presented as shown on Figure S-4.

Spatial Development Framework

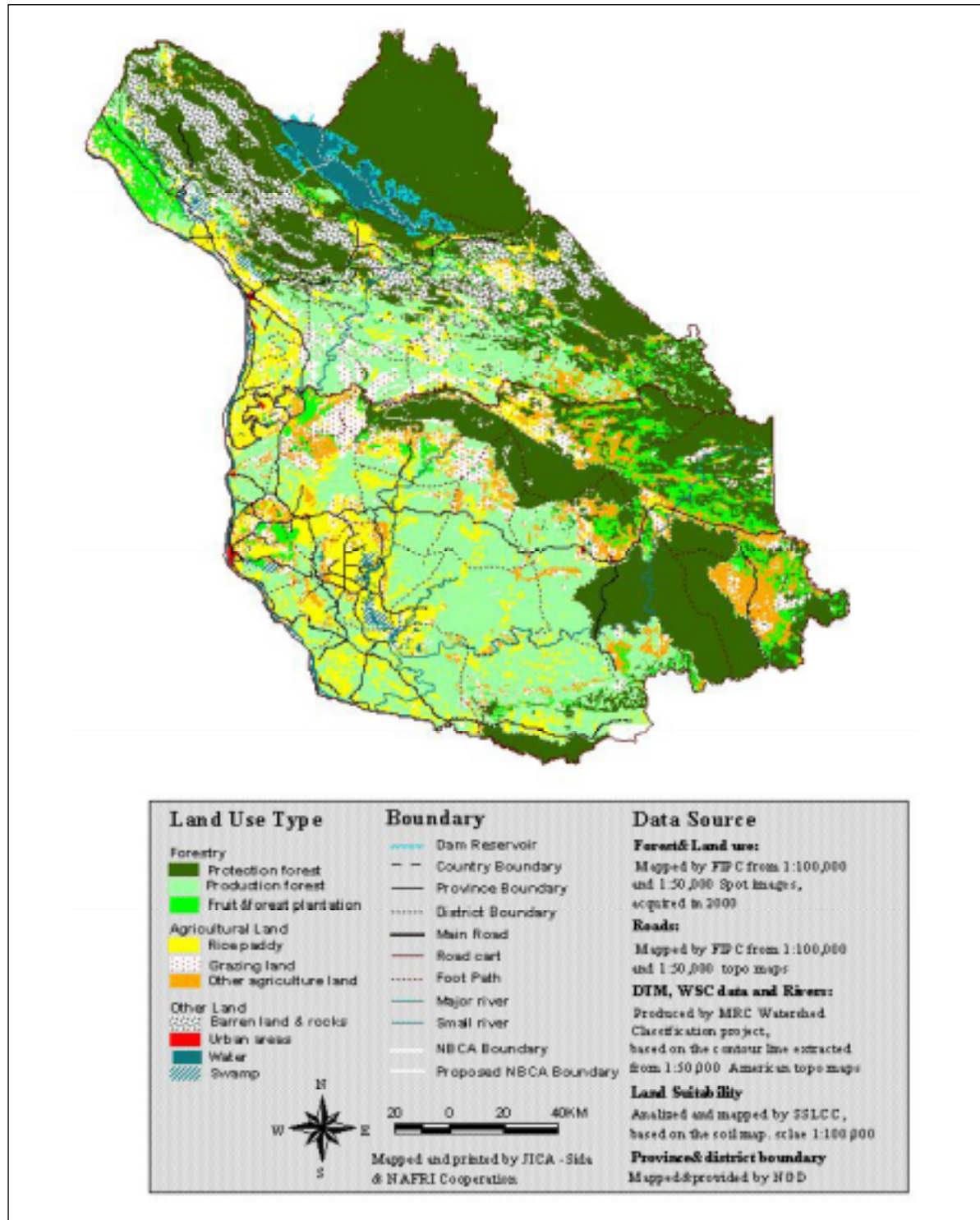
Based on the social, economic and land use framework, as well as in the light of the future perspectives for development, a spatial development framework for SKR is elaborated. Some additional factors have also been taken into account, e.g., the urban core distribution system and the regional transportation system. The future arterial transportation network is planned to satisfy balanced regional development and to secure access to district centers, as shown on Figure S-3.

The future spatial structure of SKR is thus formulated as shown on Figure-5.



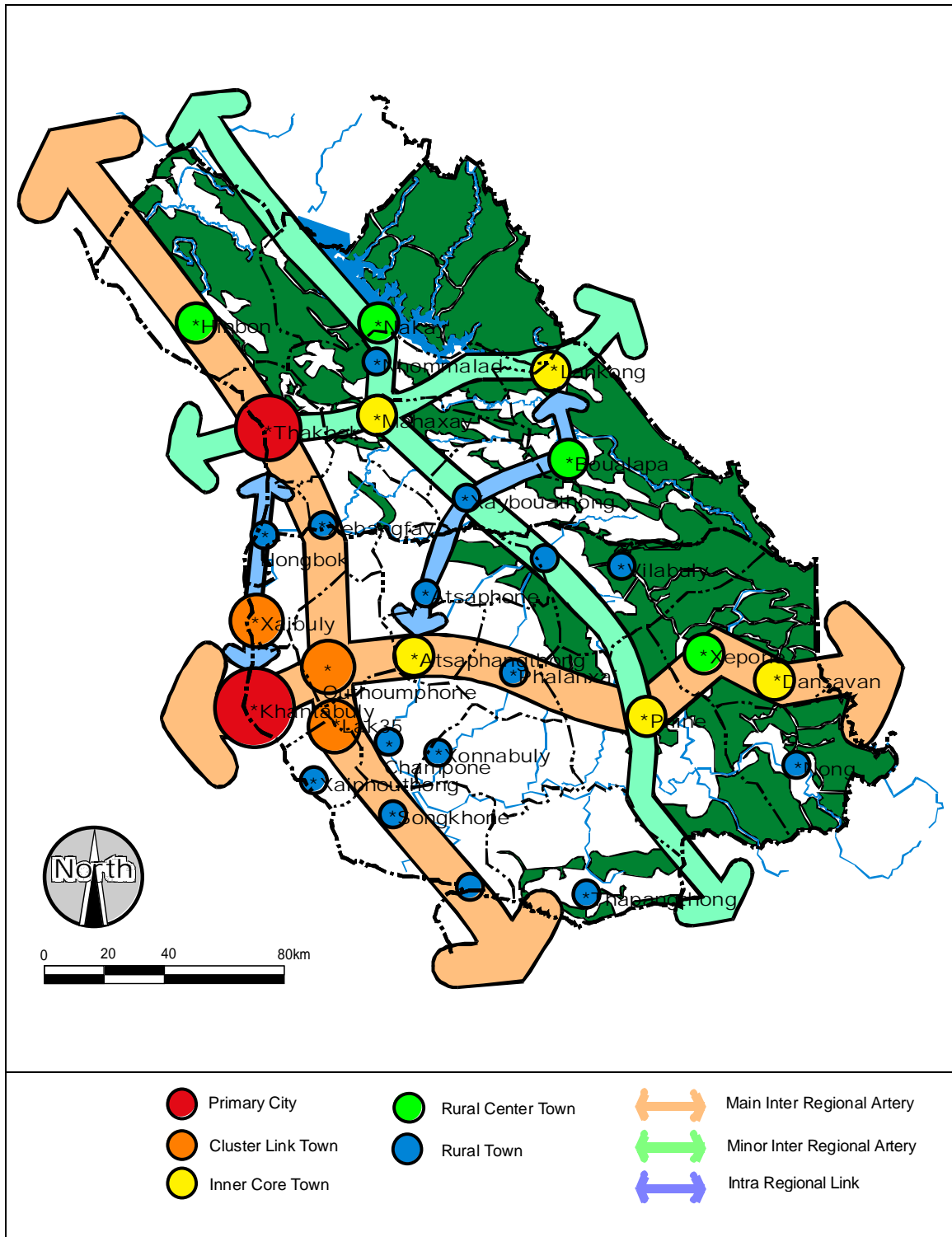
Source: JICA Study Team

Figure S-3 Future Arterial Transport Network



Source: JICA Study Team

Figure S-4 Land Use in 2020



Source: JICA Study Team

Figure S-5 Future Spatial Structure Plan

DEVELOPMENT STRATEGY AND SCENARIO

Development Objectives

Based on the current situation and constraints of SKR, as well as in the light of framework set for the SKR development plan, it is proposed that SKR development has clear objectives as defined below.

- (i) Enhancement of livelihood through the generation/enhancement of income and through the improvement of social infrastructure;
- (ii) Attainment of a balanced society through socio-economic development in the rural and urban areas;
- (iii) Protection of the environment to attain sustainable development, especially co-existence and harmonization with forests and the natural environment;

From the national and cross-national viewpoint, a set of the objectives above should be reinforced by the additional following objectives to be incorporated in the development process.

- (iv) Promotion of partnerships within the region and with neighboring countries for mutual benefit; and
- (v) Creation of new development initiatives in SKR which can be used as a model to disseminate to other provinces and regions in Lao PDR.

SKR Development Strategy

To attain the SKR development objectives, as well as to follow the development scenario as noted above, it is planned that the following strategies will be applied to SKR development:

(1) Area Development Strategy

SKR has a variety of physical and social features, and the SKR rural areas will be strategically divided into three zones for rural-based development, as follows:

- (i) Lowland (Mekong) Region: Lowland extending along the Mekong river
- (ii) Central Region: Midland in the central part; and
- (iii) East Mountainous Region: Mountainous area in the eastern part.

The agriculture development plan and local industry promotion plan are proposed for respective zones. Despite the strategy to plan rural-based and urban-based development separately in SKR, concurrently some strategies are adopted to integrate the rural and urban areas and to maintain their balance. An example of circular integration of the rural and urban areas is illustrated below.

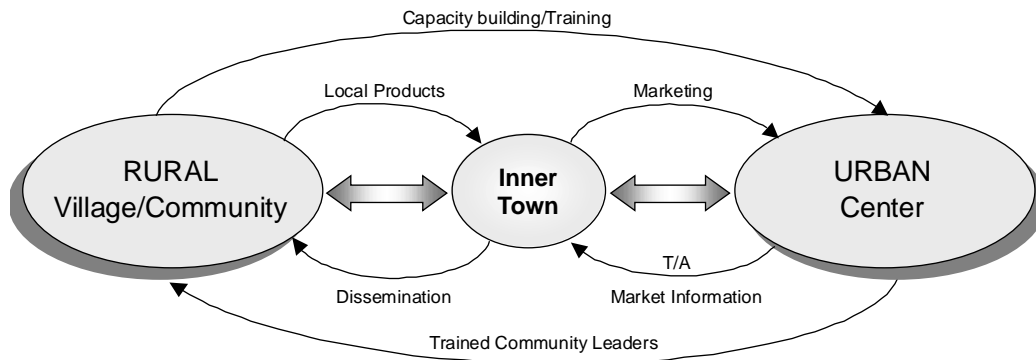


Figure S-6 Circular Integration of Rural and Urban Areas

(2) Income Generation Strategy

Although the PRSP emphasizes poverty reduction by improving social infrastructure at the village level, the SKR development plan places more emphasis on enhancing farmers' income. The plan seeks to double the farm household income within 10 years or by 2010. This scenario is attainable by applying a strategy to promote integrated farming and local industries. For promotion of integrated farming, livestock raising will be vigorously expanded, together with promotion of fishculture and tree crops. This strategy for enhancing income generation is planned for implementation mainly through the "New Village Initiative".

(3) Capacity Building Strategy

Trained people in SKR are in short supply, and the SKR development plan will prioritize human resource development programs. Limitedly available resources will be strategically allocated to education and training in SKR. For instance, an Agricultural College is proposed to practically educate village leaders in market-oriented agriculture, as well as to serve for capacity building of extension workers. Practical education and training is programmed to meet the actual requirement in the field and to bring up an entrepreneur mind at all levels of education from primary schools to technical schools. Capacity building for SKR development will be strategically promoted thoroughly implementing the "Human Resource Development Initiative".

(4) Resource Management Strategy

The forest resources in SKR are the most important assets of the region, and their management is of national and global importance. The resources management will therefore concentrate on the management of these forestry resources. One fundamental principle for forest resource management is to clearly demarcate the NBCA areas and watershed protection areas on the ground. The production forests should also be delineated. As GIS Survey revealed that nearly 190,000 ha of NBCAs have been degraded with shifting cultivation and over-logging, these degraded forest areas should be rehabilitated. The SKR development plan will propose to initiate some models and to disseminate to other areas.

(5) From a Land-locked to a “Land-linked” country

SKR is a land-locked region sandwiched between Thailand and Vietnam. When the East-West Corridor is completed along NR9, it will open dual outlets and turn SKR into a land-linked region. In longer term, another corridor might be improved along NR8/NR12 linking Thakhek with Thailand and Vietnam, providing SKR with multiple outlets/inlets. Being land-linked, SKR should strategically promote the production of niche products for niche markets.

(6) Creation of an SKR Image

SKR produces a variety of products for domestic consumption and for exports to international markets. These products, however, have no brand name and the markets have no image at all that the products have been produced in SKR. This decreases the value of SKR products. Therefore, a strategy is proposed to make SKR products “ecology-friendly” products (or “eco-products”) and to have SKR try to advance this image worldwide. When SKR produces niche products for niche markets, such products should foster an image that they are “eco-products” made in SKR. This strategy to create an SKR image for “eco-products” will be applied and disseminated through the “Competitiveness Initiative”.

(7) Strategic Integration of Development Programs

Since SKR is large and sparsely populated, it is inefficient to plan and implement a single project/program sector-wise. Some sector programs should therefore be integrated for implementation at a certain location to have a synergy effect. Under the SKR development plan, several programs or sub-programs are strategically integrated into “Initiatives” for implementation. These initiatives are objective-oriented and proposed to be initiated in SKR and disseminated to other regions. It is also planned that the related initiatives are further integrated for implementation. For instance, in the village where the New Village Initiative is implemented, the primary education expansion sub-program under the Human Resource Development Initiative will be located.

Development Scenario

Pursuant to the selected development option of “moderately open regional development”, the development scenario for SKR is programmed, dividing the planning period into three phases as follows:





Phase 1 (Short-term)	:	2001-2005
Phase 2 (Medium-term)	:	2006-2010
Phase 3 (Long-term)	:	2011-2020

Phase 1 is the period of the **Formation of Foundation for Regional Development**. Development efforts are concentrated on building up the foundations for SKR development, including dissemination of market-oriented agriculture, capacity building and human resource development. At the same time, a resource management and utilization system is to be established for sustainable SKR development. Institutional building is another priority activity during the Phase 1.

Phase 2 is the period of **Dissemination of New Systems and Reduction of Rural Poverty**. Human and financial resources during the Phase 2 period will be further directed towards dissemination of integrated farming and local industries under the New Village Initiative. Through this initiative, it is planned that the farm household income will double by the year 2010. Keeping pace with the completion of the East-West Corridor, the rural road improvement will be expanded to make utmost use of the Corridor. Thus, SKR will shift from the “land-locked” region to the “land-linked” region.

During the Phase 3, **Consolidation of the Balanced and Cyclical Society** will be promoted. The investment in capacity building and human resource development during the Phases 1 and 2 will result in accelerated regional development. By the year 2020, SKR will attain the social and economic targets set under the development framework, and rural poverty will be reduced to a minimum level. Rural and urban life is balanced and cyclical, and SKR leaves the level of the least development country status.

Table S-7 Proposed Development Scenario

Phase	Phase 1	Phase 2	Phase 3
Period	2001 – 2005	2006 – 2010	2011 – 2020
Target	Formation of foundation for regional development	Dissemination of the new systems and reduction of rural poverty Double the farm house-hold income by 2010	Consolidation of the balanced and cyclical society Set up a strong, healthy and hearty society
Human Resource Development	Initiation of “human resource development initiative”: • Basic education improvement • Agricultural college • Technical schools	Further improvement and expansion of basic education, technical education/training.	Enhancement of educational and training level capable of serving for other regions/provinces.
Natural Resource Management	Establishment of legislative and monitoring system for resource management Utilization of non-commercial and unused forest resources	Enhancement of resource management and utilization Utilization of mineral resource and promotion of resource-based industries	Acceleration of reforestation programs Consolidation of resource-based industrial promotion
Rural-based Development	Enhancement of motivation of villagers Demonstration of “new village initiative” for promotion of diversified farming and local industry	Improvement of rural accessibility and expansion of marketing. Expansion of “new village initiative” to double the farm household income.	Promotion of social infrastructure improvement to remoter villages. Consolidation of “new village initiative”
Urban-based Development	Formation of foundation for urban infrastructure improvement Establishment of basis for industrialization (SEZ)	Promotion of inner core towns, rural center towns and rural towns. Promotion of investment in SEZ	Promotion of inner towns and development of Khantabuly Cluster Consolidation of industrial basis through enhancement of competitiveness
Event	 E-W Corridor  Gold Mine	 Nam Theun II  AFTA	

5 DEVELOPMENT INITIATIVES

Integration into Initiatives

For SKR development, the development plans and programs are presented in the form of “Development Initiatives”, since it is considered to be more effective to integrate the plans and programs into several objective-oriented packages or initiatives. This integration will be particularly effective for rural development and poverty alleviation for which a holistic approach is required. It will also facilitate implementation, either in the form of an “Initiative” or in the form of a “sub-program” integrated into the initiative.

For the SKR development plan, five “Development Initiatives” are planned as illustrated on Figure S-7. In the event that the “Development Initiatives” initiated in SKR turn out to be effective and successful, they can be used as models to disseminate to other regions and provinces in Lao PDR. Since the SKR development plan is the first integrated regional development plan in Lao PDR, it is recommended that this innovative approach be applied and proved to be effective.

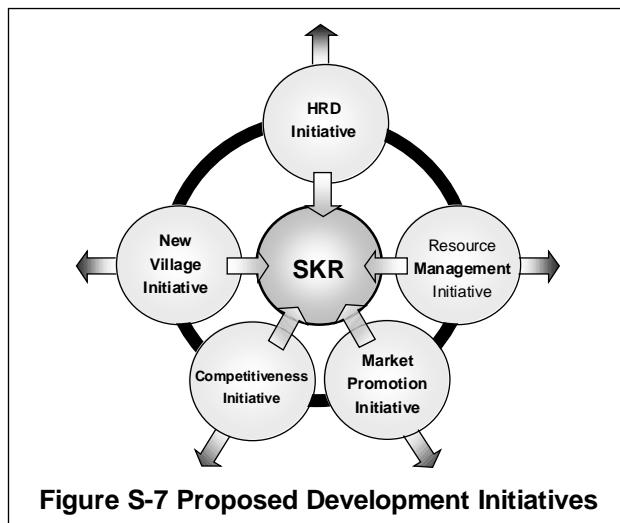


Figure S-7 Proposed Development Initiatives

The relationship between the policy framework, the SKR development objectives and the “Development Initiatives” is shown below.

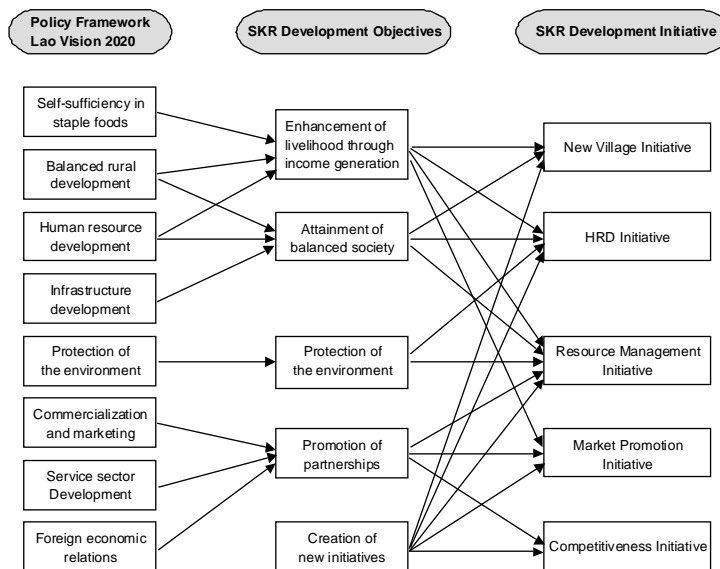


Figure S-8 Relationship between Policy Framework, Objectives and Initiatives

New Village Initiative (NVI)

The objectives of NVI are to generate and increase income for the rural households by means of integrated farming and promotion of local industries at the village level, and to ultimately build up strong, healthy and hearty villages. A target has been set to double the rural household income in 10 years.

The proposed NVI is an integration of the following sub-programs:

- (i) Enhancement of integrated farming through promotion of intensive farm management, integrated and recycled farming and organic farming;
- (ii) Promotion of local industries utilizing unused and wasted resources; and
- (iii) Improvement in such village infrastructure as water supply and village roads/bridges.

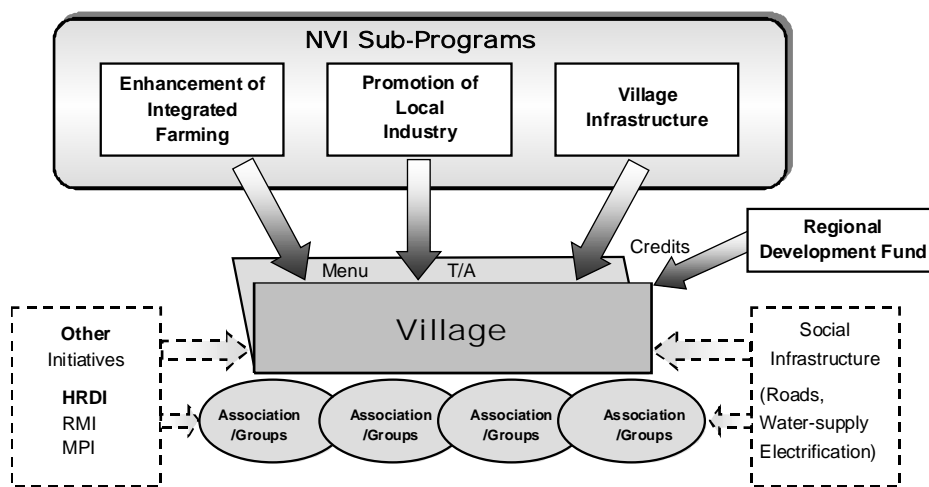


Figure S-9 Implementation of New Village Initiative

It is planned that each province will set up a “NVI Promotion Center”. Alternatively, the current Rural Development Committee (RDC) may be modified to promote NVI. At the village level, villagers are encouraged to form associations for the NVI promotion.

Since there exist nearly 2,300 villages in SKR, it takes more than the plan period of 20 years to disseminate NVI to all the villages. It is therefore planned to implement NVI step by step. At the initial stage, a dozen model villages will be selected for experiment or demonstration, through which the institutional and financial system will be consolidated. In line with the consolidation of the financial system (particularly the Regional Development Fund and Microfinance), NVI will be disseminated widely, setting an annual target for expansion. It is envisaged that NVI is expanded to about 570 villages in 10 years.

A pilot program of NVI is further studied and planned as presented in Section 9 (see page S-31). When the implementation of models turns out to be effective and successful in SKR, NVI may be expanded to other provinces and regions in the country. NVI could be a national movement for rural area development.

Human Resource Development Initiative (HRDI)

The objectives of HRDI are to improve the educational facilities in SKR and to attain capacity building, so that the development programs proposed under the SKR development plan could be implemented effectively and successfully. HRDI will also contribute to build up strong, healthy and hearty villages, as well as to supply skilled personnel for development of the industrial and service sectors in SKR.

HRDI proposes to promote three major sub-programs as follows:

- (i) Primary education expansion and improvement sub-program is proposed to construct 100 primary schools at the initial stage, together with expansion of facilities for the Teachers Training College, provision of school gardens, and installment of facilities to serve as a village community center;

- (ii) An Agricultural College is set up in Savannakhet to offer practical education/training for village leaders and extension workers. It offers courses for training and capacity building of personnel in the public and private sectors. The College is planned to be financially self-supporting.

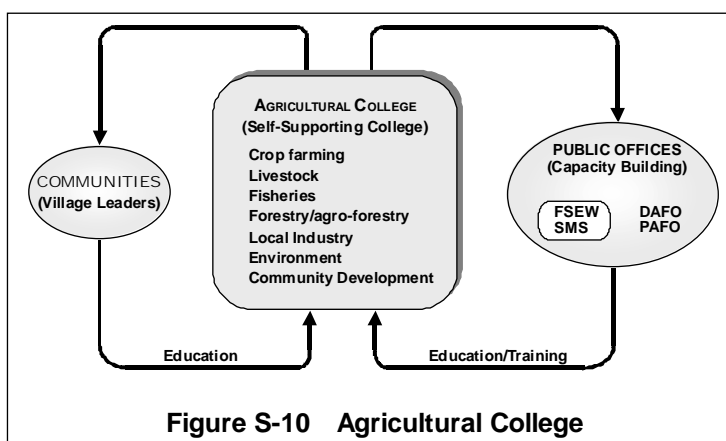


Figure S-10 Agricultural College

- (iii) The existing Technical School in Savannakhet will be restructured and renovated to meet the requirements of the younger generations and the industrial enterprises. The entrepreneurial minds should also be elevated through technical education/training.

The Ministry of Education will be responsible for implementation of the primary education expansion and improvement program, as well as the technical school renovation program. On the other hand, the Ministry of Agriculture and Forestry will implement the Savannakhet Agricultural College program.

Priority of public investments and foreign financial cooperation should be directed towards the proposed HRDI sub-programs. Construction of the Agricultural College and renovation of the Technical School should be initiated immediately so that their graduates can contribute to successful implementation of the SKR development plan. When the primary education expansion sub-program, combined with the income generation scheme, turns out to be effective in SKR, this sub-program may be disseminated to other provinces and regions as an SKR model. The proposed three HRDI sub-programs are further discussed in Section 9 (see pages S-32, S-33 and S-34).

Resource Management Initiative (RMI)

The over-arching objective of RMI is to preserve most of the existing forest resources, plan for land use changes, while at the same time making the remaining forest areas more productive and thus improve their sustainability.

The objectives of forest resource management differ depending on what type of forest area is to be managed. The principal goal of NBCAs is to conserve the area for bio-diversity and in most cases protect the watershed of rivers. In conservation areas, the objectives must be to secure the boundaries by mutual agreement with the local people and draw up a workable management plan in cooperation with villagers.

Several sub-programs are incorporated into RMI. They are:

- (i) Sub-program for delineation of conservation, protection and production area, because NBCAs and protection forests are not delineated on the ground;
- (ii) Sub-program for appraisal of long-term concessions, in view of the current system in which short-term concessionaires only pay for what is removed and not what is felled;
- (iii) Sub-program for fuller utilization of commercial and non-commercial species, because much commercial log volume is left in the forest due to wasteful logging;
- (iv) Sub-program for expanded markets of small-size wood and non-wood products, as there is a considerable surplus of small dimensional wood throughout the region;
- (v) Sub-program for agro-forestry demonstration, particularly in the area of shifting cultivation;
- (vi) Sub-program for rehabilitation of the degraded forest areas, particularly for unstocked/degraded forests in NBCAs (about 190,000 ha);
- (vii) Sub-program for tree planting for production, with sub-program for commercial nurseries particularly in the degraded forest areas; and
- (viii) Sub-program for environmental education at schools and other public institutes so as to enhance the mind of resource management.

The Department of Forestry of the Ministry of Agriculture and Forestry should take leadership in promoting RMI, particularly forestry resource management programs. Strengthening of forestry officers in the provincial department is a prerequisite for RMI promotion.

At the initial stage, efforts should be concentrated on capacity building and strengthening of forestry officers, as well as on appraisal of long-term concessions and study on practical methods for fuller utilization of commercial and non-commercial species. Marketing of small-size wood and non-wood products should be initiated along with the promotion of NVI, particularly promotion of local industries. Sub-program for agro-forestry demonstration should also be implemented in combination with NVI. A pilot program for rehabilitation of the degraded NBCA forest areas is further discussed as one of the key priority programs in Section 9 (see page S-35).

Market Promotion Initiative (MPI)

The objectives of MPI are to expand the opportunities for marketing SKR products, with value added locally to the maximum extent. Promotion of marketing is indispensable for resource-based SKR products as they are currently marketed through limited channels in neighboring countries. Marketing is of prime significance for production of niche products for niche international markets. As SKR is land-linked to outer markets with the completion of the East-West Corridor and transportation networks, now is the time to initiate market promotion.

For marketing promotion of SKR products, MPI will incorporate sub-programs as follows:

- (i) For better and more transparent marketing of industrial wood products, it is planned to set up a log auction market in Thakhek. It will make transparent the marketing system and stabilize log prices.
- (ii) For export promotion of resource-based industries, it is planned to set up an Export Marketing Center (EMC) in the Savannakhet SEZ.
- (iii) Savannakhet SEZ is also planned to accommodate the Local Product Promotion Center (LPPC). The Center will assist producers and associations of local industries to find out niche markets for such niche products.
- (iv) Some agricultural products may be marketed through the contract farming system or through exporters who have channels established in international markets.
- (v) Marketing of products will also be pursued through promotion of foreign direct investment (FDIs) as foreign investors have their own channels for exports.

The Ministry of Commerce and Tourism will be responsible for implementation of MPI. For operations of the EMC and LPPC, the Ministry will coordinate with the provincial governments and the proposed SEZ Authority. On the other hand, producers are guided to organize associations for marketing of their products. The LPPC will be implemented in line with the promotion of local industries under NVI.

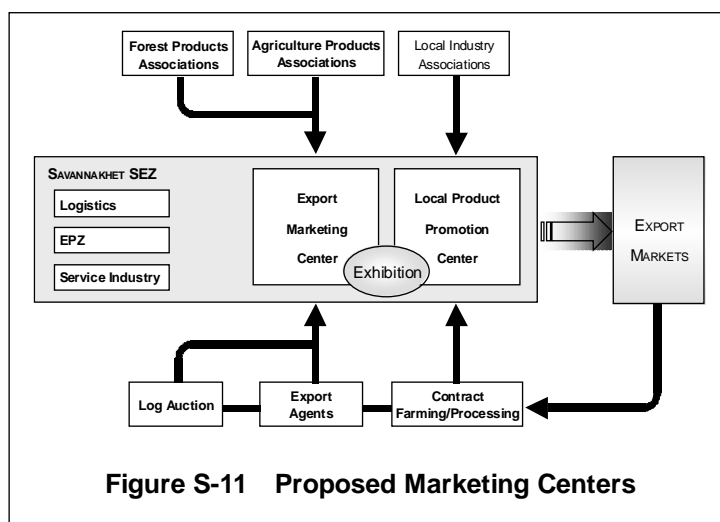


Figure S-11 Proposed Marketing Centers

MPI is planned for implementation step by step. The LPPC may start at a provisional office in Savannakhet when the NVI operations are initiated. In the long-term, the LPPC and EMC may be operated as private enterprises. Promotion of marketing channels for agricultural products should also be initiated without delay.

Competitiveness Initiative (CI)

The objectives of CI are to enhance the competitiveness of SKR products in international markets. CI is planned because competition in the markets may become more severe when SKR is land-linked after completion of the East-West Corridor, and competitiveness will be more significant after AFTA and WTO free trade regimes become effective for Lao PDR.

CI will incorporate several sub-programs for implementation. They are:

- (i) An image or brand name of the SKR products is to be created. It is planned that the SKR products are all “ecology-friendly products” (or “eco-products”) and that the image of “eco-products” is disseminated worldwide.
- (ii) Competitiveness is to be enhanced through quality improvement in the increased value added products. When niche products have higher quality and stable supply systems, they would have higher competitiveness in niche international markets.
- (iii) The private sector should be empowered to enhance capability to evaluate market information, quality of products, stable supply, and entrepreneurial minds.
- (iv) The public sector should also be strengthened to enhance competitiveness of local products, through improved legislation, simplification of procedures, de-regulations, and capacity building of trade and industry related officers.
- (v) The Savannakhet SEZ is planned to enhance competitiveness of resource-based and agro-based industries through promotion of FDIs.

CI should be promoted both in the private sector and public sector. The Ministry of Commerce and Tourism and the Ministry of Industry and Handicraft should coordinate the promotion of CI in the public sector. The Ministry of Agriculture and Forestry should also participate in this initiative, because agriculture and forestry products are targets to create an image of SKR products (eco-products) and enhance their competitiveness.

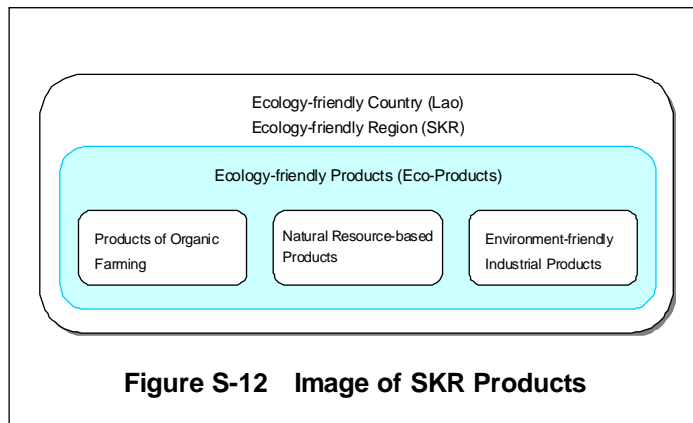


Figure S-12 Image of SKR Products

Competitiveness is not attainable all at once and it should be gradually enhanced. At the initial stage, the private and public sectors should work out measures to create the image of SKR products (“eco-products”) assuming respective responsibilities for production, marketing and exports. Before AFTA becomes effective in 2008, competitiveness of SKR products should be enhanced to such a level that could survive without protection.

6 RURAL-BASED DEVELOPMENT

Potential of SKR Rural Area

SKR is endowed with land and water resources, and it offers large potentials for rural development. These natural resources, however, are sensitive and development of their potentials should be carefully managed.

Forestry resources are most notable. Judging from the standing stock and estimated yield of the SKR forests, there is a surplus of small diameter wood for use as raw materials for local industries and as natural biomass fuel resource. If properly managed, production forests will be able to supply high quality logs in a sustainable manner. Water resources are also abundant, and the SKR river systems can be utilized for irrigation, fisheries and hydropower generation. Additionally irrigable areas are more than 329,000 ha or much larger than the total existing farmlands. Judging from the land suitability map, nearly one million ha or 25% of total land area is potentially cultivable. The potential land use map also shows that 11% of total land area or 430,000 ha are suitable for livestock.

Agriculture Development Plan

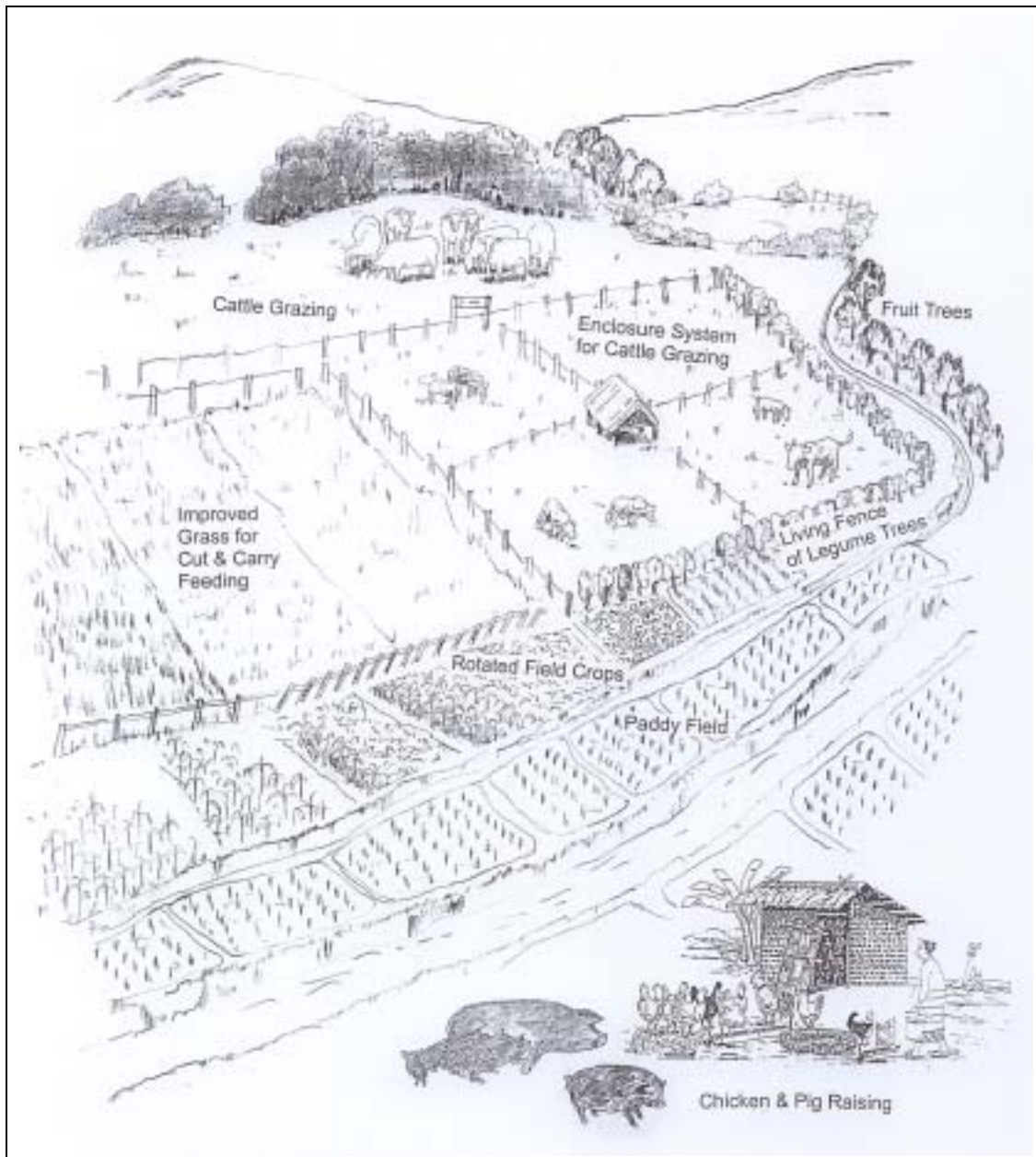
A target has been set to double agricultural household income in 10 years. The SKR agricultural development plan is formulated on the basis of promotion of integrated farming with intensive farm management, integrated/rotational farming, and organic farming. It does not envisage sizable expansion of paddy fields and irrigation systems.

In the lowland (Mekong) zone where rice cultivation is a dominant farming system at the moment, “integrated farming with rice + small animal + fishculture” will be promoted in view of the relatively limited forest areas for pasture expansion and sizable lands suitable for fishculture. With the proposed farming system, it is envisaged that the average household income in the lowland zone will increase from Kip 2.8 million to around Kip 5.6 million in 2010.

In the central zone, “integrated farming with large animal (cattle) + rice” will be promoted in view of the broader forest areas for pasture expansion in gentle rolling hills. Market-oriented farming will be expanded step by step. The average household income in the central zone is estimated to increase from Kip 2.3 million in 2000 to Kip 4.9 million in 2010.

Summary

In the eastern mountainous zone, the agricultural pattern of “integrated farming with rice + large animal (cattle) + fruit tree” will be adopted. Villagers in this zone have strong desires to promote livestock, and cattle raising will be vigorously promoted. Farmers-driven development should be adopted to enhance the village capacity, particularly in the Lao Theung villages. The average household income in the eastern zone will also double in 10 years (from Kip 1.9 million to Kip 4.4 million) if the proposed farming system is implemented.



Source: JICA Study Team

Figure S-13 Integrated Farming in Central Zone

Local Industry Development Plan

Through the field survey and interviews with villagers, about 100 products have been identified as potential local products utilizing unused or under-used materials available in SKR. From the viewpoint of their marketability, a dozen products have been selected as promising local products by zone as shown below.

Table S-8 Promising Local Products by Zone

Category	Product Item	Savannakhet			Khammouan		
		Lowland	Central	Eastern	Lowland	Central	Eastern
Bio Diversity	Bio Compost						
	Non wood products						
	Natural dye material						
	Medical herbs						
	Bee culture						
Forestry	Charcoal						
	Bamboo						
	Wood handicraft						
Textile	Sericulture						
	Cotton						
	Natural fibers						

Source: JICA Study Team

Out of these local products, some products (bio-compost and non-wood products) will not directly contribute to enhancement of income but indirectly contribute to rural development or improvement in productivity of other products. For practical promotion of local industries to villagers, several menus will be prepared and their markets will be opened.

An example is the combination of natural dye and cotton. A producer in Savannakhet has already developed a textile factory (cotton dyed by natural dye materials) and is exporting to a niche market in Japan. Another example is a locally cultivated yellow cocoon silkworm (sericulture). A Japanese artist wove “Obi” from samples of SKR silk.



Figure S-14 Dyed Yarn in SKR



Figure S-15 SKR Silk Products (Obi)

Infrastructure Development Plan

Health services in the rural area are in poor condition, with poor access in the rainy season, lack of health staff, and obsolete health facilities and equipment. For improvement of these constraints, the SKR plan envisages three sub-programs as follows:

- (i) District health system strengthening, particularly in such vulnerable districts as Phine, Thapangthong, Xonebouly (Savannakhet province) and Xaybouathong (Khammouan province);
- (ii) Reproductive health improvement, aiming at reducing the maternal mortality rate; and
- (iii) Child health improvement, aiming at reducing the infant mortality rate.

Primary education expansion and improvement is programmed under the proposed HRDI. About 200 primary schools will be required in SKR by 2010. At the initial stage, 50 primary schools in Savannakhet and 50 schools in Khammouan will be programmed under the proposed HRDI. The schools are designed to have gardens for income generation and practical learning. Special attention is needed for school feeding in the eastern mountainous zone where Lao Theung are predominant and educational motivation is low.

Village water supply is planned for improvement under NVI and HRDI. Model villages for NVI will have financial support for a dug well, and primary schools to be improved under HRDI will be designed to have a dug well as far as a groundwater aquifer is detectable.

Village-to-market road improvement is planned to improve provincial and district roads to be all-weather links between villages and a market center in the districts. Such improvements will be programmed to start after completion of the on-going improvement of NR8, NR9 (East-West Corridor) and NR12. Rural accessibility improvement is also planned to support the on-going IRAP road improvement initiative. Provisionally it is programmed that the road construction and improvement under the IRAP Extension-1 will be implemented in 2006-2010.

Rural electrification should be further promoted as the electrification ratio is still low in SKR (36% in Savannakhet and 43% in Khammouan). The rural electrification program in SKR has already been planned by EdL, and it should be implemented as scheduled. In medium terms, 115 KV transmission line should be extended from Pakxan to Savannakhet via Thakhek.

7 URBAN-BASED DEVELOPMENT

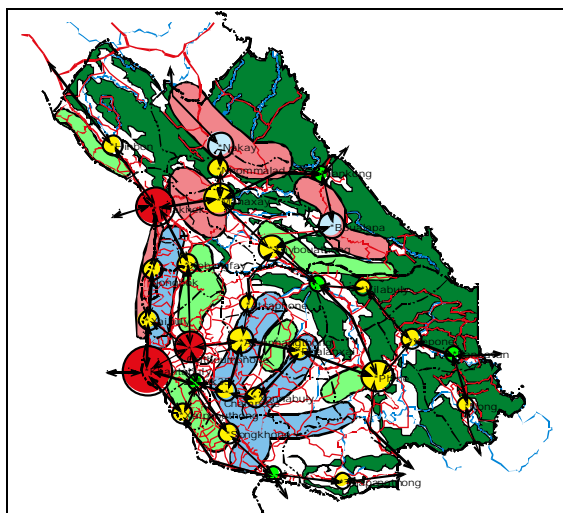
Urban Functions in SKR

The urban areas have not been developed yet in SKR except for the capitals of Savannakhet and Khammouan provinces (i.e., Khantabuly and Thakhek). However, several district centers are categorized as the urban areas, and these centers should be integrated into the SKR development plan for balanced development in the rural and urban areas.

Khantabuly and Thakhek are expected to strengthen their urban functions as consumption centers, high value added production centers, higher education and training centers, and information centers. District centers are also expected to function as marketing and information centers. Development of district centers will contribute to mitigate migration to Khantabuly and Thakhek and to attain balanced development in SKR. As set out in the social framework, the urban population in Khantabuly and Thakhek will grow at a lower rate than the population increase in district centers.

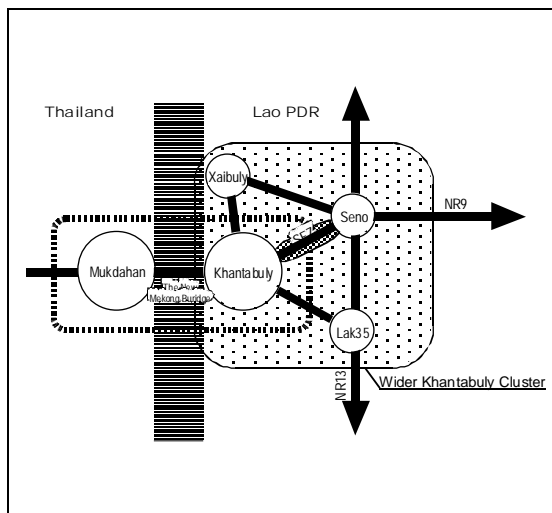
Potential Urban Cores

The urban cores in SKR will formulate a hierarchical system and develop along the transportation network. The potential urban cores are planned in the light of the spatial development framework as shown below. Likewise, it is planned that Khantabuly city would develop in combination with Seno, Xaibuly and Lak 35 forming a wider Khantabuly cluster in the long run. This cluster will serve for “pair-city development” in Savannakhet and Mukdahan crossing the New Mekong Bridge.



Source: JICA Study Team

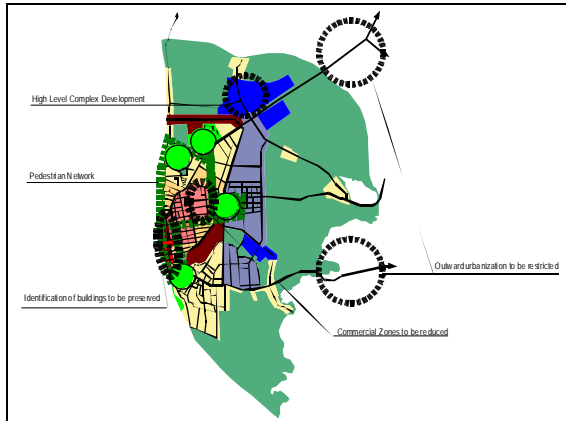
Figure S-16 Potential Urban Cores



Source: JICA Study Team

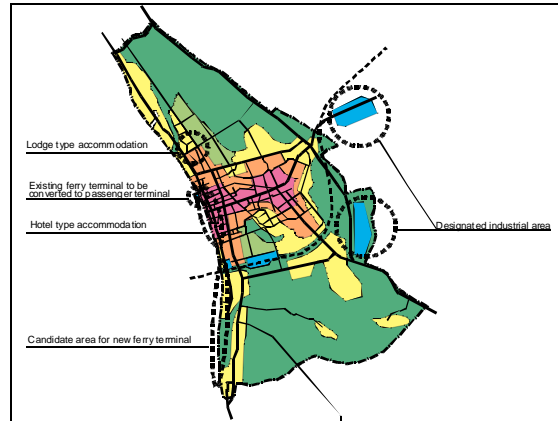
Figure S-17 Long-term Cluster Concept

For functional strengthening in Khantabuly and Thakhek, a close coordination is needed between facility development and land use management. Based on the existing urban plan, the conceptual urban structures in these cities have been planned as shown below.



Source: JICA Study Team

**Figure S-18 Conceptual Urban Structure
(Khantabuly Area)**



Source: JICA Study Team

**Figure S-19 Conceptual Urban Structure
(Thakhek Area)**

On the other had, inner-land town development has been planned by categorizing such towns as follows:

- (i) Inner Core Towns:
 - Mahaxai as a distribution center
 - Lan Khan as a center for local industries
 - Atsaphnethong as a gateway to northern areas
 - Phin as a distribution center
 - Dansavan as an inter-local trading center
- (ii) Rural Center Towns:
 - Nakai as a mother town for tourists
 - Boualapa as a tourist mother town
 - Xepone as a service center for gold/copper mine
 - Nong as a potential tourist destination
- (iii) Rural Towns:
 - Other district centers for administration, marketing and promotion of local industries

For the urban-based development, improvement of some inter-city infrastructure and inter-cluster cities infrastructure will be planned, including a Sunset Corridor between Khantabuly and Thakhek, public transport improvement and telecommunications improvement. A concept of the Tourism Free Zone along the East-West Corridor should be further studied for promotion of the tourism industry in SKR.

8 RECOMMENDED PROGRAMS

Recommended Programs

The proposed development initiatives elucidate various programs and sub-programs for implementation. Likewise, the sector-wise studies formulate additional projects/programs that have not been incorporated into the development initiatives. On the following pages, all programs/sub-programs recommended under the SKR master plan are listed together with a tentative schedule and responsible agency for implementation. A total of 57 programs/sub-programs are proposed on the list.

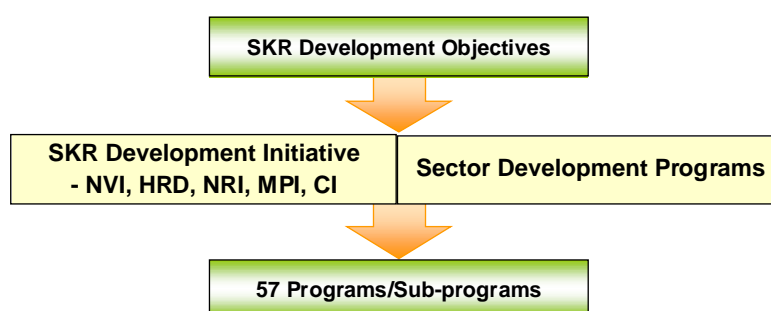


Figure S-20 Formation of Recommended Programs

Attainability of Development Targets

In the event that the programs/sub-programs are executed as recommended, the framework and objectives set for SKR development will be attained, namely:

- (i) The 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.
- (iv) Social services will be improved. Particular attention has been paid to primary education expansion so that a target set for the enrollment ratio can be attained.
- (v) Farmer's household income in SKR may double within 10 years, and the income gap between the rural and urban population can be kept at a minimum.
- (vi) Agricultural and industrial GRP set under the economic framework for SKR will be attained as far as the proposed programs are implemented as planned.

Though the targets are attainable as noted above, it is noted that implementation of the proposed programs is a challenging task for all the parties concerned. Collective and strenuous efforts of the public and private sectors, as well as external cooperation, are required to successfully implement the proposed SKR development plan.

Summary

Table S-9 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)							
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)							
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)							
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)							
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	██████	██	██	██

Code	Initiative/sector	Program/sub-Program	Program Linkage	Implementing Agency	Implementation Schedule			
					2001-05	2006-10	2011-15	2016-20
CI	Competitiveness Initiative (CI)							
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 HRD)						
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	▨	▨		

Summary

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: Paksan – Thakhek and Chanphone – Xeset	ID-2	EdL	▨		▨	
EL-6		Additional 115/22KV substations	EL-4	EdL		▨		

Source: JICA Study Team

9 KEY PRIORITY PROGRAMS

Selection of Key Programs

Out of 57 programs/sub-programs recommended in the foregoing section, some key priority programs have been selected for the pre-feasibility level study. The selection of these key programs has been made on the basis of the following:

- (i) Key programs should contribute effectively to reduction of rural poverty and for mitigation of a gap between the rural and urban areas.
- (ii) Key programs should contribute effectively to human resource development and capacity building in the short and long run.
- (iii) Key programs should contribute to protection of the environment and ecological systems in the region.
- (iv) Key programs should contribute to initiating the creation of an SKR image (i.e., ecology-friendly region and eco-products)
- (v) Key programs should contribute to balanced regional development in the long run.

As a consequence, the following five programs have been selected and studied:

- (i) New Village Initiative, as a pilot program in SKR
- (ii) Primary Education Expansion and Improvement Program,
- (iii) Savannakhet Agricultural College Program,
- (iv) Savannakhet Technical School Renovation Program, and
- (v) Degraded NBCA Forest Area Rehabilitation Program.

Results of these studies are outlined in the following pages, and details are presented in Part 3 of Final Report. These studies endorse that the proposed 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 priority 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 recommended additionally in the separately compiled report. They include (i) formulation of a cross-border business development forum, (ii) utilization of the Savannakhet Airport for pair-city development, and (iii) maintenance system of the East-West Corridor. Collective efforts should be taken for implementation of these cross-border development programs, as well.

New Village Initiative (NVI)

As a Pilot Program for Savannakhet and Khammouan

Out of 2,347 villages in SKR, about a fourth (or 567 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. Technically, it is planned that five Menus are prepared for promotion of integrated farming and seven Menus for promotion of local industries. Villages are suggested to select one or two Menus of their interest.

Table S-10 Number of Target NVI Villages

	Total Villages	Target Villages	Initial Stage	
			Y-1to3	Y-4to10
Khammouan				
Lowland	260	78	1	77
Central	320	96	4	92
Eastern	220	22	1	21
(sub-total)	(800)	(196)	(6)	(190)
Savannakhet				
Lowland	558	167	2	165
Central	528	158	2	156
Eastern	457	46	2	44
(sub-total)	(1,543)	(371)	(6)	(365)
Total	2,347	567	12	555

Source: JICA Study Team

Table S-11 Menus Prepared for Villagers

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

Financially, a new scheme is proposed to extend credits for respective Menu (\$200 to \$1,280) which should be repaid in three years. In addition, expenses for training, technical assistance, village infrastructure and monitoring will be earmarked. At the initial stage, the total cost will amount to \$162,000 in three years. During this period, the Regional Development Fund and Microfinance will be set up for the full-scale operations. For the operations in the 4th to 10th year, about \$5.8 million will be required for 555 villages, including microfinance of about \$2.8 million.

With the full-scale operation in 10 years, the production area will reach 845 ha of diversified crops, 1,410 units of cattle/chicken raising, 280 ha of fishponds, 1,410 ha of fruit tree, and 1,410 ha of coffee.

This pilot NVI program, once implemented, will double the household income within 10 years if the proposed Menus are executed as planned, except for the case of Menu-1 (diversified crops) which should be supplemented by additional activities.

Primary Education Expansion and Improvement Program

Under this program, 100 primary schools will be newly constructed (50 core schools in Savannakhet and 50 core schools in Khammouan, together with their satellite schools). In addition, the existing Savannakhet Teachers' Training College will be expanded (classrooms, dormitories and income-generating facilities) to secure teachers for the newly constructed schools. At the core primary schools, some facilities for school gardens (fruit tree, fishpond, and livestock) will be provided to generate some incomes for procurement of teaching materials. The primary schools will also have some facilities (deep well and first aid kits) to serve as a village community center. Total investment in these facilities will amount to \$6.1 million in Savannakhet and 6.7 million in Khammouan.

Table S-12 Facilities for Primary Schools

Program	Savannakhet	Khammouan	Total
1) Primary Schools: Core	50	50	100
Satellite	36	61	97
2) TTC Expansion: Classroom	8	(Equipment	8
Dormitory	12 rooms	and facilities)	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

Source: JICA Study Team

Table S-13 Estimated Cost of Facilities

(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

Source: JICA Study Team

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.

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

- (i) To request financial cooperation of international donors in constructing and providing proposed facilities;
- (ii) To request assistance in school feeding in the eastern districts where majority of pupils are 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; and
- (v) To program monitoring and evaluation of the proposed program.

Savannakhet Agricultural College Program

The Savannakhet Agricultural College will educate and train village leaders and extension workers in market-oriented agriculture and practical technologies in integrated farming. The number of students in the full operation period will be 150 students for 3-year education (admitted for at least 11th grade students and 30% for female students). About 10 short-term training courses will be offered for DAFO/PAFO extension workers, and 10 short-term training courses for village leaders. The courses are designed for (i) crops, (ii) livestock raising, (iii) fishculture, (iv) agro-forestry, (v) agro-industry/business, and (vi) irrigation/agricultural machinery. Entrepreneurship will be taught in both 3-year courses and short-term training courses.

Table S-14 Courses 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

Source: JICA Study Team

The existing agricultural training center in Ban Nake (about 11 ha) will be gradually shifted to the new campus to be located in Xaybourly (about 30 km to the north of Savannakhet) where a state land of about 800 ha is readily available. Total investment in the College is estimated to be about \$11.4 million.

Table S-15 Initial Investment Cost

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

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

- (i) To request financial support in construction and procurement of facilities,
- (ii) To request technical assistance to secure teaching staff, and
- (iii) To tie-up with similar agricultural colleges.

Savannakhet Technical School Renovation Program

The existing Technical School offers 10 courses for 843 students (against a normal student-capacity of 300). Nine buildings are located in a compound of 1 ha. The Technical School should be renovated to satisfy the increased number of applicants and to improve quality of technical education (courses, curricula and teaching staff). Under the proposed plan, the Technical School will be expanded to have a 1,500 student-capacity, with the renewed courses and curricula to meet the requirements of the industrial and service sectors.

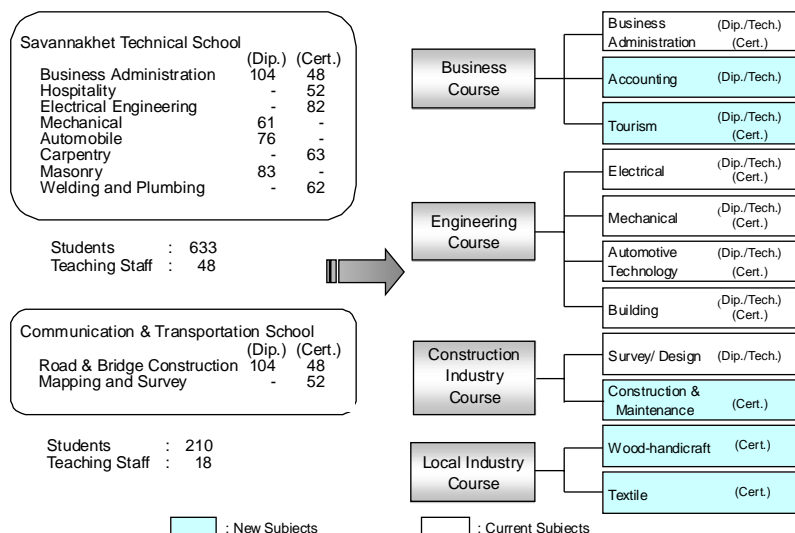


Figure S-21 Restructuring of Technical School

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 or Km 9 along NR9. The new campus will be mainly used for the Construction Industry Course, Building Course and Automotive Technology Course. The existing campus will be used for other courses. The Technical School will operate some income-generating activities (e.g., short-term workshop for local people, repairing service for the public, sales of wood-handicraft and textile, and internship). The Technical School will provide 1,820 skilled workers in 2000-2005 and 2,900 skilled workers in 2006-2010. The initial investment and operation cost/revenue are estimated as follows:

Table S-16 Estimated Cost and Revenue of Technical School

Initial Investment Cost	(US\$)	Operation Cost	(US\$)	Operation Income	(US\$)
Building construction	6,930,000	Salary	17,000	Workshop	8,100
Equipment	4,000,000	Teaching materials and maintenance	24,000	Repairing services	2,000
		Others	110,000	Product sales	500
				Internship	60,000
Total	10,930,000	Total	151,000	Total	70,600

Source: JICA Study Team

For implementation of the proposed renovation, it is recommended to take some actions:

- (i) To review the proposed restructuring of courses and curricula,
- (ii) To request financial cooperation for construction of a new campus/equipment,
- (iii) To tie-up with similar technical schools in neighboring countries.

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

About 19% of the seven National Biodiversity Conservation Areas (NBCAs, totaling about 1 million ha) in SKR are found to have been degraded due to shifting cultivation, expanded agriculture and illegal logging. The Nakai-Nam Theun NBCA is a typical NBCA having about 38,000 ha of degraded forest areas. In view of its importance for biodiversity conservation and watershed management, this degraded area is taken up as a pilot program for the rehabilitation of the degraded forest area in SKR. The proposed pilot program will incorporate 11 sub-programs as listed below, covering 25 enclave villages with the estimated population of 5,000.

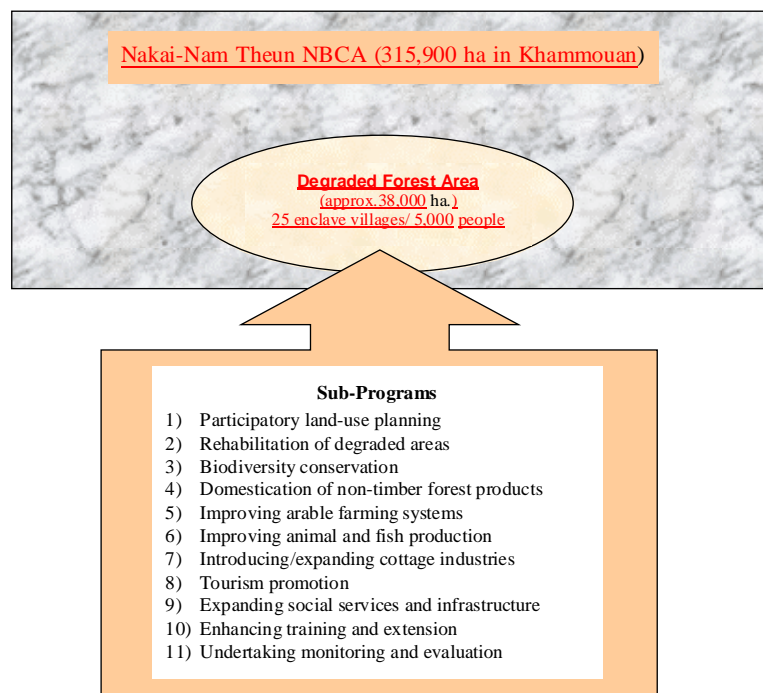


Figure S-22 Proposed Sub-programs for Degraded Forest Rehabilitation

The social settings in this area 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 cost about \$5 million for implementation.

It is proposed to carry out a feasibility level study to define (i) execution and managerial methodology of each sub-program, (ii) environmental and social impact assessment, (iii) institutional building, (iv) local industry and marketing opportunity, (v) cost estimate and financial analysis, (vi) infrastructure and network services, and (vii) capacity building. In order to executed the proposed study, it is recommended to take the following actions:

- (i) To request technical assistance to the international donors, and
- (ii) To organize a joint committee (DOF, National MRC, IUCN, World Bank, NGOs, JICA)

10 RECOMMENDATIONS

Through this study, a master plan has been formulated for the Integrated Regional Development in SKR towards the year 2020. In concluding the master plan study, a dozen suggestions are presented as overall recommendations.

- 1) This master plan for SKR has been formulated on the basis of a strategy that more attention should be paid how to elevate household income in the rural areas rather than how to improve social infrastructure. It is recommended that the PRSP be prepared with due attention to the elevation of household income to alleviate rural poverty.
- 2) This master plan focuses on promotion of rural-based development. It is recommended that limited resources for development be strategically allocated to the implementation of rural development to attain balanced regional development.
- 3) Development of human resources should be prioritized in any development program. It is recommended that focuses of the PRSP and any project implementation be strategically put on education, training and capacity building.
- 4) The master plan for SKR has been formulated as a first regional development plan. It is recommended that a provincial level master plan be formulated for each province, referring to this SKR master plan.
- 5) This master plan proposes various ideas for strategic development in each sector. It is recommended that this master plan be reviewed by the ministries concerned, and appropriate ideas and approaches be adopted in their medium-term plans.
- 6) Under the SKR master plan, five key programs have been studied and some recommendations have been presented. It is therefore recommended that appropriate actions be taken for the earliest realization of the proposed key programs.
- 7) In addition to the SKR master plan, some programs are proposed under the development plan for the Cross-National Region. It is recommended that these cross-border programs be also studied by the authorities concerned for their implementation.
- 8) JICA has been cooperating in other sector-wise master plan studies (i.e., agriculture, health, and power transmission). These studies are still underway. It is therefore recommended that these master plan studies, when completed, be referred to and some additional programs be incorporated into the SKR master plan.

- 9) The five Development Initiatives are proposed as a model for future application in other regions and provinces. It is therefore 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 master plan suggests that a country-wide development plan be formulated on the basis of a model plan proposed in SKR (e.g., local industry development plan). It is recommended that the national development strategies for local industries be formulated on the basis of the SKR plan. Likewise, it is suggested that an integrated regional development plan be formulated in the southern region (four provinces).
- 11) There is no reliable data on GPP and no agricultural and industrial census. It is therefore recommended that census and periodic surveys be carried out 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) The economic and social circumstances surrounding SKR might substantially change in the coming decade. It is 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.