

*Appendix 18*  
*Environmental Issues*

**MASTER PLAN STUDY  
ON  
INTEGRATED AGRICULTURAL DEVELOPMENT  
IN  
LAO PEOPLE’S DEMOCRATIC REPUBLIC**

**VOLUME III**

**APPENDIX-18**

**ENVIRONMENTAL ISSUES**

**Table of Contents**

	<u>Page</u>
CHAPTER 1 ENVIRONMENTAL ISSUES .....	AP18-1
1.1 Introduction .....	AP18-1
1.2 Farming Practices of Concern .....	AP18-2
1.3 Environmental Regulations .....	AP18-2
1.4 Environmental Laws and Regulations .....	AP18-3
1.5 Initial Environmental Screening of the M/P Study Programs/Projects .....	AP18-3
Chapter 2 Environmental Screening of proposed Master Plan Programs/Projects .....	AP18-7
2.1 Land and Water Resource Development. ....	AP18-7
2.2 Institutions and Organization.....	AP18-8
2.3 Human Resource Development. ....	AP18-10
2.4 Agricultural Crops. ....	AP18-11
2.5 Livestock and Fisheries. ....	AP18-17
2.6 Stabilization of Shifting Cultivation .....	AP18-19
2.7 Marketing.....	AP18-21
2.8 Rural Finance.....	AP18-23
2.9 Rural Development.....	AP18-24
2.10 Irrigation .....	AP18-25
2.11 Environmental Screening of Projects in the M/P Study.....	AP18-27

**List of Attachment**

	<u>Page</u>
Attachment 1 Annex 5 for Regulations on Environmental Assessment.....	AP18AT-1
Attachment 2 Annex 3 for the Regulations on Environmental Assessment.....	AP18AT-2

	<u>Page</u>
Attachment 3	The Regulations of Environmental Assessment ..... AP18AT-4
Attachment 4	Schematic Process for Environmental Assessment in Lao PDR .. AP18AT-6

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APPENDIX-18  
ENVIRONMENTAL ISSUES**

**CHAPTER 1 ENVIRONMENTAL ISSUES**

**1.1 Introduction**

Lao PDR covers an area of 23.68 million hectares, of which about 20.49 million ha. are classified as forest or potential forest, including about 2 million ha. of recovering shifting cultivation land, 1.85 million ha. are under permanent or temporary agriculture, 0.86 million hectares are under pasture/grasslands, with the remaining 0.48 million hectares comprising rocks, water bodies, wetlands, and urban areas etc. Within the country there are 20 National Biodiversity Conservation Areas (NBCAs) and two corridors connecting 3 NBCAs in Khammounan. The area of these NBCAs is 3.4million ha., mainly consisting of forest or potential forest. However, people live and farm inside these 'National Parks.' The mid-2001 population is an estimated 5.38 million of which more than 4.5 million rely directly or indirectly on the farming, fishing and forestry sector for their livelihood. This sector also contributes over 50% to GDP.

Over the last 20 years, the area under agriculture has increased by about 0.5 million hectares, mainly at the expense of forests, principally because of a 2 million increase in population. This trend is likely to continue, although at a decreasing pace, as agricultural productivity increases and more job opportunities open up in the industrial and service sectors. Thus, clearing land for agriculture is one of the environmental concerns. Until last year or so, the country was not self-sufficient in rice and still many poor farming families, especially in upland areas, do not grow sufficient rice for subsistence. Because of this, many of these families rely on timber and non-timber forest products (NTFPs) for income to purchase food or to collect NTFPs to supplement their diet. In addition, the government has encouraged the sale of saw logs in order to earn foreign exchange. Therefore, in some instances timber and non-timber forest resources are being over-exploited for financial reasons and subsistence requirements. Thus, over the last 20 years, not only has the area of forest decreased, but also the general quality of forests has declined. Again this is an environmental concern.

## 1.2 Farming Practices of Concern

Several farming practices leave much to be desired. These include:

- Arable farming on steep slopes without taking precautionary measures such as terracing or contour ploughing.
- Practising shifting cultivation in unsuitable areas or on too short a rotation. This leads to erosion, loss of soil fertility and texture, an invasion of noxious weeds and a reduced farm yield.
- Farming in close proximity to streams and rivers, thus exposing river banks to erosion.
- Unplanned expansion of farming sometimes in pristine forest areas and with little salvaging of valuable tree species.
- Reclaiming wetlands for rice production.
- Inappropriate irrigation systems and water application, thus making some soils waterlogged or saline.
- Clearing old grass in grazing areas by burning. This can start uncontrolled fires, kill young trees and destroy wildlife.
- Over lopping of branches to supply browse for animals, thus killing trees.
- Non-sustainable exploitation of NTFPs.
- Over fishing and using harmful fishing methods.
- Inappropriate use of fertilizers and over-use of pesticides and insecticides.

Most of these practices are carried out by individual farmers and therefore, it is impossible to rebuke them for unsustainable and environmentally harmful practices. Rather an approach to adopt, one endorsed by this M/P study, is to demonstrate alternative and sustainable systems, give them land tenure with sufficient land to farm and provide them support through training, infrastructure development, access to loans and markets etc.

## 1.3 Environmental Regulations

While the above approach should work for (existing) small farmers, all new farming projects should have at least environmental screenings undertaken on them to determine if they require a more complete Initial Environmental Examination (IEE) and a comprehensive Environmental Impact Assessment (EIA). This is laid down in the Environmental Protection Law<sup>1</sup> and elaborated in the Regulations on Environment Assessment.<sup>2</sup> According to Article 3 section 4 of these Regulations, all projects should have an Environmental Compliance Certificate (ECC), before a project can commence. A specimen copy of such a ECC is at the end as Attachment 1. This is taken from Annex 5 of the Regulations. In addition, the General Contents and Format of an IEE Report for Development

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<sup>1</sup> Lao DPR 1999. Environmental Protection Laws. National Assembly No. 99/02/NA 3 April 1999.

<sup>2</sup> STEA 2000a. Regulations on Environmental Assessment. Prime Minister's Office No 1770/STEA 10 March 2000.

Projects is given as Attachment 2. This is taken from Annex 3 of the Regulations. The Matrix giving the Process for undertaking an Environmental Assessment is given in Figure 1 as Attachment 4. This was taken from Annex 1 of the Regulations.

#### **1.4 Environmental Laws and Regulations**

In 1999, the government passed an Environmental Protection Law. This was followed by the 2<sup>nd</sup> National Environmental Action Plan 2000<sup>3</sup> and Regulations on Environmental Assessment. Article 3 of these Regulations (see Attachment 3) state that all Development Project Responsibility Agency (DPRA), e.g. MAF should make a list of all ongoing projects by March 2000 and submit it to STEA. STEA can then determine if there are environmental concerns and if so what steps the DPRA should take. Similarly each line ministry has to draw up its own regulations to undertake environmental assessments in its area of responsibility. These regulations should be submitted to STEA by October 2002.

Based on the above Regulations and taking into consideration JICA's Environmental Guidelines for Infrastructural Projects,<sup>4</sup> an Environmental Screening was undertaken for all the proposed and Priority Projects in the Agricultural Master Plan Study. A summary of this screening, by the 10 sub-sectors is given in Chapter 9. There are a total of 52 proposed projects/programs, four of which are sub-divided, bringing the grand total to 63.

#### **1.5 Initial Environmental Screening of the M/P Study Programs/Projects**

It is not possible to undertake Initial Environmental Examinations (IEE) for the broad Programs and Projects in the Master Plan Study for Agriculture. This is because programs by definition are general plans and while they may be targeted to specific agricultural sub-sectors, they are not targeted to specific areas. Also, prior to specifying the area, it is not meaningful to predict the social impacts such as gender. Similarly, most, if not all, the proposed projects, while they may be district/area specific e.g. Boloven Plateau, or sub-sector specific such as the reduction of shifting cultivation in National Biodiversity Conservation Areas, they do not specify exact project areas. This will come at the project formulation stage. Then it is possible to undertake an IEE for each project, if required. At this stage, it is sufficient to undertake an Environmental Screening of each of the proposed Program/Project. This will bring to the planner's notice the areas of concern (if any) from an environmental viewpoint and the need or otherwise for an IEE and a possible full-scale Environmental Impact Assessment (EIA). However, IEE's

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<sup>3</sup> STEA 2000b. Second National Environmental Action Plan 2000. STEA October 2000.

<sup>4</sup> JICA 1992. Environmental Guidelines for Infrastructural Projects. JICA Tokyo.

and/or EIA's should be required in the following areas where projects are proposed.

- (1) In conservation/protection areas or in areas of religious/historic significance.
- (2) Where significant forest areas are to be converted to all types of farming.
- (3) In important wetland areas and for significant irrigation schemes.
- (4) Where NTFPs are to be developed/expanded from the natural forest.
- (5) Where the use of agro-chemical, insecticides & pesticides is proposed.
- (6) Where more than 25 buildings are to be removed or relocated.
- (7) For infrastructural programs (roads, dams, buildings etc.).

For agricultural projects the areas of concern are as follows.

<b>1. Clearing Land for Permanent Agriculture</b>	
Environmental Effects	
Negative	Positive
Removing trees from pristine/historic areas causing loss of biodiversity etc. and habitat for endangered species.	Plan land clearing to cause least loss of habitat and biodiversity.
Tree loss affects water table and water retention capacity.	Plan clearing to mitigate adverse effects.
Removing trees on sloping land causes excessive erosion and water run-off during rainy season, water flow slowed in dry season, streams dry up.	Control tree removal on sloping land, retain some tree cover to diminish erosion and run-off.
Reclaiming wetlands upsets water balance, water-purifying effect, aquatic breeding grounds and bird habitat.	Avoid reclaiming important wetlands.

<b>2. Clearing Land for Rotational Agriculture</b>	
Environmental Effects	
Negative	Positive
Removing trees from pristine/historic areas causing loss of biodiversity etc. and habitat for endangered species.	Plan land clearing to cause least loss of habitat and biodiversity.
Tree loss affects water table and water retention capacity.	Plan clearing to mitigate adverse effects.
Removing trees on sloping land causes excessive erosion and water run-off during rainy season, water flow slowed in dry season, streams dry up.	Controlled tree removal on sloping land, retain some tree cover to diminish erosion and run-off.
Recovery cycle too short to regain fertility and species mix.	Appropriate cycle used.
Farming cycle too long and invasion of noxious weeds.	Appropriate cycle and species used.

<b>3. Arable Rainfed Production of Annuals on Flatlands</b>	
Environmental Effects.	
Negative	Positive
Continuous cropping with the same non-legume crop.	Inter-cropping with legumes, resting land.
Only use chemical fertilizers.	Use of organic fertilizer/manure/mulch.
Excessive use of fertilizer leading to groundwater pollution and excessive NPK in river water affecting aquatic life.	Correct application rate of both organic and inorganic fertilizers including lime.
Excessive and/or inappropriate use of pesticides/herbicides.	Reliance on integrated pest management.
Poor spacing, weeding and other management practices.	Appropriate and timely management.
Crop inappropriate for soil (too acid/alkaline).	pH of soil adjusted/appropriate crop used.
Farming practices lead to soil degradation/erosion.	Practices lead to minimum erosion etc.

<b>4. Arable Irrigated Production of Annuals (wet and/or dry season)</b>	
Environmental Effects	
Negative	Positive
Continuous cropping with the same non-legume crop.	Inter-cropping with legumes, resting land.
Only use chemical fertilizers.	Use of organic fertilizer/manure/mulch.
Excessive use of fertilizer leading to groundwater pollution and excessive NPK in river water affecting aquatic life.	Correct application rate of both organic and inorganic fertilizers including lime.
Excessive and/or inappropriate use of pesticides/herbicides.	Reliance on integrated pest management.
Poor spacing, weeding and other management practices.	Appropriate and timely management.
Crop inappropriate for soil (too acid/alkaline).	pH of soil adjusted/appropriate crop used.
Farming practices lead to soil degradation/erosion.	Practices lead to minimum erosion etc.
Excessive use of water leading to salinization/soil loss.	Correct use of water.
Inappropriate command area leading to water abuse e.g. waterlogging.	Appropriate command area.
Wrong species choice, leading to environmental degradation.	Correct species choice.

<b>5. Production of perennials on flatlands and sloping lands</b>	
Environmental Effects	
Negative	Positive
Poor species choice leading to erosion, high mortality.	Mainly positive if correct species chosen.
Excessive and/or inappropriate use of pesticides/herbicides.	Reliance on integrated pest management.
Poor spacing, weeding and other management practices.	Appropriate and timely management.
Crops inappropriate for soils (too acid/alkaline).	pH of soil adjusted/appropriate crop used.

<b>6. Animal production – ruminants</b>	
Environmental Effects	
Negative	Positive
Lack of health/control measures leads to high mortality and some fatal diseases, which could spread to other farm and wild animals.	Proper and timely control measures used.
Insufficient dry season feed, resulting in habitat destruction especially of forest areas.	Improved carrying capacity, provision of dry season feed.
Build up of poisons and toxins in food chain.	Proper and correct dosages used.

<b>7. Animal production – non-ruminants</b>	
Environmental Effects	
Negative	Positive
Lack of health/control measures leads to high mortality and some fatal diseases, which could spread to other farm and wild animals.	Proper and timely control measures used.
Insufficient feed throughout the year, leading to high mortality rate and reliance of food from surrounding areas.	Production of sufficient feed to decrease mortality and reduce scavenging.
Build up of poisons and toxins in food chain.	Proper and correct dosages used.

<b>8. Fish farming</b>	
Environmental Effects	
Negative	Positive
Lack of health/control measures leads to high mortality/some fatal diseases.	Proper and timely control measures used.
Insufficient feed throughout the year, leading to high mortality rate. This could affect the wild fish population.	Production of sufficient feed to decrease mortality.
Water quality affected because of poor management.	Correct management to control quality.
Build up of poisons and toxins in food chain.	Proper and correct dosages used.



<b>9. Mixed farming</b>	
Environmental Effects. As for arable and pastoral farming.	
<b>10. Factory farming</b>	
Environmental Effects	
Negative	Positive
Lack of health/control measures leads to high mortality and some fatal diseases, which could spread to other farm and wild animals.	Proper and timely control measures used.
Insufficient or poor quality feed, leading to high mortality rate.	Production of sufficient feed to decrease mortality.
Waste disposal can lead to pollution of streams, rivers and groundwater.	Appropriate waste disposal including biogas production and use of slurry on fields as a fertilizer.
Inappropriate use of hazardous chemicals.	Appropriate use of chemicals.
Build up of poisons and toxins in food chain.	Proper and correct dosages used.
Noxious smells from animal houses.	Control of ventilation systems.
<b>11. Hunting/gathering</b>	
Environmental Effects	
Negative	Positive
Over-exploitation of natural resources leading to a decline and sometimes local extinction of natural resources.	Sustainable resource use and domestication of some plant and animal species.
Harmful extraction and capture methods - explosives, poisons, inappropriate logging/extraction techniques.	Environmentally appropriate extraction and capture methods.
<b>12. Social effects of some farming systems</b>	
Environmental Effects	
Negative	Positive
Irrigation leads to increased water borne diseases.	Use of IPM and mosquito nets etc.
Involuntary village resettlement may occur.	Resettlement has to be agreed to through public involvement (P.I.).
Resettlement of some ethnic groups inappropriate.	Appropriate resettlement schemes.
Land-use plans imposed from above, leading to inappropriate/poor land use.	Farmers should make land-use plans.
Land allocation/titling incomplete leading to inappropriate/poor land use.	Complete allocation/titling undertaken. Through P.I.
Decreasing fallow lead to lower yields and greater dependency on NTFP's and reduced food intake. This leads to overall environmental deterioration.	Introduce alternative sustainable systems that will lead to stabilized/increased yields.
Infrastructure development can lead to local environmental deterioration.	Planning roads and building development with regard to environmental standards.

## Chapter 2 Environmental Screening of proposed Master Plan Programs/Projects

### 2.1 Land and Water Resource Development.

#### (1) Strengthening Land Use Planning (LUP) and Land Allocation (LA).

**Environmental Screening.** Positive (but possibly negative). This Project is to ensure that LUP and LA is undertaken properly. If so, this should result in environmental benefits with no IEE required. But the present methods are resulting in some environmental degradation. Thus, IEEs may be required unless the LUP is revised and repeated in many villages.

The objective of the project is to strengthen the existing LUP/LA system through the synthesis of macro-level planning and micro (village)-level planning reflecting the needs for local area development so that environmentally sound and more sustainable land uses for villagers are achieved. By securing more effective and meaningful LUP/LA, the follow-on activity of Land Registrations and Titling would be facilitated. To date, the government has been promoting LUP/LA nationwide, but now it is reported that excessively hurried LA has resulted in insufficient land use zoning, i.e. lack of village level preparation of village forest and agricultural land management agreements. Now there is need to give more attention to land-use zoning in the LUP/LA process rather than committing farmers to restricted parcels of arable agricultural land. As part of the LUP & LA exercise, the LUP teams should be trained in environmental evaluation

#### (2) Watershed Management.

**Environmental Screening.** Positive. If undertaken properly this should result in environmental benefits. However, in conservation, protection and wetland areas an IEE/IEA may be required. Also if villages are relocated an IEE/IEA is necessary.

The objective of this program is to ensure that sustainable and appropriate land use activities are undertaken in water catchment areas, especially in the upper watershed areas. The teams undertaking such activities should be trained or retrained in environmentally acceptable land use planning. An IEE or an EIA may be necessary.

#### (3) Agro-Zone Classification, Land Management & Farming Systems Development.

**Environmental Screening.** Positive. If undertaken properly this should result in environmental benefits with no IEE or IEA required.

The objectives of this program are to develop agro-zoning maps, to assist in land use and crop planning and to use remote sensing to help with existing land use and future land use classification. The teams undertaking such activities should be trained or retrained in environmentally acceptable land use planning.

- (4) Rehabilitation and Expansion of Meteo-hydrology Stations for Agricultural Development and Flood Control.

***Environmental Screening.*** Positive. This should result in environmental benefits with no IEE or IEA required.

The objectives of this program are to rehabilitate and/or expand Meteo-hydrology stations to provide timely information to the agricultural sector and to provide information to help mitigate flood damage. Thus only environmental benefits should result with no IEE required.

## **2.2 Institutions and Organization**

- (1) Institutional Development and Strengthening of MAF.

- i) Strengthening Administration and Management Procedures.

***Environmental Screening*** Neutral to Positive. No IEE or EIA required.

This is a study of the management systems and conditions in MAF, PAFS and DAFO. The results of this study will be implemented and therefore, it should lead to improved and more efficient management within MAF. This should result in neutral or positive environmental effects due to better management of projects and programs within MAF.

- ii) Strengthening Planning and Statistical Capacity.

***Environmental Screening*** Neutral to Positive. No IEE or EIA required if planning considers the environmental/social aspects.

This project is concerned with improved data collection and analysis. Much data collected by the Department of Planning (DOP) are uncertain and therefore, its use for planning purposes is unreliable. This can and does lead to poor diagnosis and wrong prescriptions. The objective of this project is to strengthen data collection, interpretation and analysis in order to assist the planning process. Such improved systems should result in an improved decision process and better policy and project formulation. Therefore, the environmental effects will be neutral or positive.

iii) Strengthening Human Resource Development Management.

**Environmental Screening** Neutral to Positive. No IEE or EIA required if planning considers the environmental/social aspects.

This project will provide technical assistance to help restructure and strengthen the planning divisions of the provincial and district offices related to agricultural and rural development under the decentralization policy. It will also empower such staff to translate the plans into concrete actions. The training programs must include environmentally friendly best farming practices with a consistent message. This will then ensure that programs and projects incorporate environmentally sustainable and socially acceptable initiatives.

(2) NAFRI Strengthening Program.

i) Institutional Strengthening and Restructuring.

**Environmental Screening.** Neutral to Positive. No IEE or EIA required if restructuring considers the environmental and social aspects specified under IO 1.3 above.

The objective of this project is to develop an efficient and effective research system for agricultural and rural development. Built into such a restructuring must be environmental concerns as mentioned in IO 1.3. Therefore, if this is undertaken, the environmental effects will be neutral or positive.

ii) Staff Capacity Building.

**Environmental Screening.** Neutral to Positive. No IEE or EIA required if the capacity building program considers the environmental and social aspects specified under IO 1.3 above.

The objective of this project is to intensify training in terms of upland crops, horticulture, fisheries, forestry and livestock so as to improve and increase research capabilities. Built into such a capacity building program must be environmental concerns as mentioned in IO 1.3. Therefore, if this is done, the environmental effects will be neutral or positive.

iii) Research Upgrading.

**Environmental Screening.** Neutral to Positive. No IEE or EIA required.

The objective of this program is to improve and upgrade research facilities and equipment at NAFRI. Provided environmental directives are followed

about noise abatement and the handling, storage and disposal of hazardous chemicals etc. then no further environmental assessment is required.

iv) Plant Quarantine Strengthening.

***Environmental Screening.*** Positive. No IEE or EIA required.

The objective of this program is to introduce new legislation and/or improve existing legislation to protect plants from diseases carried by imported plants and seeds etc. and to prevent indigenous plant diseases from being exported. The environmental consequences of such legislation can only be positive. No further environmental assessment required.

## **2.3 Human Resource Development.**

(1) Development of Provincial Natural Resource Management Methods [on going].

***Environmental Screening.*** Positive. This should result in environmental benefits with no IEE or IEA required.

The objective of this on-going project is to provide a framework for better integration and co-ordination of each province's natural resource management and socio-economic development programs. This integrated program should have positive environmental/economic effects.

(2) Strengthening Agricultural and Forestry Extension Services.

***Environmental Screening.*** Positive. This should result in environmental benefits with no IEE or IEA required.

This program will strengthen the extension services in agriculture and forestry and provide or expand environmental training. It is intimately connected to the Best Farming Practices' Publications (AC 12). Its objective is to assess the present situation regarding extension, draw up proposals for an integrated extension system and translate the proposals into action. Therefore, it should have positive environmental effects.

(3) District In-service Training and Farmer Training in Agriculture & Forestry.

***Environmental Screening.*** Positive. This should result in environmental benefits with no IEE or IEA required.

This program will strengthen the in-service and farmer training in agriculture and forestry including environmental training. It is intimately connected to the Best Farming Practices Publications (AC 12). Its objectives are to strengthen extension services at the district level and to provide vocational training to farmers. Therefore, it should have positive environmental effects.

(4) Strengthening the Technical Education Capacity in Agriculture & Forestry.

**Environmental Screening.** Positive. This should result in environmental benefits with no IEE or IEA required.

The objective of these programs is to strengthen A&FTCs and establish FVS in 9 of the provinces, with the remaining provinces being phased in at a later date. It will also improve the educational program in the 5 existing Technician's schools and develop programs for future schools. Environmental training will be part of the program and STEA with the help of NAFRI could assist in preparing or strengthening the curricula. Thus this program should have positive environmental effects.

(5) Irrigation Technician's School Improvement.

**Environmental Screening.** Positive. This should result in environmental benefits with no IEE or IEA required.

The objective of this program is to improve the educational program in the above institute and develop training for future schools. As in HR 2 above, environmental training should be part of the program. Thus, this program should have positive environmental effects.

(6) Strengthening the University Education Capacity in Agriculture, Forestry and Irrigation.

**Environmental Screening.** Positive. This should result in environmental benefits with no IEE or IEA required.

The objective of this program is to upgrade the university level training in agriculture forestry, irrigation and land and water resource management. As in HR 2 above, environmental training should be part of the program etc. Thus, this program should have positive environmental effects.

## **2.4 Agricultural Crops.**

(1) Rice Seed Multiplication System Improvement.

**Environmental Screening.** Neutral. This program will be undertaken on existing fields with no additional environmental effects. Therefore, no IEE or IEA required.

The objective of this program is to increase the production of certified rice seed. This will occur on existing fields and in research centers with no anticipated addition environmental effects. Thus, this program should have neutral environmental effects.

(2) Integrated Upland Agricultural Research.

***Environmental Screening.*** Positive (possibly negative). This program aims to stabilize rice production and to increase the production of other upland annual crops as alternatives or complements to rice. Perennial crops and livestock will also be part of the farming system. It should reduce the pressure to open up new areas and, therefore, the environmental benefits should outweigh the environmental costs. Some of the proposed species are legumes that will enrich the soil whereas others such as maize and cassava tend to exhaust the soil. Therefore, if soil fertility maintenance is important, crop rotations with legume species may be critical. *If irrigation systems are proposed, including the conversion of wetlands to arable agriculture, then an IEE/EIA should be undertaken.* Thus, when specific projects or systems are developed, a new screening should be undertaken with a follow on IEE, if necessary. Therefore, each cropping system should be treated separately. The environmental effect ranges from positive to negative depending on the crop and management practices. *Hence, there is need to treat each farming system on a case by case basis.*

The objective of this program is to stabilize the production of annuals on sloping lands. Shifting Cultivation (see Section 8) and Best Farming Practices are also intimately involved with this program. Therefore, it is anticipated that there will be little, if any, environmental costs and these will be far outweighed by benefits. Thus, this program should have net positive environmental effects, but if irrigation development is included or unsuitable annuals are proposed, then an IEE may be necessary.

(3) Crop Diversification.

***Environmental Screening.*** Neutral to Positive, but if chemicals are used they could result in negative effects. This program will be undertaken on existing fields applying improved farming practices. The environmental effects are anticipated to be neutral or positive, but could be negative through use of chemicals and poor irrigation practices. *Therefore, an IEE or IEA may be required.*

The objective of this program is to expand the varieties of annuals in the central and southern plains. This will be done by applying improved management practices as well as using improved seed varieties of alternative crops to rice on dry season irrigated land. Care has to be taken if and when herbicides and pesticides are used because faulty application of these chemicals could cause environmental damage. The program will be undertaken on existing fields and it is anticipated that the net addition environmental effects should be positive, but if chemicals are used combined with poor irrigation practices they may be negative.

(4) Suburban Horticulture Promotion.

***Environmental Screening.*** Variable. Therefore, once a specific project has been formulated an additional screening should be undertaken, followed by an IEE or IEA in some instances.

The objective of this program is to increase the production and quality of vegetables, fruit and fodder crops. The environmental effects are variable depending on location, crop and management practices (irrigation etc.). Pilot schemes will be promoted, which should incorporate appropriate management practices. But when specific projects or systems are developed a new screening should be undertaken and, if necessary, an IEE. The environmental effect ranges from positive to negative depending on the crop and management practices. Hence, there is need to treat each crop on a case by case basis.

(5) Export Oriented Crop Promotion.

***Environmental Screening.*** Variable, and if chemicals are used there could be negative effects. Land may have to be cleared, especially for cotton production and irrigation may be required. Therefore, for such crops as cotton and vegetables, an IEE may be required, but for paper mulberry and peanuts the environmental effects are anticipated to be neutral or positive. Therefore, once a specific project has been formulated an additional screening should be undertaken, followed by an IEE or IEA in some instances.

The objective of this program is to increase the quality of and quantity of export crops such as cotton, peanuts, vegetables and paper mulberry and the program will cover most agro-climatic zones in the northern region. This will be done through planting appropriate fiber crops and applying improved management practices. Care has to be taken if and when herbicides and pesticides are used because faulty application of these chemicals could cause environmental damage. Forest areas may have to be cleared for such crops as cotton. Therefore, when specific projects are developed a new screening should be undertaken, with a follow on



IEE if necessary. Therefore, each crop should be treated separately. The environmental effect is variable depending on the crop and management practices. Hence, there is need to treat each crop on a case by case basis.

(6) Fruit Production Promotion in Northern Regions.

***Environmental Screening.*** Neutral to Positive, but if chemicals are used they could result in negative effects. This program will be undertaken on existing fields or on areas that are in the fallow stage of the shifting cultivation cycle. The environmental effects are anticipated to be neutral or positive, but could be negative through use of chemicals. Therefore, an IEE or IEA may be required.

The objective of this program is to increase the quality and quantity of fruit of various species, principally in northern upland areas. This will be done by applying improved management practices as well as using improved varieties of different fruit species. Care has to be taken if and when herbicides and pesticides are used because faulty application of these chemicals could cause environmental damage. The program will be undertaken on existing fields or fallow areas in the shifting cultivation cycle. This will result in permanent perennial crops. Therefore, it is anticipated that there will be net environmental benefits, but if chemicals are used they may be negative.

(7) Fruit Production Promotion in Southern Regions.

***Environmental Screening.*** Neutral to Positive, but if chemicals are used they could result in negative effects. This program will be undertaken on existing fields or on areas that are in the fallow stage of the shifting cultivation cycle. The environmental effects are anticipated to be neutral or positive, but could be negative through use of chemicals. Therefore, an IEE or IEA may be required.

The objective of this program is to increase the quality and quantity of fruit of various species in southern upland areas. This will be done by applying improved management practices as well as using improved varieties of different fruit species. Care has to be taken if and when herbicides and pesticides are used because faulty application of these chemicals could cause environmental damage. The program will be undertaken on existing fields or fallow areas in the shifting cultivation cycle. This will result in permanent perennial crops. Therefore, it is anticipated that there will be net environmental benefits, but if chemicals are used they may be negative.

(8) Sericulture Development.

**Environmental Screening.** Neutral. This program will be undertaken at the existing Sericulture Research Center and in the homes of villagers with no additional environmental effects. Therefore, no IEE or IEA required.

The objective of this program is to increase the production of certified cocoons at the Sericulture Research Center and to disseminate these cocoons to villagers in 11 provinces. The villagers will also be taught improved management and silk production techniques. There should be no additional environmental effects. Thus, this program should have a neutral environmental effect.

(9) Farming Technology Dissemination.

**Environmental Screening.** Positive. This should result in environmental benefits with no IEE or IEA required.

The objectives of this program are to modernize and improve agricultural practices at the farmer level by collecting and developing information on various farming practices and produce publications for farmers and extension workers etc. on environmentally friendly farming practices. Part of this initiative will be to provide regular radio and TV programs on farming topics and daily information on the weather, commodity and crop prices etc.

(10) Coffee Cultivation Technology Research.

**Environmental Screening.** Neutral to Positive. This program will develop improved coffee strains and improved environmentally friendly management practices for existing coffee areas. Therefore, no IEE or IEA required unless indiscriminate use of pesticides and herbicides.

The objective of this program is to select improved varieties of coffee and to develop environmentally appropriate modern technology and management systems for coffee production. This will occur on existing coffee areas or abandoned shifting cultivation areas; therefore the anticipated additional environmental effects will be neutral to positive.

(11) Vegetable Cultivation Technology Research.

**Environmental Screening.** Neutral to Positive. This program will develop improved vegetable seeds and develop environmentally friendly management practices for vegetable cultivation. Therefore, no IEE or IEA required.

The objective of this program is to select improved varieties of various vegetables and to develop environmentally friendly management systems for vegetable production. This will occur at research stations and on existing arable farmland, therefore the anticipated addition environmental effects will be neutral to positive.

(12) Fruit Cultivation Technology Research.

***Environmental Screening.*** Neutral to Positive. This program will develop improved varieties and develop environmentally friendly management programs for fruit cultivation. Therefore, no IEE or IEA required.

The objective of this program is to select improved varieties of various fruit species and to develop environmentally friendly management systems for their production. This will occur at research stations and on existing farmland or abandoned/fallow shifting cultivation land, therefore the anticipated addition environmental effects will be neutral to positive. It will be coordinated with AC 8&9 above.

(13) Basic Seed Production Technology Development.

***Environmental Screening.*** Neutral. This program will develop and multiply non-rice foundation seeds. It will be done in existing research facilities and farmland. Therefore, no IEE or IEA required.

This program has the same objectives as AC 1 above, except it is to provide seeds for crops other than rice. This program will be undertaken at research stations and on existing farmland, therefore the anticipated addition environmental effects will be neutral.

(14) Upland Crop Cultivation Technology Research.

***Environmental Screening.*** Positive. This program will develop improved varieties of crops and land/aquatic animals for upland farmers and develop environmentally friendly farming systems. This should lead to increased and sustainable production on existing farmland. Therefore, no IEE or IEA required.

This program has the objectives of developing improved varieties of upland farm crops and developing environmentally friendly and financially beneficial practices for upland crop cultivation and animal rearing. This program will be undertaken on existing farmland or fallow shifting cultivation land; therefore the anticipated addition environmental effects will be positive.

## 2.5 Livestock and Fisheries.

### (1) Strengthening Livestock Services and Extension Activities (on going).

**Environmental Screening.** Positive. This project will continue the on-going Lao-EU Livestock Project to improve animal health and strengthen livestock services. This should lead to healthier animals with positive environmental and financial results. Therefore, no IEE or IEA required.

This project objectives are to improve animal health, reduce diseases and strengthen livestock health services. This project should result in enhanced environmental conditions, thus its effects will be positive.

### (2) Animal Health Improvement.

**Environmental Screening.** Positive. This is an extension of the above on-going Lao-EU Livestock Project to improve animal health and strengthen livestock services with positive environmental and financial results. Therefore, no IEE or IEA required.

The project's objectives are an expansion of the above project (LF 1) and should be part of the same program. This initiative should result in enhanced environmental conditions, thus its effects will be positive.

### (3) Livestock Productivity Enhancement.

**Environmental Screening.** Neutral to Positive. This project will provide technical inputs to improve animal feed. However, the private sector should handle the growing and/or production of feed. This should lead to healthier animals with neutral to positive environmental results. Therefore, no IEE or IEA required.

This project objectives are to facilitate the production of improved animal feed. It will not be directly involved in production, except on a trial basis. This initiative should result in healthier animals thus, its effects should be neutral to positive.

### (4) National Animal Health Center Improvement.

**Environmental Screening.** Neutral to Positive. This project will provide technical inputs to improve animal health with neutral to positive environmental results. Therefore, no IEE or IEA required.

This project, already planned by the Department of Livestock and Fisheries (DLF) in MAF, will strengthen the capability and capacity of the National Animal Health Center. This initiative should result in healthier animals with neutral to positive results.

- (5) Animal Disease Control Promotion Project in the Indo-China Region (on going).

**Environmental Screening.** Positive. This on-going project is providing training to veterinary staff on disease control in the Indo-China region. It should reduce the incidence of animal diseases throughout the region and provide positive environmental results. Therefore, no IEE or IEA required.

This on-going project is establishing a regional strategy for animal health and disease control. This initiative should result in healthier animals with positive results.

- (6) Aquaculture Improvement and Extension.

**Environmental Screening.** Positive. This will establish an aquaculture center to provide training, improved seed production and appropriate techniques. It should result in environmental sustainable practices. Therefore, no IEE or IEA required.

The objectives of this initiative are to establish an aquaculture center at Xamxouang in order to train counterparts in improved technology and extension activities. Experiments will be undertaken on methods of fish fry production and out-grow techniques. This initiative should result in more productive and healthier fish farms throughout the country with positive environmental results.

- (7) Fish Seed Centers: Rehabilitation and Expansion.

**Environmental Screening.** Positive. Rehabilitated and new fish stations will be in a position to provide an improved service to farmers. It should result in more environmental sustainable practices. Therefore, no IEE or IEA required.

The objectives of this program are to rehabilitate existing fish stations and establish new ones in order to improve the extension service for actual and potential fish farmers. This activity should result in more sustainable fish production in upland areas with positive environmental results.

(8) Rural Aquaculture Development.

**Environmental Screening.** Positive (to negative). The aim of this project is to develop aquaculture in rural areas. Therefore, no IEE or IEA required provided the ponds are established according to laid down practices, otherwise an IEE may be required.

The objectives of this program are to develop aquaculture in rural areas, especially around dams. It is important that ponds are developed in environmentally sustainable ways, otherwise there is a danger that they could cause environmental damage. Therefore, monitoring of new ponds is important. If this is done, then this project should result in more environmental sustainable practices. Part of this program will be to encourage fish feed mill and the marketing of fish with through the promotion of cold storage techniques. This activity should result in more fish production in upland areas with positive environmental results.

## 2.6 Stabilization of Shifting Cultivation

(1) Stabilization of Shifting Cultivation (outside NBCAs).

- Stabilization of Shifting Cultivation in the Southern Region.

**Environmental Screening.** Positive. The aim of this project is to stabilize shifting cultivation in 3 Southern Provinces bordering Viet Nam. If it is achieved to any extent it will have positive environmental effects. Some of the projects may be in protection areas. Therefore, in such cases an EIA may be required, otherwise no IEE or IEA required.

The objectives of this program are to stabilize shifting cultivation in areas in the Southern Region outside NBCAs through sustainable land-use systems, expand the management of NTFPs, clarify village boundaries, draw up management plans and develop income-generating activities. All or most of these activities should result in increased and sustainable use of natural and planted resources. Therefore, these initiatives should result in greater productivity in upland areas with positive environmental results. However, if shifting cultivation is in protected or wetland areas, an EIA may be required with a specified Environmental Management Plan (EMP).

- Stabilization of Shifting Cultivation in the Northern Region.

**Environmental Screening.** Positive. The aim of this project is to stabilize shifting cultivation in 5 Northern Provinces. If achieved to any extent it will have positive environmental effects. Some of the projects may be

in protection areas. Therefore, in such cases an EIA may be required, otherwise no IEE required.

The objectives of this program are to stabilize shifting cultivation in areas in the Northern Region outside NBCAs through sustainable land-use systems, expand the management of NTFPs, clarify village boundaries, draw up management plans and develop income generating activities. All or most of these activities should result in increased and sustainable use of natural and planted resources. Therefore, these initiatives should result in greater productivity in upland areas with positive environmental results. However, if shifting cultivation is in protected/wetland areas, an IEE may be required with an EMP.

- Upland Development and Poverty Alleviation.

**Environmental Screening.** Positive. The aim of this project is to promote rural development in upland areas where shifting cultivation is practised. This should result in positive environmental effects. Some of the initiatives may be in protection areas. Therefore, in such cases an EIA may be required, otherwise no IEE or IEA should be needed.

This project is currently being formulated as a development component to interface with the Lao-Swedish Agricultural & Forestry Research Programme. Its objectives are similar to those of SC 1&2 and may cover Luang Prabang, Savannakhet and Sayaboury Provinces. The activities include promoting sustainable land-use systems, expanding the management of NTFP's, clarifying village boundaries, draw up management plans and develop income-generating activities. All or most of these activities should result in increased and sustainable use of natural and planted resources. Therefore, these initiatives should result in greater productivity in upland areas with positive environmental results. However if some initiatives are in protected or wetland areas, an EIA may be required with a specified EMP.

(2) Stabilization of Slash and Burn inside NBCA/Watershed Protection Areas.

**Environmental Screening.** Positive. The aim of this project is to stabilize shifting cultivation. If it is achieved to any extent it will have positive environmental effects. Even though there should be positive environmental benefits, an IEA may be required because they are in conservation/protection areas.

The objectives of this program are to stabilize shifting cultivation in National Biodiversity Conservation Areas (NBCA) through sustainable land-use systems, expand the management of NTFPs, clarify village boundaries, draw up management plans and develop income generating activities. All or most of

these activities should result in increased and sustainable use of natural and planted resources. Therefore, these initiatives should result in greater productivity in upland areas with positive environmental results. However an EIA may be required with a EMP because it is in an NBCA. This program is closely related to the Watershed Catchment Management Program in LW 3 above.

(3) On-farm Agro-forestry Research for Sustainable Upland Farming

***Environmental Screening.*** Positive. The aim of this project is to provide sustainable alternatives to shifting cultivation. If farmers adopt them they will have positive environmental effects. Therefore, no IEE or IEA should be required.

The objectives of this program are to develop and establish area based sustainable agro-forestry field models as alternatives to shifting cultivation. These alternatives should result in increased and sustainable resource use. It will assist the above two initiatives (SC 1&2). Therefore, it should result in more stable agricultural/tree management practices in upland areas with positive environmental results.

(4) Research on Sustainable NTFP Management and Utilization

***Environmental Screening.*** Positive. The aim of this program is to popularize sustainable NTFP systems. If farmers adopt such technologies there will be positive environmental results. Therefore, no IEE or IEA should be required.

The objectives of this program are to promote sustainable management, harvesting and utilization of non-timber forest products (NTFP). This program, if successful, should result in increased and sustainable resource use. It will assist the shifting cultivation stabilization initiatives. Therefore, this initiative should result in more stable tree and agricultural management practices in upland areas with positive environmental results.

## 2.7 Marketing.

(1) Agricultural Commodity Marketing Intelligence.

***Environmental Screening.*** Neutral. No IEE or EIA required.

The objective of this program is to ensure access to price and production information for producers and buyers. This program only collects and distributes information and therefore is environmentally neutral.



(2) Encouraging the Formation of Farmers Production Groups (on going).

**Environmental Screening.** Neutral to Positive. No IEE or EIA required if the production groups consider the environmental and social aspects specified under IO 1.3 above.

The objective of this on-going program is to encourage farmers growing the same crop or raising the same animal species to join together in common groups so that they will have greater bargaining power for commodity purchase and product selling. Such groups should be made aware of best farming practices as well as methods to improve their bargaining power. This program should improve the economic well being of its members and make them aware of environmentally friendly farming practices.

(3) Agricultural Products Grading and Classification.

**Environmental Screening.** Neutral. No IEE or EIA required.

The objective of this program is to create a grading and classification system for agricultural products in national and international markets. This is an environmental neutral program.

(4) Export Potential and Inputs Supply Study of Agricultural Commodities.

**Environmental Screening.** Neutral. No IEE or EIA required.

The objective of this program is to promote trade of agricultural commodities in national and international markets. This is an environmental neutral program.

(5) Processing and Marketing of Non-timber Forest Products (NTFPs).

**Environmental Screening.** Possibly Negative but normally Neutral to Positive. No IEE or EIA required if the studies consider the environmental and social aspects specified under IO 1.3 above. Otherwise IEEs may have to be undertaken.

The objective of this program is to study potential markets for NTFP including wood energy for sale and as inputs to rural industries. This should identify opportunities for agro-processing development and potentials to increase revenue from the sale of NTFPs in national and international markets. This program should consider the sustainable production of NTFPs and their domestication. Therefore, it should consider the social and environmental aspects specified under IO 1.3. If not, IEE should be undertaken.

## 2.8 Rural Finance.

- (1) In-service Training of SOCB Staff and the Expansion of the Training Center.

**Environmental Screening.** Neutral. No IEE or EIA required.

The objective of this program is to provide a systematic in-service training program system to the staff of State Owned Commercial Banks (SOCB) based on effective operation and management methods in order to promote the banking system in rural areas. As this is a training program, there are no environmental concerns. Hence, this is an environmental neutral program.

- (2) SOCB Operational Performance Improvement and Extension of Branch Banking

**Environmental Screening.** Neutral. No IEE or EIA required.

The objectives of this program are to improve the performance of SOCB to extend their coverage, especially to rural areas, to encourage savings and to promote loans. While promoting loans, bank staff should be provided with some environmental training so that they do not offer loans for projects or proposals that are environmentally questionable. This is a development program and new buildings may be erected. The buildings should be in conformity with the building code and have acceptable waste disposal facilities. If this is done, then this can be regarded as environmentally neutral.

- (3) Expansion of Credit to Farmer Groups by the Agricultural Promotion Bank.

**Environmental Screening.** Neutral (possibly negative). Environmental factors should be considered during loan review applications.  
An IEE or EIA may be required.

The objective of this program is to expand credit to Farmers' Groups in order to encourage commercial production. This program is closely connected to the ongoing promotion of Farmers' Groups (see M 3). The APB should incorporate environmental factors when reviewing loan applications. STEA in cooperation with MAF could draw up environmental guidelines to be considered in every loan application. If applicants don't fulfill specific conditions or are unwilling to do so, then the loan should be refused. The APB should monitor the loan from a financial and environmental viewpoint. It is possible that an IEE or EIA may be required as a condition of the loan.

- (4) APB Restructuring and Reorganization on the Recommendations of a Diagnostic Study.

**Environmental Screening.** Positive (or neutral). Environmental factors should be included in the loan application review. No IEE required.

The objective of this program is to undertake the recommendations of the diagnostic study of the Agricultural Promotion Bank. One recommendation could be to incorporate environmental factors when considering loan applications. STEA in cooperation with MAF could draw up guidelines. As this is concerned with restructuring etc., no direct environmental impacts are anticipated, but impacts are anticipated as a result of the loan program. If the initial environmental screening is properly undertaken then only positive (or neutral) environmental effects are anticipated.

- (5) Extension and Expansion of Activities in the UNDP/UNCDF Micro-finance Training Center to all Provinces.

***Environmental Screening.*** Neutral, but environmental factors could be incorporated in the support system mechanism. No IEE or EIA required.

The objective of this program is to establish systematic support systems for rural finance, credit delivery and deposit mobilization. This will be done through the UN's Capital Development Fund's Micro-finance Training Center. Incorporated into such supporting systems should be environmental guidelines. STEA in cooperation with MAF could provide guidelines. However, this can be regarded as an environmental neutral program.

## **2.9 Rural Development**

- (1) Village-led Agricultural Development Initiatives in Remote Rural Areas (VADIRRA), covering 1,300 villages (Phase 1)
  - VADIRRA in Champasak, Attapu, Saravan and Xekong.
  - VADIRRA in Khammouan and Savannakhet.
  - VADIRRA in Vientiane Municipality, Vientiane and Borikhamxai.
  - VADIRRA in Xaisomboun and Xiangkhouang.
  - VADIRRA in Xaignabouri, Louangphrabang and Houaphan.
  - VADIRRA in Oudomxai, Bokeo, Louangnamtha and Phongsaly.

***Environmental Screening.*** Variable. The aim of this program is to remove poverty constraints in selected villages. Once the programs have been finalized they should be examined and a more detailed screening undertaken. *Therefore, individual IEEs or IEAs may be required depending on proposed activities.*

The objective of this program is to remove poverty constraints in 1,300 selected villages through improved infrastructure development and applying a bottom-up participatory community planning process. Once individual village plans have

been made they should have a more thorough environmental screening. This may be followed by an IEE/EIA.

(2) Integrated Agricultural and Rural Development in the Boloven Plateau

***Environmental Screening.*** Usually negative. This program will promote increased farm outputs through road, irrigation, draining etc., together with appropriate agricultural support. The environmental effects are anticipated to be negative, especially in regard to wetland drainage. Therefore, it is anticipated that at least an IEE will be required.

The objective of this program is principally to improve the infrastructure and improve/extend the irrigation system. This may entail draining some wetlands. Infrastructure development, especially wetland draining requires at least an IEE and usually an EIA. Therefore, one the site-specific projects have been formulated the environmental screening will usually indicate that an IEE or EIA is required with EMP.

(3) Area Based Integrated Rural Development (Phase 1)

***Environmental Screening.*** Usually negative. The aim of this program is to promote agricultural development in remote areas by improving infrastructure. Once the specific village initiatives have been finalized they should be examined and a more detailed screening undertaken. Therefore, individual IEEs or IEAs usually required depending on proposed activities.

The objective of this program is to promote participatory agricultural development including cottage industry development in selected villages in remote areas. This will be done through a menu of initiatives, especially by improving the infrastructure. Only after the specific initiatives are detailed will it be possible to undertake a meaningful screening, but it seems that IEEs will be required. The screening will reveal if an IEE/EIA is required with EMP.

## 2.10 Irrigation

(1) Community Managed Irrigation Sector Project-2 (CMI-2)

***Environmental Screening.*** Variable. The aim of this project is to increase food security and incomes in the northern uplands. This will be done through growing irrigated rice and improving village access. Road and irrigation constructions are proposed. These could have negative environmental effects. On the other hand,

paddy rice could reduce the production of upland rice grown under shifting cultivation. Once plans have been made for villages, *individual IEEs or IEAs may be required depending on the proposed activities.*

The objectives of this project are: to increase sustainable agricultural production; to improve watersheds by reducing shifting cultivation; and to construct feeder roads. These activities have both positive and negative environmental effects. Once community managed irrigation schemes have been identified and the proposals drawn up, detailed environmental screening should take place covering all aspects. Only then will it be possible to undertake a proper screening. This screening will reveal if an IEE is required.

(2) Decentralized Irrigation Development and Management Project (on going).

**Environmental Screening.** Neutral. The aim of this project is to transfer irrigation schemes to farmers including training in appropriate water management practices. Thus, no IEE or IEA is required.

This is an on-going project, whose aim is to facilitate the transfer and rehabilitation of existing irrigation schemes to farmer groups through Water Users Associations and to train farmers in water management practices. This is an ongoing project and therefore the additional environmental consequences should be neutral to positive provided the schemes are properly maintained and the water is used in an appropriate way.

(3) Agricultural Development Project (on-going).

**Environmental Screening.** Neutral. This is a similar project to I 2 above centered in the southern provinces. The aim is to rehabilitate irrigation facilities and promote crop diversification. Included in the initiative is training in appropriate water management practices. Bearing this in mind, no IEE or IEA is required.

This is an on-going project, whose aim is to enhance agricultural productivity and crop diversification through the rehabilitation of irrigation facilities in the southern Laos. The additional environmental consequences of rehabilitating irrigation schemes should be neutral to positive provided the schemes are properly maintained and the water is used in an appropriate way. Therefore, no additional environmental assessment is required.

(4) Accelerated Irrigation Management Transfer (IMT).

**Environmental Screening.** Neutral. This is a Technical Assistance study to propose ways whereby existing irrigation schemes

can be transferred to WUAs. Thus, no IEE or IEA is required.

This is a study to establish a database on existing irrigation schemes, to list schemes that could be transferred to WUAs and propose methods of transfer. As this is just a study, it is environmentally neutral, although environmentally sound irrigation practices should be included in its proposals. Therefore, no additional environmental assessment is required.

(5) Community Managed Small-scale Irrigation.

***Environmental Screening.*** Variable. This is a follow on to the above project. Existing irrigation schemes are transferred to Water Users Associations. Some new construction of irrigation schemes may occur. In such cases *an IEE or IEA may be required after a screening of the specific project is undertaken.*

This program consists of many individual sub-projects whereby existing irrigation schemes are transferred to WUA and some new schemes built. Each project, once it has been formulated, should be screened. Any new irrigation systems as well as extensions to existing systems should undergo at least an IEE. Therefore, environmental screening of all individual proposals should be undertaken, followed by IEE/EIA when necessary.

(6) Flood Disaster Mitigation.

***Environmental Screening.*** Neutral to Positive. This program is designed to reduce flooding along the Mekong with positive environmental effects. No IEE or EIA required unless people moved.

This program consists of undertaking an assessment of areas damaged by flooding, planning and undertaking flood mitigation measures, rehabilitating existing systems and upgrading the observatory monitoring systems. Thus, the environmental consequences of this program will be mostly positive, unless villages/villagers have to be relocated. Therefore no IEE or EIA should be required except for relocation of people.

## **2.11 Environmental Screening of Projects in the M/P Study.**

If and when the proposed projects in the M/P study are converted into actual projects, with a project description for specific areas, then an Environment Screening has to be undertaken. This is required so that an Environmental Compliance Certificate (ECC) can be issued. As indicated in the initial environmental screening process, about 75% of the proposed projects will give

either positive environmental benefits, or are neutral. However, according to the law, even these projects must go through a screening process in order to obtain a ECC. The Ministry of Agriculture and Forestry has not yet issued Environmental Regulations for projects covering their sphere of influence. In the interim, a matrix for environmental screening has been compiled covering the areas that should be considered when undertaking an environmental assessment once the project area has been identified and a description of the project is available. This matrix is given below. The matrix covers nine environmental areas or classes and fifty environmental elements. Not all these elements are relevant for each individual project. However, for each project the relevant ones are considered and a 'scoring' is undertaken for positive and negative environmental effects ranging from significant to little. If as a result of the scoring there are possible moderate to significant negative environmental consequences, then an Initial Environmental Examination (IEE) has to be undertaken with a possible Environmental Impact Assessment (EIA) to follow. The process and format for an IEE and EIA is described in the Environmental Assessment Regulations (STEA 2000). An important part of the IEE/EIA process is formulating an Environmental Management Plan (EMP) that spells out measures to mitigated possible negative environmental damage. The EMP should be drawn up with the cooperation and agreement of the beneficiaries. A flow diagram for the whole environmental assessment process is given below after the matrix (Attachment 4). Until MAF has issued its own regulations these general guidelines should be followed when preparing an environmental screening for actual projects. As mentioned previously this is necessary in order to obtain that an Environmental Compliance Certificate. Only after this is granted can a project proceed.

**Possible Environmental Matrix for Environmental Screening of Agricultural Programs/Projects  
proposed for the MP.  
(Prior to Initial Environmental Evaluation (IEE)/ Environmental Impact Assessment)**

I. Institutions and Organisations		Program/Project number						
Class	Environmental Elements	1	2	3	4	5	6	7
I	Surface water							
	Groundwater							
	Irrigation							
	Wetland							
	Soil							
	Geology							
	Erosion							
	Climate							
	Ecology of fisheries							
	Natural vegetation							
	Wildlife habitat							
	Non-timber forest products							
II	Hazardous substances (pesticides)							
	H S (insecticides)							
	Solid wastes							
III	Water resources							
	Fish culture							
	Arable production rainfed							
	Arable production irrigation							
	Shifting cultivation							
	Pastoral Production ruminants							
	Pastoral production non-ruminants							
	Mixed farming							
	Factory farming							
	Integrated pest management							
	Wood production							
	Non-wood production							
	Mining							
	Energy resources							
IV	Air quality							
	Water quality							
	Noise							
V	Community facilities and services							
	Infrastructure							
	Transportation							
	Community population							
	Resettlement							
	Income							
	Gender							
	Ethnic distribution							
	Lifestyle							
VI	Accessibility							
	Activities							
VII	Historic/Religious sites and structures							
	Archaeological or paleontological sites							
VIII	Natural landscape							
	Cultural landscape							
IX	Elimination/relocation of enterprises							
	Employment							
	Local economy							

Environmental Elements		Environmental Screening Score	
I Natural and Biological Environment	VI Open Space & Recreation	A+ Significant	A- Significantly negative
II Environmental Hazard	VII Historic Resources	B+ Moderate	B- Moderately negative
III Resource Conservation and Use	VIII Visual Resources	C+ Little	C- Little negatively
IV Air, Water, and Noise Quality	IX Economic Environment	U Unclear	(Blank) Not Applicable
V Community Facilities/Services and Structures			



**Attachment 1, taken from:  
Annex 5 for Regulations on Environmental Assessment.**

**General contents for an Environmental Compliance Certificate  
resulting from a project's environmental screening  
Under the form without *[or with conditions]***

Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

\*\*\*\*\*

Prime Minister's Office  
Science Technology and Environmental Agency

No        /STEA.PM  
Vientiane, .....

Certificate

As a result of the project proposal review and recommendations of .....Development Project Responsible Agency (DPRA), document No. ..., of..... (month/ year), for Project.....(Project Name), conducted by.....(the name of company or any institution which is recruited for developing project description), STEA certifies that, according to the screening information provided by .....(DPRA), the project will not create adverse environmental and social impacts and agrees that the project in question does not require further environmental assessment.

Therefore, STEA issues a certificate to approve such project proposal.

*[STEA issues the following certificate of approval for the project proposal with the following conditions (if any): 1. 2, 3 etc....]*

President  
Science Technology and Environment Agency

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**Attachment 2 taken from:  
Annex 3 for the Regulations on Environmental Assessment.**

**General Contents and Format of an IEE Report for Development Projects.**

1. Introduction
  - Name and address of project owner
  - Name, address and affiliation of the author of the report
  - Purposes of the report
  - Purposes of the project
  
2. Project Description
  - Type, size and location of project
  - Project activities and their timing/sequence
    - i. construction period
    - ii. operation period
    - iii. closure period
  - Quantity and quality of raw material to be used
  - Quantity and quality of waste products generated by the project
  - Project costing
  
3. Environmental description of project area (baseline data)Introduction
  - Physical
  - Biological
  - Economic
  - Social
  
4. Environmental Impacts
  - Impacts during project construction period
    - physical (air, water, land)
    - biological (fauna and flora)
    - economic
    - social
  - Impacts during project operation period
    - physical (air, water, land)
    - biological (fauna and flora)
    - economic
    - social
  - Impacts during project closure phase
    - physical (air, water, land)
    - biological (fauna and flora)
    - economic
    - social

5. Environment Management Plan or draft TOR for an EIA

If the project is not required to undertake an EIA, the EMP must contain:

- protective or reduction measures for environmental impacts
- compensation measures (if any)
- institutional arrangements, timing and budgets for implementation of EMP
- an environmental monitoring programme

In case the project is required to undertake an EIA, the draft TOR on EIA must contain:

- the area of expected environmental impacts
- EIA methodology
- persons or entities involved in undertaking an EIA

6. Description of public involvement activities during IEE

7. Conclusions and Recommendations

**Attachment 3 taken from:**  
**The Regulations of Environmental Assessment.**  
**PART II. General Principles, Environmental Assessment Process and Procedures**  
**in the Lao PDR**

**Subpart 1: General Principles**

**Article 3:** EA should be undertaken using the following general principles:

1. Each Development Project Responsible Agency (DPRA) must ensure that any development project in the Lao PDR carries out EA in accordance with the content determined in this Regulation, and any regulation of its own line ministry.  
The Environment Assessment must include at least a Project Description to enable DPRA to perform a project environment screening under Article 7 of this Regulation. If the project is not exempt under this Regulation's Article 8, the EA must include an Initial Environment Examination (IEE) as specified in Article 9 of this Regulation. For some projects, through the findings of the IEE, an Environmental Impact Assessment (EIA) is required as specified in Articles 11, 12, 13, and 14 of this Regulation.
2. The steps of the EA process are demonstrated in the chart under Annex 1. They are as follows:
  - description of project
  - screening of project environment
  - preparation of IEE
  - review and approval of the IEE, including either an Environmental Management Plan (EMP) or Terms of Reference (TOR) for conducting an EIA where the IEE determines that an EIA is required
  - preparation of EIA, based on IEE findings
  - review and approval of the EIA report including an EMP
  - implementation of the EMP
  - project monitoring and evaluation
3. Each development project must follow the steps in this Regulations' Articles 3 (2) & 5 (2) as appropriate.
4. No construction or other physical activities shall be undertaken at a project site until STEA has issued an environmental compliance certificate for the project, in accordance with Article 8 (4), Article 10 (5), Article 13 (5) and Article 14 (2) of this Regulation.

5. The DPRA must:

- Within 6 months after the enactment of this Regulation make a list of all projects within its sector area of responsibility that did not undertake EA as part of the project approval cycle, but have caused significant impact on the environment. Each DPRA must provide the above list to STEA for consideration. Within 60 days after receiving such list, STEA shall either approve the list or advise the DPRA to reconsider the list of projects.
- Within 9 months after the enactment of this Regulation, the DPRA must advise the project owners of each project on the list to develop an EMP. This plan must contain all negative environmental impacts from the project and propose mitigation measures to address such negative impacts.

Within 24 months after the enactment of this Regulation, each owner of a project on the above list must submit an EMP to the DPRA for consideration. Within three months of receiving the plan, the DPRA must approve the plan, or must require the project owner to revise it.

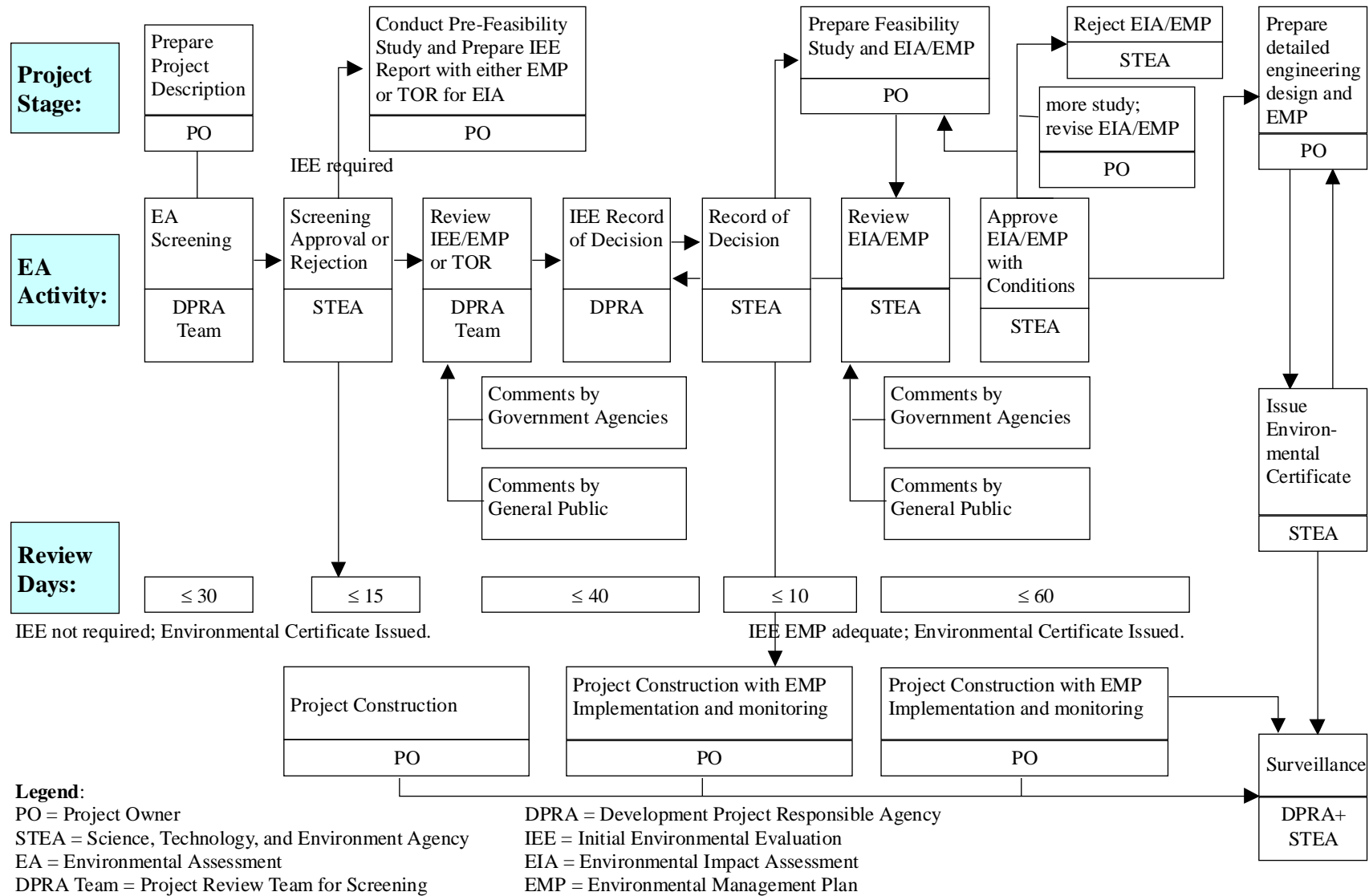
Upon approval of the EMP, the project owner must implement the EMP in conformance with its contents and schedule.

6. Within six months after the enactment of this Regulation, the Science, Technology and Environment Agency must put in place qualification guidelines for all persons, entities or organizations who undertake Environmental Assessment in the country

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**Attachment 4 Taken from the Regulations**

**Annex 1 Schematic Process for Environmental Assessments in Lao PDR**



*Appendix 19*  
*Past and Current*  
*Agricultural Development Projects*

**MASTER PLAN STUDY  
ON  
INTEGRATED AGRICULTURAL DEVELOPMENT  
IN  
LAO PEOPLE’S DEMOCRATIC REPUBLIC**

**VOLUME III**

**APPENDIX-19**

**PAST AND CURRENT AGRICULTURAL DEVELOPMENT PROJECTS**

**Table of Contents**

	<u>Page</u>
1. Land and Water Resources Development	
PLW-01 Land Titling Project.....	AP19-1
2. Institutions and Organization	
PIO-01 Institutional Development and Strengthening of the Ministry of Agriculture and Forestry.....	AP19-3
3. Human Resources Development	
PHR-01 Curriculum Development and In-service Training for Teaching Staff in the Secondary Agricultural School in Lao PDR .....	AP19-5
PHR-02 Occupation Oriented Basic Vocational Training in the Informal Sector.....	AP19-6
PHR-03 Pilot Extension Project.....	AP19-7
PHR-04 Promotion of Forestry Education Project (PROFEP) .....	AP19-8
PHR-05 Projet de Transformation de l’Ecole Superieur d’Agriculture de Nabong and Faculte d’Agriculture (PTEF) .....	AP19-9
4. Crops: Research, Extension and Related Activities	
PAC-01 Lao-IRRI Rice Research and Training Project (LIRRTTP), Phase 1 to 3 .....	AP19-11
PAC-02 Lao-IRRI Rice Research and Training Project (LIRRTTP), Phase 4 .....	AP19-12
PAC-03 Xiangkhouang Agriculture Development Project Phase I .....	AP19-13
PAC-04 Xiangkhouang Agriculture Development Project Phase II.....	AP19-14
PAC-05 National Integrated Pest Management (IPM) .....	AP19-15
PAC-06 Rural Development Project in Bolaven Plateau .....	AP19-16
5. Livestock and Fisheries	
PLF-01 Strengthening of Livestock Service and Extension Activities.....	AP19-17



	<u>Page</u>
PLF-02 Animal Disease Control in Thailand and Neighboring Countries.....	AP19-18
PLF-03 Forages and Livestock Project.....	AP19-19
PLF-04 Provincial Aquaculture Development Project.....	AP19-20
PLF-05 National Aquatic Resources Institute Project .....	AP19-22
6. Stabilization of Shifting Cultivation	
PSC-01 Industrial Tree Plantation Project – ITPP – ADB - 1295 .....	AP19-23
PSC-02 Linking Hin Namno NBCA and Phong Nha – Ke Bang Nature Reserve through Parallel Conservation - LINK .....	AP19-24
PSC-03 Learning and Innovation Loan [District Upland Development and Conservation] (LIL - UNDP) .....	AP19-25
PSC-04 Louangnamtha Integrated Villages Development Project (LNT – IVDP)...	AP19-26
PSC-05 Dong Hua Sao & Phou Xiang Thong Biodiversity Conservation Project (BCP).....	AP19-27
PSC-06 Sustainable Management of the Resource in the Lower Mekong Basin (second phase) (SMRP - LMB) .....	AP19-28
PSC-07 Biodiversity Conservation Plan for Bokeo Province and Management of Nam Kan Protected Area (NK-BOKEO-MP).....	AP19-29
PSC-08 Phou Dene Dinh NBCA Conservation Project (PDD) .....	AP19-30
PSC-09 Lao-Swedish Forestry Programme – Phase IV.....	AP19-31
PSC-10 Shifting Cultivation Stabilization Project (SCSP).....	AP19-32
PSC-11 Forest Conservation and Afforestation Project (FORCAP).....	AP19-33
PSC-12 Forest Management & Conservation Project (FOMACOP).....	AP19-34
PSC-13 Integrated Watershed Management in Xieng Khouang and Houaphan Provinces (NIWMAP) .....	AP19-35
PSC-14 Xiangkhouang Agriculture Development Project (XKN-ADP-2) .....	AP19-36
PSC-15 Integrated Biodiversity Conservation and Community Development in Nam Et and Phou Loei NBCAs.....	AP19-37
PSC-16 Micro-Projects Luang Prabang II .....	AP19-38
PSC-17 Alternative Development Project-LCDC/UNDCP 1. Long district 2. Beng district 3. Nonghet district 4. Nam Ven and Nam Ham Sub-Districts .....	AP19-39
7. Rural Finance	
PRF-01 Improvement of SOCB Operational Performance .....	AP19-41
PRF-02 Micro-finance Project.....	AP19-42
PRF-03 Agriculture Promotion Bank (APB) Diagnostic Study.....	AP19-43
8. Rural Development	
PRD-01 Micro-Projects Program in Luangprabang Province, Phase II .....	AP19-45

	<u>Page</u>
PRD-02 Agriculture and Rural Development Project in Vientiane Province in Lao PDR (VARDP).....	AP19-46
PRD-03 Focal Site Program (National Rural Development Program).....	AP19-47
9. Irrigation	
PIR-01 Agriculture Development Project to Control Slash and Burn Cultivation in Oudomxai.....	AP19-49
PIR-02 Feasibility Study on Agriculture and Rural Development Project in the Suburbs of Vientiane.....	AP19-50
PIR-03 Master Plan and Feasibility Study on the Integrated Agriculture Rural Development Project (Savannakhet Province) .....	AP19-51
PIR-04 The Study on the Integrated Agriculture and Rural Development Project in Bolaven Plateau .....	AP19-52
PIR-05 The Study on Small Scale Agriculture and Rural Development Program along the Mekong River in the Lao People’s Democratic Republic .....	AP19-53
PIR-06 Agriculture and Rural Development Project in the Suburbs of Vientiane (Km 6 Irrigation Project).....	AP19-55
PIR-07 Integrated Agriculture Rural Development Project in Savannakhet Province (Km 35 Irrigation Project).....	AP19-57
PIR-08 Strengthening and Restructuring of Irrigation Development Project (SRIDP) .....	AP19-59
PIR-09 Sustainable Irrigated Agriculture Project (SIRAP) .....	AP19-61
PIR-10 Farmer Irrigated Agriculture Training (FIAT) .....	AP19-63
PIR-11 Community Managed Irrigation Sector Project (CMISP) .....	AP19-65
PIR-12 Decentralized Irrigation Development and Management Sector Project (DIDMP) .....	AP19-67
PIR-13 Agricultural Development Project.....	AP19-68
PIR-14 National Pump Installation and Management Program (NPIMP).....	AP19-70
PIR-15 Vientiane Plain Flood Protection Urgent Phase.....	AP19-71

# ***1. Land and Water Resources Development***

### Outline of Past and On-going Project

Title of Program/Project	Land Titling Project		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1997 – 2004 (1 <sup>st</sup> Phase)		
Executing Agency	Department of Lands, Ministry of Finance		
Funding Source/Donor	World Bank, in partnership with AusAid which is funding the technical assistance component of the project		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>
Objectives of Program/Project	To foster the development of efficient land markets and to facilitate domestic resource mobilization by providing a system of clear and enforceable land use ownership rights and by developing a land valuation capacity.		
Location	Urban and peri-urban areas of Vientiane Municipality, Savannakhet, Champasak, Louangphrabang, Khammouan, and Vientiane Province as of June 2001. (Borikhamxai and Xaignabouri will be included within 2001.) Under the succeeding phase, rural area will be covered.		
Features of Program/Project	The important land administration and management challenges are: (i) the need for accelerated land registration and titling to enable the provision of incentives to land holders to manage land resources efficiently and sustainably; and (ii) the need to expand land titling programs so as to facilitate the development of mortgage market that are essential for financial sector development.		
Targets of Program/Project	<ul style="list-style-type: none"> <li>-Completion of the policy and legal framework for land management and administration</li> <li>-Implementation of accelerated land titling program (base mapping, systematic adjudication and registration, sporadic adjudication, training in support of systematic and sporadic adjudication, customer relations and services.)</li> <li>-Improvements in the infrastructure, facilities and systems for land administration</li> <li>-Development of land valuation functions.</li> </ul>		
Cost	Foreign (Mill. US\$) 17.06		Total (Mill. US\$) 28.38
	Local (Mill. US\$) 11.32		
Evaluation of Performance of Program/Project	<u>Planned:</u> -Number of titles issued	<u>Performed:</u> -20,000 Land Titles were issued as of May 2001.	
Environmental and Gender Issues	<ul style="list-style-type: none"> <li>-Impacts on the environment would be neutral in the short and medium term.</li> <li>-Registration of title should reflect women's traditional property rights to strengthen women's position by providing gender awareness training and monitoring gender statistics, etc.,</li> </ul>		
Impact of Program/Project	-Land tax revenue has been increased.		
Constraints and Risks	Implementation of land titling is often constrained by inappropriate macro and sectoral policies, weak institutions, conflicting bureaucratic priorities and /or infighting, and a poor human resource and infrastructure base.		
Lessons Learnt	It is considered that the factors contributing to success include: (I) simple project design, with only one single objective of land titling and one single agency responsible for project implementation; (ii) strong government commitment to the project; (iii) specially formed and trained systematic adjudication teams which involved the communities concerned.		

## **2. *Institutions and Organization***

### Outline of Past and On-going Project

Title of Program/Project	Institutional Development and Strengthening of the Ministry of Agriculture and Forestry T.A 1745-LAO and T.A 2333-LAO	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/> Planned <input type="checkbox"/>
Period	1993 – 1996	
Executing Agency	Ministry of Agriculture and Forestry, Department of Planning	
Funding Source/Donor	Asian Development Bank (ADB)	
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>To establish a sector, program and project planning and resource management capability within MAF/Division of statistics, Planning and Finance.</p> <p>To help MAF establish specific objectives and terms of reference and job description for the operational departments and units of the ministry, and to assess MAF's systemic weakness and develop remedial action programs.</p> <p>To develop a MAF personnel management information system, to analyse personnel distributions, to prepare personnel functional and skills distribution supply and demand gaps for the Ministry's new role in the market economy and to help a ministerial human resources development plan.</p>	
Location	MAF and nation wide.	
Features of Program/Project	Develop an integrated planning, programming and budgeting, monitoring and evaluation system within MAF and human resource development planning. Major institutional objective has been developed through intensive training and technology transfer to a cadre of Lao MAF employee trainers within the central ministry and line departments. The extension of project-supplied technical systems and management procedures to PAFS and DAFO was done through the regular workflow and interactions within the horizontal and vertical structures of the Ministry.	
Targets of Program/Project	Promotion of MAF horizontal/vertical integration and integrated planning system development. Elaboration of planning and programming workshops in 18 provinces, study tours and other workshops, human resource development planning, data processing and farming system analysis and provision of equipment.	
Cost	Foreign: US\$ Not available      Local (US\$): Not available.	
Evaluation of Performance of Program/Project	<u>Planned:</u> .	<u>Performed</u> 39 planning and programming workshops in 18 provinces with 60 to 84 participants in each.
Environmental and Gender Issues		
Impact of Program/Project	Increased 30% of operational and management skill of MAF department and line agencies staff. Development of planning and management system and procedures and the establishment of the Department of Planning. Development of human resource development planning system.	
Constraints and Risks	No follow-up after the completion of the technical assistance project. Other constraints were lack of incentive (low salary), lack of facilities (DAFO office space), lack of mobility, lack of operational funds for operating DAFO.	
Lessons Learnt	Based on the supply/demand analysis the project elaborated a human resource development plan (HRP) for MAF. However, the philosophy and concept developed under the HRP is highlighted in the strategic vision.	

### ***3. Human Resources Development***

### Outline of Past and On-going Project

Title of Program/Project	Curriculum Development and In-service Training for Teaching Staff in the Secondary Agricultural School in Lao PDR (Phase 1) and Promotion of Sustainable Agriculture in Two Agricultural Secondary Schools in Lao PDR. (phase 2)	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>
Period	1996 – 2000 (Phase 1) and 2001-2003 (Phase 2)	
Executing Agency	MAF's Department of Personnel, Pakxueg Agriculture and Forestry School and Pakse Agriculture and Forestry School.	
Funding Source/Donor	Main source of fund is Lao government. Technical assistance is being made by CIDSE Lao.	
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/> This program contains mainly technical assistance.
Objectives of Program/Project	(1) To enhance the knowledge, skill, and/or teaching capacity of teachers in sustainable agriculture systems. (2) To develop parts of the land area at each school as sustainable primary production systems to provide teachers with practical opportunities to apply the principles of sustainable agriculture and land management. (3) To develop and complete curriculum improvement in which sustainable agriculture is being incorporated into the existing curricula of the schools.	
Location	Pakxueg Agriculture and Forestry School, Louangprabang; and Pakse Agriculture and Forestry School, Champassak.	
Features of Program/Project	Development of sustainable agriculture curriculum, which address environment and social issues such as the use of bio-fertilizer and integrated pest management.	
Targets of Program/Project	Up-grade 10 teachers in sustainable agriculture system, 10 teachers in facilitating farmer learning, 6 teachers in networking and monitoring and evaluation, and 6 teachers in environmental education. This is done through OTJ, short course, workshops, study tour at the Kalasin Ralmankhala Institute in Thailand. Other capacity building library management, computer training, English training.  Curriculum for sustainable agriculture developed through development of material, reference resource, teacher meeting.	
Cost	Foreign ( US\$): Phase 1: 200,000.00, Phase 2: 203,000.00. Local (US\$): Not available. Total (US\$) 400,003.00	
Evaluation of Performance of Program/Project	<u>Planned:</u> .	<u>Performed</u> .
Environmental and Gender Issues	Environmental and gender issues are strongly addressed in all components	
Impact of Program/Project	Increased knowledge and skill of teachers and improved curriculum for crops and livestock sciences.	
Constraints and Risks	This is a low cost and high yield project, which has not been taken seriously by some of the government agencies and donor assisted project due to the small contribution.	
Lessons Learnt	Supporting the agriculture school to develop sustainable agriculture curriculum is a big challenge for an NGO while many bilateral organizations are supporting conventional agriculture and are promoting the use of improved varieties, irrigation systems, chemical fertilizers and pesticide to increase crops yield to respond to the food security of the country. Nevertheless, Lao farmers are poor and cannot afford to pay for the high inputs.	



## Outline of Past and On-going Project

Title of Program/Project	Occupation Oriented Basic Vocational Training in the Informal Sector		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1998 – 2000		
Executing Agency	Ministry of Education		
Funding Source/Donor	GTZ under the Lao-German Program on Occupation-Oriented Basic and Further Training for Target Groups for the Informal Sector (BAFIS program)		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1) To develop most appropriate training programs for target groups based on skills training need assessment and labor market survey. (2) To support new strategies to develop curricula and training materials for non-formal vocation skills training. (3) to improve the infrastructure of Regional Non Formal Education Development Centers (RNFEDC)		
Location	Country wide in rural areas		
Features of Program/Project	Development of non formal education based on the need and fields of occupation of the labor communities in rural areas. There are 5 priority occupational fields: dressmaking, food processing, tourism-related services, crop-agriculture and livestock farming.		
Targets of Program/Project	Skill TNA survey and labor market survey in 4 provinces. Development of training curriculum and training materials. Training of trainers. Design of training program for RNFEDC. Improvement of RNFEDC infrastructure.		
Cost	Foreign (Mill. US\$): Not available Local (Mill. US\$): Not available.		
Evaluation of Performance of Program/Project	<u>Planned:</u> .	<u>Performed</u> 49 different skill training programs (1998-2000) 1700 trainees (58% female)	
Environmental and Gender Issues	Environmental and gender issues are addressed in all components		
Impact of Program/Project	Increased number of skill labor Improved non-formal vocational education system.		
Constraints and Risks	Sustainability of the program after the completion of the German assistance.		
Lessons Learnt	The training process developed by BAFIS could be utilized for the establishment of the Farmer Vocational Schools (FVS) under the Integrated Agricultural Development Master Plan program		

## Outline of Past and On-going Project

Title of Program/Project	Pilot Extension Project		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1996 – 1998		
Executing Agency	Ministry of Agriculture and Forestry, Department of Agriculture.		
Funding Source/Donor	Funded by Swiss Development Agency (SDC) and implemented by Novartis Foundation for Sustainable Development		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	To develop the agricultural extension system at the central, provincial and district levels.		
Location	MAF and pilot areas in southern Laos, Champassak and Saravan.		
Features of Program/Project	Focus on technical issues to enable the DAFO to function as an extension unit through the work in the field and the development of working models (extension methodology, DAFO structure adjusted for extension, extension management system), and program to develop staff capacity to work according to the model.		
Targets of Program/Project	Introduction of new technology in 8 clusters villages, establishment of village extension workers (VEW) in 8 clusters Villages, training of FEW and VEW.		
Cost	Foreign: 700,000.00 US\$ Local (Mill. US\$): Not available.		
Evaluation of Performance of Program/Project	<u>Planned:</u> .	<u>Performed</u> 16 VEW 2246 farmers (42% of families in pilot villages) 1662 ha with improved technology	
Environmental and Gender Issues	Environmental and gender issues are addressed in all components		
Impact of Program/Project	The application of the extension methodology had encouraged 40% of all families in 46 pilot villages to use improved technologies for rice over 20% of their paddy, with an average increase of about 50%. DAFO staff were willing to work as generalist.		
Constraints and Risks	There have been no continuation and replication of the project despite its impressive results. However, the concept has been adopted by many donor assisted project such as the World Bank Agriculture Development Project and the ABD-AFD financed Decentralized Irrigation Development and Management Project (DIDM)		
Lessons Learnt	It is convinced that: (1) the extension methodology developed by PEP was effective; (2) DAFO staff working as generalist extension workers, opens the opportunity for restructuring DAFO on a functional basis, with an Extension Unit separated from the Administrative and Regulatory Units. This would enable the Extension Unit to provide an extension service on a wide-spread basis throughout whole districts; (3) the capacity building program could be used to train and up-grade the DAFO staff to operate at a professional level; and (4) Central and PAFS-Extension Training Unit staff could perform as effective units to implement the capacity building program in an on-going manner. All of the lessons described above would be integrated in the development of the National Integrated Agricultural Extension System of the Master Plan for Integrated Agricultural Development.		

## Outline of Past and On-going Project

Title of Program/Project	Promotion of Forestry Education Project (PROFEP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1994	to	2004	
Executing Agency	Ministry Education	Department NUOL	Institute Faculty of Forestry	Others
Funding Source/Donor	GTZ and KFW Germany			
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	To qualify the Faculty of Forestry to provide academic education in the context of a well-designed forestry education system according to the demand of the forestry sector and in line with the National Forest Policy			
Location	Faculty of Forestry Dongdock, Vientiane Municipality			
Features of Program/Project	The project components consist of the development of educational framework for BSc. in Forestry, Human resource development through knowledge enhancement practical training in forest management and applied research, and institutional building and organizational development			
Targets of Program/Project	Development of the Faculty educational framework Enhancement of practical training in forest management and applied research Institutional building and organization development			
Cost	Foreign (Mill. US\$) 2.00		Total (Mill. US\$) N.A	
	Local (Mill. US\$) N.A.			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Environmental and gender issues addressed in all component of the project			
Impact of Program/Project	Improved quality of BSc. Forest Academic capacity of Faculty of Forestry improved Transition of Dongdock Forestry Technician School to Faculty of Forest completed			
Constraints and Risks	The disbursement of government funds to carry on with the project after the termination of the German contribution. The availability of well qualified academic staff for education and teaching is endangered by lucrative offers of other donors for employment in international projects.			
Lessons Learnt				

## Outline of Past and On-going Project

Title of Program/Project	Projet de Transformation de l'Ecole Superieur d'Agriculture de Nabong and Faculte d'Agriculture (PTEF) (Phase 1) and Projet d'Appui a la Faculte d'Agriculture de Nabong (PAFA) (Phase 2).			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1997	to	2004	
Executing Agency	Ministry Education	Department NUOL	Institute Faculty of Agriculture	Others
Funding Source/Donor	French ministry of Foreign Affairs and Caise Francaise pour le Development (CFD)			
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	To support the transformation of the Nabong Agriculture Technician School into the Faculty of Agriculture of the National University of Laos To strengthen the academic program and facilities of the faculty			
Location	Nabong, Vientiane Municipality			
Features of Program/Project	Support the transformation of a technician school to a faculty of agriculture through academic development human resource development Development of BSc academic program for multidisciplinary agricultural engineers (Agriculture, silviculture and pastoral)			
Targets of Program/Project	Upgrading of academic staff by formal training, seminar, research development, languages and overseas studies Development of pedagogic tools for the BSc program by translation of foreign text books, creation of manuals in Lao language, provision of scientific and research text books, reviews and magazines. Institutional development and re-organization of the faculty Provision of equipment and materials for the faculty's academic program and facilities improvement.			
Cost	Phase 1: Foreign (US\$) 2.06 Local (Mill. US\$) 0.53 Total (Mill. US\$) 2.59 Phase 2: Foreign (US\$) 2.75 Local (Mill. US\$) N.A Total (Mill. US\$) N.A			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Environmental and issues are considered in all components of the project.			
Impact of Program/Project	Improved quality of BSc. Agriculture Academic capacity of Faculty of Agriculture improved Transition of Nabong Agriculture Technician School to Faculty of Agriculture completed			
Constraints and Risks	None			
Lessons Learnt				

**4. *Crops: Research, Extension  
and  
Related Activities***

### Outline of Past and On-going Project

Title of Program/Project	Lao-IRRI Rice Research and Training Project (LIRRTP), Phase 1 to 3		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1990-1999 (Phase 1 for 1990-1993, Phase 2 for 1993-1996, and Phase 3 for 1996-1999)		
Executing Agency	NAFRI-IRRI		
Funding Source/Donor	Swiss Agency for Development and Cooperation (SDC)		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input checked="" type="checkbox"/>
Objectives of Program/Project	To increase production and sustainability of rice and rice-based farming systems in Lao PDR through (a) improving the technical expertise of scientists and technicians in research, training and extension, (b) strengthening the quality and increasing the quantity of rice research in Lao PDR, and (c) assisting in the development of research and training infrastructure at strategic locations.		
Location	Project activities cover all rice area in Lao PDR giving priority to the lowland rice areas.		
Features of Program/Project	On the past decade, the project has been the principal source of capacity building and technological developments in the rice sector in Lao PDR. From a very low base in 1990, the project has developed a functional National Rice Research System involving more than 120 government officials and technicians. In addition, a network of research station involving all 17 provinces of the country as well as comprehensive training facilities have been established. The project has also been instrumental in catalyzing a number of complementary collaborative research programs on rice research involving both the government and private sectors.		
Targets of Program/Project	To assist in the development of an independent rice research system in the Lao PDR, which will have the financial resources and the research capacity to continuously develop rice research in response to the agro-climatic and socio-economic conditions of the country and the concrete demands from its farming communities.		
Cost (Mill. US\$)	Phase 1: 2.91 Mill. US\$, Phase 2: 3.54 Mill. US\$, Phase 3: 4.57 Mill. US\$ Total: about 11.0 Mill. US\$ for 3 phases (9 years)		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues			
Impact of Program/Project	(1) The project has developed a functional National Rice Research System involving more than 120 government officials and technicians including whom in research stations in 17 provinces. (2) By 1999, improved glutinous varieties were planted for about 70% of the main rainfed lowland rice-producing region in the Mekong River Valley (compared to about 5% in 1990). (3) Nutrient management strategies has been developed for lowland rice production with the potential to raise yields by up to 100%.		
Constraints and Risks	Despite the above advances, recent restructuring in MAF has left many research disciplines understaffed and with insufficient central leadership capacity to ensure the longer-term sustainability of the program. Research programs in plant protection, agronomy and seed technology have remained relatively weak and require further strengthening.		
Lessons Learnt	In general, the national rice research program needs to further develop capacity for agenda setting and research coordination and leadership with less dependence on external experts. During Phases 1 to 3, there has been heavy reliance on LIRRTP as the source of technical advice and operational support. The next phase aims to ensure managerial and leadership capabilities to provide a sustainable institutional environment that enables past gains to continue beyond 2003, when a significant reduction in external technical assistance and operational support is expected.		

## Outline of Past and On-going Project

Title of Program/Project	Lao-IRRI Rice Research and Training Project (LIR RTP), Phase 4		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	2000-2003		
Executing Agency	NAFRI-IRRI		
Funding Source/Donor	Swiss Agency for Development and Cooperation (SDC)		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input checked="" type="checkbox"/>
Objectives of Program/Project	The objective of Phase 4 is that the NRRP be able reach farmers based on its capacity to define, plan, implement, document, monitor and evaluate a program of focused, needs-based adaptive and applied research and development for rice production in both the lowland and upland environment.		
Location	Project activities cover all rice area in Lao PDR		
Features of Program/Project	<p>On the past decade, the project has been the principal source of capacity building and technological developments in the rice sector in Lao PDR.</p> <p>In order to achieve sustainability of the Lao NRRP, SDC expects greater national capacity to independently plan and implement research and development and thereby reduce its dependence on external experts. In addition, because diversification of financial support to include a role of the Lao government and other donors is essential, Phase 4 will increasingly emphasize the need for additional resources from other donor organizations for specific research and training activities.</p>		
Targets of Program/Project	To assist in the development of an independent rice research system in the Lao PDR, which will have the financial resources and the research capacity to continuously develop rice research in response to the agro-climatic and socio-economic conditions of the country and the concrete demands from its farming communities.		
Cost (Mill. US\$)	US\$ 2.8 Mill. for three years of program period.		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues	No major environmental problems are anticipated from the Project activities.		
Impact of Program/Project	The project outputs will benefit Lao farmers and their families, rural and urban rice consumers, and the overall economy, through the development and introduction of more productive rice-based farming systems, which will at the same time, be environmentally sustainable. MAF, PAFS, and other agencies active in the agriculture sector will gain direct institutional benefit.		
Constraints and Risks	<p>(1) The lack of human and financial resources continues as a serious problem for the Lao PDR.</p> <p>(2) There is a risk that some staff will transfer/rotate or even leave for better paid jobs with other organizations.</p>		
Lessons Learnt			





## Outline of Past and On-going Project

Title of Program/Project	Xiangkhouang Agriculture Development Project Phase II		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1999-2005		
Executing Agency	Xiangkhouang Provincial Government		
Funding Source/Donor	IFAD (loan), UNDCP (T/A)		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>-Poverty is mitigated.</p> <p>-Household food and income security are increased and nutrition status is improved.</p> <p>-Availability for alternatives for opium cultivation is increased.</p>		
Location	6 Districts in Xiangkhouang Province (Kham, Khoun, Phaxay, Phoukout, Nonghet, and Pek)		
Features of Program/Project	<p>7) Income diversification; Credit (handicrafts, marketing, fishery, horticulture, dry season crops, sericulture, buffaloes rearing etc.), community mobilization &amp; group formation by LWU.</p> <p>8) Agriculture development; crops, livestock &amp; fisheries, irrigation.</p> <p>9) Rural infrastructure; rural water supply, rural access road.</p>		
Targets of Program/Project	<p>3) Poverty for men and women is reduced.</p> <p>4) New roads and irrigation are constructed.</p> <p>5) Livestock vaccination is improved.</p> <p>6) Seedlings are distributed to farmers and cropping areas are expanded.</p> <p>7) Availability of the alternatives to poppy cultivation is increased.</p>		
Cost	<p>Foreign (Mill. US\$) 6.9(IFAD loan) Total (Mill. US\$) 8.1</p> <p style="padding-left: 100px;">0.9 (UNDCP T/A)</p> <p>Local (Mill. US\$) 1.2 (plus 0.1 from Japan for gender component between 2000-2001)</p>		
Evaluation of Performance of Program/Project	<p><u>Planned:</u> (1999-2000)</p> <p>iii) farmer training in water use: 15</p> <p>iv) farmer training in crops: 11,315</p> <p>v) livestock staff training: 1,310</p>	<p><u>Performed:</u> (1999-2000)</p> <p>iii) farmer training in water use: 3 (courses)</p> <p>iv) farmer training in crops: 287 (man/days)</p> <p>v) livestock staff training: 15 (man/days)</p>	
Environmental and Gender Issues	<p>-Gender component was incorporated including skill training for beneficiaries.</p> <p>-The project can result in positive impacts on environment through the stabilization of shifting cultivation.</p>		
Impact of Program/Project	-As the project is at the mid-term stage as of July 2001, the impacts are not yet evaluated.		
Constraints and Risks	-Payment to labor for road construction was delayed.		
Lessons Learnt	<p>-The capacity of District Project Management Units and line agencies is vital for the success of the project.</p> <p>-Development of useful data form for monitoring &amp; evaluation is vital for overall evaluation of project impacts.</p>		

## Outline of Past and On-going Project

Title of Program/Project	National Integrated Pest Management (IPM)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1996 - 2002		
Executing Agency	Agriculture Extension Agency (AEA), Department of Agriculture (DOA), MAF		
Funding Source/Donor	The fund source for FAO Vegetable IPM program is Netherlands (1996-2000) and the fund source for FAO Community IPM program is Norway (1999-2002). Technical assistance is being made by FAO.		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
	The assistant is made mainly through training program.		
Objectives of Program/Project	To extend the IPM in rice and vegetable production through training program.		
Location	This program covers south and southeast region. In Lao PDR, the program covers; Vientiane municipality, Vientiane province, Borikhamxai province, Khammouan province, Savannakhet province and Champasak province.		
Features of Program/Project	The program includes the three core activities; i) training of trainers (TOT) courses, ii) organizing farmers field school (FFS), and iii) supporting participatory field study. TOTs is intensive field training for agriculture extension workers about IPM and production technology for paddy and vegetables. FFS is a field based school for farmers and carries out short term training about IPM at the village. The participatory field study will be made by farmers, extension workers and researchers to identify the constraints and formulate solutions.		
Targets of Program/Project			
Cost	Foreign (Mill. US\$) 4.0 from Netherlands for regional program Total (Mill. US\$) 13.9 9.9 from Norway for regional program Local (Mill. US\$) -		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed (As of May 1999)</u> 61 extension staff are trained for becoming trainer in the program. 2,850 farmers completed training course of FFS.	
Environmental and Gender Issues	The gender balance of FFS has been considered carefully to avoid expansion of gender gap.		
Impact of Program/Project	Impact of IPM training has resulted in higher unit yield and profit of paddy production in the villages that implemented FFS compared to national average yield.		
Constraints and Risks	Due to limitation of number of extension staff, the Lao Government shows that the expansion of new FFS is higher concern than continuous training in FFS. This will cause the low sustainability of the project.		
Lessons Learnt	Not specified.		

## Outline of Past and On-going Project

Title of Program/Project	Rural Development Project in Bolaven Plateau	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/> Planned <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>
Period	November 1997-2000 (extended another one year to November 2001)	
Executing Agency	Ministry of Agriculture and Forestry	
Funding Source/Donor	AFD (Agence France Pour le Development, cooperation with CIRAD)	
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/> Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>	
Objectives of Program/Project	The main project goals are: (i) to evaluate the agriculture capacity of the plateau, (ii) to develop and grow other crops (coffee plus) to prevent from disaster and to increase income of farmers, (iii) to reinforce crops husbandry techniques to grow other crops and to attain high quality of product, (iv) to protect the natural resources and manage soil fertility, (v) to raise animals to establish a production system and (vi) to organize farmers for facilitating technical extension, marketing, and for attaining the sustainable development.	
Location	The activities cover the area over the 200m of altitude in the plateau totaled 4,800 km <sup>2</sup> , spreading over 4 districts of 3 provinces.	
Features of Program/Project	Project is composed of operations programs of Coffee, Agronomy, Animal Husbandry, Farmers Organizations, Infrastructures, and Support and Technical Assistance.	
Targets of Program/Project	The project covers 120 villages among some 400 villages in the plateau.	
Cost	Foreign (Mill. US\$) Local (Mill. US\$)	Total (Mill. FF) 27.1 (= US\$ 3.6 million)
Evaluation of Performance of Program/Project	<u>Planned:</u> - Covering 120 villages for extension	<u>Performed</u> - 93 villages have been covered by 1999,
Environmental and Gender Issues		
Impact of Program/Project		
Constraints and Risks	The international price of coffee decreases and accordingly, the farm income under the project also decreases. To overcome this constrains, the project is promoting agricultural diversification including livestock and inter cropping with coffee cultivation.	
Lessons Learnt	Details will be discussed by the evaluation mission on the project that will visit the project around June 2001.	

## **5. *Livestock and Fisheries***

### Outline of Past and On-going Project

Title of Program/Project	Strengthening of Livestock Service and Extension Activities		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1998 - 2004		
Executing Agency	Department of Livestock & Fishery		
Funding Source/Donor	Main source of fund is European Union (EU)		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other
Objectives of Program/Project	<p>Objectives: to enhance small holder's financial autonomy and capacity of initiative by improving their income from livestock rearing.</p> <p>Components: ) Legislation, ) Information System, ) Laboratory, ) Extension, ) Regional coordination, ) Information and Communication, ) Management and Monitoring.</p>		
Location	The project is active all over Laos, with special emphasis on Northern Laos (Louangphrabang, Louangnamtha, Oudomxai, Xaignabouri, Bokeo and Phongsali Provinces)for its extension component.		
Features of Program/Project	<p>Component except for extension makes the whole country the target in this project. Extension carries out training of the farmhouse directly targeting six provinces of the northern area.</p> <p>And, ) The funding system in the village, ) Training System, ) Training Center and Breeding center, are prepared for so that activities may go on after the project completion as well.</p>		
Targets of Program/Project	It is planned to cover progressively a total of 2,170 villages in about 30 district, grouping some 100,000 households owning assets of 235,000 large ruminant, 325,000 pigs and 1,670,000 poultry.		
Cost	Foreign (Mill. Euro) 5.7	Total (Mill. Euro) 6.1	
	Local (Mill. Euro) 0.4		
Evaluation of Performance of Program/Project	<u>Planned:</u> Plans are seven component which showed it in "Objective of Program/Project".	<u>Performed</u> Progress conditions by the item are smooth. It has already been paid 42% of the plan budgets.	
Environmental and Gender Issues			
Impact of Program/Project			
Constraints and Risks	(1) Securing of staff after the project completion. (2) The extension of the new veterinary legislation and the method of the watch of legislation.		
Lessons Learnt	(1) When Project began, staff's securing and training took it for a long time. (2) There are 3 point which is different from project of EU until now in this project. These items are prepared for so that extension activities may last after project is finished. 1) The funding system in the village. 2) Training System 3) Training Center and Breeding center These become lessons learnt in future project implementation.		

## Outline of Past and On-going Project

Title of Program/Project	Animal Disease Control in Thailand and Neighboring Countries		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period			
Executing Agency	Department of Livestock and Fishery (DLF)		
Funding Source/Donor	Main source of fund is Japanese government.		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other
Objectives of Program/Project	<p>Objective: the technical of animal disease control is improved in Thailand and neighboring countries.</p> <p>Components:   ) Improvement of capacity of regional cooperation system and resources for effective animal disease control,   ) Development of human resources,   ) Improvement of disease surveillance,   ) improvement of vaccine production and quality control technique,   ) Improvement of animal quarantine technique.</p>		
Location	Thailand, Laos, Cambodia, Myanmar, Vietnam and Malaysia.		
Features of Program/Project	<p>There are many movements of the livestock beyond the border in the applicable area of project. But, because the border quarantine is insufficient, the execution of wide area-like project is effective.</p> <p>Thailand is a leading country with this project. Main activities are carried out in Thailand. Training to show in the following is the subject in Laos.</p> <p>    ) Improvement of whole diagnosis technology,   ) The use promotion of the information system,   ) Improvement of the vaccine production and quality control technology,   ) Strengthening of the inspection technology of the check post,   ) The training and strengthening of the animal health technician,   ) Strengthening of the veterinarian training system.</p>		
Targets of Program/Project	The improvement of animal health is promoted in Thailand and neighboring countries.		
Cost	Foreign (Mill. US\$)	Total (Mill. US\$)	
	Local (Mill. US\$)		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues			
Impact of Program/Project			
Constraints and Risks			
Lessons Learnt	It is efficient for the livestock epidemic countermeasure of these countries which have the border of the land continuation that it is carried out like this project from the viewpoint of wide area.		

## Outline of Past and On-going Project

Title of Program/Project	Forages and Livestock Project		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	2000 ~ 2005		
Executing Agency	Luang Prabang Province. PAFO, Xieng Khouang Province. PAFO, National Agriculture and Forestry Research Institute(NAFRI)		
Funding Source/Donor	The Australian Agency for International Development (Aus AID )		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other
Objectives of Program/Project	Integrate forage technologies and improvement livestock management practices in upland farming systems. Components: ) Technical Development, ) Institutional Capacity, ) Monitoring and Evaluation, ) Project Management.		
Location	This project is being enforced in two district of the following two province. 1. Luangprabang : Xieng Ngeun, Chomphet 2. Xiangkhouang : Pek, Nong hed		
Features of Program/Project	This is designed as a development project for the extension of existing forage and livestock management technologies suited to Lao PDR. It is acknowledged that the application of these technologies will require a participatory development approach in farmers in farmers fields with farmers. There is no on-station research.		
Targets of Program/Project	Improve the livelihoods of upland farming families while protecting the resource base of their farming system. As for the details is in the following. 1) 27 upland villages in each of 4 target districts with sustainable livestock production systems contributing to farm income. 2) 50% reduction in time taken to cut to and carry forages for livestock. 3) 33% upland villages in target district using legume-based forage technologies with contribute to the stabilization of shifting cultivation.		
Cost	Foreign (Mill. AUD\$) 28.2 Local (Mill. AUDS\$) 0.4	Total (Mill. AUD\$) 28.6	
Evaluation of Performance of Program/Project	<u>Planned:</u> Plans are five component which showed it in "Objective of Program/Project".	<u>Performed</u> This project has just and still passed through one year. The first-year main activities are as mentioned in the following. 1) Demonstration planned, designed and procured by that data. 2) Collection of the resources, including the district staff, site selections.	
Environmental and Gender Issues			
Impact of Program/Project			
Constraints and Risks			
Lessons Learnt			

## Outline of Past and On-going Project

Title of Program/Project	Provincial Aquaculture Development Project			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1997 - 2000			
Executing Agency	The department of livestock and fisheries of the ministry of agriculture and forestry			
Funding Source/Donor	UNDP/FAO.			
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	To attain enhanced food self-sufficiency and increased income and nutrition among low income rural people in the targeted provinces through the expansion of fish culture.			
Location	Oudomxai, Xaignabouri, Xekong, Savannakhet and Xiangkhouang provinces.			
Features of Program/Project	Implementation of a community-based provincial fisheries program, Formation of at least 45 fish farming groups, Creation of a trainers' pool at national and district levels capable of imparting training at community level, Development of fish hatcheries to ensure sustained fish fry.			
Targets of Program/Project	Low income fish farmers' groups including women fish farmers in the rural areas, Department of Livestock and Fisheries staff from central, provincial and district levels, Individual or organizations targeted for hatchery and fingerling production.			
Cost	Foreign (Mill. US\$) 1.17 Local (Mill. Kip) 250			
Evaluation of Performance of Program/Project	<p><u>Performed</u></p> <p>The project has achieved most of its expected outputs, In many cases achievements have exceeded original expectations.</p>			
Environmental and Gender Issues	Women's involvement as farmer group members is still low, representing approximately 13% of named group members. One of the reason for this is the tendency for the head of the family to put their name down on a form.			
Impact of Program/Project	1359 farmers for pond culture and 177 farmers for fingerling production were trained. 98 farmers' groups were formed covering 1055 farmers. 1.8 million fingerlings by provincial centers and 2.3 million fingerlings were produced.			
Constraints	A lack of experiences of counterparts in extension and project management affected project implementation. Lack of viable institutional credit system still prevents activities in aquaculture.			
Lessons Learnt	<p>(1) The supply of fish fry and fingerlings is insufficient to meets farmers' requirements.</p> <p>(2) Lack of viable institutional credit system are the most significant problem for the aquaculture development.</p> <p>(3) The training of technicians and extension officers in aquaculture has not extended to many farmers. The establishment and sustenance of extension network at the farmers' level is very important.</p> <p>(4) The extension methodology of identifying targets farmers, training them in aquaculture and developing them as model farmers who serve as extension agents has been very effective.</p> <p>(5) The majority of the target farmers who benefited from earlier projects were not necessarily the poorer ones.</p>			



### **Outline of Past and On-going Project**

Lessons Learnt	<p>(6) The community approach such as entire villages, rather than individual targets or model farmer approach, appears to be more efficient in helping poorer farmers access institutional credit and to support each other in technological adoption, input provision, marketing and pricing. Farmer to farmer contact and exchange of experience is a valuable tool in the extension process.</p> <p>(7) Targeting remote communities limits impact on a wider scale. Road access to target groups is critical for successful support.</p> <p>(8) Provincial hatcheries are unreliable as a source of fish fingerlings due to conflicting priorities between development activities and commercial viability.</p> <p>(9) Farmer-based fingerling production is extremely successful and facilitates access to fish culture by groups previously excluded.</p> <p>(10) Due to limited numbers and capacity of counterparts in the provinces, it is better to spread a few activities across a range of provinces than to focus many in one place. The more projects that are active in a particular province, the more likely it is that conflicts over staff availability and implementation approach will occur.</p> <p>(11) Involving mass organizations in project implementation can be another way for effective targeting and project management</p>
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## Outline of Past and On-going Project

Title of Program/Project	National Aquatic Resources Institute Project	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/> Planned <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>
Period	1 April 1999 to 1 April 2004 (5 years)	
Executing Agency	National Agriculture and Forestry Research Institute (NAFRI), Ministry of Agriculture and Forestry	
Funding Source/Donor	DANIDA	
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/> <input type="checkbox"/>	Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(i) Technical assistance in the management of a research institution (research program planning and implementation, human resources development planning and implementation, research facilities planning and procurement, general management); (ii) research infrastructure and the Living Aquatic Resource Research Center (LARReC) premises including office equipment (furniture, PC workstation etc) computer network, audio-visual equipment, basic laboratory equipment, library facilities, maintenance workshop and vehicles; (iii) fund for short and long term staffing, and (iv) fund for LARReC research activities	
Location	LARReC in Vientiane	
Features of Program/Project	Project funded research and advise will focus on the utilization and management of the aquatic fauna and flora resources (fish, frogs, snails, water birds, plants etc.)	
Targets of Program/Project	To establish aquatic resources research and management in Lao PDR	
Cost	Foreign (US\$): 1,900,000 2,525,000 Local (US\$): 625,000	Total (US\$)
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>
Environmental and Gender Issues		
Impact of Program/Project		
Constraints and Risks		
Lessons Learnt		

## **6. *Stabilization of Shifting Cultivation***

## Outline of Past and On-going Project

Title of Program/Project	Industrial Tree Plantation Project – ITPP-ADB-1295			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1994	to	2003	
Executing Agency	Ministry	Department Forestry	Institute	Others Bank of Lao
Funding Source/Donor	Asian Development Bank / Private Investors			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	1. Re establish tree cover on un-stocked land and convert it to productive uses. 2 Produce wood for industrial construction and fuelwood uses. 3. Establish policy and institutional framework for development of sustainable tree plantations.			
Location	Provinces of Borikhamxai, Savannakhet, Champasak and Vientiane Municipality			
Features of Program/Project	Community forestry. Industrial plantation forestry. Site-species matching for industrial trees plantations. Pest and disease control in plantations. Forest nursery development. Forest roads. Provision of a credit facility for smallholder farmers and private enterprises to finance the establishment of industrial tree plantations.			
Targets of Program/Project	1. Provision of credit for farmers and private enterprises to establish plantations. 2. Establish 560 hectare of demonstration plantations. 3. Construct and improve 60 km of rural forest roads. 4. Management support to forest nursery improvement.			
Cost	Foreign (Mill. US\$)	13.00	Total (Mill. US\$)	13.90
	Local (Mill. US\$)	0.90		
Evaluation of Performance of Program/Project	<u>Planned:</u> Monthly and annual reporting. Coordinated by provinces.		<u>Performed</u> 69,851 hectares planted to end FY 2000. Annual National Agriculture & Forestry Meeting MAF	
Environmental and Gender Issues	Improvement of environmental conditions and stream flows through tree establishment on degraded forest areas. Smallholder raising of seedlings provides job opportunities for women.			
Impact of Program/Project	About 70,000 hectares planted under project to the year 2000. State will have increased revenue from forest productivity tax. Families have increased income and wood for their needs that reduces pressure on forests. Companies and forest industries have reduced need for natural forest timber.			
Constraints and Risks	Timber market insecurity.			
Lessons Learnt	Requires evaluation of tree species for environmental suitability and survival rates achieved. Problems need to be countered by correct species choices and appropriate management. Planning of species needs to take end use, processing requirement and facilities available on a site-by-site basis. Need to involve land allocation units to identify the degraded areas suitable for plantation that will not be used for agriculture.			

## Outline of Past and On-going Project

Title of Program/Project	Linking Hin Namno NBCA and Phong Nha – Ke Bang Nature Reserve through Parallel Conservation – LINK			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1998 to		2001	
Executing Agency	Ministry	Department Forestry	Institute	Others PAFO Khammouan
Funding Source/Donor	United Kingdom / World Wide Fund for Nature			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>1. Establish a system for ecological and economic monitoring of the LINK Project area for incorporation into project decision-making and evaluation of impact.</p> <p>2. Assist the communities of Hin Namno NBCA to practice good stewardship of their resource.</p>			
Location	Khammouan Province			
Features of Program/Project	<p>1. Collaborative management.</p> <p>2. Transboundary management.</p> <p>3. Parallel conservation.</p> <p>4. Ecological and socio-economic monitoring.</p>			
Targets of Program/Project	<p>Community based management of natural forests.</p> <p>Catchment management.</p> <p>Management of NBCAs and other protected areas for biological conservation.</p> <p>Human resource development.</p>			
Cost	Foreign (Mill. US\$) 0.92		Total (Mill. US\$) 0.92	
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Make watershed and conservation area effective in conserving biodiversity; to protect natural watershed values; bring sustainable livelihoods to communities, especially women and minorities, in and around the NBCA.			
Impact of Program/Project	The capacity of staff has been improved at a number of levels and has supported the empowerment of villages in and around Hin Namno NBCA and improvement in living standards.			
Constraints and Risks	Uncertainty of Phase II funding causing a halt to activities and decrease in staff motivation.			
Lessons Learnt	Adequate time is needed for preparation, approvals and budget release.			

## Outline of Past and On-going Project

Title of Program/Project	Learning and Innovation Loan [District Upland Development and Conservation] (LIL – UNDP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	01 / May / 1999 to		30 / Sept / 2002	
Executing Agency	Ministry MAF	Department DoF	Institute	Others
Funding Source/Donor	World Bank (IDA)			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<ol style="list-style-type: none"> <li>1. Stabilisation of Slash and Burn Cultivation.</li> <li>2. Develop poverty reduction interventions.</li> <li>3. Develop local capacity.</li> <li>4. Ensure sustainability.</li> </ol>			
Location	Khammouan NBCA's and other protected areas			
Features of Program/Project	<ol style="list-style-type: none"> <li>1. Agricultural support.</li> <li>2. Social support.</li> <li>3. Conservation support and awareness.</li> <li>4. Institutional strengthening.</li> </ol>			
Targets of Program/Project	Three pilot villages in the Nakay Nam Theun NBCA (353,200 ha).			
Cost	Foreign (Mill. US\$)	2,000,000	Total (Mill. US\$)	
	Local (Mill. US\$)	?		
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	<p>Conservation of protected biodiversity and watershed areas.</p> <p>Brings sustainable livelihoods to communities, especially women and minorities, in and around the NBCA.</p>			
Impact of Program/Project				
Constraints and Risks	Institutional weakness			
Lessons Learnt				

## Outline of Past and On-going Project

Title of Program/Project	Luang Namtha Integrated Villages Development Project (LNT – IVDP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	01 / March / 1999 to		01 / March / 2002	
Executing Agency	Ministry MAF	Department DoF	Institute	Others
Funding Source/Donor	Sweden (SIDA) and (ADRA)			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	Slash and burn stabilisation through commodity production support, food production and irrigation development			
Location	Luang Namtha Province			
Features of Program/Project	Testing new tree species, green manure a fruit orchards. Development of irrigation & drainage through water users groups micro-credit for income generating activities employment. Crop management and marketing. Establish fruit tree nursery.			
Targets of Program/Project	Upland farmers in Luang Namtha Province (Nam Ha NBCA 202,400 ha).			
Cost	Foreign (Mill. US\$)	324,000	Total (Mill. US\$)	
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Watershed protection and NBCA protection. Sustainable use of NTFPs. Bring sustainable livelihoods to communities, especially women and minorities, in and around the NBCA.			
Impact of Program/Project	Increased family incomes in target areas. Positive impacts on stabilization of shifting cultivation through permanent agriculture development .			
Constraints and Risks	Trainer's training skills and insufficient personnel.			
Lessons Learnt	Too early for consolidation.			

## Outline of Past and On-going Project

Title of Program/Project	Dong Hua Sao & Phou Xiang Thong Biodiversity Conservation Project (BCP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1995		to	2001
Executing Agency	Ministry MAF	Department DoF	Institute	Others
Funding Source/Donor	Netherlands (IUCN)			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	Develop a Master Plan for the two NBCAs Implement the Master Plan Build Staff Capacity			
Location	Champasak & Saravan Provinces.			
Features of Program/Project	Attempt to obtain local participation in NBCA management. Strong emphasis on staff training for NBCA management (wild life surveys etc.) Landuse Planning and Land Allocation. Integrated Conservation and Development Activities (ICAD).			
Targets of Program/Project	Management development. MP implementation. Staff capacity building. Find sustainable alternatives / supplementary activities for villagers living in protected areas / buffer zones to forest resources. Demonstrate sustainable utilization of NTFPs.			
Cost	Foreign (Mill. US\$)	1.07	Total (Mill. US\$)	1.18
	Local (Mill. US\$)	0.11		
Evaluation of Performance of Program/Project	<u>Planned:</u> Mid-term: 1997 Final: Dec. 2001		<u>Performed</u> December 1997	
Environmental and Gender Issues	Biodiversity conservation and environmental protection in NBCA. Domestication of NTFPs to protect them in the NBCAs. Demonstration livelihood activities that are particularly suited to women. Ethic acknowledgement			
Impact of Program/Project	Heightened awareness and importance and difficulties of NBCA management. Rice availability for consumption of 642 families increased by 40%. Revolving funds used for income generating activities in 24 target villages. Improved sanitation and access to clean water. Conservation awareness in communities and schools. Capacity strengthening at both village and staff levels.			
Constraints and Risks	A clear strategy for integrating conservation and involvement of users need to be developed. Transfer of now qualified and experienced staff will have negative impacts on progress. Continued encroachment (coffee growing) and poaching.			
Lessons Learnt	Need for effective local participation and collaboration in development and implementation of the management plan.  The process to use one year for preparation, plan development / refining is appropriate. Preparation for future project phases needs to start earlier than anticipated to ensure continuity.			



## Outline of Past and On-going Project

Title of Program/Project	Sustainable Management of the Resource in the Lower Mekong Basin (second phase) (SMRP – LMB)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	01 / April / 1997		to	31 / Aug / 2001
Executing Agency	Ministry MAF	Department DoF	Institute	Others
Funding Source/Donor	Germany GTZ			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	Sustainable management of natural forests for commercial production of forest products. Community management of natural forests. Management of NBCAs and other protected areas for biological conservation. Stabilization of shifting cultivation in NBCA's and other protected areas through community based management. Human resources development.			
Location	Nationwide			
Features of Program/Project	1. Develop framework for watershed management 2. Participatory land use planning and allocation. 3. Land use management in NBCA's other protected areas 4. Development of NTFP 5. Human resource development			
Targets of Program/Project	1. People living in NBCA's and protected areas 2. NGO's 3. Government agencies			
Cost	Foreign (Mill. US\$)	415,000	Total (Mill. US\$)	
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Protection of NBCA's and protected areas. Prior excessive use of timber and NTFPs. Project is improving sustainable livelihoods for minorities and women.			
Impact of Program/Project				
Constraints and Risks	Institutional			
Lessons Learnt				

## Outline of Past and On-going Project

Title of Program/Project	Biodiversity Conservation Plan for Bokeo Province and Management of Nam Kan Protected Area (NK – BOKEO – MP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1999	to	2001	
Executing Agency	Ministry	Department	Institute	Others PAFO - Bokeo
Funding Source/Donor	France			
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	1. Preparation of a biodiversity conservation programme at the provincial level 2. Management support to the Nam Kan Protected Area			
Location	Bokeo Province			
Features of Program/Project	Provincial biodiversity conservation and management planning. Provincial staff education in conservation and sustainable use of natural resources. Incorporation of environmental awareness in all literacy and education programmes			
Targets of Program/Project				
Cost	Foreign (Mill. US\$)	1.00	Total (Mill. US\$)	1.00
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Make watershed and conservation area effective in conserving biodiversity; to protect natural watershed values; bring sustainable livelihoods to communities, especially women and minorities, in and around the NBCA.			
Impact of Program/Project				
Constraints and Risks	None			
Lessons Learnt	Not consolidated yet.			

## Outline of Past and On-going Project

Title of Program/Project	Phou Dene Dinh NBCA Conservation Project (PDD)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1998	to	2003	
Executing Agency	Ministry	Department	Institute	Others PAFO - Phongsali
Funding Source/Donor	European Union			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	To be completed			
Location	Phongsali Province			
Features of Program/Project	To be completed			
Targets of Program/Project	To be completed			
Cost	Foreign (Mill. US\$)	1.20	Total (Mill. US\$)	1.20
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Make watershed and conservation area effective in conserving biodiversity; to protect natural watershed values; bring sustainable livelihoods to communities, especially women and minorities, in and around the NBCA.			
Impact of Program/Project				
Constraints and Risks	None			
Lessons Learnt				

## Outline of Past and On-going Project

Title of Program/Project	Lao-Swedish Forestry Programme – Phase IV			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1996	to	2001	
Executing Agency	Ministry	Department DoF	Institute & NAFRI	Others
Funding Source/Donor	Sweden (SIDA)			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	Improved productivity and sustainable use of forest and agricultural land, in combination with conservation and protection of target areas.			
Location	Vientiane, Luang Prabang, Xaibouri, Savannakhet and Saravan			
Features of Program/Project	Methodology development, human resource development and capacity strengthening. Programme components include: landuse planning and land allocation, extension and extension training, sloping land research, forestry research (Joint Forest Management), conservation and human resources development & institutional strengthening.			
Targets of Program/Project	Model/method development has targeted: - participatory village development and sustainable land-use, participatory NBCA management; natural resources management and institutional building initiatives.			
Cost	Foreign (Mill. US\$)	14.80	Total (Mill. US\$)	0.00
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u> Bi-annual / Mid-term component reviews		<u>Performed</u> Bi-annually / Mid-term component / Other specific purpose evaluations as required.	
Environmental and Gender Issues	Protection of natural resources in NBCA and watershed areas. Sloping land research and shifting cultivation stabilisation addressed in the participatory village development and sustainable land-use system.  Gender responsiveness in the method development has been mainstreamed into the methodologies as cross-cutting tools for all systems and initiatives. Gender responsiveness is important across all natural resource management issues and within institutional work environment.			
Impact of Program/Project	Programme has developed systems and initiatives for: - Participatory Village Development and Sustainable Landuse; Participatory NBCA Management; Natural Resources Management; and Institutional Building Initiatives.			
Constraints and Risks	Allocation of counterparts and time availability of allocated key counterpart staff.			
Lessons Learnt	Institutionalisation requires involvement from stakeholders at all levels to create ownership at operational as well as policy levels. This increases the potential to expand to non-project areas.  Decentralisation in method development provided mechanisms for devolving authority and functions to provincial, district and village levels.  Involvement of the Regional Training Centers in model development provides a field experience base for appropriate curriculum development.  Village development is enhanced by multi-discipline integration in participatory work.  The participatory whole village approach offers more opportunity to effect change in village communities.			

## Outline of Past and On-going Project

Title of Program/Project	Shifting Cultivation Stabilization Project (SCSP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1999	to	2005	
Executing Agency	Ministry	Department	Institute	Others PAFO – Houaphan
Funding Source/Donor	Asian Development bank / United Nationals Drug Control Programme			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<ol style="list-style-type: none"> <li>1. Establish sedentary diversified farming systems as alternatives to shifting cultivation.</li> <li>2. Provide basic rural infrastructure.</li> <li>3. Work to implement village planning and land allocation.</li> <li>4. Seek to eliminate opium poppy production in Project villages.</li> </ol>			
Location	Houaphan Province			
Features of Program/Project	<ol style="list-style-type: none"> <li>1. Institutional strengthening and capacity building.</li> <li>2. Promotion of diversified sedentary farming systems.</li> <li>3. Village based development</li> <li>4. Rural infrastructure.</li> <li>5. Project management</li> </ol>			
Targets of Program/Project	<p>Improve the income of the upland farmers.</p> <p>Conserve natural resource through establishment of environmentally diversified sedentary farming systems as alternatives to shifting cultivation.</p> <p>Elimination of opium poppy cultivation in target villages.</p>			
Cost	Foreign (Mill. US\$)	6.90	Total (Mill. US\$)	8.70
	Local (Mill. US\$)	1.80		
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u>	
Environmental and Gender Issues	Reduction of biodiversity and unsustainable use of forest products. Without project intervention decreasing opportunities for minorities and women. These issues have to be countered through proper management of land and forest resources.			
Impact of Program/Project	Project field activity has not had sufficient time to warrant evaluation of impact.			
Constraints and Risks	Institutional			
Lessons Learnt	Joint development efforts are required to restrict and reduce shifting cultivation. Upland farming systems development must be gender responsive and participatory. Possibilities for permanent land-use options should be technically and financially supported. Non-agricultural sources of in come need to be further developed. Permanent land allocation is important to restrict cropping to allocated land. Outside technical know how needs to participate and work with communities which have inherent wish to experiment and improve living conditions.			

## Outline of Past and On-going Project

Title of Program/Project	Forest Conservation and Afforestation Project (FORCAP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	Phase I (1996-1998; preparatory phase) and Phase II (1998- 2003; implementation phase)		
Executing Agency	Cabinet Office, Ministry of Agriculture and Forestry (MAF) PAFS, Vientiane Province		
Funding Source/Donor	JICA/the Government of Japan		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	Project-type technical cooperation scheme of JICA (1) To reduce the trend in forest degradation in the lower part of the Nam Ngum Dam watershed area and its vicinity. (2) To strengthen the capacity of the local administration for promotion of participatory forest management.		
Location	Project office is in Afforestation Center in Vientiane province - constructed under the Program. Project activities in 15 target villages in Vangvieng and Hinheup districts in Vientiane province.		
Features of Program/Project	(1) Village Forest Management Plans are prepared based on the review of regulations of land and forest utilization at the village level, (2) Forest management methods by the villages are established using the technology developed by the project, (3) The income generation models introduced by the project are practiced by the villages, (4) The recommendation report on village level forest management in terms of administrative, technical and financial matters, is prepared, and (5) Skills and knowledge of the local administrations, especially the project counterparts are improved.		
Targets of Program/Project	To realize the project purpose, FOCAP is under implementation expecting the following outputs: (1) To strengthen institutional capacity of local people and local government to implement watershed management plan, (2) To improve the local people's forest management techniques for the sustainable utilization of forest, (3) To revert degraded forest lands to forested lands with a provision of forest management plans to be prepared in participatory manner, (4) To decrease the degree of dependence on shifting cultivation in the livelihood of local people. The major inputs planned in PDM for the 5-year implementation period are as follows: (1) Japanese side; 5 long-term experts for 5 years, short-term experts, machinery/equipment, training Lao personnel, and local cost. (2) Lao side; Counterparts, land/building/facilities, and operation cost.		
Cost	JICA assisted the local costs of about US\$ 310,000 beside the input of experts in 1999/2000. The counterpart budget allocated by GoL was about 77,000,000 Kip also in 1999/2000.		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues	The project itself aims at introduction of proper forest management to the target villages expecting the environmental conservation. Gender issue is also taken into account in the project, particularly in the income generation activities in which many women are successfully involved in weaving of small mat made from paper mulberry and cotton.		
Impact of Program/Project	It is too early to evaluate the project impact at this stage.		
Constraints and Risks	Lao Government's effort will be needed for dissemination of methodology and technology developed by the project to other villages in Vientiane and other provinces. If this is not undertaken by the Government, the project sustainability and impact will be lowered.		
Lessons Learnt	It is too early to evaluate the lessons learnt at this stage.		

## Outline of Past and On-going Project

Title of Program/Project	Forest Management & Conservation Project (FOMACOP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1995 to 2000			
Executing Agency	Ministry	Department Forestry	Institute	Others
Funding Source/Donor	Finland – FINNIDA / Global Environment Trust / World Bank IBRD or IDA			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>To develop and test community forestry methodology.</p> <p>Community participation in management of NBCAs</p> <p>Commodity production support programme.</p> <p>Human resource development.</p> <p>Stabilization of slash and burn cultivation.</p>			
Location	Khammouan, Savannakhet, Salavan and Champasak Provinces.			
Features of Program/Project	<p>Promoting sustainable forest management and improvement in rural living standards through close collaboration of villagers and government forestry field staff in participatory forest management of production forests.</p> <p>NBCAs and other protected areas Management for biological conservation.</p> <p>Human resources development</p>			
Targets of Program/Project	<p>Building a policy and legal framework for sustainable forest management.</p> <p>Development of national guidelines &amp; management procedures for State production Forests.</p> <p>Development and testing community forestry methodology in the target areas.</p> <p>Development &amp; adoption of environmental &amp; conservation guidelines NBCA management.</p> <p>Planning and implementing participatory ICAD programs in and around NBCAs and forests.</p> <p>Human resources development and institutional strengthening at national &amp; provincial levels.</p>			
Cost	<p>Foreign (Mill. US\$) 10.60                      Total (Mill. US\$) 0.00</p> <p>WB Loan (Mill. US\$) 8.70</p> <p>Local (Mill. US\$)</p>			
Evaluation of Performance of Program/Project	<u>Planned:</u> Annual		<u>Performed</u> Annual & Completion	
Environmental and Gender Issues	<p>Sustainability of forest production potentials and sustainable environmentally acceptable community livelihood activity in and around NBCAs and managed forests.</p> <p>Gender responsive approaches required in all natural resource management and utilization.</p>			
Impact of Program/Project	<p>Excellent and successful demonstration of community forestry model</p> <p>Increased capacity of PAFS &amp; DAFO staff in participatory approaches to sustainable forestry.</p> <p>Village use of revenues from community forestry for village development activity.</p>			
Constraints and Risks	Ability of government to adopt and expand initiatives in community forestry.			
Lessons Learnt	<p>Villager participation in sustainable management of production forests is feasible and provides for village driven development leading to strengthening of community organization and capacity.</p> <p>Development of linkages for conservation of natural resources and supporting community livelihood development needs multi-sectoral interventions. Conservation initiatives can contribute to rural development but cannot alone achieve it.</p> <p>Development of alternatives that simultaneously promote sustainable conservation environmental management and poverty alleviation is a difficult challenge.</p>			

## Outline of Past and On-going Project

Title of Program/Project	Integrated Watershed Management in Xieng Khouang and Houaphan Provinces (NIWMAP)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	2000		to	2002 (Phase I)
Executing Agency	Ministry	Department	Institute	Others Houaphan & Xieng Khouang PAFS
Funding Source/Donor	DANIDA			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>Sustainable management of natural resources in Northeast Lao PDR.</p> <p>Improved capacity in provincial and district institutions for planning and implementation in accordance with sustainable watershed management practices.</p> <p>Enhanced watershed management in the Nam Neun Watershed through increased sustainability of household livelihood and implementation of pilot projects based on participatory approaches.</p>			
Location	Nam Neun Watershed – Xieng Khouang and Houaphan Provinces			
Features of Program/Project	<p>Training of provincial and district government staff.</p> <p>Preparation of a watershed management plan for Nam Neun.</p> <p>Community participation in development and implementation of land-use and village development action plans.</p> <p>Cost sharing approaches emphasizing on contribution from villages and farmer groups.</p>			
Targets of Program/Project	<p>Provincial and district staff trained in watershed management practices and planning procedures.</p> <p>Implementation of village level activities to improve management of natural resources.</p>			
Cost	Foreign (Mill. US\$)	1.26	Total (Mill. US\$)	1.34
	Local (Mill. US\$)	0.08 (2 years estimate)		
Evaluation of Performance of Program/Project	<u>Planned:</u> December 2001		<u>Performed</u>	
Environmental and Gender Issues	<p>All village level activities aim (directly or indirectly) at improved management of natural resources. This takes place through on-farm and off-farm village projects and training.</p> <p>Training in family planning and sanitation with direct impact on children as well as women's reproductive health. Women are also targeted through promotion of income generating activities.</p>			
Impact of Program/Project	<p>Capacity of provincial and district is enhanced.</p> <p>Increased awareness of natural resource management.</p> <p>Initiatives to improve farming practices, livelihoods and natural resource management.</p>			
Constraints and Risks	<p>Government staff not used to participatory approaches.</p> <p>Uncontrollable logging in project area might affect sustainability of project achievements.</p>			
Lessons Learnt	<p>Decentralisation of planning from national to provincial level and from province to district level has proved valuable in enhancing participation and ownership.</p> <p>Local natural resource management structures and networks are in place – impact yet to be determined.</p>			



## Outline of Past and On-going Project

Title of Program/Project	Xieng Khouang Agricultural Development Project (XKN-ADP-2)			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1999 to 2004			
Executing Agency	Ministry	Department Agriculture	Institute	Others
Funding Source/Donor	International Fund for Agricultural Development (IFAD) / United Nations Drug Control Programme (UNDCP)			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<ol style="list-style-type: none"> <li>1. To alleviate poverty</li> <li>2. To improve household food security and income security</li> <li>3. To enhance alternative opportunities for opium reduction in the project area.</li> </ol>			
Location	Xieng Khouang Province			
Features of Program/Project	<ol style="list-style-type: none"> <li>1. Irrigation Development.</li> <li>2. Food crops and livestock production.</li> <li>3. Crop and income diversification.</li> <li>4. Strengthening agricultural services.</li> <li>5. Establishment of rural finance services.</li> <li>6. Improvement of rural roads.</li> </ol>			
Targets of Program/Project	Poverty Reduction for Men and Women. Increased household food and income security and improved nutrition for the poor. An increase in the availability of alternatives to opium poppy cultivation.			
Cost	Foreign (Mill. US\$)	9.10	Total (Mill. US\$)	
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u> Semi-Annual Project Progress Reports. Mid-term		<u>Performed</u> Mid-Term	
Environmental and Gender Issues	To stabilize shifting cultivation, correct management of NTFPs including promotion of domestication of NTFPs. Encouragement of livelihood activities such as papermaking and silk production.			
Impact of Program/Project	To early to assess.			
Constraints and Risks	Budget transfer is slow compared to the plan that delay the villagers planting season. Lack of staff numbers and quality. Coordination between provincial project management unit and line departments. Civil works delayed due to difficulties in the bidding process.			
Lessons Learnt	Training line agency staff is necessary to enhance coordination with project and implementation of annual work plans.			

## Outline of Past and On-going Project

Title of Program/Project	Integrated Biodiversity Conservation and Community Development in Nam Et and Phou Loei NBCAs			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	2000 to 2002			
Executing Agency	Ministry MAF	Department DoF	Institute	Others PAFS/DAFOs HPN/LPB
Funding Source/Donor	DANIDA			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>To develop provincial capability and capacity in participatory natural resource and biodiversity conservation and the management of Nam Et &amp; Phou Loei NBCAs.</p> <p>Develop an integrated community development project and protected area management framework for the project area based on socio-economic and biophysical conditions.</p>			
Location	Nam Et & Phou Loei NBCAs – Houaphan & Luang Prabang			
Features of Program/Project	<p>Sustainable community development that is integrated with effective participatory natural resources conservation and management in NBCAs.</p> <p>Surveys on: - natural resource use; indigenous management strategies (knowledge and technologies); village &amp; NBCAs boundaries; socio-economic status including land and resource use; knowledge of ecosystems and habitats and species existing in representative sections of the NBCAs.</p>			
Targets of Program/Project	Community based protected area management – ICAD Approaches.			
Cost	Foreign (Mill. US\$) 0.75		Total (Mill. US\$) 0.00	
	Local (Mill. US\$)			
Evaluation of Performance of Program/Project	<u>Planned:</u> Preparation for Phase II project.		<u>Performed</u> Nil.	
Environmental and Gender Issues	Project will develop community based sustainable management of natural resources of the NBCAs and equitable access to resources.			
Impact of Program/Project	<p>Improved understanding of village livelihood and indigenous socio-economy.</p> <p>Sustainable land and forest resource use and management for community resource use needs.</p> <p>Aspirations for development and conservation that will be integrated into protected areas' management plan.</p> <p>Community development and participatory conservation activities (ICAD) in strategic focal sites initiated by project staff, local communities and district authorities.</p> <p>Effective forest and agricultural land use planning, allocation and management undertaken in pilot villages including the identification of potential (pilot) ICAD activities.</p>			
Constraints and Risks	<p>Decrease in budget available due to currency exchange between project approval and implementation. Compounded by increase in project area and scope.</p> <p>Current lack of project office is a major impediment to commencement of project activities.</p> <p>The insufficient desk/office space and living accommodation of the project may limit the project's ability to provide a good working environment for the assistants and consultants.</p>			
Lessons Learnt	Not yet consolidated.			

### Outline of Past and On-going Project

Title of Program/Project	Micro-Projects Luang Prabang II			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1996		to	2006
Executing Agency	Ministry	Department	Institute	Others PAFS/DAFO
Funding Source/Donor	Commission of the European Communities EU			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>Improvement of living conditions rural people in Luang Prabang Province by:</p> <p>Promoting equitable economic growth in the villages.</p> <p>Reducing poverty by improving food security.</p> <p>Reducing degradation of the environment</p>			
Location	Luang Prabang Province			
Features of Program/Project	Integrated development including: - institutional strengthening, infrastructure, agricultural and socio-economic development and development of off-farm activities. The project has made targeted efforts to alleviate poverty with interventions in credit, training, education, women development, health, water & sanitation and agricultural promotion.			
Targets of Program/Project	To impact and improve living conditions of about 350,000 rural people in Luang Prabang			
Cost	Foreign (Mill. US\$)	10.50	Total (Mill. US\$)	0.00
	Local (Mill. US\$)	0.75		
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u> Mid-term impact assessment June 1999	
Environmental and Gender Issues	Women involved in planning of activities and are beneficiaries of many project interventions. Positive environmental impacts achieved by improvements in upland farming systems and reduced erosion from adoption of sustainable land-use systems.			
Impact of Program/Project	To date about 9,000 households (50,000 persons) spread ove 173 villages have directly benefited from at least one project intervention. 78% of the focal zone villages have benefited from at least 3 interventions. Positive and measured increases in living standards have been achieved.			
Constraints and Risks	None reported.			
Lessons Learnt	<p>Many positive interventions have been achieved in remote villages classed as 'non-accessible' or very difficult to access. These have included: training, literacy, water supply, footpath rehabilitation and home-base gardening etc. Improved access is important for economic development but is not a pre-requisite for development work.</p> <p>DAFO staff development needs multi-disciplinary teams to be trained as extension workers to continue follow-up extension to land use planning and allocation.</p> <p>Participatory planning of activities is crucial for 'feeling of ownership' of activities and therefore the sustainability of outputs.</p> <p>Involvement of teachers and students in the project areas is a positive way to accelerate uptake and benefit from project interventions.</p>			

## Outline of Past and On-going Project

Title of Program/Project	Alternative Development Projects – LCDC/UNDCP 1. Long District 2. Beng District 3. Nonghet District 4. Nam Ven & Nam Ham Sub-Districts			
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/>	Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1995 to 2006			
Executing Agency	Ministry	Department	Institute	Others
	Norwegian Church Aid, Provincial Administrations of Oudomxai, Xieng Khouang & Houaphan			
Funding Sources/Donor	United States, Norway, Luxembourg, Sweden, Denmark			
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	To reduce and eliminate the production of illicit drug crops through specifically designed rural development measures in the context of sustained national growth.			
Location	Luang Namtha, Oudomxai, Xieng Khouang and Houaphan Provinces			
Features of Program/Project	Physical infrastructures: - roads, water supply, sanitation & small-scale irrigation works utilizing community labour through cooperation with IFAD and other donors. Social Infrastructure: - community development, health, education and vocational training. Food security & income generation including: - sustainable land-use development, livestock, forestry, eco-tourism, income diversification and credit.			
Targets of Program/Project	To eliminate opium poppy cultivation by 2006.			
Cost	Foreign (Mill. US\$) 11.16		Total (Mill. US\$) 12.07	
	Local (Mill. US\$) 0.91			
Evaluation of Performance of Program/Project	<u>Planned:</u>		<u>Performed</u> Mid-term evaluations performed for Long, Beng and Nonghet ADPs.	
Environmental and Gender Issues	Adopted UNDCP gender strategy paper and incorporated in to planning and implementation strategies. Gender mainstreaming is emphasized for equitable access and opportunities to women and men, both individuals and groups, to development resources; power structures and decision-making; gender dis-aggregated data and gender assessment.			
Impact of Program/Project	Improved physical and social infrastructure, enhanced food security, skill development and income-generation opportunities. Decrease in acreage of opium poppy cultivation.			
Constraints and Risks	Comprehensive and integrated rural/agricultural development in the context of national growth and development of national capacities especially at the provincial/district levels is necessary for the long-term sustainability of the impact and achievements. Lack of resources and sustainable growth/development may result in a 'relapse'.			
Lessons Learnt	Targeting project activities to particular villages and within villages is important. Roles of different family members in aspects of alternative development interventions need careful consideration in project formulation. Alternative development needs support until alternative income earning activities have proven effective to farmers giving up opium. Planning needs to allow the time necessary for consensus decision making at many levels of government by shortening decision trees and decentralizing activities as far as possible and increasing the flexibility of plans and operational procedures. Implementation of projects needs to feature participatory processes to engage the community. Development personnel and government staff need education in participatory processes through to technical assistance until they are established. The mix of grants and loans needs careful consideration for cost effectiveness.			

## **7. *Rural Finance***

### Outline of Past and On-going Project

Title of Program/Project	Improvement of SOCB Operational Performance	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>	
Status	Completed <input type="checkbox"/> On-going <input type="checkbox"/> Planned <input type="checkbox"/>	
Period	1998	
Executing Agency	Ministry of Finance and BOL	
Funding Source/Donor	Asian Development Bank	
Type of Assistance	Technical Cooperation <input type="checkbox"/> Grant <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>	
Objectives of Program/Project	SOCB's are not commercially viable and beset with several problems., especially large proportion of non performing loans. The project through a program loan was to restructure SOCB's capital structure and operations and build a basis for sustainable commercial operations through review business practices, pricing policies, operating systems and accounting procedures and deposit mobilization. Also involved re capitalization and reduction in the number of SOCB's.	
Location	Nationwide, especially in Vientiane and branches.	
Features of Program/Project	The program identified weaknesses in operation of SOCB's and the supervisory function of the BOL was strengthened. The management of SOCB's was also strengthened.	
Targets of Program/Project	-To transform SOCB's into viable financial institution within a specified time frame. .	
Cost	Foreign (Mill. US\$) <span style="float: right;">Total (Mill. US\$)25.0 mill</span> Local (Mill. US\$)	
Evaluation of Performance of Program/Project	<u>Planned:</u> -	<u>Performed:</u> .
Environmental and Gender Issues	-Not relevant	
Impact of Program/Project	-To transform SOCB's into viable financial institutions and be able to provide financial services to all sectors of the economy	
Constraints and Risks		
Lessons Learnt	Measures to reform the Banking system should necessarily be slow and in a step by step fashion.	

## Outline of Past and On-going Project

Title of Program/Project	Micro-finance Project	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>	
Status	Completed <input type="checkbox"/> On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>	
Period	1998--2002	
Executing Agency	Ministry of Finance and BOL	
Funding Source/Donor	UNDP/CDF	
Type of Assistance	Technical Cooperation <input type="checkbox"/> Grant <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>	
Objectives of Program/Project	Major objectives are to: provide microfinance institutions to village communities where with empowerment and ownership they create the framework for financial services over which they have control and also provide for long term sustainability. The project also aims at creating the appropriate policy framework and gradually introduce MFI's into rural areas.	
Location	Nationwide, especially in Vientiane, Oudomxay, and Sayboury.	
Features of Program/Project	The project is facilitating the creation of MFI's in 3 provinces, following group lending approach with strong focus on savings mobilization, financial and institutional sustainability. A National Training Center has been established and training is underway on a cost recovery basis. Presently over 300 village groups with over 1000 borrowers.	
Targets of Program/Project	-To create an enabling environment for the development of microfinance. A microfinance Task Force to sensitise policy makers and stakeholders on mechanisms needed for viable MFI's through legislation and regulations; setting up a Microfinance Training Center and fund capitalization through grants to emerging MFI's that offer scope for sustainability .	
Cost	Foreign (Mill. US\$) <span style="float: right;">Total (Mill. US\$) 7.2 million</span> Local (Mill. US\$)	
Evaluation of Performance of Program/Project	<u>Planned:</u> - 2002	<u>Performed:</u> .
Environmental and Gender Issues	-Not relevant	
Impact of Program/Project	- to be determined on completion	
Constraints and Risks	Risk of default on loans.	
Lessons Learnt	Not relevant	

## Outline of Past and On-going Project

Title of Program/Project	Agricultural Promotion Bank (APB) Diagnostic Study	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input checked="" type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/>	
Status	Completed <input type="checkbox"/> On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>	
Period	2000-2002	
Executing Agency	Ministry of Finance and BOL	
Funding Source/Donor	Asian Development Bank	
Type of Assistance	Technical Cooperation <input type="checkbox"/> Grant <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>	
Objectives of Program/Project	To undertake a comprehensive examination of all aspects of APB operations. Review APB operational structure, business practices, pricing policies, operating systems and accounting procedures. It would analyze loan portfolio, loan recovery, capital adequacy and deposit mobilization. Scheduled for completion in 2002.	
Location	Nationwide, especially in Vientiane and in APB branches.	
Features of Program/Project	The Diagnostic study would identify major problems and formulate a comprehensive reform package with a view to transforming APB into a viable rural financial institution within a specified time frame. The study would present a comprehensive package of recommendations, and the implementation would begin after consultation with government on restructuring of APB.	
Targets of Program/Project	-To transform APB into a viable rural financial institution within a specified time frame. .	
Cost	Foreign (Mill. US\$) Total (Mill. US\$) Local (Mill. US\$)	
Evaluation of Performance of Program/Project	<u>Planned:</u> -	<u>Performed:</u> .
Environmental and Gender Issues	-Not relevant	
Impact of Program/Project	-To transform APB into a viable rural financial institution to be able to provide financial services for the farming community and the rural sector at large.	
Constraints and Risks	Decision by the Government and agreement to the recommendations of the Diagnostic study to restructure the institution.	
Lessons Learnt	Not relevant	



## **8. *Rural Development***

### Outline of Past and On-going Project

Title of Program/Project	Micro-projects Program in Luangprabang Province, Phase II	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>
Period	1996-2002	
Executing Agency	Provincial Administration of Luangprabang Province	
Funding Source/Donor	Commission of the European Communities, and Government of Lao PDR	
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	The long-term objective of the project is the improvement of the living conditions of about 350,000 rural people in Luangprabang Province through sustainable use of natural resources by: (i) promoting equitable economic growth in the villages, (ii) reducing poverty by improving food security, and (iii) reducing the degradation of the environment.	
Location	4 districts in Louangphrabang province, i.e. Luangprabang, Pak Ou, Phon Xay and Pak Xeng.	
Features of Program/Project	The project is designed to provide a set of integrated activities using the micro-project approach. The mix of activities that the project provides varies in scale, content and emphasis and reflects the Rural Development Strategy, which in turn reflects the rural conditions. The Project comprises a series of micro-projects responding to the needs of the rural population. The major components include: (i) institutional development, (ii) agricultural development, (iii) socio-economic development, (iv) infrastructure development, and (v) development of off-farm activities.	
Targets of Program/Project	Specifically, the project aims to improve the living conditions of about 90,000 rural poor of the different ethnic groups in 4 districts of Louangphrabang province.	
Cost (Mill. US\$)	Commission of the European Communities: US\$ 11.5 Mill. (EURO 12.8 Mill.) Government of Lao PDR: US\$ 0.8 Mill. (EURO 0.9 Mill.)	
Evaluation of Performance of Program/Project	<u>Planned:</u> Living conditions of 90,000 rural population would be improved.	<u>Performed</u> As of mid-1999, about 50,000 people spread over 173 villages have directly benefited from at least one project intervention (according to the result of mid-term impact assessment made in 1999).
Environmental and Gender Issues	The Project will promote the socio-economic development of the poorest among the villagers with a particular attention to women and will also promote sustainable management methods of the natural resources, water, soil and forest, while conserving the bio-diversity in order to limit the degradation of the environment by shifting cultivation.	
Impact of Program/Project	The mid-term impact assessment report states that: (1) the average value of the village quality of life index has increased from 38.8 in the pre-project situation to 52.1, (2) the number of villages considered as "very poor" in the entire project area as been reduced by half compared to the pre-project situation, (3) in the whole project area, the remoteness coefficient has decreased by 17%, corresponding to a reduction the average travel time to key socio-economic destinations of about half-an-hour.	
Constraints and Risks	Irrigation development component is seriously behind the schedule due mainly to the lack of qualified Lao irrigation engineers and consultants.	
Lessons Learnt	(1) Existence of a market and the accessibility to the market are essential for the agricultural sector development, (2) Considerably high economic return is derived from the 65km road construction.	

## Outline of Past and On-going Project

Title of Program/Project	Agricultural and Rural Development Project in Vientiane Province in Lao PDR (VARDP)	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>
Period	Phase I (1995-1997; preparatory phase) and Phase II (1997- 2002; implementation phase)	
Executing Agency	Cabinet Office, Ministry of Agriculture and Forestry (MAF) PAFS, Vientiane Province	
Funding Source/Donor	JICA/the Government of Japan	
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	Project-type technical cooperation scheme of JICA As the project purpose, PDM (Project Design Matrix) states that “methodology and technology for participatory and sustainable agricultural and rural development is established in five villages in Vientiane Province”. Then, the overall goal in PDM defines that “agricultural and rural development is promoted in Vientiane Province”.	
Location	(1) Namnam village in Thoulakhom District, (2) Vangkhi village in Hinheub District, (3) Phonkeo village in Phonhong District, (4) Napheuy village in Thoulakhom District, (5) Phonho village in Phonhong District	
Features of Program/Project	The following project activities are being carried out mainly in the selected 5 villages: (1) Improving the methodology of panning for agricultural and rural development, (2) Improving the agricultural infrastructure technology, (3) Verifying, improving and disseminating the appropriate technology for agricultural production, (4) Improving the rural living environment and maintenance capability, (5) Organizing and strengthening farmer’s group, (6) Conducting training on methodology of agricultural and rural development planning, agricultural infrastructure, agricultural production and improvement of rural living environment and strengthening farmer’s organization. In order to perform the above, among others, input of 300 M/M of Japanese long-term experts and other financial assistance will be made during Phase II. From the Lao side, among others, 660 M/M full time counterparts will be provided also during Phase II.	
Targets of Program/Project	(1) Methodology of planning, implementation and evaluation on agricultural and rural development is improved, (2) Appropriate technology for improvement of agricultural infrastructure is established, (3) Regionally appropriate technology for agricultural production of rice and other crops, livestock and fish culture is established, (4) Rural living environment is improved, (5) Methodology of organizing and managing farmer’s group is strengthened, (6) Technical capabilities of farmers, village leaders, and government staff concerned are improved.	
Cost	About US\$ 750,000 will be granted during Phase II for the infrastructure development in 5 villages. Cost input from the Lao side is to be about US\$ 35,000 during Phase II for the operation of the project (staff salary is not included in this cost).	
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>
Environmental and Gender Issues	Recognizing the importance of gender issues, the project is under implementation jointly with other Japan’s ODA scheme of Local Development Program that is now active covering the fields of domestic water supply, sanitation improvement, adult education, etc.	
Impact of Program/Project	It is too early to evaluate the project impact at this stage.	
Constraints and Risks	Lao Government’s effort will be needed for dissemination of methodology and technology developed by the project to other villages in Vientiane and other provinces. If this is not undertaken by the Government, the project sustainability will be lowered.	
Lessons Learnt	It is too early to evaluate the lessons learnt at this stage.	

### Outline of Past and On-going Project

Title of Program/Project	Focal Site Program (National Rural Development Program)	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>	
Status	Completed <input type="checkbox"/> On-going <input checked="" type="checkbox"/> Planned <input type="checkbox"/>	
Period	Program period is for 1996 - 2000. However, this is still on-going in 2001.	
Executing Agency	Leading Committee for Rural Development under Prime Minister's Office and Provincial Rural Development Committee in each Province	
Funding Source/Donor	Main source of fund is Lao government. Technical assistance is being made by UNDP/ILO.	
Type of Assistance	Technical Cooperation <input type="checkbox"/> Grant <input type="checkbox"/> Loan <input type="checkbox"/> Other <input checked="" type="checkbox"/> This program covers several types of assistance depending on site conditions, e.g. construction of roads, water and electrification supply system, health facilities, etc., extension services, capacity building of farmers and district and provincial staff assigned for the Program.	
Objectives of Program/Project	To remove the constraints of poverty from the target population in the focal sites mainly through provision of development services in an integrated and focussed manner. The development services include improvement of infrastructure, building schools, health care facilities, etc. Focal sites are to act as learning and growth centers in which to develop new methods and approaches and from which successful experiences are to be replicated to extend the impact of rural development efforts to other areas.	
Location	Total number of focal sites was 58 in 1996, 82 in 1998 and 87 in 1999 scattered over the country. No further expansion in the number of focal sites is envisaged according to the National Rural Development Program.	
Features of Program/Project	This program was designed as the main stem of the National Rural Development Program (1996-2000) having a broad goal to alleviate poverty and to help development of the most deprived rural social strata.	
Targets of Program/Project	To establish a total of 87 Focal Sites over the country involving all 18 provinces.	
Cost (Mill. US\$)	Foreign 25.4, Local 128.6, Total 154.0 (This is the cost estimated in the National Rural Development Program. Actual cost is unknown. Seemingly, it is much less than the estimate.)	
Evaluation of Performance of Program/Project	<u>Planned:</u> To establish a total of 87 Focal Sites.	<u>Performed</u> Some 59 Focal Sites have been established until the end of 2000. However, only about 25 Sites are functional. This limited performance has been made due mainly to shortage in fund and inexperienced staff for the program operation.
Environmental and Gender Issues	No information is available.	
Impact of Program/Project	No information is available.	
Constraints and Risks	No information is available.	
Lessons Learnt	Details are still unclear in each Focal Site, because the monitoring activities have not been well implemented both at province and central levels. According to LCRD, however, about 34 Focal Sites are not well functioned due to (i) a lack of experienced staff assigned at province and district levels, (b) shortages in budget, and (c) a weakness in monitoring activities. Those have to be taken into account in formulation of similar projects/prgrams.	

## **9. *Irrigation***

### Outline of Past and On-going Project

Title of Program/Project	Agricultural Development Project to Control Slash and Burn Cultivation in Oudomxai Province		
Type of Program/Project	Study (M/P) <input checked="" type="checkbox"/>	Study (F/S) <input checked="" type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1992 - 1993		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	JICA/the Government of Japan		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1) Increase and stabilization of agricultural production (2) Development of agricultural production infrastructure (3) Development of social infrastructure (4) Measures to alleviate environmental problems (5) Support services for women's groups		
Location	Xai, Beng and Hun Districts (3 Districts), Oudomxai Province		
Features of Program/Project	(1) Program for strengthening the agricultural support, including 2-office buildings, 1-staff quarters, and supply of two motor cycles and office equipment (2) Improvement of marketing system for 3 farmers' organizations, including 3-office buildings, 3-storage, 3-drying yards, 3-small scale rice-mills, sesame cleaners, etc. (3) Irrigation development for three model areas with total areas of 773 ha, including 4-diversion weirs, irrigation canals of 62 km long, and installation of meteo-hydrological instruments (4) Social infrastructural development, including improvement of District Roads of 9.4 km long, provision of 12-rural water supply facilities, rehabilitation and construction of 12-primary school (5) Project cost : US\$15.54 mill		
Targets of Program/Project	(1) Paddy yields : 2.6 tons/ha (without project) - 4.0 tons/ha (with project) (2) Farm income increase : 141,200-234,600 Kip/household (without project) -198,900-259,200 Kip/household (with project)		
Cost	Foreign (Mill. US\$) 10.27	Total (Mill. US\$) 15.54	
	Local (Mill. US\$) 5.27		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues	The programs in the project to support women are formulated for women's groups, including women's schools by extension offices, promotion of participation in rice bank, extension of sericulture technique. The construction of rural water supply system are to improve the hygienic and health situations in their living conditions.		
Impact of Program/Project			
Constraints and Risks			
Lessons Learnt	(1) Two irrigation schemes in Xai and Hun Districts were rehabilitated in 1998 based on the feasibility study on a grass root assistance basis, however those scale are not full as envisaged in the study because of limitation of fund under the grass root assistance. (2) A seed production center was also constructed, and it is being operated.		

## Outline of Past and On-going Project

Title of Program/Project	Feasibility Study on Agricultural and Rural Development Project in the Suburbs of Vientiane		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input checked="" type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1988 - 1989		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	JICA/the Government of Japan		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>(1) increase rice production and ease chronic shortage of rice in Vientiane Municipality and its neighboring area,</p> <p>(2) produce upland crops to meet increasing demand resulting from promotion of agro-industrial development and export crop cultivation in line with GOL's diversification policy,</p> <p>(3) provide rural infrastructure for enhancement of social and agricultural activities of farmers,</p> <p>(4) improve living standard of farmers by raising incomes and providing rural infrastructure, and</p> <p>(5) earn or save foreign currency for GOL by reduction of rice imports and production of export crops</p>		
Location	Saythany District and Saysetha District in Vientiane Municipality		
Features of Program/Project	<p>(1)Irrigation area : 2,700 ha in net,(2)Crops : double cropping of paddy rice and partly intercropped with upland crops, (3)Water source : Nam Ngum river, (4)Water requirement : 4.86 m3/sec at head intake, (5)Major facilities : 1-main pump station and 2-booster pump stations, 1-headreach of 11.4 km long, 1-regulation pond with 110,000 m3 storage, 2-main canals of 19.3 km long, secondary canals of 20.8 km long, on-farm works for project area, 1-demonstration farm with 64 ha, (6)Beneficiaries : about 1,420 households or 8,700 persons, (7)Project cost : US\$ 29.1 mill, (8)EIRR : 11.1%</p>		
Targets of Program/Project	<p>(1) Irrigation area : 2,700 ha</p> <p>(2) Paddy productions : Paddy 4,893 tons (without project) - 25,027 tons (with project)</p> <p>(3) Upland crops productions (soybean, groundnuts, garlic) : 0 tons (without project) - 1,380 tons (with project)</p> <p>(4) Net incremental benefit : US\$ 3.8 mill annum</p>		
Cost	Foreign (Mill. US\$)    19.82	Total (Mill. US\$)    29.1	
	Local (Mill. US\$)      9.28		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues			
Impact of Program/Project			
Constraints and Risks			
Lessons Learnt			

## Outline of Past and On-going Project

Title of Program/Project	Master Plan and Feasibility Study on the Integrated Agricultural Rural Development Project (Savannakhet Province)		
Type of Program/Project	Study (M/P) <input checked="" type="checkbox"/>	Study (F/S) <input checked="" type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1990 - 1992		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	JICA/the Government of Japan		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1) Effective use of water resources, (2) Increase of agricultural production, (3) Creation of employment opportunities, (4) Increase in per capita income by expanding agricultural land and improving farming system		
Location	Khantabuli, Champhone, Songkhone, Outhoumphone, Xaybouli and Atsaphangthong Districts (6 Districts), Savannakhet Province		
Features of Program/Project	(1)Irrigation area : 1,655 ha in net,(2)Crops : double cropping of paddy rice and partly inter-cropped with upland crops, (3)Water source : H. Bak river and H. Namphou river, (4)Water requirement : 1.36 m3/sec at head intake of H. Bak, and 0.76 m3/sec at head intakes of Nam. Phou, (5)Major facilities : 1-reservoir dam, 6-diversion weir, 2-main canals of 25 km long, secondary canals of 11.6 km long, on-farm canals of 172 km long, farm road along main and secondary canals, 1-demonstration farm with 58 ha, Rice processing and storage facilities, rural water supply facilities (6)Beneficiaries : about 2,800 households or 13,500 persons as of 1990, (7)Project cost : US\$ 15.0 mill, (8)EIRR : 8.05%		
Targets of Program/Project	(1) Irrigation area : 1,655 ha (2) Paddy productions : Paddy 3,007 tons (without project) - 9,057 tons (with project) (3) Upland crops productions (soybean, groundnuts, garlic) :7.5 tons (without project) - 1,245 tons (with project) (4) Net incremental benefit : US\$ 1.2 mill annum		
Cost	Foreign (Mill. US\$) 12.42 Local (Mill. US\$) 2.58	Total (Mill. US\$) 15.0	
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues			
Impact of Program/Project			
Constraints and Risks			
Lessons Learnt	The Project was implemented with a grant aid assistance of the Government of Japan during the period of 1993 to 1995. The project is being operated and maintained.		



## Outline of Past and On-going Project

Title of Program/Project	The Study on the Integrated Agricultural and Rural Development Project in Boloven Plateau		
Type of Program/Project	Study (M/P) <input checked="" type="checkbox"/>	Study (F/S) <input checked="" type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1995 - 1996		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	JICA/the Government of Japan		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>(1) Raise farmers' income levels through enhancement of stabilized farming and the introduction of profitable crops, particularly coffee, tea, vegetables, fruits, etc. combined with efficient utilization of land and water development potentials;</p> <p>(2) Increase foodstuff in the lowland area through providing irrigation systems and improved farming technology and practices; and</p> <p>(3) Raise living standard and improve rural life of people through provision and improvement of rural infrastructure as well as extension of living technology</p>		
Location	Pakxong and Bachiang Districts in Champassak Province, Salavan and Laongam Districts in Salavan Province, and Thateng District in Sekong Province		
Features of Program/Project	<p>Irrigation (4,010 ha) based rural development including farm roads, electrification, primary school, village clinic, and community hall are provided for five priority areas:</p> <p>(1) Upper Champi area: irrigation for coffee and vegetables of 730 ha;</p> <p>(2) Upper Tapoung area: irrigation for vegetables of 50 ha;</p> <p>(3) Upper Kapheu area: irrigation for coffee and upland crops of 1,100 ha;</p> <p>(4) Lower Xe Set area: irrigation for rice and upland crops of 1,800 ha; and</p> <p>(5) Upper Tay Un area: irrigation for rice and upland crops of 330 ha.</p> <p>In addition, the following three facilities are constructed:</p> <p>(6) Highland vegetable trial and demonstration station (50 ha);</p> <p>(7) Wholesale market in Paksong; and</p> <p>(8) Rice bank in Lower Xe Set and Upper Tay-Un areas</p>		
Targets of Program/Project	<p>(1) Increased agricultural production : Coffee- 2,100 ton/year, Tea - 120 ton/year, Vegetables - 3,800 ton/year, Rice - 4,900 ton/year, Upland crops - 2,040 ton/year</p> <p>(2) Reduce shifting cultivation 3,510 ha</p>		
Cost	Foreign (Mill. US\$) 28.28	Total (Mill. US\$) 39.61	
	Local (Mill. US\$) 11.33		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues	<p>(1) Upland and undulating steep areas has a danger of soil erosion. Physical and agricultural measures are necessary.</p> <p>(2) Use of agro-chemicals may affect the production of vegetables. IPM program is applied.</p> <p>(3) Social status of women will be promoted by participating in social activities.</p> <p>(4) Burden to women and children for water carry will be mitigated by providing water supply facilities</p>		
Impact of Program/Project			
Constraints and Risks	The project has not been realized despite the grant assistance application was requested to the Government of Japan by GOL. The coffee and vegetable farming are extensively being developed in the Boloven Plateau. Review of project component may be required for implementation.		
Lessons Learnt			

## Outline of Past and On-going Project

Title of Program/Project	The Study on Small Scale Agricultural and Rural Development Program along the Mekong River in the Lao People's Democratic Republic			
Type of Program/Project	Study (M/P) <input checked="" type="checkbox"/>	Study (F/S) <input checked="" type="checkbox"/>	Technical Cooperation <input type="checkbox"/>	Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>	
Period	1998 - 2000			
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)			
Funding Source/Donor	JICA/the Government of Japan			
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/>	Other <input type="checkbox"/>
Objectives of Program/Project	<p>(1) establish and strengthen farmers organizations including water user organization (WUO), agricultural production group (APG) and agricultural credit group (ACG) to improve farmers' access to agricultural finance, to increase farmers' bargaining power and to realize proper water management</p> <p>(2) strengthen agricultural finance through capacity building of APB to accommodate fund for agricultural production and rehabilitation of irrigation systems and to enhance collection of repayment</p> <p>(3) improve farmers support system and irrigation facilities to promote the introduction of double cropping and diversified farming, and improve the access to market to increase farm income</p>			
Location	12 Districts in Bolikhamsai, Khammouane and Savannakhet Provinces			
Features of Program/Project	<p>The project consists of two components: wider-area approach and basic/intensive area approach.</p> <p>(1) Wider-area approach has three sub-components: (i) promotion to establish and strengthen farmers' organizations; (ii) strengthening BOL and APB financial system with total cost of about US\$600,000; and (iii) stabilization of support system with total cost of US\$310,000.</p> <p>The basic/intensive area approach is to provide three model areas, namely Thongharb-Nakhua (Pakkading Dist./Bolikhamsai Prov.), Vangkong Area (Himboun Dist./Khammouane Prov.) and Phonthan (Xayphouthong Dist./Savannakhet Prov.) with following three components:</p> <p>(1) Establishment and strengthening of farmers' groups/organization;</p> <p>(2) Strengthening of APB's Branches, Service Units and Sub-service Units;</p> <p>(3) Strengthening support system - capacity building with infrastructural development with total cost of US\$1.3 million;</p> <p>(4) Rehabilitation and improvement of small scale irrigation facilities with total cost of about US\$622,000; and</p> <p>(5) Development of rural and farm roads with total cost of about US\$321,000.</p>			
Targets of Program/Project	<p>(1) Achieve rice self-sufficiency with some surplus;</p> <p>(2) Enhance farmers' technical level on improved paddy farming practices and diversified farming;</p> <p>(3) Rehabilitate existing infrastructure on participatory basis and followed by O&amp;M by WUGs;</p> <p>(4) Upgrade technical capability of provincial extension staff (SMS) under participatory approach with Task Force Team (TFT);</p> <p>(5) Establish farmers organizations including WUG, participatory construction organization, etc.; and</p> <p>(6) Access institutional agricultural credits.</p>			
Cost	Foreign (Mill. US\$)	4.15	Total (Mill. US\$)	4.15
	Local (Mill. US\$)	0.0		

(To be continued)

### **Outline of Past and On-going Project**

Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>
Environmental and Gender Issues		
Impact of Program/Project		
Constraints and Risks		
Lessons Learnt		

## Outline of Past and On-going Project

Title of Program/Project	Agricultural and Rural Development Project in the Suburbs of Vientiane (KM6 Irrigation Project)	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/> Planned <input type="checkbox"/>
Period	1990 - 1992	
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)	
Funding Source/Donor	JICA/the Government of Japan	
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1)increase rice production and ease chronic shortage of rice in Vientiane Municipality and its neighboring area, (2)produce upland crops to meet increasing demand resulting from promotion of agro-industrial development and export crop cultivation in line with GOL's diversification policy, (3)provide rural infrastructure for enhancement of social and agricultural activities of farmers, (4)improve living standard of farmers by raising incomes and providing rural infrastructure, and (5)earn or save foreign currency for GOL by reduction of rice imports and production of export crops	
Location	Saythany District and Saysetha District in Vientiane Municipality	
Features of Program/Project	(1) Irrigation development for a net area of 1,200 ha extending along national roads of routes No.10 and No.13; (2) Construction of main pump station, head reach and regulating pond with a capacity of irrigating 1,700 ha; (3) Construction of irrigation canals, drains and farm roads for 1,200 ha area; (4) Improvement of rural infrastructure for five villages; (5) Provision of project office building and warehouse; and (6) Provision of O&M equipment.	
Targets of Program/Project	(1) Irrigation area :1,200 ha (2) Unit yield of paddy : 1.65 ton/ha (present) - 4.5 ton/ha (rainy season with project) / 5.5 ton/ha (dry season with project) (3) Paddy productions : Paddy 3,700 tons (without project) -17,000 tons (with project) (4) Foreign exchange saving : about US\$ 4 million by decreasing rice import (5) Farm income : 6 times increase in gross income and 3 times in net income	
Cost	Foreign (Mill. US\$) 10.0 Local (Mill. US\$) 0	Total (Mill. US\$) 10.0
Evaluation of Performance of Program/Project	<u>Planned:</u> Irrigation area : 1,200 ha Paddy production : 12,000 tons	<u>Performed</u> Irrigated area (rainy+dry) and paddy production 1993/94 : 1,320 ha & 3,700 tons 1994/95 : 1,767 ha & 6,180 tons 1995/96 : 2,065 ha & 8,673 tons 1996/97 : 2,113 ha & 9,720 tons 1997/98 : 2,198 ha & 8,570 tons 1998/99 : 2,807 ha & 11,230 tons 1999/00 : 2,617 ha & 11,250 tons 2000/01 : 3,000 ha & 13,800 tons
Environmental and Gender Issues		

(To be continued)

### **Outline of Past and On-going Project**

Impact of Program/Project	<ul style="list-style-type: none"> <li>(1) Paddy yield has been steadily increased from 2.5 tons/ha to 4.0 tons/ha.</li> <li>(2) GOL expanded the project area by 500 ha by her own effort.</li> <li>(3) Seed production in KM6 project contributes to the seed requirement in the Vientiane Municipality.</li> </ul>
Constraints and Risks	<ul style="list-style-type: none"> <li>(1) Paddy production in the dry season is limited by shortage of spare parts for pump equipment. JICA provided a certain amount of spare parts as a follow-up program.</li> <li>(2) The project area, located adjacent to the Vientiane city as its a part of urban zone, suffered by expansion of Vientiane's urbanization and about 128 ha was converted into housing places. This has been anticipated in the basic design stage to somewhat extent and some area along the trunk road (#13) was reserved as urbanization in future, but actual situation is beyond the design. To encounter this situation, GOL expanded the irrigation area to compensate it by their own budget.</li> <li>(3) The collection rate of water fee has been decreasing since 1955 and presently it is about 50%. The amount of water fee collected does not meet the electricity charge. The water fee is set at 190,000 kip/ha for the dry season paddy, and 95,000 kip/ha for wet season. This rates are decided by the Vientiane Municipality without any breakdown.</li> <li>(4) It is very hard to obtain spareparts of pump and electric equipment from the ordinary markets, while Indian pumps introduced in the NPIMP are widely supported by the maintenance centers established over the country.</li> <li>(5) The production loss during the post harvest processing is large, and such facilities as silo and drying machine are desired.</li> </ul>
Lessons Learnt	<ul style="list-style-type: none"> <li>(1) Sustainability of pump irrigation depends on availability of spare parts of pump equipment. In particular, the Grant Aid project by the Government of Japan procure the Japanese equipment and goods, for which spare parts are scarce in the local markets or costly and time consuming for import.</li> <li>(2) Effect of urbanization should be assessed carefully where the project is adjacent to large city and town.</li> <li>(3) Full understanding and agreement on the project implementation to the benefited farmers should be confirmed on a participatory basis during the project planning stage, and again prior to the project implementation.</li> <li>(4) The design on O&amp;M cost should be made carefully prior to the project implementation.</li> </ul>

## Outline of Past and On-going Project

Title of Program/Project	Integrated Agricultural Rural Development Project in Savannakhet Province (KM35 Irrigation Project)	
Type of Program/Project	Study (M/P) <input type="checkbox"/> Study (F/S) <input type="checkbox"/> Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>	
Status	Completed <input checked="" type="checkbox"/> On-going <input type="checkbox"/> Planned <input type="checkbox"/>	
Period	1993 - 1995	
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)	
Funding Source/Donor	JICA/the Government of Japan	
Type of Assistance	Technical Cooperation <input type="checkbox"/> Grant <input checked="" type="checkbox"/> Loan <input type="checkbox"/> Other <input type="checkbox"/>	
Objectives of Program/Project	(1) Effective use of water resources; (2) Increase of agricultural production; (3) Creation of employment opportunities; and (4) Increase in per capita income by expanding agricultural land and improving farming system.	
Location	Khanabuli, Champhone, Songkhone, Outhoumphone, Xaybouli and Atsaphangthong Districts (6 Districts), Savannakhet Province	
Features of Program/Project	(1) Irrigation development for a net area of 1,360 ha, consisting of H. Bak upstream area of 950 ha and Namphou area of 410 ha; (2) Construction of H. Bak reservoir and Namphou diversion weir; (3) Construction of irrigation canals, drains and farm roads for 1,360 ha area; (4) Improvement of rural infrastructure including rural roads and rural water supply wells; (5) Provision of agricultural supporting center; and (6) Provision of O&M equipment.	
Targets of Program/Project	(1) Irrigation area :1,360 ha (2) Unit yield of paddy : 2.0 ton/ha (present) - 4.0 ton/ha (rainy season with project) / 0 ton/ha (present) - 4.5 ton/ha (dry season with project) (3) Increase of crop productions : paddy 5,177 tons/year and peanuts 1,125 tons/year	
Cost	Foreign (Mill. US\$) 18.0 Total (Mill. US\$) 18.0 Local (Mill. US\$) 0	
Evaluation of Performance of Program/Project	<u>Planned:</u> Irrigation area : 1,360 ha Paddy production : 7,897 tons/year Peanuts production : 1,125 tons/year	<u>Performed</u> Irrigated area (rainy+dry) and paddy production 1996 : 1,457 ha & 3,631 tons 1997 : 1,831 ha & 4,751 tons 1998 : 1,724 ha & 4,952 tons 1999 : 1,685 ha & 5,331 tons
Environmental and Gender Issues		
Impact of Program/Project	Expected project impacts were : (1) increased food production, (2) improvement of agricultural marketing, (3) crop diversification, (4) extension of farming technique, (5) improvement of rural livelihood infrastructure, and (6) improvement of health and hygienic conditions.  At present, crop diversification is not still in expected conditions due mainly to shortage of water and lack of on-farm level irrigation facilities.	

(To be continued)

### **Outline of Past and On-going Project**

<p>Constraints and Risks</p>	<ol style="list-style-type: none"> <li>(1) The dry season crops are not cultivated for reasons of shortage of water resource (H. Xay sub-scheme) and lack of tertiary canals (H. Bak sub-scheme).</li> <li>(2) Irrigation facilities are damaged and the repair works are insufficiently made due to lack of budget.</li> <li>(3) Some benefited farmers hesitate to repay the investment cost of tertiary canals because of individually different debt amount upon the location and fund sources.</li> <li>(4) To avoid stagnation of dry crop production as well as the dry season paddy, it is necessary to rehabilitate the damaged project facilities, to rationalize the repayment procedure for tertiary canals cost recovery and to provide benefited farmers with educational and training programs.</li> </ol>
<p>Lessons Learnt</p>	<ol style="list-style-type: none"> <li>(1) Full understanding and agreement on the project implementation to the benefited farmers should be confirmed on a participatory basis during the project planning stage, and again prior to the project implementation.</li> <li>(2) The design and funding arrangement with capital cost recovery down to the on-farm level facilities should be made prior to the project implementation, even though a part of project facilities are constructed by benefited farmers themselves.</li> <li>(3) Where water resource is insufficient for dry season crops, various alternatives for securing water should be assessed, such as groundwater exploitation, small scale water tanks, etc.</li> <li>(4) A careful program on project management should be studied and designed.</li> <li>(5) For re-activation of the KM35 irrigation project, it is proposed to evaluate its constraints and requirement of rehabilitation and improvement in terms of both the hard and soft aspects. The results will be reflected on the future acceleration of IMT.</li> </ol>

## Outline of Past and On-going Project

Title of Program/Project	Strengthening and Restructuring of Irrigation Development Project (SRIDP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1993 - 1998		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	ADB/the Government of Netherlands		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1) Develop effective strategies and programs for irrigation development in Lao PDR; and (2) Strengthen DOI technical and management capability to implement effective strategies and programs		
Location	Vientiane Mun., and Bolikhamxay, Khamouane, Vientiane, Xiang Khouang and Savannakhet Provinces		
Features of Program/Project	(1) Role of women and other groups in the irrigation sub-sector; (2) Environmental issues; (3) Water legislation; (4) Institutional development; (5) Institutional development; and (6) Human resources development		
Targets of Program/Project			
Cost	Foreign (Mill. US\$) 2.55	Total (Mill. US\$) 2.55	
	Local (Mill. US\$) 0		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u> (1) Hold workshops on "Women, Irrigated Agriculture and Development" (2) Prepare environmental checklist for small scale irrigation (3) Assist DOI in preparing Ministerial Decree of the Establishment of Water User Associations and DOI Departmental Implementing Guidelines. (4) Develop re-organization of DOI with development of function and responsibilities of Division and Sections, identification of staff requirement and positioning, etc. (5) Prepare National Framework for Irrigation Development (6) Develop Strategy for Irrigation Development 1996 - 2000 (7) Hold 2nd Irrigation Donor Meeting in August 1998 (8) Support to publish a glossary of technical terms used in irrigation, and separate standards in Lao language for survey, design and construction of irrigation (9) Support activities in Tad Thong Irrigation College including development of three year plan and preparation of training modules and materials (10) Train national and local irrigation staff with an amount of about 7,300 person/days (11) Formulation of Community Managed Irrigation Projects (CMI)	
Environmental and Gender Issues			

(To be continued)



### **Outline of Past and On-going Project**

Impact of Program/Project	<ul style="list-style-type: none"> <li>(1) Legislation on Water Users Association developed by SRIDP was into effect</li> <li>(2) CMI formulated by SRIDP was realized and being implemented, not only as one of the major irrigation projects in Lao PDR but also as a model of prevailing irrigation schemes to be extended.</li> <li>(3) All the activities developed in SRIDP, including WID, environment, water legislation, institutional development and technical publications, are incorporated in CMI.</li> </ul>
Constraints and Risks	
Lessons Learnt	<ul style="list-style-type: none"> <li>(1) Such type project as SRIDP is required to work with routine staff of counterpart agency(ies), not staff seconded as counterpart coordinations.</li> <li>(2) Operation of SRIDP recognized the consultants the need to adopt a flexible approach and for the external funding agency to respond quickly and decisively to requests for change.</li> </ul>

## Outline of Past and On-going Project

Title of Program/Project	Sustainable Irrigated Agriculture Project (SIRAP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1992 - 1998		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	the Government of Netherland		
Type of Assistance	Technical Cooperation <input checked="" type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>(1) Improve conditions for viable and sustainable agricultural development by strengthening capacity of farmer institutions and by increasing self-reliance of farmer institutions in O&amp;M of irrigation schemes, in planning and implementing agricultural production and in marketing of agriculture products;</p> <p>(2) Strengthen capacity of government staff at provincial and district level and at scheme level in extension support to farmer's production groups and in the transfer of management responsibility from the government to farmer institutions based on participatory and on community managed irrigation approaches;</p> <p>(3) Assist in the development of national implementation policies and methodologies for implementation of irrigated agriculture development through group development and irrigation management transfer process; and</p> <p>(4) Increase regional cooperation in irrigated agriculture in the Lower Mekong Basin, particularly through trans-Mekong exchange programs for department, provincial agency staff and farmers between Lao PDR and neighboring countries.</p>		
Location	Vientiane Mun., Khammouane and Savannakhet Provinces		
Features of Program/Project	<p>For 9 irrigation schemes of 2,430 ha in total, 7 developments/programs were provided:</p> <p>(1) Water user association development;</p> <p>(2) Agriculture and income generating development;</p> <p>(3) Irrigation water management;</p> <p>(4) Scheme economics;</p> <p>(5) Gender development;</p> <p>(6) Environment issues; and</p> <p>(7) Improvement of IMT process.</p>		
Targets of Program/Project	(1) Develop IMT process in Lao PDR		
Cost	Foreign (Mill. US\$) 4.99	Total (Mill. US\$) 4.99	
	Local (Mill. US\$) 0		
Evaluation of Performance of Program/Project	<u>Planned:</u> (1) Develop 9 WUAs (2) Agriculture/income generation (3) Irrigation water management (4) Gender development (5) Environmental issue (6) IMT	<u>Performed</u> (1) Developed 9 WUAs under Decree No.0156 (2) Increase crop command area from 1,538 ha to 1,745 ha, Establish Village Development Fund (VRF) with total amount of 53 mil. Kip for 9 schemes Develop APB credit with total amount of 116 mil. Kip for 2,072 households (3) Hold a number of training programs and workshops for irrigation water management for government's staff and farmers	

(To be continued)

### **Outline of Past and On-going Project**

Evaluation of Performance of Program/Project	<u>Planned:</u> (1) Develop 9 WUAs (2) Agriculture/income generation (3) Irrigation water management (4) Gender development (5) Environmental issue (6) IMT	(4) Establish development fund (Tho Yo No fund) to Female farmers in 9 schemes with amount of 10.6 mil. Kip together with many gender training (5) Training on IPM, disseminate WUA on Houay Sakhouang Watershed management and Sebangfai wetlands (6) 7 schemes are transferred to WUAs, and prove IMT rationale and applicable nationwide
Environmental and Gender Issues	(1) Develop fund for female farmers (2) Disseminate improved pesticides management (IPM) (3) Disseminate watershed management and wetland conservation in relation to irrigated agricultural development	
Impact of Program/Project	(1) Prove sustainable irrigation schemes with participation of beneficiaries (2) Prove IMT to be applicable nationwide	
Constraints and Risks		
Lessons Learnt	(1) The systematic and careful approach under SIRAP resulted in a number of well-managed schemes, in which farmers are capable and willing to take all responsibilities. WUA leadership and management were strengthened during the operation of SIRAP. (2) Replication of IMT at a much larger scale needs the consolidation of incomplete state of policies, regulations and laws, as well as solution of weakness among the key agencies due to limitations of staff, skills, funds and present approaches. (3) SIRAP identified serious constraints caused by the poor physical state of irrigation infrastructure and its sub-optimal use due to poor organization of farmers, inadequate water management and insufficient knowledge. (4) Financial aspects and market opportunities present equally serious obstacles that need to be tackled before farmers will be able to manage their systems in a productive and profitable way.	

## Outline of Past and On-going Project

Title of Program/Project	Farmer Irrigated Agriculture Training (FIAT)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input checked="" type="checkbox"/> Implementation <input type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1994 - 1999		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	UNDP and GOL		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p><u>Long Term</u> : to improve the living standards of farmers in irrigated areas by increasing agricultural production through HRD and strengthening Government and farmer institutions</p> <p><u>Immediate</u> : (1) to develop and strengthen the capacity of i) agriculture and irrigation staffs and ii) staff of colleges, by a program of training, advisory services and monitoring, (2) to train and develop selected WUG leaders and EAFs/VEWs, (3) to develop existing training units in agriculture and irrigation colleges with equipment, facilities, methodologies and co-operatively develop training materials, and (4) i) the rehabilitation of flood damaged projects (temporary) and ii) the co-ordination and co-operation with MAF training and extension agencies, other UNDP projects and relevant NGOs.</p>		
Location	1 Municipality and 12 Provinces : Vientiane Munc. Vientiane, Bolikamsy, Kahmmoune, Savannakhet, Salavan, Champassak, Luang Prabang, Oudomsai, Sayabouli, Luang Namtha, Sekong, Attapeu		
Features of Program/Project	(1) Train and strengthen Master Trainers (MTs); (2) Train and strengthen Provincial Trainers (PTs); (3) Train and strengthen District Trainers (DTs); (4) Train WUGs member farmers; and (5) Develop training references, materials and manuals.		
Targets of Program/Project	(1) Train 31 MTs and establish MT pool; (2) Develop 89 PTs; (3) Develop 160 DTs; (4) Train 1,400 farmers including WUG leaders and EAFs; (5) Train 160 WUG leaders and 100 EAFs; (6) Strengthen capacity of MAF institutions; and (7) Develop training references, materials and manuals		
Cost	Foreign (Mill. US\$) 1.75	Total (Mill. US\$) 1.77	
	Local (Mill. US\$) 0.02		
Evaluation of Performance of Program/Project	<u>Planned:</u> (1) Train 31 MT and establish MT pool; (2) Develop 89 PT; (3) Develop 160 DT; (4) Train 1,400 farmers including WUG leaders and EAFs; (5) Train 160 WUG leaders and 100 EAFs; (6) Strengthen capacity of MAF institutions; and (7) Develop training references, materials and manuals	<u>Performed</u> (1) 35 MTs; (2) 83 PTs; (3) 166 DTs; (4) 6,239 farmers including 160 WUG leaders and 157 EAFs; (5) 274 WUG leaders and EAFs; (6) 5 agricultural schools; and (7) 25 manuals, 7 pamphlets and 4 posters	

(To be continued)

### **Outline of Past and On-going Project**

Environmental and Gender Issues	Women contribution and role in development was promoted in such a manner as increasing participation of women in training. FIAT aimed to support active participation of women in all steps of irrigated agriculture development.
Impact of Program/Project	<ol style="list-style-type: none"> <li>(1) Capability of central, provincial and district level staff was strengthened in terms of development of communication and training skills and ability to analyze problems and data;</li> <li>(2) WUGs were strengthened in terms of quality and sustainability; and</li> <li>(3) Paddy productivity was increased from a combination of irrigated area and increase of yields.</li> </ol>
Constraints and Risks	Training system developed by FIAT was not adopted to MAF, but only PAFSs, DAFOs and Farmers.
Lessons Learnt	<ol style="list-style-type: none"> <li>(1) Training system and process developed by FIAT gave positive results in 13 provinces out of 18, and trainers skills have been improved significantly.;</li> <li>(2) An issue after FIAT is how to extend the training system to other provinces;</li> <li>(3) An issue is how to bring the FIAT training process to awareness and in-depth understanding of all MAF's departments and projects/programs; and</li> <li>(4) How to secure the budget to implement the FIAT training process.</li> </ol>

## Outline of Past and On-going Project

Title of Program/Project	Community Managed Irrigation Sector Project (CMISP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1997 - 2004		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	ADB/OPEC		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input checked="" type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	(1) Increase agricultural production on a sustainable basis; (2) Increase food security and incomes of about 6,000 farm families; and (3) Improve watersheds by reducing shifting cultivation and promoting tree planting		
Location	Vientiane, Bolikhamxay, Houaphanh and Xieng Kouang Provinces, and Xaysomboun Special Zone		
Features of Program/Project	(1) Assist communities to organize themselves to participate in the selection, design, implementation, and subsequent O&M of irrigation systems; (2) Implement 70 CMI schemes to improve irrigation in parallel with construction of rural access roads, appropriate agricultural/aquacultural extension, and environmental monitoring and watershed protection efforts; (3) Construct two district feeder roads to link CMI schemes in remote areas to the national road network; and (4) Support project management (planning, implementation and monitoring) in CMI development at the national, provincial and district levels.		
Targets of Program/Project	(1) Increase irrigated cropped area and crop intensity to 127% (100% in wet season and 27% in dry season); (2) Increase rice production from 8,500 tons to 14,800 tons; (3) Increase production of upland crops of maize, legumes and vegetables; (4) Increase production of fish from paddy fields; (5) Achieve EIRRs ranging from 12% to 14%; and (6) Expect non-agricultural benefits including improvement of nutritional status, reduction of shifting cultivation, increase of indirect employment opportunities and improvement of access to information and health services.		
Cost	Foreign (Mill. US\$) 17.6 (13.6/ADB + 4.0/OPEC)		Total (Mill. US\$) 28.1 Local (Mill. US\$) 10.5
Evaluation of Performance of Program/Project	<u>Planned:</u> (1) Implementation of 70 schemes (2) 90 km long rural access roads (3) increase rice yield from 2.2 ton/ha to 3.0 ton/ha in wet season and 3.2 ton/ha in dry season by 2010	<u>Performed</u> (1) reduce to 44 schemes (2) increase 117 km long access roads including 28 km long new road (3) At 5 schemes in 2000, rice yield in dry season ranging from 3.2 ton/ha to 4.5 tons/ha	
Environmental and Gender Issues	(1) 30% of irrigation community organizers should be women. (2) Schemes are implemented only after environmental evaluation be cleared.		
Impact of Program/Project	(1) Agricultural production : paddy yield increase from 1.5 tons/ha to 2.5-4.0 tons/ha (2) Promotion of cash crops : introduce garlic, corn, groundnuts, watermelon, etc., and fish production (3) Poverty reduction : income increase 5 to 7 times (4) Reduction of shifting cultivation : current results not clear and need further monitoring		

(To be continued)

### **Outline of Past and On-going Project**

Constraints and Risks	<ol style="list-style-type: none"><li>(1) Government technical support is needed for initial O&amp;M after schemes be handed to WUA</li><li>(2) Traditions hamper the participation of women in WUA</li><li>(3) Collection of irrigation service fee (ISF) is below the target by 40 to 50% due to shortage of water in the dry season and high rate of ISF for farmers</li></ol>
Lessons Learnt	<ol style="list-style-type: none"><li>(1) The construction works of concrete and stone masonry structures such as weir, flume canals and pipe culverts are undertaken by WUA members on a labor-intensive basis. However, available labor forces are not always sufficient in some remote areas.</li><li>(2) The provincial CMI offices cannot be always provided sufficient staff by PAFS, and the case of District is the same. This resulted in overburden to the project staff.</li><li>(3) CMI involves both the activities; construction and strengthening of WUAs. Due to tight construction schedule, an emphasis is rather given to construction. This resulted in allocation of fund and equipment being deviated to hard component than soft component.</li></ol>

## Outline of Past and On-going Project

Title of Program/Project	Decentralized Irrigation Development and Management Sector Project (DIDMP)	
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/> Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input type="checkbox"/> Planned <input checked="" type="checkbox"/>
Period	2001 - 2005	
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)	
Funding Source/Donor	ADB	
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/> Loan <input checked="" type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	Establish a sustainable Irrigation Management Transfer (IMT) process of GOL to transfer irrigation assets to WUAs and support its implementation in specific provinces, expecting covering about 56 systems with a total command area of about 10,000 ha	
Location	Bolikahmsay Province, Vientiane Municipality, Vientiane Province, Savannakhet Province, Sayaboury Province, Luang Prabang Province	
Features of Program/Project	<p>(1) Rehabilitation of irrigation infrastructure: repairs to pump sets and review of present design of headworks and distribution arrangements, through design preparation by WUAs with technical support of PAFS and DAFOs, and parallelly with establishing WUAs.</p> <p>(2) Introduction of new extension methods: providing specialist services for technology transfer and training of local level officials</p> <p>(3) Development of WUAs: providing support at various levels to WUAs, focusing on educating and training the water users about IMT process and develop a sense of ownership of the process</p> <p>(4) Project management support</p> <p>(5) Project cost: US\$24.9 mill with financing by ADB at US\$17.83 mill, by Farmer contribution in labor and kind at US\$ 4.57 mill, and by GOL at 2.52 mill</p> <p>(6) EIRR: 16% -25% for three sample sites</p>	
Targets of Program/Project	<p>(1) a 10% increase in irrigation area</p> <p>(2) increase in crop yields: wet season rice from 2 ton/ha to 3.2 ton/ha, dry season rice from 3 tons/ha to 5 tons/ha, maize 3 tons/ha, soybean 0.7 tons/ha and vegetables</p> <p>(3) an increase in the area of non-rice crops grown per year of around 50%</p>	
Cost	Foreign (Mill. US\$) 17.83	Total (Mill. US\$) 24.92
	Local (Mill. US\$) 7.09	
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>
Environmental and Gender Issues	<p>(1) No negative effects on the environment, but positive effects on catchment conditions and on sustainability of water resource used for irrigation</p> <p>(2) There is a risk of female farmers missing out on the benefits of establishment of WUAs. A specific strategy will be adopted to increase involvement of female and carry out a systematic GID training, achieving about 20% positions occupied by female</p>	
Impact of Program/Project	<p>(1) direct and positive primary impact on about 62,000 people in terms of access to transport and market. access to credit, improved inputs and draft power, access to knowledge and information on improved technology, and social capital-the capability of organize farmers' cooperation</p> <p>(2) Relief from poverty</p>	
Constraints and Risks	Three principal risks including implementability, realization of benefits, and sustainability	
Lessons Learnt		



## Outline of Past and On-going Project

Title of Program/Project	Agricultural Development Project (ADP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input checked="" type="checkbox"/>
Period	2001 - 2005		
Executing Agency	Department of Planning (DOP), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	World Bank		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input checked="" type="checkbox"/> Other <input type="checkbox"/>
Objectives of Program/Project	<p>(1) enhancing agricultural productivity, encouraging crop diversification and thereby increasing overall agricultural production; the project would focus particularly on those areas of the country which have good potential to promote sector growth</p> <p>(2) taking a community based approach, targeting small and low income subsistence farmers, so as to improve small holder food security and increase rural incomes in a sustainable manner</p>		
Location	Champasak Province, Khammouane Province, Saravane Province, Attapeu Province		
Features of Program/Project	<p>(1) Irrigation rehabilitation: 27 irrigation schemes including 7-small scale (below 100 ha), 10-medium (10-500 ha), 4-large (500 ha more), 2-electric pump irrigation, and 4-converting diesel to electric driven pump schemes with a total service area of 8,200 ha.</p> <p>(2) Village access tracks: rehabilitation of 164.5 km long access tracks and 84 nos. Irish crossing.</p> <p>(3) Village water supply schemes: installation of 152 hand pumps and 106 open wells</p> <p>(4) Village-based investments for agricultural development (VIF): VIF allocation to 13 districts for implementing small scale projects</p> <p>(5) Agricultural services: improving capacity of OAFS and DAFO technical staff to provide extension and related services to farmers</p> <p>(6) Project implementation support: providing necessary support for establishment of the needed project management, implementation and coordination arrangements, TA and training, vehicles, vehicle O&amp;M costs, per diem and travel costs etc.</p> <p>(7) Project cost: US\$ 17.2 million</p> <p>(8) EIRR: 9.97%</p>		
Targets of Program/Project	(1) Increase in irrigated area: increase in agricultural production by increasing irrigated area from 7,456 ha (dry and wet seasons) with 109% intensity to 13,240 ha with 161% intensity, or annual incremental production of 56,330 tons of paddy and 215 tons of other crops		
Cost	Foreign (Mill. US\$) 14.28	Total (Mill. US\$) 17.22	
	Local (Mill. US\$) 2.94		
Evaluation of Performance of Program/Project	<u>Planned:</u>	<u>Performed</u>	
Environmental and Gender Issues	Environmental benefits: better water conservation from irrigation development by minimize water loss		
Impact of Program/Project	<p>(1) Institutional benefits: capacity building of MAF level, PAFS and DAFO for enabling them to effectively support agricultural development</p> <p>(2) Increase in farm income: increase in net farm income with a range of 120% to 140% over the present level</p> <p>(3) Reduction in overall poverty in the country by achieving sustained agricultural growth through efficient use of resources allocated for the agricultural sector</p>		

(To be continued)

### **Outline of Past and On-going Project**

Constraints and Risks	<ol style="list-style-type: none"><li>(1) Increased water abstractions for increased irrigation areas from river Mekong and its tributaries</li><li>(2) Fiscal impact on provincial budgets and capital investment programs in the four Provinces</li><li>(3) Possible risk of GOL not being able to find sufficient local human resources and/or capacity for implementing the project</li></ol>
Lessons Learnt	

## Outline of Past and On-going Project

Title of Program/Project	National Pump Installation and Management Program (NPIMP)		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input type="checkbox"/>	On-going <input checked="" type="checkbox"/>	Planned <input type="checkbox"/>
Period	1996 - 2000		
Executing Agency	Department of Irrigation (DOI), Ministry of Agriculture and Forestry (MAF)		
Funding Source/Donor	The Government of Lao PDR		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input type="checkbox"/>	Loan <input type="checkbox"/> Other <input checked="" type="checkbox"/>
Objectives of Program/Project	(1) Achieve food sufficiency over the country		
Location	Nationwide		
Features of Program/Project	(1) install pump sets with about 7,000 in number over the country; (2) construct irrigation canals; and (3) transfer all the irrigation facilities including pump sets to benefited farmers under IMT process		
Targets of Program/Project	(1) Irrigation area :1,360 ha (2) Unit yield of paddy : 2.0 ton/ha (present) - 4.0 ton/ha (rainy season with project) / 0 ton/ha (present) - 4.5 ton/ha (dry season with project) (3) Increase of crop productions : paddy 5,177 tons/year and peanuts 1,125 tons/year		
Cost	Foreign (Mill. US\$) 30.0 (Estimated)		Total (Mill. US\$) 30.0
	Local (Mill. US\$) 0		
Evaluation of Performance of Program/Project	<u>Planned:</u> No study report available	<u>Performed</u> Number of pumps installed : 7,391 by 2000 Irrigation area : more than 80,535 ha (as planned)	
Environmental and Gender Issues			
Impact of Program/Project	(1) Irrigated area in the dry season increased sharply from the year 1997 and onward; and (2) In 2000, the rice production reached meeting nation demand marginally.		
Constraints and Risks	(1) delivery pipes are installed without slope protection, having risks of slope erosion that may affect the stability of discharge pipes. (2) irrigation canals are not facilitated well down to on-farm level. (3) water shortage problems take place in small rivers, particularly in southern area. (4) It is uncertain that benefited farmer will be able to reimburse the investment cost to the Government in accordance with the Prime Minister Order, "Order on Full Transfer of Irrigation Project to Community Organization" issued in December 1998.		
Lessons Learnt	(1) It is said that NPIMP induced hyper inflation and serious devaluation of Kip against hard currencies, because of drastic increase of domestic money supply for procurement of pump set. The implementation process for such large investment projects should be carefully assessed taking the effect given to the national economy into account. (2) The project implementation seemed to have been commenced with lack of prior and careful study, although the achievement of food sufficiency was unavoidable and urgent policy of the Government. This should not be repeated. (3) Many schemes are left without construction of on-farm level facilities. Full understanding and agreement on the project implementation to the benefited farmers should be confirmed on a participatory basis during the project planning stage, and again prior to the project implementation. In addition, a careful program on scheme management should be studied and designed.		

## Outline of Past and On-going Project

Title of Program/Project	Vientiane Plain Flood Protection Urgent Phase		
Type of Program/Project	Study (M/P) <input type="checkbox"/>	Study (F/S) <input type="checkbox"/>	Technical Cooperation <input type="checkbox"/> Implementation <input checked="" type="checkbox"/>
Status	Completed <input checked="" type="checkbox"/>	On-going <input type="checkbox"/>	Planned <input type="checkbox"/>
Period	1995 - 1997		
Executing Agency	Vientiane Municipality		
Funding Source/Donor	European Commission		
Type of Assistance	Technical Cooperation <input type="checkbox"/>	Grant <input checked="" type="checkbox"/>	Loan <input type="checkbox"/> Other <input type="checkbox"/>
	The project comprised rehabilitation, construction works and technical assistance.		
Objectives of Program/Project	The objective of the Project is to mitigate flood disaster in Vientiane Plain by (i) raising and rehabilitating the existing flood protection dikes in the Kaolieo-Chainaimo and Casier Sud Stations, (ii) the construction of some new water control structures in the Thanaleng-Dong Phosey section, (iii) river bank protection works using gabion mattresses places on a geotextile filter and short reaches of dumped rock protection.		
Location	Along Mekong River between Kaolieo-Chinaimo and Casier Sud section and Thanalen-Dong Phosey section in Vientiane Municipality		
Features of Program/Project	In 1991 the Commission of the European Communities financed and dispatched appraisal mission undertaken by the Temporary Association of European Firms (SETA) to evaluate the immediate and future flood protection requirements for Vientiane. The mission concluded that there was (i) and urgent need to reinstate the flood protection works to their original condition and (ii) a need for more detailed studies for long term flood protection for floods of 1 in 50 or a 100 year return period. Based on this recommendation, the project was designed and implemented.		
Targets of Program/Project	To protect city area from wet season flooding in Vientiane plain		
Cost	Foreign (Mill. Ecu) 2.52	Total (Mill. Ecu) 2.52	
	Local (Mill. Ecu) None		
Evaluation of Performance of Program/Project	<p><u>Planned:</u></p> <p>In the TOR the Followings were envisaged.</p> <ul style="list-style-type: none"> <li>-Strengthening (rehabilitation and improvement) of the existing dikes</li> <li>-Construction of new dikes</li> <li>-Construction of concrete walls in special cases</li> <li>-River bank protection works to be considered when the dike is threatened by erosion and it can't be realigned.</li> </ul>	<p><u>Performed</u></p> <ul style="list-style-type: none"> <li>-Raising and rehabilitating the existing flood protection dikes in the Kaolieo-Chinaimo and Casier Sud sections</li> <li>-Construction of new dikes and associated water control structures in the Thanaleng-Dong Phosey section</li> <li>-A 420 m length of river bank protection works using gabion and short reaches of dumped rock protection</li> </ul>	
Environmental and Gender Issues	<p>(i) There were some temporary adverse affects during construction principally from dust when the lateritic material dries out.</p> <p>(ii) There are associated traffic hazards from the dike being used as a road, particularly where the dike is located close to the houses, schools and amenity buildings.</p> <p>(iii) Though dike Construction basically is to increase downstream flood water levels, the overall impact on this construction works is minimal and no serious adverse effect are observed.</p>		
Impact of Program/Project	Security of target area against flooding is improved. Additionally through the technical assistance such as OJT and Study Tour, relevant staff is provided with practical technical knowledge.		

(To be Continued)

### **Outline of Past and On-going Project**

Constraints and Risks	It was recommended under this Project to establish Vientiane Plain Protection Operation and Maintenance Agency for O&M purposes. However, still now, there is no specific department or unit to be in charge of O&M due to the lack of capable staff, which threatens the sustainability of the facilities.
Lessons Learnt	A limited area of additional land, such as gardens and agricultural field, has been taken for the dikes, for which compensation is not paid. Land acquisition should have been cleared under this kind of large-scale civil works.