

ASIAN DEVELOPMENT BANK

JFPR: 37650-02

PROPOSED GRANT ASSISTANCE
(Financed by the Japan Fund for Poverty Reduction)

TO THE

LAO PEOPLE'S DEMOCRATIC REPUBLIC

FOR

**SUSTAINABLE AGROFORESTRY SYSTEMS FOR LIVELIHOOD
ENHANCEMENT OF THE RURAL POOR**

December 2004

CURRENCY EQUIVALENTS

(as of 1 September 2004)

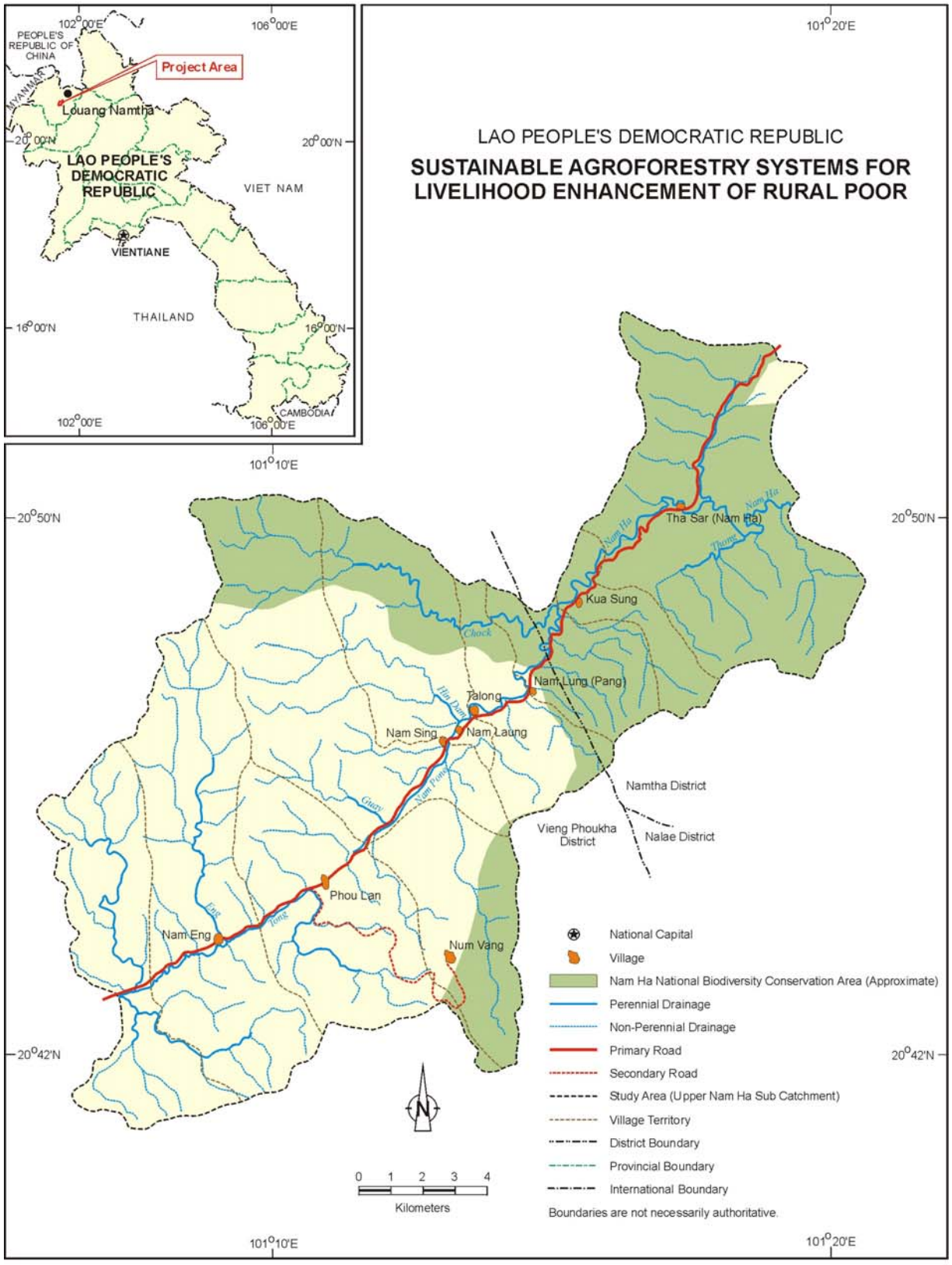
Currency Unit	–	kip (KN)
KN1.00	=	\$0.0001
\$1.00	=	KN10,828

ABBREVIATIONS

ADB	–	Asian Development Bank
ADRA	–	Adventist Development and Relief Agency
CTA	–	chief technical advisor
GMS	–	Greater Mekong Subregion
JFPR	–	Japan Fund for Poverty Reduction
JICA	–	Japan International Cooperation Agency
JOCV	–	Japan Overseas Cooperation Volunteers
Lao PDR	–	Lao People's Democratic Republic
MAF	–	Ministry of Agriculture and Forestry
NGO	–	nongovernment organization
NPD	–	national project director
PIU	–	project implementation unit
PRC	–	People's Republic of China
PRF	–	Poverty Reduction Cooperation Fund
SAP	–	social action plan
UNWFP	–	United Nations World Food Programme
VDC	–	village development committee
WCS	–	Wildlife Conservation Society

NOTE

In this report, "\$" refers to US dollars.



JAPAN FUND FOR POVERTY REDUCTION (JFPR)

JFPR Grant Proposal

I. Basic Data	
Name of Proposed Activity	Sustainable Agroforestry Systems for Livelihood Enhancement of the Rural Poor
Country	Lao People's Democratic Republic (Lao PDR)
Grant Amount Requested	\$1.5 million
Regional Grant	<input type="radio"/> Yes / <input checked="" type="radio"/> No
Grant Type	<input checked="" type="radio"/> Project / <input type="radio"/> Capacity building

II. Grant Development Objectives and Expected Key Performance Indicators

<p>Grant Development Objectives: The overall development objective is to bring about socially, economically, environmentally, and ecologically sustainable rural poverty reduction by stabilizing land use in a typical pilot area comprising nine impoverished ethnic minority communities in one subcatchment area in northern Lao PDR. The Japan Fund for Poverty Reduction (JFPR) grant will support (i) construction of on-farm infrastructure to develop sustainable intensive interlinked agriculture and forestry land-use systems to enhance farm productivity, improve rural livelihoods, and lay the foundation for secure land tenure certification; (ii) capacity and skills building of target communities to manage their sedentarized¹ landholdings for increased productivity; and (iii) strengthening of local government agencies' institutional capacity, in collaboration with community-based organizations and the private sector, to deliver essential agriculture and forestry extension and regulation services. The project is prepared as a component of the social action plan of Loan 1989-LAO.²</p>
<p>Expected Key Performance Indicators:</p> <ul style="list-style-type: none"> (i) Area of the pilot subcatchment brought under sustainable and productive land use for agriculture, livestock husbandry, forestry, and biodiversity conservation (ii) Number of beneficiary families adopting locally innovative strategies and technologies for sustainable poverty reduction incorporating intensive agricultural sedentarization, land occupancy consolidation, enhanced market linkages, and sustained-yield forestry (iii) Number of beneficiary families whose livelihoods have been raised sufficiently above the poverty line to be able to accumulate savings and pay viable rates of taxation (iv) Number of local government functionaries with experience-based skills and competence in their respective fields of responsibility

III. Grant Categories of Expenditure, Amounts, and Percentage of Expenditures

Category	Amount of Grant Allocated in \$	Percentage of Expenditures
1. Civil Works (land & forest development)	506,673	33.8
2. Equipment, Hardware, & Materials	107,540	7.2
3. Training, Workshops, Seminars	217,764	14.5
4. Consulting Services	90,600	6.0
5. Project Management & Operations	190,530	12.7
6. Other Project Inputs	300,840	20.1
7. Contingency	86,053	5.7
TOTAL	1,500,000	100.0
Incremental Cost	4,000	0.0

¹ Sedentarized: Typical shifting cultivators slash and burn about one hectare per family of secondary forest to produce their subsistence crops of upland rice and vegetables. After each cropping season the fields are allowed to regenerate to secondary forest (bush fallow) and cultivation is shifted to another field. By comparison, under sedentary agricultural regimes only one field (approximately 1 hectare per family) is cultivated repeatedly year after year. This field may be permanently fenced and also provided with an irrigation system (which is not possible under shifting cultivation). Sedentarization/sedentarize therefore means the conversion of an agricultural production system from an extensive shifting cultivation regime to an intensive permanent land use agricultural regime.

² ADB. 2002. *Report and Recommendation of the President to the Board of Directors for the Proposed Loan to the Lao People's Democratic Republic for the GMS Northern Economic Corridor Project*. Manila.

JAPAN FUND FOR POVERTY REDUCTION

**JFPR Grant Proposal
Background Information**

A. Other Data	
Date of Submission of Application	September 2004
Project Officer (Name, Position)	Marla Huddleston, Sr. Social Development/Resettlement Specialist
Project Officer's Division, E-mail, Phone	Mekong Infrastructure Division (MKRD/MKID) mhuddleston@adb.org Tel: 623-5172
Other Staff Who Will Need Access to Edit/Review the Report	M. Abao, MKID
Sector	Agriculture and natural resources
Theme	Environmental sustainability, gender and development
Was JFPR Seed Money used to prepare this grant proposal?	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Have SRC comments been reflected in the proposal?	Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]
Name of Associated ADB Financed Operation(s)	ADB Loan 1989-LAO(SF): Greater Mekong Subregional (GMS) Northern Economic Corridor Project
Executing Agency	Louang Namtha provincial government
Grant Implementing Agency	A project implementation unit (PIU) to be established by the Provincial Government of Louang Namtha, headed by a national project director (NPD) recruited by the EA and assisted by a chief technical advisor (CTA), and technical support team furnished by an international nongovernment organization (NGO)—Adventist Development and Relief Agency (ADRA) in the Lao People's Democratic Republic (Lao PDR) (ADRA Lao). Contact information: Mr. Brendon Irvine Director of ADRA Lao P.O. Box 5000 (55/5 Ban Sikhaytha, Muang Sikhothabong) Vientiane, Lao PDR Phone: +856-21-215276 Fax: +856-21-253007 Email: bjirvine@adralao.org (director), adralao@adralao.org (office)

B. Details of the Proposed Grant**1. Description of the Components, Monitorable Deliverables/Outcomes, and Implementation Timetable**

Component A	
Component Name	Agricultural Land Development for Sedentarisation and Intensification
Cost (\$)	\$608,536
Component Description	A.1. Expansion and Upgrading of Irrigation Schemes for Poor Farmers Rationale: One hectare ha of irrigated double-cropped paddy field can produce up to 40 times as much rice annually as 1 ha of upland field under the traditional 10-year cycle shifting cultivation land-use regime. For this reason, irrigation system upgrading and expansion for rice and arable crops is given high priority to

	<p>improve productivity and thereby reduce cultivation pressure on the fragile upland and highland ecosystems. All target villages have some bunded paddy fields that are partly irrigated by temporary timber and rock weirs. To enhance food security for poor families, these schemes will be upgraded and expanded by installing permanent stream diversion weirs, distribution canals, and drains.</p> <p>Irrigation systems will be upgraded for 65 ha of existing paddy fields, and a further 30 ha will be converted to irrigated paddy fields.</p> <p>Activities:</p> <ul style="list-style-type: none"> (i) Survey and design by domestic consultant specialists of potentially irrigable land to select lands that can be irrigated most economically (ii) Layout of canal alignments in the field by irrigation engineers in collaboration with potential landholders. (iii) Preparation of tender documents and procurement of construction contractors (iv) Construction of weirs, and main, secondary, and tertiary canals by contractors (v) Construction of quaternary canals, drains, field leveling and bunding by beneficiaries with food for work support for beneficiary labor input (vi) Construction supervision by project irrigation engineer in collaboration with the provincial irrigation service and village development committee (vii) Training of all beneficiaries in irrigation system operation and maintenance conducted by JFPR-supported resident technicians in collaboration with district irrigation extension officers <p>A.2. Run-off Capture Irrigation and Rain-fed Terrace Infrastructure</p> <p>Rationale: Stream-fed irrigable land in the project area is insufficient to meet the rice requirement of the projected population. To make up the deficit, some sloping lands will need to be bunded for the cultivation of rice watered by run-off capture and/or direct rainfall interception, particularly for poor families that do not have access to stream-irrigated fields. Paddy fields to be irrigated by run-off capture irrigation lie adjacent to the foot slopes, which will be ditched to trap surface run-off and directed to the bunded rice fields. Paddy land remote from the foot slopes and not commandable by stream diversion will be equipped with high bunds for capturing and storing rainfall.</p>
	<p>Terraces for the production of rain-fed arable crops and forage crops (requiring wet-season drainage rather than irrigation), will be constructed on medium slopes using labor-intensive self-building techniques using beneficiary labor input.</p> <p>This component is projected to develop 71 ha of run-off capture irrigation paddy land, 167 ha of rain-fed, bunded paddy land, and 134 ha of arable and forage crop terraces.</p> <p>Activities:</p> <ul style="list-style-type: none"> (i) Participatory survey design and layout by project technical staff with landholders and local government staff

	<ul style="list-style-type: none"> (ii) Bunding (according to contour alignment), ditching, and appropriate leveling by beneficiary labor (iii) Fencing of crop lands by the beneficiaries, using wire provided by the project (iv) Construction supervision by project technicians <p>Eighty percent of the total beneficiary labor input will be compensated by food for work provided by the United Nations World Food Programme (UNWFP), with preference accorded to the poorest. This scheme will be an important short-term poverty reduction measure. The remaining uncompensated 20% of beneficiary labor will be considered as a community contribution. If necessary, by community consensus, the most vulnerable families could be compensated for 100% of their labor input.</p> <p>Note: Once the area of land irrigable by stream diversion has been delineated by the survey and design consultants, the remainder of each village territory can be zoned at the micro level based on a three dimensional topographic model prepared by the land-use specialist in collaboration with the village development committee. They will then proceed to negotiate with each landholder about which parcels of land will be allocated to which families for each category of agricultural or forestry usufruct.</p>
Monitorable Deliverables/Outputs	<ul style="list-style-type: none"> (i) 65 ha of existing paddy fields upgraded to technical irrigation (ii) 30 ha of new land under technical irrigation (iii) 71 ha of new run-off capture irrigation paddy land (iv) 167 ha of new rain-fed bunded paddy land (v) 134 ha of new terraces for forage crops. (vi) 620 families trained and skilled in the operation and maintenance of their irrigated and rain-fed farms to enhance productivity (vii) 5 government agriculture officers trained (viii) Survey and design maps and tender documents (ix) Construction supervision reports
Implementation of Major Activities: Number of months for grant activities	48 months

Component B	
Component Name	Establishment of Tree Plantations, Rehabilitation, and Protection of Local Forests
Cost (\$)	\$406,752
Component Description	<p>Rationale: Regenerating bush fallow lands released from shifting cultivation through agricultural sedentarization (component A) will be rezoned and rehabilitated for forestry, including the categories listed below.</p> <p>B.1. Community Forestry Each target family requires, on average, 9 square meters (m³) per annum of fuelwood and 0.5 m³ per annum of timber for house building and repair, the production of which requires approximately 1.5 ha of community forest per family. Community forest will be sequestered and rehabilitated in each target village</p>

	<p>territory for a total of 802 ha. Beneficiaries will be trained and supported in enrichment planting³ and sustained-yield management⁴ of their community forests.</p> <p>B.2. Village Production Forestry To meet the project's overall family income targets, agricultural income must be complemented with logging income from 1.5 ha of village production forest per family, managed for sustained yield. Village production forest will be sequestered and rehabilitated in each target village territory for a total of 802 ha. All beneficiaries will be trained and supported in enrichment planting and sustained-yield management of their village production forests.</p> <p>B.3. Dedicated Plantations Based on an estimated routine maintenance cost, income from 0.5 ha of dedicated plantation is required for each hectare of irrigated land, plus 1 ha for each school or clinic. On this basis dedicated plantations will be established in each village territory, for a total of 110 ha, to provide income for projected community infrastructure maintenance.</p> <p>Activities:</p> <ul style="list-style-type: none"> (i) Participatory forest inventory and forest management planning by specialist consultants in collaboration with village interest groups and district forestry officials (ii) Establishment of village nurseries, training of village nursery workers, and production of tree seedlings in nurseries, supported by project forestry technical staff in collaboration with village interest groups (iii) Delineation and layout of the various categories of village forests (community forest, village production forest, and dedicated plantations) by village forestry interest groups, supported by project and local government forestry staff (iv) Tree seedling transplanting and enrichment planting for community and village production forest and high-density planting for dedicated plantations with appropriate tree species by beneficiaries, under the supervision of project and government forestry staff (v) Silvicultural maintenance: weeding, fire protection, culling, replanting etc. by beneficiary interest groups with technical support by project and government forestry staff <p>Eighty percent of the family labor for forest rehabilitation, plantation, and silvicultural maintenance will be supported by food for work. (If necessary, by community consensus, the most vulnerable families could be compensated for 100% for their labor input.)</p>
Monitorable Deliverables/Outputs	(i) 802 ha of enrichment planted community forest managed for sustained yield

³ Enrichment-planting is a technique by which seedlings of high value trees are introduced into a natural forest either primary or secondary. It may be accompanied by "culling" which removes undesirable, non valuable or weed species to make way for the more valuable seedlings. The term enrichment can also be applied to the introduction of nontimber forest product species (e.g. cardamom, rattan, medicinal herbs etc.) under the canopy of secondary and primary forest. Therefore "Enrichment-planted village production forest" means forest areas designated for village production that has been enrichment planted with high value species.

⁴ Sustained-yield management means managing a forest to produce a sustainable yield.

	<ul style="list-style-type: none"> (ii) 802 ha of enrichment planted village production forest managed for sustained yield (iii) 110 ha of dedicated plantations under community management for sustained yield (iv) 620 families experientially trained in silvicultural maintenance and sustained-yield management of their community, village production, and dedicated plantation forests (v) Two district forestry officers trained (vi) Participatory land- and forest-use regulations formulation sessions (two sessions per village) (vii) Village land, forest, and plantation management regulations (viii) Nine trained village seedling nursery workers (ix) Functioning seedling production nursery in each village (x) Three silvicultural management training field-days per village for years 1 and 2
Implementation of Major Activities: Number of months for grant activities	48 months

Component C	
Component Name	Skills Enhancement for the Productive Management of Upgraded Agricultural and Forestlands
Cost (\$)	\$224,578
Component Description	<p>Rationale: The resident technicians will train all beneficiaries in, and demonstrate and promote to them, appropriate agronomic and silvicultural technologies to improve and maintain farm and forest productivity. In-village seed and seedling production will be supported. To minimize postharvest losses, low-cost, appropriate-technology storage barn improvements will be promoted and made accessible to all beneficiaries. For organized product storage, processing, and marketing, village trading posts will be constructed and operated in strategic locations.</p> <p>Activities:</p> <ul style="list-style-type: none"> (i) Participatory needs assessment for locating village trading posts and determining which value-added processing will be appropriate for which village, followed by design, procurement, construction, and construction supervision for village trading posts (ii) Training activities by resident technicians and technical specialists incorporating awareness-raising workshops, field days, and on-the-job learning as and when appropriate for the following topics: <ul style="list-style-type: none"> (a) Water management for irrigated crops (b) Diversified rain-fed cropping systems (c) Forage cropping systems for improved livestock nutrition (d) Tree and forage crop nursery operations (e) Forest management and silvicultural maintenance (f) Improved postharvest crop storage, processing, and marketing
Monitorable Deliverables/Outputs	<ul style="list-style-type: none"> (i) 620 families experientially trained in appropriate technologies for productive intensive agriculture and forestry production (ii) Four village trading posts constructed and functioning (iii) Three demonstration and training field-days annually in each target village (iv) Five province and district government agriculture and

	forestry officers trained on the job
Implementation of Major Activities: Number of months for grant activities	48 months

Component D	
Component Name	Project Management, Monitoring, Auditing, Evaluation, and Dissemination
Cost (US\$)	\$260,134
Component Description	<p>The NPD and CTA will be responsible for day-to-day project management: elaboration of detailed work schedules and budget plans, supervision of implementation, record keeping, accounting, monitoring, and reporting. The NPD will be supported by other specialist management and administrative staff of the PIU. A senior resident technical support staff member will be delegated as site manager in each target village and will report to and receive instructions from the PIU in weekly management meetings held at the provincial office.</p> <p>The PIU will prepare a monitoring and evaluation framework, with a set of key performance indicators, and produce quarterly monitoring reviews. Poverty impact of the project will be monitored by the PIU through regular socioeconomic sample surveys in the beneficiary villages and focus on the ability of the families in the target villages to meet their basic needs. Monitoring will also focus on the cost-effectiveness, replicability, and adaptability of the project modalities. Performance monitoring will involve full participation of project beneficiaries.</p> <p>External audits will be conducted semiannually. ADB, the Government, ADRA Lao, and the PIU will jointly and biannually review project progress and performance. External midterm and final evaluations will be conducted. Annual workshops will be held to disseminate lessons learned.</p>
Monitorable Deliverables/Outputs	<ul style="list-style-type: none"> (i) Detailed work schedule and budget plans (ii) Project management meeting minutes (iii) Monitoring and implementation progress reports (iv) Biannual joint review reports (v) Annual progress reports (vi) External monitoring and evaluation reports (vii) Audit reports
Implementation of Major Activities: Number of months from grant activities	48 months

2. Financing Plan for Proposed Grant to be Supported by JFPR

Financier	Amount (\$)
JFPR	1,500,000
Government: In-kind contribution—government staff resources (estimated value)	20,000
UN World Food Programme: In-kind contribution for food for work (estimated value)	226,588
Target Community Contribution: In-kind (labor) contribution (estimated value)	59,347
Total	1,805,935

3. Genesis

Background. In December 2002, ADB approved the Greater Mekong Subregion (GMS) Northern Economic Corridor Project (ADB Loan 1989-LAO[SF]). The project consists of

upgrading Lao National Route 3 (an unpaved seasonal road) to link northern Thailand with Yunnan Province in the People's Republic of China (PRC) via Bokeo and Louang Namtha, two mountainous northwestern provinces of the Lao PDR. Route 3 passes through Houayxay district in Bokeo, and Viengphukha and Namtha districts in Louang Namtha. Viengphukha is among the poorest districts, according to Government poverty statistics, with a poverty incidence rate of 90.3%.

Many rural settlements in the road impact zone, and particularly in Viengphukha, have been isolated, especially in the wet season, with low penetration of, or difficult access to, government services and markets. Most of the impact-zone population suffers from one or more maladies that commonly affect traditional agricultural communities throughout the Southeast Asian uplands as populations grow and aspirations rise: (i) declining productivity of traditional slash-and-burn shifting cultivation (swidden agriculture), leading to food and income insecurity; (ii) high birth rate, high infant mortality, and low life expectancy; (iii) low labor productivity due to poor health; (iv) soil and watershed degradation through deforestation and erosion caused by shifting cultivation expansion; (v) ecological degradation through overexploitative hunting and gathering and/or uncontrolled burning; and (vi) abuse, production, and/or trading of narcotic substances for medication and cash.

A 35-kilometer (km) segment of Route 3 passes through the upper Nam Ha subcatchment, which is a 250-square-kilometer (km²) tract, mostly in northern Viengphukha and partly in Namtha. This area contains nine impoverished ethnic minority villages, with eight on the roadside and one accessible only via a steep, narrow seasonal feeder track. Due to poor roads, these villages have been the most remote and isolated of all along Route 3. The population of 3,250 is ethnically diverse (Khmou, Sam Tao, Thai Dam, Hmong, and Qui-Lahu) and growing at an average annual rate of 2.8% (2.2–3.5% between villages). Socioeconomic and livelihood surveys and analyses (April 2000 and November 2003) reveal that the nine target villages suffer poverty incident rates of 85–98%, with six of the nine villages experiencing rice deficits, and virtually no families with income adequate for savings or for paying viable rates of taxation. The high level of poverty is primarily due to the declining productivity of traditional slash-and-burn shifting cultivation. An 85 km² section of the upper Nam Ha subcatchment is within the buffer zone of the ecologically highly important and environmentally sensitive Nam Ha national protected area. Poverty forces local residents to join outsiders in hunting and gathering illegally in the national protected area, which threatens some rare species with extinction.

The JFPR project is prepared as a component of the social action plan (SAP) of Loan 1989-LAO. The SAP serves as an ethnic minority development plan in accordance with ADB's policy on indigenous peoples. Ethnic minorities are the targeted project beneficiaries.

Issues that Need to be Addressed. The upgraded Route 3 is expected to facilitate trade and investment for the entire region, thereby increasing income and creating jobs. Road upgrading is expected to accelerate the development of the Lao PDR by linking its economy to two rapidly growing economies in neighboring countries. Road upgrading, however, has potential negative consequences, especially for the previously isolated and vulnerable ethnic minority communities inhabiting the remote mountainous rural areas of the road impact zone. These consequences include (i) reduced access to traditional lands due to land grabbing by opportunistic in-migrants, as the Land Law does not provide for official land occupancy tenure security for those practicing shifting cultivation; (ii) exploitation by unscrupulous traders; (iii) other in-migrants with more experience and appropriate entrepreneurial skills being better able to take advantage of economic opportunities the road improvements will bring; (iv) potential exposure to HIV/AIDS⁵ and sexually transmitted disease via increased contact with road construction crews (during

⁵ Human Immunodeficiency virus/acute immunodeficiency syndrome.

Route 3 upgrading), truck drivers, and itinerant traders (after Route 3 upgrading); (v) potential increased risk of human trafficking; and (vi) overexploitation of natural forest and wildlife resources, with increasing demand by traders and other outsiders.

The main objective of upgrading Route 3 is to enhance the regional economy by providing increased commercial and trade opportunities, which will automatically benefit monetized entrepreneurs in north Thailand and southwest PRC and the provincial and district towns of the Lao PDR traversed by the highway. Subsistence-oriented ethnic minority shifting cultivators inhabiting the road impact zones, however, will not automatically benefit in a sustainable manner from these increased trade opportunities as shifting cultivation cannot produce significant agricultural surplus for trade. Hence, there is a strong risk that the economic opportunities and benefits of road upgrading will bypass these rural communities, which will still be exposed to the associated potential negative consequences.

Government Request for Assistance and Identification of Target Area. The national Government, through the Louang Namtha provincial government, recognizes these positive opportunities and also potential negative consequences of Route 3 upgrading. The provincial government has therefore requested assistance through ADB to inaugurate sustainable approaches for reducing poverty and to introduce proactive measures to enable these impacted communities to partake of the potential economic advantages of Route 3 upgrading, while shielding them from the potentially adverse impacts of rapid modernization. The upper Nam Ha subcatchment was proposed as a representative venue for pilot interventions that will pave the way to eventually scale up the project's activities along the Route 3 corridor. The pilot interventions will focus on the nine impoverished rural communities in the upper Nam Ha subcatchment that were previously the most isolated along the entire Route 3.

Land Occupancy Issues. With the upgrading of Route 3, the demand for land along and close to the road will increase. As the local people predominantly practice shifting cultivation, they do not have official land occupancy certification or, hence, secure land tenure. Under the Land Law, to obtain official land occupancy certification, agricultural land must be confined to either permanently sedentarized fields (paddy rice fields, permanent cropping fields, gardens, plantations, permanent fodder and pasture land etc.) or to a limited three-plot rotational shifting cultivation system (3-year rotational use). Cyclic re-occupance shifting cultivation requires a bush fallow period between reuse of 7–15 years (depending on soil type) in order for soil fertility to recover. This means that the 3-year rotation is essentially not a viable long-term option but could, with development interventions, be considered an intermediate step toward sustainable sedentarization. Hence, continuing traditional long-cycle shifting cultivation, even if there were sufficient land to do so, poses grave risks to land occupancy security of local residents, as they cannot obtain land occupancy certification if they continue shifting cultivation.

Shifting Cultivation Issues. Assessment of the livelihood status of the target communities reveals that the imputed value of a typical farm family productive output from shifting cultivation is in the order of only \$870 per year. Most of this output is consumed by the family. Most families do not produce surplus that can be sold on roadsides or in regional markets and are therefore unable to accumulate savings, pay for family medical and educational needs, or pay viable rates of taxation. This livelihood output is significantly below the estimated basic subsistence livelihood of \$1,260 per family per year. Farm families that depend on shifting cultivation have extreme difficulty producing a significant surplus for trade, especially if the population continues to grow. Generally their only marketable surplus from shifting cultivation is gathered. Nontimber food products, which will soon be overexploited unless domesticated in village gardens. Hence, there is a strong risk that the economic opportunities and benefits of road upgrading will bypass these rural communities, which will still be exposed to the associated potential negative consequences.

Rationale of Interventions. To lift rural families, currently practicing shifting cultivation, out of poverty, and enable them to partake of the opportunities, and protect them from key negative consequences, of road upgrading, the best option is to sedentarize agriculture under intensive yet sustainable permanent land-use systems. This would significantly improve family farm productivity and pave the way for official land occupancy certification and, hence, secure land tenure. Bush fallows, previously required for agricultural usufruct under shifting cultivation, would be released to regenerate forests; part of the proceeds could augment farm family incomes, with the remainder reverting to the Government. Domestication of Nontimber food products in village gardens will offset the ongoing degradation of this resource base due to uncontrolled harvesting from the wild.

Livelihood modeling demonstrates that agricultural sedentarization augmented by farm forestry is feasible. In the target area, a typical farm family practicing shifting cultivation uses just over 10 ha for its agriculture and bush fallow rotational cycle. By developing land to enable sedentarization, the agricultural land requirement per family can be reduced to an average of 2.4 ha, the potential production from which is considerably greater than from 10.0 ha under shifting cultivation. Sedentarization of agricultural land will enable the release of over 7 ha per family previously used for shifting cultivation, which will be regenerated as productive forest. Of this, 3 ha will be allocated to each family as community and village production forest, which, under sustained-yield management, will provide firewood and housing maintenance timber as well as approximately 3 m³ of saleable lumber per family per year to augment income from agriculture. The remaining 4 ha will be returned to state management for production or conservation forestry as appropriate. This agroforestry strategy, incorporating the improved productivity possible under sedentarized agriculture and augmented by income from farm forestry, will lift farm family livelihood well above subsistence levels to approximately \$1,900/family/annum. This is close to doubling what is currently possible under shifting cultivation while remaining well within the labor capacity of the farm family.

Agricultural sedentarization will focus on the low slope valley bottoms and gentle foot slopes where stabilization and soil erosion protection measures are relatively straightforward to establish. This will release large areas of medium- to high-slope land, currently used for shifting cultivation, for reforestation, which will have multiple benefits, including income generation for local communities, revenue for the Government, watershed protection through soil erosion, enhanced biodiversity habitat, etc. Watershed protection in the hills is vital to sustainability of irrigated agriculture in the valleys. Hence, agricultural sedentarization is a prerequisite for reforestation, while reforestation is essential for generating complementary income and maintaining the sustainability of sedentarized agriculture, especially irrigation in addition to other environmental and economic benefits.

This JFPR project will focus on the development of sedentarized and intensified agroforestry livelihood systems that will lift farm family awareness and productivity sufficiently to enable confident and equitable engagement in the economic opportunities afforded by Route 3 upgrading. This will pave the way for land occupancy certification that will protect local communities' land occupancy security. A parallel complementary Poverty Reduction Cooperation Fund (PRF) grant project will focus on social preparation for the target communities in health, nonformal education, gender and development, land-rights awareness, natural resource management, and product processing and marketing. This will enhance their ability to confidently and equitably partake of the opportunities of Route 3 upgrading while resisting potential negative social, economic, and environmental consequences.

The JFPR and PRF project proposals have been prepared as complementary components supporting the SAP 2002 of ADB Loan 1989-LAO(SF) for the GMS Northern Economic Corridor

Project. The SAP serves as an ethnic minority development plan required under ADB's policy on indigenous peoples. All the targeted communities of the JFPR and PRF projects are ethnic minorities.

Project implementation will not cause any land acquisition or involuntary resettlement. No access restrictions will be placed on the beneficiary population other than those already pertaining to the integrity of wildlife sanctuary core zones.

4. Innovation

The main innovative features are the following:

- (i) Visionary (year 2025) land-use zonation, based on land capability assessment combined with demographic projection. This provides a platform for the participatory determination of which lands are suitable to develop for intensive agroforestry systems and which need to be protected to conserve biodiversity and the environment.
- (ii) Incorporation of provincial and district government personnel and village committee functionaries in all stages of the planning, implementing, and monitoring.
- (iii) Use of participatory opportunities and constraints analysis, rather than a rapid rural appraisal or participatory rural appraisal during project formulation. Commencing with the socioeconomic data gathering in each village, analysis of participatory opportunities and constraints involves not only community developers and sociologists but also agriculturalists and foresters, who can provide technical and policy insights to development suggestions from villagers, and who can propose technical solutions that have worked elsewhere but may be unfamiliar to the local people.
- (iv) Livelihood targeting, which is based on the availability and capability of the land in each village, to support a sustainable livelihood for each family, providing not only for all subsistence needs but also savings and a taxpaying capacity.
- (v) Incorporation, where necessary, of legalized income from sustainable logging as part of the farm family income stream.
- (vi) Incorporation of food for work to fully involve vulnerable families in the early years of the project, while awaiting the stream of benefits that will eventually accrue from the overall project's implementation.
- (vii) Past irrigation development projects in the Lao PDR have cost as much as \$5,000 per family, and have not protected the catchments on which irrigation water supply depends. This project takes the innovative step of addressing not only irrigation but also the livelihoods of farmers without irrigated fields, and the protection and conservation of the entire catchment through forest rehabilitation with community involvement.
- (viii) Assignment of resident technicians to live full-time in the target villages during the period of management change. They will be counterparts to, and augment the inputs of, local government staff, whose mandates require that they give attention to all villages in each district. The capacity of local government staff may not yet be sufficient to implement change management processes that require social sensitivity.
- (ix) Programmed collaboration at field level between government, NGO, and private sector development support entities.
- (x) Several technologies are incorporated into the project package, which the target farmer population will view as innovative: e.g., self-build terracing, cut-and-carry feeding of purpose-planted forages, and compost making. Adoption of such

practices is essential for to intensify agricultural land use and to enable land currently under extensive slash-and-burn shifting cultivation to be released back for reforestation.

5. Sustainability

Through community organizations the project will empower farm families to participate in informed decision making concerning their present and future livelihoods. After project completion they will be able to interact on an equal footing with outsiders and local government agencies, having had on-the-ground experience with land use and land occupancy stabilization. The project communities represent most communities along Route 3 and will serve to demonstrate and extend to them the various poverty reduction strategies espoused.

Economic Sustainability. Livelihood modeling demonstrates that the envisaged developments, when fully implemented, can be expected to raise household subsistence and cash incomes well above the poverty line, as the following summary table shows:

Projected Household Subsistence and Income Needs

Item	Amount (\$)
Annual subsistence need for an average family of six people	1,261
Actual present income of an average family of six people	870
Projected level of income with project intervention, after project completion, for an average family of six people	1,904

Source: Adventist Development and Relief Agency Lao livelihood modeling for the project villages, 2004.

Enhanced livelihoods will remove any necessity or justification for beneficiaries to continue with unsustainable or undesirable livelihood practices (e.g., slash and burn, wildlife poaching, illegal lumbering, narcotics production and trading etc.) to meet family income needs.

Project costs are approximately \$2,700/family, but only \$60/ha for the overall target area and \$108/ha for rehabilitated or regenerated production forest. Annual incremental timber value of production forest in northern Lao PDR exceeds \$200/ha and thereby more than justifies the proposed expenditure on the basis of long-term returns from sustained-yield forestry on land released and protected for reforestation by agricultural intensification.

Technical Sustainability. Although the technologies promoted may be new to the project area, they have been well proven elsewhere in similar environments. These technologies emphasize labor- rather than capital-intensive approaches wherever feasible. Technicians from the concerned government agencies will be trained on the job and will be able to scale up the new technologies in other areas. The agricultural production systems promoted place heavy emphasis on soil erosion control and maintenance of soil fertility.

Environmental Sustainability. The proposed strategy involves a geographical rather than sectoral approach to stabilize rural livelihoods and the project area without harming livelihoods downstream, downwind, or in the future. Reducing the agricultural area, reducing the incidence of fire, reforestation of steep-slope land etc. all improve air and water quality, the stream-flow regime, and maintenance of a secure biodiversity habitat. The project is under environment category C: positive for the environment and unlikely to have adverse environmental results.

Exit Strategy. Overall, the exit strategy rests on enabling communities and local government to become self-reliant as soon as possible, with secure adequate livelihoods and revenue streams. Technical support will be withdrawn during the project as soon as any sector of activity has become self-reliant. During project implementation, as strategies become proven and well established, the interest generated will enable the provincial government to attract additional funding from the central Government, ADB, and/or other international funding agencies to scale up these approaches. The technical assistance will address these possibilities well before project termination.

6. Participatory Approach

Project preparation has been based on the results of an intensive participatory socioeconomic survey and land-use planning campaign in each target village, eliciting informed opinions of all stakeholders in formulation of a map-based budgeted plan to reduce poverty and stabilize resource use in the target area. District and provincial government staff from all relevant offices were involved in the field surveys after initial training, and have participated in workshops to present survey results, explain mapping and land-use planning, and jointly elaborate on the project scope and budget. Provincial representatives have participated in similar briefing and planning sessions with central Government agencies. PowerPoint presentations (with accompanying compact discs) detailing project aims and strategies, in Lao and English, have been presented to governmental and funding agencies to solicit their inputs, suggestions, and involvement as appropriate.

In order for the nine target communities to have a sense of project ownership, their involvement was solicited from the earliest stages of project preparation. At each step in the planning process, plans and anticipated project benefits were explained and communicated clearly. The JFPR project strategy emphasizes enhancing community leadership for meaningful involvement in planning and decision making, in collaboration with local government agencies and the private sector.

The project will work through elected village development committees (VDCs) as the primary interface between the PIU and community in participatory activity planning and decision making and collaborative management and monitoring. Each VDC will comprise several interest groups (subcommittees), each established to implement individual project components (e.g., irrigation water users, community forestry, etc.). The VDC will be responsible to the village administration committee for village decision making. The project will support the formation, capacity building, and training of VDCs and the various interest group functionaries so enable them to make informed, logical choices concerning livelihood options. In establishing VDCs and interest groups, equitable representation from all gender and economic status groups will be actively encouraged (Appendix 3, Organization Structure).

The project is designed to maximize community involvement in land and agroforestry development and stabilization. Almost all land development work (except for the technical components of irrigation development) will require significant community labor input. This will be partly compensated by 80% food for work payments (to enable the poorest families to participate without compromising their food security and labor-opportunity cost). The remaining 20% of the labor requirement will be contributed freely by the beneficiary families as their counterpart contribution to project ownership.

Much of the capacity building for land and agroforestry development will involve learning by doing, where community participants will be trained on the job by project and government technicians. The relevant skills will then become embedded in the community to be passed on to others, including the next generations. The project is designed to incorporate a significant

number of district and provincial government staff members to enhance participation and sense of ownership by local government.

Primary Beneficiaries and Other Affected Groups and Relevant Description	Other Key Stakeholders and Brief Description
<ul style="list-style-type: none"> • Nine target ethnic minority communities in the upper Nam Ha subcatchment (see above section, which describes their involvement) • Other affected groups • Other residents of the buffer zones of the Nam Ha NPA • Other roadside villages along Route 3 • Beneficiaries of other donor-assisted sectoral projects throughout Bokeo and Louang Namtha provinces • Other affected groups that will benefit from dissemination of project-sponsored technologies, distribution of technical reports, and field-day site visits by community representatives and/or their technical advisors 	<ul style="list-style-type: none"> • As Executing Agency, the Louang Namtha provincial government will approve the detailed annual work and budget plans; assign the NPD, who will head the PIU; and provide several provincial technical counterpart staff. • Viengphukha and Namtha district government officials will be members of the project coordination committee and provide district technical counterpart staff. • ADRA Lao will furnish the technical support team and CTA, who will assist the NPD and be a part of the PIU, which is responsible for project implementation and management. • The Ministry of Agriculture and Forestry (MAF) will be involved in technical monitoring and review, especially of scaling up of labor-intensive soil erosion control measures to be pioneered in the project area and village forestry systems. • The local business and banking community will benefit from increased farmers' savings and consumption capacity, and improved quantity and reliability of better-quality farm and forest produce derived from improved agroforestry production systems.

7. Coordination

The Japan International Cooperation Agency (JICA) is financing several assistance programs in northern Lao PDR, particularly in community health and village forestry. The outcomes of several JICA-financed initiatives in agroforestry development were considered in project preparation. The aerial photographs used for the preparatory mapping work for this proposal were funded by JICA. JICA officers and Embassy of Japan officials in the Lao PDR were consulted several times during project proposal development, and their comments and feedback incorporated into the proposal design. A further briefing was provided during the latest fact-finding mission (1–4 June 2004). Several Japan Overseas Cooperation Volunteers (JOCV) volunteers have been assigned to provincial government agencies in Louang Namtha. A previous mission explored with JICA the possibility of assigning, part-time, a JOCV agroforestry or forestry volunteer attached to the provincial Agriculture and Forestry Service, to support the target communities.

In the first two years of project implementation, the Government and ADB joint project reviews will be mounted at least twice a year or more frequently, if needed. The PIU will prepare activity progress reports, together with an annual project review report, as a basis for the tripartite performance review. These reports will be prepared and disseminated to the Embassy of Japan and JICA in the Lao PDR, whose representatives will be invited to participate in the project review meetings in Louang Namtha.

A complementary proposal for \$850,000 will be submitted for PRF grant financing, which will focus on the social sector (health, nonformal education, enterprise-skills development,

preparation of a gender action plan); natural resource management (sustainable wildlife and non-timber forest products resource management); and land tenure security issues (land capability assessment, zonation, allocation, and occupancy certification) for the same target area. ADRA Germany has expressed willingness to support complementary rural income-generating activities (with a tentative budget of €400,000–500,000) for fruit orchard development, NTFP domestication, and livestock husbandry and aquaculture development. Regardless of the outcomes of these complementary applications, this proposal is designed to have stand-alone viability.

The United Nations World Food Programme (UNWFP) in the Lao PDR has expressed a strong commitment to partner with this project by providing rice to be used as compensation for the labor input of local communities via food for work. This is an important short-term poverty reduction measure as it compensates local communities for their labor input as they develop land-use systems that can provide long-term improved livelihood and food security.

8. Detailed Cost Table

Cost estimate tables are in Appendix 1.

The cost of purchasing vehicles has been included in the budget as it is cheaper and more cost-effective than leasing or renting. Lease or rental costs of required vehicles over the life of the project would almost double the cost compared to direct purchase.

C. Linkage to ADB Strategy and ADB-Financed Operations

1. Linkage to ADB Strategy

Document	Date of Last Discussion	Objective(s)
ADB Country Strategy and Program (CSP)	May 2004	Key related objectives are (i) rural development, market linkages, improved land tenure and allocation, and extension services; (ii) human resource development addressing gender as a crosscutting concern; (iii) sustainable environmental management; (iv) governance and capacity building through strengthening village institutional and regulatory framework and district and provincial government staff of MAF and Department of Land-Use Planning and Development; (v) ADB's geographical focus on the poor northern provinces; and (vi) the integrated development approach along border areas and the key corridors, including the Northern Economic Corridor.
National Growth and Poverty Eradication Strategy	January 2004	Key related agriculture and forestry sector development priorities are (i) sustainable land-use zonation, allocation, and land occupancy entitlement; (ii) promotion of sustainable community management of natural resources, especially agricultural land and local forests; (iii) livelihood skills directly supporting community development and livelihood enhancement; and (iv) reversing deforestation.
Northern Region Development Strategy	February 2004	Key related objectives are (i) environmental development strategies for capacity building and human resource development; (ii) conservation of the natural environment; (iii) stabilizing shifting cultivation through province-level land-use zonation, participatory village land-use zonation; and (iv) agricultural intensification, land allocation.

2. Linkage to Specific ADB-Financed Operation

Project Name	Greater Mekong Subregional (GMS) Northern Economic Corridor Project
Project Number	ADB Loan 1989-LAO(SF)
Date of Board Approval	20 December 2002
Loan Amount (\$ million)	\$30.00-million loan from ADB (total project cost is \$95.79 million)

3. Development Objective of the Associated ADB-Financed Operation:

The primary development objective of the GMS Northern Economic Corridor Project is to accelerate regional development through more efficient infrastructure networks. A direct link between the PRC and Thailand via the Lao PDR will reduce transport costs in the regional project influence area, and will increase the efficiency of vehicle, goods, and passenger traffic. The link will also help the Lao PDR develop by linking it to two rapidly growing economies within the region. The road will help link two remote provinces of the Lao PDR and help reduce poverty by providing access to markets, extension services, income, and jobs, thus enhancing development potential.

4. List the main components of the Associated ADB-Financed Operation:

No.	Component Name	Brief Description
1.	Construction of Project Road	1.1 Upgrading and reconstruction of National Route 3 from Huayay (on the border with Thailand) to Boten (on the border with the PRC) to a sealed two-lane highway (228 km) 1.2 Construction of new bridges and widening of existing bridges as required 1.3 Upgrading of ferry facilities on the Mekong River 1.4 Construction of a 7.1-km bypass around Louang Namtha town
2.	Implementation of an Area Development Plan	2.1 Resettlement plan. To ensure that the immediate impact of road construction will not be adverse to communities living along the road, by supporting resettlement and compensation where required. 2.2 SAP. To enhance project benefits, especially to ethnic minorities, along the road (the SAP specifically includes an ethnic minority development plan) and will include the following main subcomponents: 2.2.1 Community feeder roads 2.2.2 Water and sanitation scheme development for roadside communities 2.2.3 Education and awareness programs for (i) preventive education program for HIV/AIDS and sexually transmitted diseases, and trafficking awareness; (ii) nonformal education; and (iii) road safety awareness
3.	Capacity Building at the Provincial and Sector Levels	3.1 The project includes international third-party monitoring of the road's environmental impact. This program will integrate local capacity building through on-the-job training and formal module training for the road sector at the provincial level, and for the Environment Research Institute set up under the Science, Technology, and Environment Agency to enhance local capacity to carry out social and environmental monitoring.

5. Rationale for Grant Funding versus ADB Lending

Commercial and village forestry will be the mainstay of the economy in northern Lao PDR for the foreseeable future. Before forestlands can be rehabilitated and secured, the area under slash-and-burn shifting cultivation must be drastically reduced through agriculture sedentarization and impoverished farmers integrated into the forest economy. This approach will be a new experience for the Lao PDR and as such requires piloting at the local level before scaling up province and region wide through international financial institution lending. A pilot project, the proposed JFPR project is necessarily small and therefore does not lend itself to the usual modalities of ADB funding. Because of ADB institutional overheads, it is difficult for ADB to consider an investment loan project of less than \$10 million.

D. Implementation of the Proposed Grant

1. Implementing Agencies	A PIU to be established by the Louang Namtha provincial government, the Executing Agency, will be headed by the NPD recruited by the government and assisted by a CTA and technical support team furnished by ADRA Lao. ⁶
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2. Risks Affecting Grant Implementation

Type of Risk	Brief Description	Measure to Mitigate the Risk
Local government capacity	The possibility that counterpart staff assigned by the local government line agencies would be insufficiently capable or be inexperienced	The planned assignment of resident technical support personnel to be counterparts of district and provincial officials during the period of management change, when continuous and intensive technical support is required to ensure adoption of new approaches and technologies by all socioeconomic strata of the target communities.
Adoption	Slower-than-forecast adoption of the project-espoused land-use changes and technologies	During regular progress reviews assess whether the adoption rate has been as forecast and conduct activities to speed up adoption, as required.
Implementation delays	Funds reaching the field later than the projected time frame for season-bound activities (1 month's delay in season-bound activities can cause a year's delay to the project)	Allocate a substantial reserve provision in the province project account sufficient to obviate any potential delay in season-bound activities.
Governance	Provincial government's insufficient influence to prevent trespass of external loggers or poachers into village territories	Organize and authorize armed patrols by village militia, with approval from the Ministry of Interior.
Coordination	Draconian measures to suppress opium production before the land and forest development measures scheduled under the project have been implemented and adopted could cause highland village antagonism against	Top-level coordination between MAF, Ministry of Interior, and provincial authorities concerning the nature and timing of opium cultivation suppression measures

⁶ ADRA Lao is an international rural development NGO based in the Lao PDR, with broad-based capabilities of managerial, technical, and administration experience in similar projects in the Lao PDR since 1994.

Type of Risk	Brief Description	Measure to Mitigate the Risk
	<p>and noncooperation with all government and associated development personnel.</p> <p>Poor coordination between the JFPR project and the Northern Economic Corridor Project</p>	<p>The JFPR PIU coordinates with the coordination consultants under the Northern Economic Corridor Project, because JFPR project villages are also affected by the road project. The VDCs will be the same, but other implementing agencies and the executing agency will be different.</p>

3. Incremental ADB Costs

Component	Incremental Bank Cost
Amount requested	\$4,000
Justification	The Province of Louang Namtha and implementing NGO are not familiar with ADB's procurement and disbursement procedures and will need training from ADB.
<p>The project analyst will train the Province of Louang Namtha and the PIU in the following areas during the inception mission:</p> <p>(i) ADB's disbursement and procurement guidelines and practices;</p> <p>(ii) general guidelines;</p> <p>(iii) disbursement procedures;</p> <p>(iv) basic requirements for disbursement;</p> <p>(v) withdrawal application;</p> <p>(vi) eligible expenditures;</p> <p>(vii) bidding processes and procedures; and</p> <p>(viii) invitation for bids.</p> <p>Training will last 4–6 days.</p>	One ADB project analyst will provide training in the PIU in Louang Namtha.

4. Monitoring and Evaluation

Key Performance Indicator	Reporting Mechanism	Plan and Timetable for M&E
Area of the pilot subcatchment brought under sustainable and productive land use for agriculture, livestock husbandry, forestry, and biodiversity conservation	Target area land-use mapping by VDCs	Annually at the end of each dry season (in May of each project year)
Number of beneficiary families adopting locally innovative strategies and technologies for sustainable poverty reduction, incorporating intensive agricultural sedentarization, land occupancy consolidation, enhanced market linkages, and sustained-yield forestry	Socioeconomic sample surveys, village trading post accounts, village and district land ownership and tax registers, target area land-use mapping	Annual monitoring commencing January year 2

Key Performance Indicator	Reporting Mechanism	Plan and Timetable for M&E
Number of beneficiary families whose livelihoods have been raised sufficiently above the poverty line to be able to accumulate savings and pay viable rates of taxation	Socioeconomic sample surveys, village crop and animal production records, village and district land ownership and tax registers	Annual monitoring commencing end of year 1, midterm and final evaluations
Number of local government functionaries with experience-based skills and competence in their respective fields of responsibility	Polling of beneficiaries and aptitude tests, workshop and training attendance	Biannual monitoring, midterm and final evaluation
Accounting, auditing, and reporting by ADRA Lao	(i) Project progress reports (ii) Audited project accounts within 6 months of each fiscal year (iii) Project completion report	(i) Quarterly (ii) Annually (iii) Within 3 months of project completion

5. Estimated Disbursement Schedule

Duration: 4 years (48 months)
Commencement: First quarter of 2005
Competition: End of last quarter of 2008

Fiscal Year (FY)	Amount (\$)
FY 2005	496,896
FY 2006	480,141
FY 2007	284,277
FY 2008	238,686
Total Disbursements	1,500,000

Appendixes

1. Detailed Cost Estimates
2. Fund Flow Arrangement
3. Implementation Arrangements

COST ESTIMATES

Table A1.1: Summary Budget Matrix

Grant Components Inputs/Expenditures Category	Component A	Component B	Component C	Component D	Total (Input)	%
1. Civil Works: (e.g. land preparation, forest rehabilitation, construction of irrigation systems, construction of village trading posts, village plant nurseries, and related costs)	304,190	173,623	28,860		506,673	33.8
2. Equipment, Hardware and material (e.g. vehicles, irrigation pumps, generator, computers, audio-visual equipment, furniture, etc.)	55,140	41,500		10,900	107,540	7.2
3. Training, workshops, seminars, public campaigns: (e.g. trainers, technical specialists, rental for venue, travel, food and lodging for participants, training facilities and other related costs)	83,060	39,835	94,869		217,764	14.5
4. Consulting Services: (e.g. for evaluation, other specialists, and related costs such as travel)	12,000	39,000		39,600	90,600	6.0
5. Project Management: including management of specific components by PIU, the EA and IAs. (e.g. wages for staff, per diem for government staff and local volunteers, office equipment, rental, O&M, and recurrent costs)	21,408	21,408	21,408	126,306	190,530	12.7
6. Other Project Inputs: (For other specific project inputs that cannot be included in any of the above categories, such as NGO involvement and resources)	97,836	68,052	66,552	68,400	300,840	20.1
7. Contingencies (0-10% of total estimated costs, that can be utilized for any of the above categories that, due to unforeseen circumstances, may require additional funds during implementation. Use of Contingencies requires prior approval from ADB)	34,902	23,334	12,889	14,928	86,053	5.7
Subtotal JFPR grant financed	608,536	406,752	224,578	260,134	1,500,000	100.0
Government contribution (e.g. Salaries for government counterparts; provision of project office; participation in workshops/meetings)	8,000	6,000	6,000		20,000	
Counterpart project's contribution: (e.g. health, hygiene, non-formal education, community water supply and sanitation)					0	
Other Donors' contribution (e.g., UNWFP's Food for Work)	78,885	137,983	9,720		226,588	
Community's Contributions (e.g., participation in all training and community development; land development in kind labor through food for work)	20,288	35,819	3,240		59,347	
Total Estimated Costs	715,709	586,554	243,538	260,134	1,805,935	

ADB = Asian Development Bank, NGO = nongovernment organization, O&M = operations and management, UNWFP = United Nations World Food Programme.

Table A2.1: Detailed Cost Estimates

Code	Supplies and Services Rendered	Costs						Contributions		
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
Component A. Development of Sustainable Agriculture Landuse Systems			Subtotal:		680,807	573,634		8,000	78,885	20,288
1.1	Land Development (for labor 80% FFW from UNWFP, 20% communities contribution)		Subtotal:		394,291	304,190		0	72,081	18,020
1.1.1	Construction of Intake, Weir and Other Concrete Superstructures for New Irrigated Paddy	ha	30	3,556	106,680	105,000			1,344	336
1.1.2	Upgraded Existing Paddy	ha	65	2,556	166,140	162,500			2,912	728
1.1.3	Run-off Capture Irrigation	ha	71	326	23,146	3,550			15,677	3,919
1.1.4	Rain-fed Bunded Rice Terrace	ha	167	263	43,921	8,350			28,457	7,114
1.1.5	Arable/Forage Terrace (less than 12.5% slope)	ha	134	406	54,404	24,790			23,691	5,923
1.2	Equipment and Materials		Subtotal:		55,140	55,140		0	0	0
1.2.1	HF Radio Set Up for Base to Field Communications	Set	1*50%	5,000	2,500	2,500	DP			
1.2.2	5 KVA Generator (field)	Unit	1*50%	1,200	600	600	DP			
1.2.3	Agricultural Tools, Equipment	Lump sum	1*50%	10,000	5,000	5,000	DP			
1.2.4	4-Wheel Drive Heavy Duty (13 seater)	Unit	1*50%	27,500	13,750	13,750	DP			
1.2.5	4-Wheel Drive 4 door Pick-up	Unit	1*50%	20,500	10,250	10,250	DP			
1.2.6	Semi-off-Road Motorbikes	Unit	5*50%	2,800	7,000	7,000	DP			
1.2.7	Motorscooters	Unit	4*50%	1,200	2,400	2,400	DP			
1.2.8	Postharvest Storage Materials	Unit	620	22	13,640	13,640	DP			
1.3	Component Management (20% of input)		Subtotal:		21,408	21,408		0	0	0
1.3.1	Management Support Officer	Months	48*2%	655	6,288	6,288				
1.3.2	Accountant/Logistics & Procurement Officer	Months	48*20%	465	4,464	4,464				
1.3.3	Administrative Assistant/Secretary	Months	48*20%	400	3,840	3,840				
1.3.4	Monitoring Officer/Translator	Months	48*20%	620	5,952	5,952				
1.3.5	Messenger/Cleaner	Months	48*20%	90	864	864				
1.4	Other Inputs		Subtotal:		97,836	97,836				
1.4.1	Chief Technical Advisor (expat) @ 30% of Total Advisory and Coordination Input	Months	48*30%	4,750	68,400	68,400	DS			
1.4.2	Materials Transport	Trucks	10	150	1,500	1,500				
1.4.3	Driver/Mechanic	Months	48*40%	180	3,456	3,456				

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Table A2.1—Continued

Code	Supplies and Services Rendered	Costs						Contributions		
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
1.4.4	Vehicle Running Costs (4WDs & motorbikes)	Months	48*40%	1,275	24,480	24,480				
1.5	On-the-Job-Training, Technical Guidance		Subtotal:		75,214	75,214				
1.5.1	Agronomist/Upland Farming Systems Specialist	Months	36*70%	545	13,734	13,734				
1.5.2	Agronomist/Lowland and Irrigated Paddy Systems Specialist	Months	36*70%	545	13,734	13,734				
1.5.3	Irrigation Engineer	Months	18*70%	840	10,584	10,584				
1.5.4	Crop Water Management Technician	Months	24*70%	545	9,156	9,156				
1.5.5	3 x Resident Technical Support Generalists: Local Project Staff Residing in the Community, Each Covering three Villages	Months	135*40%	340	18,360	18,360				
1.5.6	Soil Conservation Field Foreman	Months	15*40%	445	2,670	2,670				
1.5.7	Community Mobilization Specialist	Months	32*40%	545	6,976	6,976				
1.6	Capacity Building for Government Technical Counterparts		Subtotal:		15,846	7,846		8,000		
1.6.1	Provincial Irrigation Counterpart	Persons	1	1,294	1,294	1,294				
1.6.2	2 x District Agricultural Officers	Persons	2	2,184	4,368	4,368				
1.6.3	2 x District Irrigation Officers	Persons	2	1,092	2,184	2,184				
1.6.4	Government Contribution (staff salaries and benefits)	Lump sum	40%		8,000			8,000		
1.7	Village Volunteers (allowance: 75% by UNWFP + 25% village contribution)		Subtotal:		9,072	0		0	6,804	
1.7.1	9 Village Water Resources Managers (allowance for 48 months)	Months	36*9*70%	40	9,072				6,804	
1.8	Consulting Service (TA, specialists)		Subtotal:		12,000	12,000				
1.8.1	Irrigation Feasibility and Design Consultancy	Unit	1	12,000	12,000	12,000				
Component B. Development of Sustainable Forestry Systems					563,220	383,418		6,000	137,983	35,819
2.1	Forest Development: (for labor 80% FFW from UNWFP, 20% communities' contribution)		Subtotal:		326,257	173,623		0	122,107	30,527
2.1.1	Dedicated Plantation (local materials+100% labor costs)	ha	110	628	69,080	38,390			24,552	6,138
2.1.2	Community Forest Enrichment (local materials+100% labor costs)	ha	802	175	140,350	70,576	DP		55,819	13,955
2.1.3	Village Production Forest Enrichment (local materials+100% labor costs)	ha	802	106	85,012	36,892	DP		38,496	9,624

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Table A2.1—Continued

Code	Supplies and Services Rendered	Costs						Contributions		
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
2.1.4	Village Nursery	Units	9	2,095	18,855	14,805	DP		3,240	810
2.1.5	Village Nursery Operations	Months	9*48	30	12,960	12,960				
2.2	Equipment and Material		Subtotal:		41,500	41,500		0	0	0
2.2.1	HF Radio Set Up for Base-to-Field communications	Set	1*50%	5,000	2,500	2,500	DP			
2.2.2	5-KVA Generator (field)	Unit	1*50%	1,200	600	600	DP			
2.2.3	Agricultural Tools, Equipment	Lump sum	1*50%	10,000	5,000	5,000	DP			
2.2.4	4-Wheel Drive Heavy Duty (13 seater)	Unit	1*50%	27,500	13,750	13,750	DP			
2.2.5	4-Wheel Drive 4-Door Pick-up	Unit	1*50%	20,500	10,250	10,250	DP			
2.2.6	Semi-Off-Road Motorbikes	Unit	5*50%	2,800	7,000	7,000	DP			
2.2.7	Motorscooters	Unit	4*50%	1,200	2,400	2,400	DP			
2.3	Component Management (20% input)		Subtotal:		21,408	21,408		0	0	0
2.3.1	Management Support Officer	Months	48*20%	655	6,288	6,288				
2.3.2	Accountant/Logistics & Procurement Officer	Months	48*20%	465	4,464	4,464				
2.3.3	Administrative Assistant/Secretary	Months	48*20%	400	3,840	3,840				
2.3.4	Monitoring Officer/Translator	Months	48*20%	620	5,952	5,952				
2.3.5	Messenger/Cleaner	Months	48*20%	90	864	864				
2.4	Other Inputs		Subtotal:		68,052	68,052		0	0	0
2.4.1	Chief Technical Advisor (expat) (@ 20% of total advisory and coordination input)	Months	48*20%	4,750	45,600	45,600				
2.4.2	Materials Transport	Trucks	10	150	1,500	1,500				
2.4.3	Driver/Mechanic	Months	48*30%	180	2,592	2,592				
2.4.4	Vehicle Running Costs (4WDs & motorbikes)	Months	48*30%	1,275	18,360	18,360				
2.5	On-the-Job-Training, Technical Guidance		Subtotal:		36,013	36,013		0	0	0
2.5.1	3 x Resident Technical Support Generalists (local project staff residing in the community, each covering 3 villages)	Months	135*30%	340	13,770	13,770				
2.5.2	Soil Conservation Field Foreman	Months	15*30%	445	2,003	2,003				
2.5.3	Forestry Technician	Months	32*70%	670	15,008	15,008				
2.5.4	Community Mobilization Specialist	Months	32*30%	545	5,232	5,232				
2.6	Capacity Building for Government Technical Counterparts		Subtotal:		9,822	3,822		6,000	0	0
2.6.1	2 x District Forestry Officers	Persons	2	1,911	3,822	3,822				
2.6.2	Government Contribution (staff salaries & benefits)	Lump sum			6,000			6,000		
2.7	Village Volunteers (allowance: 75% by		Subtotal:		21,168	0		0	15,876	5,292

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Table A2.1—Continued

Code	Supplies and Services Rendered	Costs					Contributions			
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
	UNWFP + 25% village contribution)									
2.7.1	9 x Village Rangers/Foresters (allowance for 48 months)	Months	48*9*70%	40	12,096				9,072	3,024
2B.7.2	9 x Village Nursery Workers	Months	36*9*70*	40	9,072				6,804	2,268
2.8	Consulting Service (TA, Specialists)		Subtotal:		39,000	39,000		0	0	0
2.8.1	Forest Inventory, Management Planning, and Training Consultancy	Unit	1	39,000	39,000	39,000				
Component C. Community Skills Training					230,649	211,689		6,000	9,720	3,240
3.1	Training, Workshops, Seminars, Coordination Meetings, Field-Days		Subtotal:		42,200	42,200		0	0	0
3.1.1	Community Training and Study Visits	Sessions	36	500	18,000	18,000				
3.1.2	Government Counterpart Specialized Training	Persons	8	1,000	8,000	8,000				
3.1.3	Demonstration and Training Field-Days	Field-days	108	150	16,200	16,200				
3.2	On-the-Job-Training, Technical Guidance		Subtotal:		47,669	47,669		0	0	0
3.2.1	Agronomist/Upland Farming Systems Specialist	Months	36*30%	545	5,886	5,886				
3.2.2	Agronomist/Lowland and Irrigated Paddy Systems Specialist	Months	36*30%	545	5,886	5,886				
3.2.3	Irrigation Engineer	Months	18*30%	840	4,536	4,536				
3.2.4	Crop Water Management Technician	Months	24*30%	545	3,924	3,924				
3.2.5	3 x Resident Technical Support Generalists: (local project staff residing in the community, each covering 3 villages)	Months	135*30%	340	13,770	13,770				
3.2.6	Soil Conservation Field Foreman	Months	15*30%	445	2,003	2,003				
3.2.7	Forestry Technician	Months	32*30%	670	6,432	6,432				
3.2.8	Community Mobilization Specialist	Months	32*30%	545	5,232	5,232				
3.3	Capacity Building for Government Technical Counterparts		Subtotal:		11,000	5,000		6,000	0	0
3.3.1	Provincial Irrigation Counterpart	Persons	1	554	554	554				
3.3.2	2 x District Agricultural Officers	Persons	2	936	1,872	1,872				
3.3.3	2 x District Forestry Officers	Persons	2	819	1,638	1,638				
3.3.4	2 x District Irrigation Officers	Persons	2	468	936	936				
3.3.5	Government Contribution (staff salaries & benefits)	Lump sum	30%		6,000			6,000		
3.4	Village Volunteers (allowance: 75% by UNWFP + 25% village contribution)		Subtotal:		12,960	0		0	9,720	3,240
3.4.1	9 Village Water Resources Managers	Months	36*9*30%	40	3,888				2,916	972

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Table A2.1—Continued

Code	Supplies and Services Rendered	Costs						Contributions		
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
	(Allowance for 48 months)									
3.4.2	9 x Village Rangers/Foresters (allowance for 48 months)	Months	48*9*30%	40	5,184				3,888	1296
3.4.3	9 x Village Nursery Workers	Months	36*9*30%	40	3,888				2,916	972
3.5	Other Inputs		Subtotal:		66,552	66,552		0	0	0
3.5.1	Chief Technical Advisor (expat) (@ 20% of total advisory and coordination input)	Months	48*20%	4,750	45,600	45,600				
3.5.2	Driver/Mechanic	Months	48*30%	180	2,592	2,592				
3.5.3	Vehicle Running Costs (4WDs and motorbikes)	Months	48*30%	1,275	18,360	18,360				
3.6	Component Management (20% input)		Subtotal:		21,408	21,408		0	0	0
3.6.1	Management Support Officer	Months	48*20%	655	6,288	6,288				
3.6.2	Accountant/Logistics & Procurement Officer	Months	48*20%	465	4,464	4,464				
3.6.3	Administrative Assistant/Secretary	Months	48*20%	400	3,840	3,840				
3.6.4	Monitoring Officer/Translator	Months	48*20%	620	5,952	5,952				
3.6.5	Messenger/Cleaner	Months	48*20%	90	864	864				
3.7	Civil Works		Subtotal:		28,860	28,860		0	0	0
3.7.1	Village Trading Post (construction)	Units	4	7,215	28,860	28,860	LCB			
	Component D. Project Management		Subtotal:		245,206	245,206		0	0	
4.1	Project Management Personnel (40% input)		Subtotal:		42,816	42,816		0	0	
4.1.1	Management Support Officer	Months	48*40%	655	12,576	12,576				
4.1.2	Accountant/Logistics & Procurement Officer	Months	48*40%	465	8,928	8,928				
4.1.3	Administrative Assistant/Secretary	Months	48*40%	400	7,680	7,680				
4.1.4	Monitoring Officer/Translator	Months	48*40%	620	11,904	11,904				
4.1.5	Messenger/Cleaner	Months	48*40%	90	1,728	1,728				
4.2	Equipment and Material		Subtotal:		10,900	10,900		0	0	0
4.2.1	Desktop Computer	Unit	3	1,000	3,000	3,000	DP			
4.2.3	Printer	Unit	2	150	300	300	DP			
4.2.2	Laptop Computer	Unit	2	1,500	3,000	3,000	DP			
4.2.4	Computer Software	Sets	5	100	500	500	DP			
4.2.5	Fax Machine	Unit	1	200	200	200	DP			
4.2.6	Office Furniture	Lump sum	1	1,500	1,500	1,500	DP			
4.2.7	Photo Camera set	Unit	1	400	400	400	DP			
4.2.8	Data Projector	Unit	1	2,000	2,000	2,000	DP			
4.3	Operational Costs		Subtotal:		21,600	21,600		0	0	0

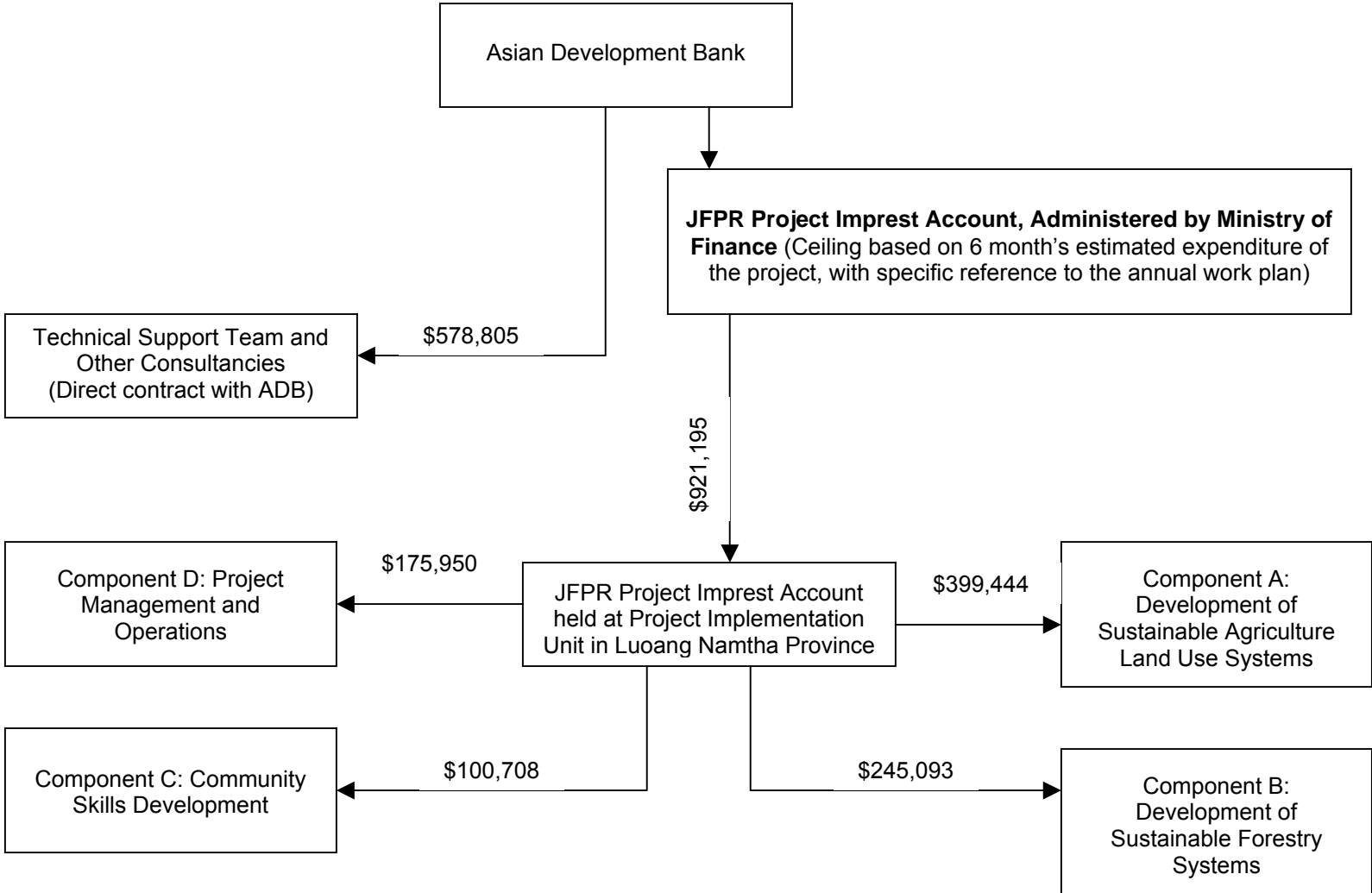
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Table A2.1—Continued

Code	Supplies and Services Rendered	Costs						Contributions		
		Unit	Quantity	Cost	TOTAL	JFPR		GOL	Other Donors - UNUNWFP	Communities
			Units	Per Unit	\$	Amount	Method of Procurement			
4.3.1	Office Rental	Months	48	150	7,200	7,200	DP			
4.3.2	Office Running Costs (supplies, utilities, communications)	Months	48	300	14,400	14,400	DP			
4.4	Travel		Subtotal:		25,740	25,740		0	0	0
4.4.1	National Travel (Lao staff)	Tickets	138	90	12,420	12,420				
4.4.2	National Travel (GoL ministry-level Staff)	Tickets	32	90	2,880	2,880				
4.4.3	National Travel (foreign project and monitoring staff)	Tickets	72	145	10,440	10,440				
4.5	Per Diem for Missions, Travel		Subtotal:		36,150	36,150		0	0	0
4.5.1	Project Staff Travel	Days	690	15	10,350	10,350				
4.5.2	Government Ministry-Level Monitoring & Evaluation	Days	160	15	2,400	2,400				
4.5.3	Management, Technical & Financial Monitoring	Days	360	65	23,400	23,400				
4.6	Other Inputs		Subtotal:		68,400	68,400		0	0	0
4.6.1	Chief Technical Advisor (expat) (@ 30% of total advisory and coordination input)	Months	48*30%	4,750	68,400	68,400				
4.7	Audits, Coordination, Dissemination & Evaluation Costs		Subtotal:		39,600	39,600		0	0	0
4.7.1	Audit Services (biannual external audit)	Audits	8	2,000	16,000	16,000				
4.7.2	Biannual Government/ADB Project Review & Coordination Meetings	Meetings	8	800	6,400	6,400				
4.7.3	Quarterly Coordinating Meetings with Local Government	Meetings	16	200	3,200	3,200				
4.7.4	Annual Dissemination Workshop	Workshop	4	1,000	4,000	4,000				
4.7.5	Midterm and Final Evaluation	Evaluation	2	5,000	10,000	10,000				
	Components A+B+C+D Subtotal				1,719,882	1,413,947		20,000	226,588	59,347
	Contingency: Component A				34,902	34,902				
	Component B				23,334	23,334				
	Component C				12,889	12,889				
	Component D				14,928	14,928				
	Total Project Cost				1,805,935	1,500,000		20,000	226,588	59,347

DP = direct purchase, DS = direct selection of a firm, FFW = Food for Work, GOL = Government of Lao, ha = hectare, HF = high frequency, JFPR = Japan Fund for Poverty Reduction, KVA = kilovolt amperes, LCD = local competitive bidding, TA = technical assistance, UNWFP = United Nations World Food Programme.

FUND FLOW ARRANGEMENTS FOR JFPR FUNDS



ADB = Asian Development Bank, JFPR = Japan Fund for Poverty Reduction

IMPLEMENTATION ARRANGEMENTS

1. **Executing Agency.** The Louang Namtha provincial government will be the project's Executing Agency (EA). It will oversee project activities, facilitate coordination with district and village authorities and other projects, endorse the grant and the annual work plans. The Provincial Government of Louang Namtha will appoint a Japan Fund for Poverty Reduction (JFPR) liaison officer to facilitate coordination with and between national, provincial and district departments.
2. **Project Coordination Committee.** A project coordination committee (PCC), chaired by the provincial vice-governor, will provide overall implementation guidance, approve overall and annual work and financial plans, and monitor implementation progress. The PCC will comprise representatives from the provincial and district departments of agriculture and forestry; provincial Bureau of Land Use Planning and Development; and provincial Department of Communication, Transport, Post, and Construction. The chief technical advisor (CTA) and representatives from the Asian Development Bank (ADB) Lao Resident Mission will be nonvoting members.
3. **Implementing Agency.** A national project director (NPD) recruited or assigned by the Louang Namtha provincial government (upon concurrence by ADB) will, together with the CTA, jointly head the project implementation unit (PIU). The PIU will be responsible for the day-to-day management of project implementation. A managerial, technical, and administrative support team, headed by the CTA will provide management, technical, and administrative support to the PIU.
4. The project will undertake detailed design and implementation of project components in coordination with and with the full participation of all relevant agencies and community stakeholders. To facilitate this, the project will work through elected village development committees (VDCs) as the primary interface between the PIU and the community in terms of participatory activity planning and decision making and collaborative management and monitoring. Each VDC will comprise several interest groups (subcommittees), each established to implement individual project components (e.g., irrigation water users, community forestry, etc.) The VDC will be responsible to the village administration committee (VAC) for village-level decision making. The project will support the formation, capacity building, and training of the VDCs and various interest group functionaries to enable them to make informed, logical choices concerning livelihood options. In establishing VDCs and interest groups, equitable representation from all gender and economic status groups will be actively encouraged.
5. **Consulting Services.** ADB will recruit, through direct selection procedures, the international nongovernment organization (NGO) Adventist and Development Relief Agency in the Lao People's Democratic Republic (Lao PDR) (ADRA Lao),¹ which will furnish a technical support team, headed by the CTA. At the request of the provincial government, ADRA Lao designed the full Nam Ha subcatchment project, which was submitted to ADB for consideration for financing. At ADB's request, ADRA Lao prepared the proposals for the three complementary projects for parallel financing, including this JFPR proposal. ADRA Lao has established a close working relationship with, and has gained the trust of, province, district, and target communities, and is best-placed to implement this project effectively. Because it is highly familiar with the design, ADRA Lao will not require any learning curve and can commence its consultancy

¹ ADRA Lao is an international rural development NGO based in the Lao PDR with the broad-based capabilities of managerial, technical, and administration experience with similar projects in the Lao PDR since 1994.

immediately and efficiently, with less consultants' time and reduced cost. ADRA Lao will subcontract the services of two technical service contracts to the two agencies that helped design the project over the past 3 years: (i) EcoLao, to assess land capability in Viengphukha district; and (ii) Wildlife Conservation Society, to conduct wildlife conservation training and action research.²

6. ADRA Lao has long experience in the Lao PDR, particularly in Louang Namtha Province. ADRA Lao, together with the Wildlife Conservation Society and the domestic consultant, EcoLao, initially designed the proposed poverty-relief activities in the upper Nam Ha subcatchment at the request of the provincial government. The consultants will be engaged in accordance with ADB's *Guidelines on the Use of Consultants*.³

7. **Financial Arrangements.** JFPR funds will be managed and disbursed in accordance with ADB's guidelines. All costs associated with the CTA; the managerial, technical, and administrative support team; and other consultants will be included in the contract between ADB and ADRA Lao. All other costs of the JFPR project will be disbursed directly from ADB to a first-generation JFPR project imprest account under Ministry of Finance administration, and forwarded to a second-generation project imprest account held in Louang Namtha under the PIU's administration. Withdrawals from the second-generation JFPR account at the PIU level will require signatures from the NPD and CTA. In case of dispute, the first recourse for adjudication will be the PCC. If the dispute cannot be solved at that level, it will go to ADB for final decision.

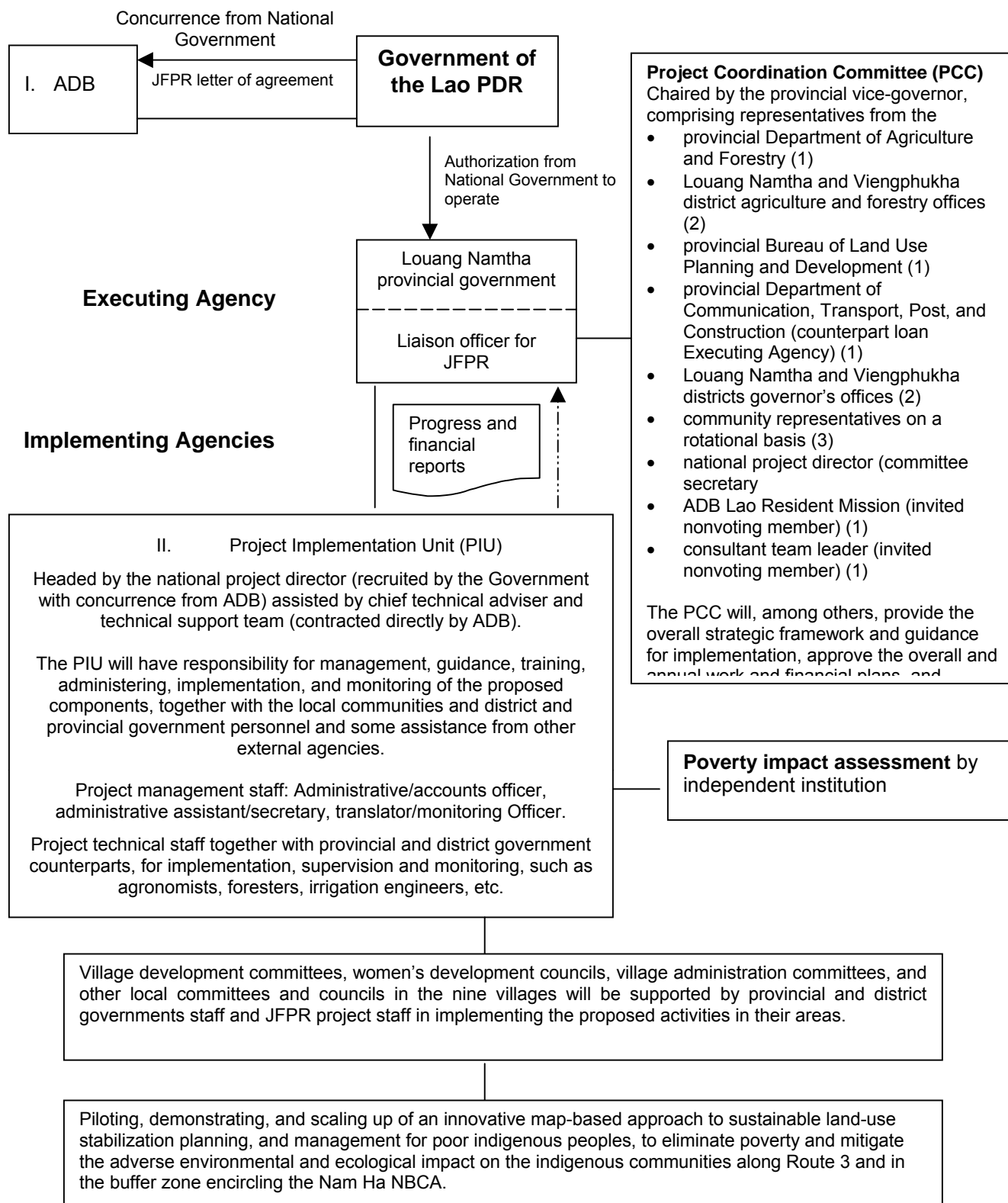
8. The imprest account will be managed, replenished, and liquidated in accordance with ADB's *Loan Disbursement Handbook*. The advance to the imprest account will be based on 6 months' estimated project expenditures or 10% of grant amount, whichever is lower, with specific reference to the annual work plan and budget approved by the PCC. In order to facilitate replenishment or liquidation of the imprest account, the statement of expenditure procedures for individual payments under \$10,000 will be used.

9. **Procurement.** Procurement will be conducted jointly by the CTA and NPD, in accordance with ADB's *Guidelines for Procurement*. Goods and related services below \$100,000 will be procured using ADB's direct purchase procedure. Goods and services above \$100,000 will be procured using ADB's international shopping procedure. The procurement of civil works will follow local competitive bidding procedures acceptable to ADB. No international competitive bidding is envisaged under the project.

² EcoLao is experienced in land capability assessment in the Lao PDR, and the Wildlife Conservation Society is experienced in wildlife conservation training and action research in the project area.

³ Direct selection is justified as per clause 6.13.

ORGANIZATIONAL STRUCTURE



ADB =Asian Development Bank, JFPR = Japan Fund for Poverty Reduction, Lao PDR = Lao People's Democratic Republic, NBCA = National Biodiversity Conservation Area.