PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED TRUST FUND FOR EAST TIMOR GRANT
IN THE AMOUNT OF US$6.8 MILLION EQUIVALENT
AND A SECOND GRANT OF US$11.4 MILLION
TO
EAST TIMOR
FOR AN
AGRICULTURE REHABILITATION PROJECT
June 14, 2000
CURRENCY EQUIVALENTS
(Exchange Rate Effective June 5, 2000)

Currency Unit = US Dollar
LC = US$ 1
US$ 1 = LC

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARP</td>
<td>Agriculture Rehabilitation Project</td>
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<tr>
<td>ADO</td>
<td>Agriculture District Officer</td>
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<tr>
<td>AusAid</td>
<td>Australian Agency for International Development</td>
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<td>BNU</td>
<td>Banco Nacional Ultramarino</td>
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<td>CAS</td>
<td>Country Assistance Strategy</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization (of the United Nations)</td>
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<td>GPA</td>
<td>Governance and Public Administration</td>
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<td>IDA</td>
<td>International Development Association</td>
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<tr>
<td>IDARD</td>
<td>UNTAET’s future Interim Department of Agriculture and Rural Development</td>
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<tr>
<td>JAM</td>
<td>Joint Assessment Mission</td>
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<td>NGO</td>
<td>Non-Government Organization</td>
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<tr>
<td>PASC</td>
<td>Pilot Agriculture Services Center</td>
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<tr>
<td>PMU</td>
<td>Project Management Unit</td>
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<tr>
<td>SEP</td>
<td>Small Enterprises Project (TFET funded)</td>
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<tr>
<td>TFET</td>
<td>Trust Fund for East Timor</td>
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<tr>
<td>UNTAET</td>
<td>United Nations Transitional Administration in East Timor</td>
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</tbody>
</table>

Vice President: Jemal-ud-din Kassum
Country Manager/Director: Klaus Rohland
Sector Manager/Director: Geoffrey B. Fox
Team Leader: Mohamed Noureddine Benali
East Timor
Agriculture Rehabilitation Project

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MAP IBRD 30626

Additional annexes, where applicable: Letter of Sector Policy, Eligibility Criteria for Beneficiaries and Subprojects, and summaries of the Environmental Assessment, Social and Environmental Analyses, Indigenous Peoples' Plan, Resettlement Plan, etc.
East Timor
Agriculture Rehabilitation Project

Project Appraisal Document

East Asia and Pacific Region
Papua New Guinea/Pacific Islands Country Unit

Date: June 14, 2000
Team Leader: Mohamed Noureddine Benali
Country Manager/Director: Klaus Rohland
Project ID: SF-P070533
Sector Manager/Director: Geoffrey B. Fox
Lending Instrument: 
Sector: AC, AE, Al, AG
Theme(s): Poverty Alleviation, Crop Prod., Cap. Building
Poverty Targeted Intervention: [X] Yes [ ] No

Project Financing Data

For Grant: [X] Grant [ ] Other [Specify]

Amount (US$m): US$6.8\(^1\) million for the first Grant\(^2\) and 11.4 for a second grant.
Proposed terms: [ ] To be defined [ ] Multicurrency [X] Single currency

<table>
<thead>
<tr>
<th>Financing plan (US$ million):</th>
<th>Source</th>
<th>[ ] To be defined</th>
<th>Foreign</th>
<th>Total</th>
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<tr>
<td></td>
<td>Government (UNTAET)</td>
<td></td>
<td>0.1(^{1}) grant</td>
<td>0.6 2(^{nd}) grant</td>
</tr>
<tr>
<td></td>
<td>IDA-Managed Trust Fund For East Timor</td>
<td></td>
<td>6.8(^{1}) grant</td>
<td>11.4 2(^{nd}) grant</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>6.9 1(^{st}) grant</td>
<td>12.0 2(^{nd}) grant</td>
</tr>
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</table>

Responsible agency: UNTAET Department of Agriculture

Estimated disbursements (Bank FY/US$M):

<table>
<thead>
<tr>
<th>FY</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>6.8</td>
<td>5.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Cumulative</td>
<td>6.8</td>
<td>12.3</td>
<td>18.9</td>
</tr>
</tbody>
</table>

Project implementation period: 12 months 1\(^{st}\) grant & 30 months for the whole project
Expected effectiveness date: June 30, 2000
Expected closing date: June 30, 2002
Implementing agency: GPA/UNTAET Department of Agriculture
Contact person: Mr. Serge Verniau, Director, Department of Agriculture
Address: UNTAET/GPA Building Dili, East Timor
Tel: (61 4) 18903701; (61 8) 89422203
Fax: (61 8) 89422203 ext.5361
E-mail: untaetgri@yahoo.com

\(^1\) A US$2.5 million line of credit dedicated to the agriculture sector will be included in the next grant of the Small Enterprise Project (SEP) on the basis of a supplementary Grant Agreement to be disbursed through the BNU.

\(^2\) Because the Trust Fund for East Timor does not have all of the necessary project funding at this stage, Project financing would be divided into two grants. The first will finance priority activities to be carried out during the initial 12 months of the Project. The second grant would finance the remaining Project activities whose implementation may have started during the first grant, but would need to continue until the Project closing date of December 31, 2002. The implementation of the activities under the second grant could start before the end of the first grant as soon as funding from the Trust Fund becomes available.
A: Project Development Objective

1. Project development objective: (see Annex 1)

The proposed Agriculture Rehabilitation Project (ARP) is an emergency recovery project, which aims at achieving the following two objectives:

(i) improving food security of selected poor households; and
(ii) increasing agricultural production in selected Project areas and promoting rural growth.

2. Key performance indicators: (see Annex 1)

The following indicators will be monitored by the Project Management Unit (PMU). These indicators will be used to follow up on Project implementation progress and to evaluate the achievement of its development objectives and eventually its impact.

Key project outcome indicators:

(i) Nutrition of Project beneficiaries improved (1st grant): Increased availability of eggs, poultry, and rice at the household level.
(ii) Off-farm employment opportunities increase in the Project areas (1st grant and whole Project).
(iii) Area under irrigation and access to main roads improve in Project (whole Project).
(iv) Yields of rice and maize increase by about 10 percent at full development.

Key project output indicators:

(i) Cattle, buffalo, small ruminants mortality rates decline by 50 percent. (1st grant)
(ii) Length of access roads rehabilitated by communities is at least 100 km (1st grant and whole Project).
(iii) Irrigation schemes covering a total area of at least 7000 ha are maintained and rehabilitated (whole Project).
(iv) Eight Pilot Agriculture Services Centers established (1st grant = 5 and whole Project = 8).
(v) Five community radio stations established (1st grant = 2 and whole Project = 5).
(vi) A minimum of twenty research, extension, PASC staff trained in country and/or abroad (1st grant = 15 and whole Project = 20).

B: Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the Project: (see Annex 1)

Document number: Not Available (NA) Date of latest CAS discussion: NA

No CAS has yet been prepared for East Timor. However, the IDA-led Joint Assessment Mission (JAM), in November 1999, identified short-term reconstruction priorities and their costs. The JAM used a comprehensive development framework approach covering eight sectors, including agriculture, and incorporated international technical expertise from five donor countries, four UN agencies, and three multilateral institutions.

One of the poorest regions in Indonesia before the disruption, East Timor now faces the need for extensive rebuilding, while at the same time establishing its political, economic and social structures. In the violence that followed the referendum it is estimated that over 75% of the population of 850,000 was displaced, and approximately 100,000 are still refugees in West Timor. Almost 70% of physical infrastructure was destroyed. Even before the disturbances the territory lagged behind the rest of Indonesia in most social indicators, and 30% of the population lived below the poverty line – twice the national average. Per capita income is now estimated to be $210 – 40 to 50 percent below its 1996 level.

The United Nations Transitional Administration in East Timor (UNTAET) is managing the administration and reconstruction of East Timor. UNTAET was established by the Security Council Resolution 1272 (S/RES/1272) on October 25, 1999. UNTAET will oversee the country’s reconstruction, develop Timorese administrative and technical capacities, and prepare to hand over functions to an East
Timorese administration. Funding for UNTAET is from a trust fund which supports administrative costs; a short-term humanitarian pledge; and a medium term development trust fund (Trust Fund for East Timor, TFET) that is managed by the IDA. Significant additional resources are provided through bilaterals and NGOs.

The agricultural sector was not exempt from the violence. It was, in fact, brought to a halt by the events following the referendum. Livestock for meat and traction were destroyed or driven to West Timor, farm and food-processing machinery was destroyed, and food stocks and seeds were looted. Farmers' houses were burned and their tools destroyed. Few facilities remain, and most staff of the Ministry of Agriculture and of the food agency (BULOG) have left the territory. In addition, rural infrastructure had been allowed to deteriorate and a centralized planning approach to agriculture had been imposed on farmers.

Prior to the 1999 referendum, agriculture and its support activities (agro-processing and agricultural input industries) employed more than 85 percent of the population, contributed 40 percent of GDP, and accounted for 90 percent of foreign exchange. Coffee, some sandlewood and (formerly) some live cattle were exported. Agriculture’s key position in the economy has created an imperative for rapidly rebuilding agricultural capacity for both food security and income-generating reasons.

The JAM found that virtually the entire pre-independence governance structure had disappeared. While this leaves a large void, it also presents an opportunity for reform since the civil service was overstaffed and underpaid under Indonesia. Policy recommendations for the transitional period are that the aggregate numbers for the civil service should not exceed 12,200 in the first three years, of which approximately 90% will be teachers and health workers. The JAM review of priorities for the transitional period recommended a "community empowerment and governance program" and identified several priority areas for the reconstruction of agriculture. These include, inter alia, support: (i) to vulnerable groups, including the victims of violence and those who have lost their productive assets; (ii) to the restoration of basic agriculture infrastructure; including irrigation systems and access roads; (iii) to the restoration of livestock; and (iv) to small-holder coffee development initiatives, including the provision of agricultural services.

It is against this background that the proposed agricultural rehabilitation and development program was designed. It supports the main objectives of the Trust Fund for East Timor: to start rehabilitation and reconstruction of the major productive sector; and return agriculture to the engine of growth for the East Timorese economy.

2. Main sector issues and Government strategy:

East Timor faces many challenges as it develops its agricultural sector. But it has one great advantage: it is starting life with a clean slate. It can design the framework for agriculture from the ground up. East Timor is drawing from the successes and failures of other countries to put together a policy environment based on appropriate best-practices from around the world. In formulating an agricultural strategy for East Timor, the government was strongly influenced by certain characteristics of the country and of the post-conflict situation:

- One of the key issues of the rural sector is poverty. East Timor as a whole was already the poorest part of Indonesia prior to independence. East Timor and particularly its rural population fell behind Indonesia in most poverty aspects, including malnutrition.
- East Timor will have very limited public resources to spend on agriculture. Estimates of tax revenue when reconstruction is completed are around US$30 million. The priorities of schooling and health will require at least half of this, leaving very little for other sectors, including agriculture.
- East Timor is presently receiving substantial amounts of foreign assistance to reconstruct its economy. These foreign grants should be seen as a one-time event and should be used for capital investment to put in place the framework and infrastructure for a thriving agriculture. Foreign aid is likely to diminish drastically at the conclusion of the transition period and judging by the present lack of interest of many bilaterals in agriculture, the sector will not be able to rely on significant foreign aid.
Agriculture will continue to be the principle economic activity in East Timor and will be the chief engine of growth for the economy;

Given these pre-conditions, the Government formulated a strategy that would lead to agriculture being the engine of growth for the economy where farmers can freely choose how to market their crops and animal products; where the population need not fear food shortages created by civil strife and poor policies; and where government is the 'enabler' or 'facilitator' of rural development rather than the 'provider' of agricultural services. The strategy incorporates the following policy and strategic features:

(i) Ensure that the short-term reconstruction and development activities recommended in the Joint Assessment Mission report and complemented by this mission are completed.
(ii) Agriculture, including agricultural inputs and value-added processing and marketing, will be private sector driven, i.e. farmers and farmer groups.
(iii) Government's role will be to create and implement a policy framework that rewards hard work and innovation, and that offers employment opportunities for rural people through market-driven growth.
(iv) Government development programs will be participatory in design, selection, and implementation, community owned and will focus on poverty alleviation.
(v) Agricultural education and institutional capacity are starting from a very low base and will be given high priority in government expenditure.
(vi) Support the building of farm organizations such as cooperatives, limited liability companies, partnerships, associations, and NGOs. The objective is to foster community self-reliance and develop organizations capable of implementing government programs.
(vii) Much of East Timor’s farmland is fragile and steep, ensuring the conservation of land and other resources, as well as promoting sustainable farming systems are a priority environmental goal.

3. Sector issues to be addressed by the project and strategic choices:

a. **Undertaking Priority Reconstruction Activities:** Component one of the Project, Productive Asset Restoration, will help improve the food security of poor rural households that have been the victims of violence. This component will help them at least partially restore their most immediate family assets by providing them with capital grants in the form of four to six-week old chicks, buffalo, cattle, and hand tools, as well as information to enable them to benefit from the assistance of the ARP and other projects.

b. **Encouraging Community-Based Activities:** The ARP will undertake community-based extension and access road rehabilitation. Activities would include repairing and maintaining a minimum of 100 km of feeder/access roads through labor-intensive community participation, using hand tools and support to community radio extension by financing procurement of short range transmission equipment and radios for the purpose of providing rural dwellers with information and technical advice.

c. **Providing Food Security:** Component 2 of the grant seeks to rehabilitate irrigation schemes requiring light to medium work. To qualify for rehabilitation the irrigation schemes must: have an economic rate of return of 10 percent; benefit the largest number of people; have no negative environmental impact; and be ones where users are willing to manage the operation and maintenance of the scheme. Rehabilitating the irrigation schemes will increase rice production by approximately 10 percent, and will ensure improved production during an El Nino.

d. **Strengthening the Private Sector:** Up to eight Pilot Agriculture Services Centers (PASCs) will be established. These will be community-owned and operated businesses which would provide agricultural services and supplies, on a demand-driven, full-fee basis to farmers. Services offered might include tractor rental, seeds, agro-chemicals (according to Bank guidelines), veterinary services and supplies, hand tools, and other farm inputs not now provided by the private sector. To avoid political capture, the PASCs would have a

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board of directors, drawn from farmers, civil society, businessmen, women's organizations, financial institutions, local NGOs/cooperatives, and a government representative as an observer.

e. **Furthering Agricultural Education and Institution Building:** Component 3 will also provide for short and long-term training of East Timorese extension and research staff, a researcher exchange program, and twinning arrangements with overseas teaching and research institutions.

In addition to the sectoral issues addressed specifically by the Project components, the design of all components has been consistent with the government’s strategy of allowing maximum responsibility of the private sector and minimal intervention by government. Communities are important organizational and implementing entities, and bottom-up, participatory processes are employed. The components are designed to undertake first the most important activities limiting agricultural growth; and are designed to give agriculture a significant capital injection to jump start agricultural development in the belief that the generosity of donors will not be repeated nor be matched by future public investment in the sector.

**C: Project Description Summary**

1. **Project components:** (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown).

Because the Trust Fund for East Timor does not have all of the necessary Project funding at this stage, Project financing will be divided in two grants. The first will finance priority activities to be carried out during the initial 12 months of the Project. The second grant will finance the remaining Project activities whose implementation may have started during the first grant, but would need to continue until the Project closing date of June 30, 2002. The implementation of the second grant could start before the end of the first grant, as soon as funding from the Trust Fund becomes available.

Annex 2 provides the description of both the activities that will be financed under the first grant of the Trust Fund Grant and the activities of the Project as a whole. The matrix below provides a summary description of the whole Project.

A US$2.5 million line of credit originally designed into this Project will instead be financed under the next grant of the on-going Small Enterprise Project (SEP). This line of credit will be dedicated to the agriculture sector and will be disbursed through the Banco Nacional Ultramarino (BNU) along the same arrangement currently in place for the SEP. The next grant of the SEP is expected to be financed in about two to three months.
1. Priority Productive Asset Restoration: Under this component the Project would finance: (i) national vaccination campaigns to immunize livestock against infectious diseases and emergency clinical services; (ii) the provision of 5 four to six-week old chicks and chicken feed to about 20,000 poor rural families; (iii) the procurement of up to 1,000 head of buffalo and 1000 head of Bali cattle to replace animals lost during the violence; (iv) the replacement of simple hand tools needed by poor rural people to undertake farming, household and communal work; and (v) information campaigns for the purpose of informing farmers of the services provided by the ARP and other development projects.

2. Irrigation/Rural Infrastructure Rehabilitation and Maintenance: Under this component the ARP would finance: (i) pre-feasibility design, hydrological and engineering studies; (ii) reconstruction, rehabilitation and maintenance of irrigation schemes covering up to 7,000 ha; and (iii) the rehabilitation and maintenance through community participation of a minimum of 100 km of agricultural access roads.

3. Pilot Agriculture Services Centers: The ARP would finance: (i) the establishment of up to eight commercially operating Pilot Agriculture Services Centers (PASC) for the purpose of providing farming communities with demand-driven agricultural services; (ii) short and long-term training of East Timorese research, extension and PASC staff; (iii) Design of an agriculture research laboratory and experiment stations for the Faculty of Agriculture of the University of East Timor; and (iv) establishment of Community Radio Extension/Stations and the procurement of radios for the purpose of providing isolated rural communities and farmers with information and technical advice; (v) land/soil mapping and aptitude studies, as well as the establishment of a documentation center within IDARD.

4. The Project Management Unit: To facilitate the implementation of Project activities, the ARP would finance, over the two-and-half-year life of the Project, the recruitment of East Timorese and expatriate (experienced UN volunteers) consultants, technical assistance, training for East Timorese staff, as well as equipment, vehicles and operating costs to build, within UNTAET’s Department of Agriculture and Rural Development, the necessary capacity to implement the Project.

<table>
<thead>
<tr>
<th>Component</th>
<th>Sector</th>
<th>Indicative Costs (US$M)</th>
<th>% of Total</th>
<th>Bank-financing (US$M)</th>
<th>% of Bank-financing</th>
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<td>15.9</td>
<td>2.9</td>
<td>15.9</td>
</tr>
<tr>
<td>2. Irrigation/Rural Infrastructure Rehabilitation and Maintenance</td>
<td>AI, Irrig. &amp; Drain.</td>
<td>8.6</td>
<td>45.5</td>
<td>8.4</td>
<td>46.2</td>
</tr>
<tr>
<td>3. Pilot Agriculture Services Centers</td>
<td>AC, AE, AG, AR, Grant Extens. Agency reform Research</td>
<td>6.0</td>
<td>31.7</td>
<td>5.8</td>
<td>31.9</td>
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<tr>
<td>4. The Project Management Unit</td>
<td>MY, Multi sector</td>
<td>1.3</td>
<td>6.9</td>
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<td><strong>Total</strong></td>
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<td><strong>100</strong></td>
<td><strong>18.2</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>18.2</strong></td>
</tr>
</tbody>
</table>
2. Key policy and institutional reforms supported by the project:

- Support to community empowerment through the provision of support for the establishment of the PASCs.
- Reduce fiscal impact of Project activities by minimizing the impact of public sector staffing, transferring the operation and maintenance of irrigation schemes to users.
- Encouraging private sector initiatives by improving production and other infrastructure.
- Support agricultural education and institutional capacity.
- Support the building of farm organizations such as cooperatives, limited liability companies, partnerships, associations, and NGOs to foster community self-reliance.
- Encourage environment-friendly development by contributing to the introduction of integrated pest management, encouraging organic coffee farming and improving the use and management of water resources.

3. Benefits and target population:

The benefits that will accrue as a result of the Project include:

- Increased food production and security at the household level as more eggs, poultry meat and rice, as well as garden vegetables.
- Increased rice production (8,000 incremental tons per year at full development) as a result of improved rice yields caused by improved irrigation conveyance systems and on-farm water management.
- Improved marketing of agriculture products as a result of the improved maintenance of agricultural access roads.
- Strengthened agriculture productivity in both the rain-fed and irrigated areas as a result of greater availability of agriculture services and farm inputs provided by the Pilot Agriculture Services Centers to be established under the Project.

The Project will use community village, sub-district and district-level councils that will be created under the IDA-financed Community Empowerment and Local Governance Project, as well as civil society (e.g. churches), informal groups and village elders to target the benefits of the productive asset restoration component of the Project towards the poor. Community participation will be sought by the PMU and other project-executing agencies for the purpose of defining eligible poor households who will benefit from the chicks and hand tools to be given free by the Project. The rehabilitation of irrigation schemes will be undertaken on the basis of a number of agreed criteria (ref. sub-section 4 below). The proposed PASCs will cater to farmers who require extension services, farm inputs and services. The PASCs will not target the poor but the general population of farmers.

4. Institutional and implementation arrangements:

To facilitate the implementation of Project activities, the ARP would finance the establishment of a Project Management Unit (PMU). The PMU would be an integral part of UNTAET’s Interim Department of Agriculture and Rural Development (IDARD). During the first year of the Project, the PMU would be headed by the director of IDARD and his deputy would be East Timorese. During the initial year of the Project, the deputy PMU Director would be trained and mentored by the head of the IDARD/PMU. In the second year, the deputy PMU director would take over the function of PMU director and the previous director would become his advisor. Leadership of the IDARD would remain with the UNTAET designated director. Under the ARP, East Timorese staff would be recruited to undertake the following functions: Project financial management, procurement, monitoring and evaluation, irrigation engineering, etc. Expatriate technical assistants would also be recruited under the Project to train and mentor their Timorese counterparts. The objective of the creation of the PMU and the recruitment of expatriate staff is to build Project management capacity within the IDARD and enable it to sustain its Project planning, management and monitoring capacity.
The PMU would be responsible for: (i) preparing, advertising, evaluating tenders and awarding contracts for the procurement of civil works, goods and services for the various activities of the Project; (ii) obtaining relevant clearances, including customs and transporting the equipment to the Project sites; (iii) managing the Project's special account and preparing withdrawal/replenishment applications; (iv) making payments and keeping Project accounts; (v) having Project account audited annually and submitting audit reports regularly to IDA; (vi) implementing, following up, supervising, monitoring and evaluating the implementation of all Project activities including those that have been contracted out or are being implemented through the Pilot Agriculture Services Centers (PASC) or District Agriculture Offices; and (vii) consolidating and submitting to IDA Project progress, mid-term review and implementation completion reports as well as following up and consolidating reports on monitoring and evaluating of Project actions. The PMU staff which are also staff of IDARD would be based in Dili and undertake other IDARD activities.

It is anticipated that implementation of the priority productive asset restoration component (component No. 1) would be completed within the first six to twelve months of the life of the ARP. Implementation of the activities of this component would be undertaken by the PMU with technical assistance from a consulting firm to be identified and selected by UNTAET. For the distribution of the chicks, buffalo, Bali cattle, and hand tool sets the PMU and associated NGOs would give first priority to the poor among the population of farmers and/or rural people who have lost animals during the period of strife. The PMU and NGOs would work with community councils and village elders to define the poor who will benefit from the Project.

Implementation of the rehabilitation of irrigation schemes under the second component of the Project would be undertaken in accordance with the following criteria:

(i) the rehabilitation of the scheme has an economic rate of return of at least 10 percent;
(ii) rehabilitation would benefit the greatest number of poor beneficiaries;
(iii) the rehabilitation would have no negative impacts on the environment;
(iv) the schemes with the highest beneficiary participation; and
(v) schemes with users that are willing to take over responsibility for the operation and maintenance of the irrigation system (with the exception of large works) and hence, schemes that have the least fiscal impact on government budget.

It is anticipated that a consultant firm chosen from a short list of consultant firms would be asked to submit a proposal for pre-feasibility studies to prioritize viable irrigation, detailed designs and preparation of LIB tender documents. Because of the emergency nature of the rehabilitation, consulting firms may be contracted directly. Capacity building and training of East Timorese staff in O&M, irrigation systems planning, design of irrigation systems, as well as the cost of delayed maintenance on several schemes has been included in the cost of this component. Contracting for construction/rehabilitation of irrigation schemes will be done by the PMU using LIB tendering procedures. In view of the relatively small size of individual schemes and the unavailability of contractors in East Timor, the PMU will group all the schemes selected for rehabilitation into two or three contracts in order to attract contractors from abroad.

Implementation of the delayed maintenance of irrigation schemes and the rehabilitation of agriculture access roads will be undertaken by communities through the same guidelines established by the recently-approved, IDA-financed Community Empowerment Project. These guidelines can be summarized as follows. The PMU's rural engineer (whose cost is included in the Project) would consult and enlist the active participation of village, sub-district and district councils, as well as civil society (e.g. churches) in defining the access roads and irrigation schemes that need repair and/or maintenance. He will use the same process to obtain the nomination of the villagers (priority given to the poor, as defined by the councils) who will be recruited by the PMU as temporary laborers to repair and maintain the roads and irrigation canals. The PMU's rural engineer consultant will set the technical guidelines for the maintenance work and help organize work crews from the laborers chosen by the community councils. The engineer will designate crew chiefs who will supervise the work and record work progress. It is expected that the engineer will first make an estimate of the cost of the work to be undertaken by communities and then contract the work to one or several communities on the basis of a lump sum contract per kilometer of road rehabilitated or length of canals.
maintained. Most of the work will be conducted by laborers using simple hand tools. Work completion will be certified by the engineer prior to making full payment to the communities.

The initial steps in the implementation of the third component of the Project, i.e. the establishment of the Pilot Agriculture Services Centers, would be taken by the PMU and the Agriculture District Officer (ADO) in a given district. The PMU Director, the ADO and his counterpart, assisted by an experienced agriculturist (consultant paid by the Project), would organize meetings in promising districts to provide information to farmers and gauge their interest in engaging in the creation of a PASC. The PMU would select five districts where farmers are most engaged and interested and would contact NGOs, other donors to seek their collaboration in assisting with the management of the initial PASCs. The PMU may also choose to recruit on Project funds qualified professionals to manage the first five centers. The PMU, ADO and consultants (sociologist and agriculturist) and the newly recruited managers (each in his district) undertake a social and needs assessments to ascertain the interest of farming communities and feasibility of the establishment of the PASCs. Once this process is complete, a specialist is recruited (Project consultant) to draft the bylaws for the centers (as cooperatives, associations or limited liability companies) and complete the registration process. Simultaneously, members of the board of directors would be selected by community focus groups. The board of directors would have representatives from: (i) farmers-two; civil society-one from the church; businessman-one; women organization-one; financial institution-one; local NGO/cooperative-one and one government representative as an observer. Government officials may not serve on the boards. After the registration of the PASC, the PMU and the ADO help the new manager in organizing the first meeting of the Board of Directors.

Once the PASC is registered with the authorities and becomes a legal entity owned by the communities, the manager drafts a letter on behalf of the Board requesting a building to house the center, inputs, business supplies and inventory. Land to build the PASCs would be provided by the communities and would be an indication of their interest and support for the center.

Along with the request for buildings, goods and services, the manager will provide a business work plan in which he will explain the nature of the services that will be provided by the center. He will provide a detailed description of the accounting procedures to be used and the steps to be taken to ensure the long-term viability of the PASC. He will certify that such services are not in competition with those provided by other private businesses in the Project area. In order to become eligible and receive works, goods and services from the ARP, each pilot center would have to fulfill the following criteria:

(i) register with the relevant authorities as a legal entity;
(ii) have a confirmed commitment for its management from a qualified NGO or a professional manager provided by the PMU under the ARP or by another donor; and
(iii) have submitted an acceptable business work plan to the PMU.

Upon receipt of a complete and satisfactory request for inputs, supplies, and inventory, and business plan submitted by the PASC’s manager on behalf of its board of directors, UNTAET’s Department of Agriculture and the PMU will enter into agreement with the center to provide it with the required inputs in amounts commensurate with the number of its members and the scope of its business plan. Successful and profitable PASCs who require additional inputs and supplies to expand their services in response to demonstrated needs, can apply and receive additional support up to a total amount not to exceed US$0.35 million. Once the first five centers are established, the PMU will follow the same process in the establishment of other centers. All of the services provided by the pilot centers would be against full payment. The PASCs would therefore operate as commercial enterprises. The PASCs will, to the extent possible, be twinned with business centers established under the Small Enterprise Project (SEP). The centers proposed by SEP would provide marketing information, training in enterprise management and entrepreneurial skills, and office services. The PASCs and the SEP Centers will be complementary.

Since the PASCs are commercial enterprises they will be subject to normal commercial risks. Their success and long-term survival cannot be guaranteed, but will depend, in large part, on the quality of their
management and of their board. For this reason, the Project provides funding for management assistance and management training, as well as mentoring by experienced entrepreneurs.

Further details on the administrative and other Project implementation arrangements are included in Annex 2. Arrangements for the financial management of the Project and the PASCs are in Annex 6.

D: Project Rationale

1. Project alternatives considered and reasons for rejection:

- The alternative of designing a project focused solely on providing emergency relief to the victims of the violence was considered and rejected. Such an alternative would have neglected to rehabilitate productive infrastructure and services such as irrigation, agriculture access roads, research and extension support as well as the provision of agriculture input and Grant, which is a major bottleneck to agriculture production.
- The distribution of five four to six-week old chicks and hand tools to poor rural households was selected because it was the most rapid way of starting a large number of productive family enterprises and improving family nutrition and food self-reliance.
- As the type and number of lost assets of rural households was extremely varied, the Project had to limit itself to the restoration of assets that could benefit the largest number of people at an affordable cost and those assets that impacted rice production.
- The alternative of having the public sector heavily involved in the provision of research, extension and input supply services was examined and discarded because: (i) such public sector involvement has not proven successful elsewhere; and (ii) the anticipated government fiscal resources would not be able to afford such a burden. That is the reason why the proposed PASCs are designed to be privately owned, commercially-operated and self-sustaining enterprises.
- Because of the present lack of financial institutions in East Timor, especially in the rural areas, the Project has chosen to design the PASCs in a manner that would allow them to engage in the supply of farm inputs.
2. Major related projects financed by the TFET and/or other development agencies:
(completed, ongoing and planned)

<table>
<thead>
<tr>
<th>Sector issue</th>
<th>Project</th>
<th>Latest Supervision (Form 590) Ratings (Bank-financed projects only)</th>
</tr>
</thead>
</table>
| **IDA (TFET financed):**  
1. Community Empowerment and Local Governance Project | The community empowerment and local governance project aims to build equitable, accountable, transparent and participatory local government structures through which communities can work to rehabilitate basic economic infrastructure. The elected village sub-district councils provide the potential for broader community participation in the agriculture sector. | Implementation Progress (IP)  
Effectiveness date:  
March 21, 2000  
Development Objective (DO)  
Not applicable |
| 2. Small Enterprise Project | The Small Enterprise Project provides Grants, through BNU, to private sector entrepreneurs to create industrial enterprises. | Effectiveness date:  
April 20, 2000  
Not applicable |
| 3. Dili Community Employment Generation Project | This project provides for small labor-intensive works and job creation to provide short-term employment and income opportunities for the poor in Dili. Removal of solid waste and debris would reduce health risks to the poor and improve their income and nutrition. | Effectiveness date:  
Not available  
Not applicable |
| 4. Health Sector Rehabilitation and Development Project | The project aims to address immediate basic health needs and develop appropriate health policies and systems. | Effectiveness date:  
Not available  
Not applicable |
| 5. Emergency School Readiness Project | Aims to revitalize the school system, to rebuild schools in the short term and raise the quality of educational programs in the medium term. | Negotiated  
Not applicable |

**Other development agencies**

<table>
<thead>
<tr>
<th>Project</th>
<th>Implementation Progress (IP)</th>
<th>Development Objective (DO)</th>
</tr>
</thead>
</table>
| **Asian Development Bank (TFET financed):**  
1. Transport and infrastructure project | Will rehabilitate and upgrade roads, transport, ports and power projects and support rehabilitation and long-term planning for infrastructure investment. Project not yet appraised. |  |
| 2. Water and sanitation project | This project aims at improving water supply and sanitation systems. Project not yet appraised. |  |

IP/DO Ratings:  
HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)
3. Lessons learned and reflected in the project design:

   A number of lessons learned from other countries with similar post-conflict situations have been reflected in the Project design. These include:
   - Using of broad participation of donors, NGOs and civil society, as well as beneficiaries, in the design of the Project.
   - Making the best use of donor financing by directing it towards sustainable capital investments that benefit a large segment of the rural population.
   - Limiting government’s role to the creation and implementation of a policy framework that rewards hard work and innovation and offers employment opportunities for rural people through market-driven growth.
   - Government development programs should be participatory in design, transparent with high community participation and a focus on poverty alleviation.
   - Supporting the building of farm organizations, such as cooperative, limited liability companies, partnerships and NGOs to foster community self-reliance and help implement government programs.

4. Indications of Recipient commitment and ownership:

   - The United Nations Transitional Administration in East Timor, acting as the provisional government and recipient of the grant funds, has mobilized its department of agriculture, representative of the East National Council of Timorese Resistance (CNRT), NGOs, civil society and its regional staff to participate in the design of the Project.
   - East Timorese political leaders and the senior officials of UNTAET have shown great interest in the Project and have participated in its review/wrap-up meetings.
   - UNTAET is actively engaged in the recruitment of staff for the purpose of establishing the Project management unit.
   - UNTAET's Department of Agriculture and East Timorese counterparts have been in constant contact and interaction with the IDA’s Project preparation team in order to ensure their full participation in the design of the Project and in defining its implementation arrangements.

5. Value added of IDA support in this project:

   In addition to managing the TFET, IDA provided significant value added by:
   - Making use of its experience in other post-conflict countries to assist UNTAET and the East Timorese counterparts in the formulation of a rural/agriculture sector strategy based on the principals of community and private sector empowerment, limiting public sector intervention to the formulation of sector policies, the creation of enabling environments and market-based growth.
   - Assisting UNTAET and CNRT in adopting market-based policies for the growth of the agriculture sector
   - Limiting recruitment of public sector staff to numbers commensurate with expected budgetary/fiscal resources.

E: Summary Project Analysis: (detailed assessments are in the Project file, see Annex 8)

1. Economic: (supported by Annex 4)

   [X] Cost-Benefit Analysis: NPV=US$5.4 million; Economic Rate of Return (ERR) = 23%

   A cost benefit analysis was carried out for the Project as a whole. All Project benefits and costs were considered. The duration of the analysis is ten years. Conservative estimates for agriculture and livestock yields have been provided by the specialists from the sector. Assumptions, analysis and documentation are provided in the Project files. The results show a rate of return of 23.1% with an NPV of about US$5.4 million. With the exception of coffee, the agricultural sector in East Timor does not have any taxes or subsidies.

   Cost-benefit analysis was not carried out for the Grant line of the Project as it is part of the analysis carried out under the Small Enterprise Project.
**Priority Productive Asset Restoration:** Quantitative analysis of this component indicate that it is profitable and, if managed properly, incomes can be improved. The net present values of the priority investments are positive at 12%.

**Irrigation System Rehabilitation:** A cost benefit analysis was carried out on some of the irrigation schemes proposed for rehabilitation to ascertain the highest costs per hectare that could be incurred for viable rehabilitation. It is expected that the life of such rehabilitation would be about 10 years. At 12 percent cost of capital, the NPV for these schemes is expected to be about US$1.7 million with an Internal Rate of Return (IRR) of about 19%.

**Pilot Agriculture Service Centers:** Pro-forma annual income statement for a representative PASC was established for a ten year period. The PASCs are expected to have a sales margin of about 20% to generate a positive NPV.

**Assessment of Fiscal Impact and Financial Sustainability:** The recurrent costs for the Project is about US$729,512. These are expected to be less than 3% of the total government’s recurrent budget. The Project design mandates that the local communities take over the responsibilities of maintaining the secondary and tertiary irrigation systems and the management of Pilot Agriculture Service Centers.

**Contribution to Poverty Alleviation:** No poverty assessment is yet available for East Timor. However, given that the population of East Timor is rural and agrarian, poverty is widespread. Measures to improve incomes and increased agricultural production will improve welfare. Priority investments made in the first year will provide benefits to about 26,000 poor households. It is expected that about 7,000 tons additional rice would be produced due to the Project. Other investments under the Project are expected to benefit most of the farmers in the Project area.

2. **Financial:** (see Annex 5):
NPV=US$ 5.4 million; Financial Rate of Return (FRR)=23%

**Fiscal impact:**

The recurrent costs for the Project is about US$729,512. These are expected to be less than 3% of the total government’s recurrent budget. The Project design mandates that the local communities take over the responsibilities of maintaining the secondary and tertiary irrigation systems and the management of Pilot Agriculture Service Centers. The government would be responsible for certain research and extension expenses and maintaining the primary irrigation channels. Also, the economic evaluation suggests that the Project investments are expected to generate sufficient rural incomes for sustainability. Mechanisms could be eventually developed to recover costs for such services.

3. **Technical:**

- The technical design of the Project is sound. The priority production asset restoration, i.e. the distribution of chicks, buffalo, Bali cattle, and hand tools, would allow the beneficiaries to engage in activities that are familiar to them. The sustainability and profitability of these activities pose no significant risk.
- The distribution of the buffalo and cattle on a revolving scheme is a novelty for East Timor, but has been successfully implemented in other countries of the region (Thailand).
- The rehabilitation of the irrigation schemes and rural access roads will make operational systems with which farmers are familiar. Farmers have traditionally associated themselves into groups for the purpose of irrigation canal maintenance and other community endeavors.
- The proposed tasks are a novelty for East Timor and for the region. It is clear that, although they will be community owned, the communities are not at this stage able to manage them properly. Hence, provisions were made under the Project to finance management technical assistance and to seek donor/NGO support to assist these communities in the management of the tasks until such a time that local expertise becomes available.
Support to the faculty of agriculture in lieu of creating an independent research institution will help focus research activities on demand-driven immediate impact research.

4. Institutional:
   a. Executing agencies:
      • UNTAET's GPA-IDARD will be the implementing institution for the Project. The PMU will be an integral part of this department.
      • The Project management unit will be responsible for the overall implementation of the Project. It will keep Project records and operate the special account.
      • A consultant will provide technical support to the PMU for the execution of the priority asset restoration component.
      • Individual consultants and firms will be recruited to conduct studies and provide technical assistance and training.
   b. Project management:
      Because IDARD's capacity to implement Project activity is limited, the Project will finance the recruitment of Timorese and expatriate counterpart staff to build up the implementation capacity of the department. These new staff would work with existing IDARD staff as a PMU to implement Project activities and maintain Project accounts. The role and staffing of the PMU are detailed in Annex 2 and in the Project Implementation Plan (PIP). Provisions have been made so that the PMU and consultants collaborate with local and international NGOs as well as community councils at all levels in order to implement this component within the agreed six to eight month period. Arrangements for Project procurement and financial management are discussed in Annex 6.

5. Social:
   The activities proposed under the Project have been defined in a participatory manner in which farmers, donors, NGOs and civil society contributed. The Project preparation mission undertook a number of field visits throughout the country and interviewed many farmers. Rapid rural appraisal results indicate that farmers and beneficiaries in particular are supportive of the activities proposed under the Project. Project assistance in the form of chicken, buffalo, cattle, hand tools and inputs for the PASCs will benefit more than 50,000 households, half of which would be poor. In addition, the irrigation and road rehabilitation activities have been designed to be labor intensive for the purpose of fostering economic growth in rural areas. None of the proposed Project activities will cause resettlement of populations, directly or indirectly. It is anticipated that by fostering rural growth, improved household nutrition, the Project will contribute to reducing migration of people from rural areas to Dili and other urban centers.

6. Environmental assessment:
   Environmental Category [ ] A [X] B [ ] C
   An environmental assessment has been conducted and has indicated that:
   • The procurement and distribution to poor households of chicks and livestock would not negatively impact the environment because they would not represent a significant increase of the poultry and livestock populations in East Timor. The hand tools, also to be distributed by the Project, would be used essentially for gardening purposes in households and would not adversely impact the environment.
   • The rehabilitation of irrigation schemes would bring back into irrigation areas that are within existing irrigation schemes and are presently starved of water. Since irrigation water is generally diverted from river flows during and immediately after the rainy season, the rehabilitation of irrigation schemes would not affect ground water supply but would only reduce the amount of runoff water that goes to the sea.
   • The rehabilitation of agriculture access roads would be undertaken only on existing roads and would not enlarge or lengthen them. The impact on the areas served by these roads would be minimal as the increased traffic would be due to general economic growth and activity rather than due to the maintenance of the access roads.
• The establishment of the PASCs would make it easier for farmers to have access to farm inputs and support services. While it is likely that fertilizer and pesticide use may increase as a result of intensification of rice production, it is unlikely that this phenomenon would happen in the uplands and coffee-growing areas. The Project is providing support to research and extension services that will provide recommendations on appropriate uses of fertilizers and advice and demonstrate the safe use of pesticides by farmers. Integrated pest management techniques and products will be demonstrated to farmers for the purpose of promoting the use of biological and/or environmental control methods and reducing farmers’ reliance on synthetic chemical pesticides. Pesticides to be procured under the Project would, in accordance with OP 4.09, be subject to IDA assessment and would have to comply with its selection criteria.

• The ARP would finance the procurement of pesticides by the PASCs on the condition that they and the extension agents stationed at their headquarters promote integrated pest management techniques. Any and all pesticides to be procured by the PASCs would be done in accordance with Bank policy and guidelines on pest management.

• The land capability studies to be financed by the Project under its third component will be used by IDARD for land use planning and would most likely result in guidelines and government actions that would reduce soil and water erosions and protect bio-diversity and sensitive areas.

• The schemes to be rehabilitated/maintained by the Project cover a total command area of 7000 ha all located on flat lands. The twenty two potential irrigation schemes are located in nine of the thirteen administrative districts of East Timor. The list of potential irrigation schemes is in Annex 14. The majority of the PASCs will be located in areas where crop intensification is possible and in the uplands where coffee and fruit trees are grown. It is expected that the PASCs will encourage organic coffee growing in the uplands and sustainable rice intensification in the lowlands.

• In order to avoid impacting protected areas, the TORs of the feasibility and design studies of irrigation rehabilitation will include provisions for locating the irrigation schemes in relation to the protected areas and making an assessment of any impact on these areas.

• As the Project will only rehabilitate existing schemes and would not extend irrigation to new areas, no involuntary resettlement is envisaged or anticipated. The construction of the proposed PASCs will be done on land voluntarily given by the communities who own the centers. The PMU will ascertain prior to the initiation of the construction of PASCs that the land is voluntarily provided and no one is displaced.

• While the status of protected areas in East Timor is not known, the Project would include in the TORs for the feasibility studies for the rehabilitation of irrigation schemes provisions for the consultants to assess whether the schemes being considered for rehabilitation are inside of or on the perimeter of protected areas. In such case the study should evaluate the extent to which Project activities would impact the integrity of the protected area and, if so, formulate offsetting appropriate measures.

• The Project considered a number of design alternatives to minimize potential negative impacts on the environment. The new irrigation schemes and repair of major diversion structures and headworks were considered but rejected because under the emergency framework of this Project the required environmental assessments and mitigation plan satisfactorily undertaken. The alternative of building PASCs indiscriminately in all districts of the country was considered but rejected in order not to encourage the intensification of shifting cultivation. Shifting cultivation, which continues to be practiced in the uplands of East Timor, requires seeds and plant materials that are adapted to these areas. The PASCs would not engage in the sale or provision of these seeds or plant materials.

7. Participatory approach:

a. Primary beneficiaries and other affected groups:

During Project identification and preparation, the multi-donor and IDA mission members and East Timorese counterparts conducted rapid rural appraisals and consultations that covered almost all of East Timor. Results of the rapid rural appraisals and the consultations both confirmed that the components proposed under the Project are needed and are of a priority nature to remain feasible. It was not possible for
the Project to include in its components or finance all of the needs expressed by the people and organizations that were consulted.

b. Other key stakeholders:

The mission, UNTAET and East Timorese counterparts, as well as a number of donors (AusAID, Portuguese Government, Japanese International Cooperation Agency (JICA), Food and Agriculture (FAO) and local NGOs) participated in workshops that designed project objectives, components and implementation arrangements. In addition, the mission and UNTAET conducted two workshops in Dili which were well attended by NGOs, civil society and UNTAET regional agricultural staff. The mission also undertook visits to various stakeholders, including vocational schools, churches and villages to consult with these stakeholders.

F: Sustainability and Risks

1. Sustainability:

Under the priority first grant, productive activities will be sustained with the help of investments in a vaccination program. Sufficient training and technical assistance is provided for the veterinary staff after the life of the Project. Market forces and family needs would also be factors for the sustainability of livestock. For example, a large income from livestock will ensure that livestock are well-cared for. Conservative budget estimates of the livestock component show financial viability at present prices.

Only minor and medium deferred maintenance and rehabilitation have been planned under the Project. It is expected that the farmers in the Project schemes will take over subsequent annual maintenance of secondary and tertiary irrigation canals. Many of the communities had assigned a member for monitoring the requirements of irrigation maintenance and had an informal method of assigning responsibilities of annual irrigation maintenance. This has been discontinued in recent years. It is expected that a one-time investment in deferred maintenance and rehabilitation of these schemes will be sufficient and the community will then be able to generate contributions for subsequent maintenance. The Project has provided resources for training irrigation engineers to help the communities in the future.

Establishing PASCs will provide urgently needed inputs and services to the rural communities. To ensure good management and profitability of PASCs safeguards have been included: technical assistance, training, organizational structure, annual audits, etc. However, it can be expected that some of these PASCs will fail. This should not be seen as a failure of the Project as the component would have provided priority inputs to jump-start rural growth and entrepreneurship.

All of the above investments will generate rural incomes which will eventually produce tax revenue.
2. Critical Risks: (reflecting assumptions in the fourth column of Annex 1)

<table>
<thead>
<tr>
<th>Risk</th>
<th>Risk Rating</th>
<th>Risk Minimization Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>From Outputs to Objective</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg and livestock productions are not sustained.</td>
<td>M</td>
<td>Vaccination campaigns will help keep mortality rates low and the expectation of continued egg production will keep beneficiaries from selling/consuming the original stock.</td>
</tr>
<tr>
<td>Livestock health services are not sustained.</td>
<td>S</td>
<td>Vaccination campaigns and clinical services funded by UNTAET will help keep mortality rates low.</td>
</tr>
<tr>
<td>Tools are not used by beneficiaries for productive purposes.</td>
<td>M</td>
<td>Only tools used for gardening will be distributed by the Project.</td>
</tr>
<tr>
<td>Buffalo and cattle calves are not passed on to second generation beneficiaries</td>
<td>S</td>
<td>Animals will be given first to farmers of low social status so that community peer pressure to perform will be placed on them.</td>
</tr>
<tr>
<td><strong>From Components to Outputs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation water is not available and farmers are not able to irrigate because of lack of rainfall.</td>
<td>M</td>
<td>The incidence of droughts in East Timor is linked to El Nino.</td>
</tr>
<tr>
<td>PASCs activities are not demand-driven and are poorly managed.</td>
<td>S</td>
<td>Technical assistance for the management of the PADSCs is provided by the Project and donors.</td>
</tr>
<tr>
<td>PASCs become politicized</td>
<td>S</td>
<td>Require an independent board with no civil servants or elected officials</td>
</tr>
<tr>
<td>Farmers do not attend field days and advice given is not adopted.</td>
<td>M</td>
<td>TA is provided for transport of farmers and quality extension messages.</td>
</tr>
<tr>
<td>Trainees are not motivated and take on other activities after their training.</td>
<td>S</td>
<td>Candidates for long-term training should sign a contract to return and work the institution that trained them.</td>
</tr>
<tr>
<td>Radio stations are diverted from their original mission and do not sustain their operation.</td>
<td>S</td>
<td>Stations will be controlled by communities.</td>
</tr>
<tr>
<td><strong>Overall Risk Rating</strong></td>
<td>S</td>
<td>IDA will undertake close supervision of Project and provide training/support to PMU staff in Project management, procurement, financial management and M&amp;E.</td>
</tr>
</tbody>
</table>

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

3. Possible Controversial Aspects:

- To ensure a realistic project design and implementation program the Project did not finance certain activities proposed by UNTAET and East Timorese counterparts. These include the construction of slaughterhouses, the provision of central grain silos, etc.
- Some members of UNTAET and East Timorese counterparts may not appreciate the lack of public sector command and control structures and activities and may not support the Project.
G: Main TFET Grant Conditions

1. Negotiations Conditions:
   a. IDA obtained assurances from UNTAET that adequate budgetary allocations will be made for funds required for financing the recurrent costs of the Project during Project implementation.
   b. IDA obtained assurances from UNTAET that it would delegate Project oversight responsibility (both operational and financial authority) to the Project Management Unit.

2. Conditions of Effectiveness:

   The Project Management Unit (a) has been established within UNTAET’s Governance and Public Administration Pillar, with competent personnel in adequate numbers, including: (i) a Project Management Unit Director; (ii) a procurement specialist; and (iii) a financial manager; (b) has been provided with adequate office space and communication facilities; and (c) UNTAET/GPA has prepared a model subsidiary agreement, acceptable to IDA to be used between UNTAET and the PASC’s to define among others the condition under which PASCs receive goods and services under the Project, the manner in which PASCs accounts are audited and the goods and services are used for the purposes intended.

3. Other:
   Accounts/Audits
   a. The PMU shall submit quarterly financial statements to IDA that follow agreed formats, no later than 30 days after the end of each quarter.
   b. Internal Audits of Project accounts by the UN Internal Audit Department at least twice a year.
   c. Appointment of an independent auditor, in accordance with terms of reference acceptable to the IDA, no later than December 31, 2000.

Flow and Utilization of Project Funds

Management of the Project

Monitoring, Review and Reporting
   a. The UNTAET/PMU shall prepare and submit to IDA semi annual progress reports in January and July of each year starting on January 30, 2001.
   b. Maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with agreed project performance indicators

Implementation

1. UNTAET shall select rural families and farmers to receive chicks and hand tools in accordance with criteria agreed with IDA, including the following criteria, and shall keep acceptable records of the screening process and the selected participants, namely beneficiaries of chickens and hand tools shall be selected by the village councils or focus groups from the poorest families and farmers in rural areas. Inputs on the beneficiary selection shall be sought from civil society (such as a representative of a church, the head of a local non-government organization, or a women’s organization).

2. UNTAET shall select rural families and farmers to receive cattle in accordance with criteria agreed with the IDA, including the following criteria, and shall keep acceptable records of the screening process and the selected participants:
(a) beneficiaries of buffaloes or Bali cattle shall be rural families and farmers of the lowest social strata who lost buffaloes or Bali cattle. Each beneficiary family shall receive one buffalo or one cow;

(b) rural families and farmers who have lost buffaloes or Bali cattle but who are the second lowest in the social strata shall receive the first calf from a beneficiary under sub-paragraph (a) above; and

(c) the final list of beneficiaries under sub-paragraphs (a) and (b) above shall be signed by a representative from the PMU, a member of the community or village council or a member of the village focus group, and a member of civil society (such as a representative of a church, the head of a local non-government organization, a women’s organization, or a village elder).

3. Beneficiaries of chicks, cattle and hand tools shall receive chickens, a set of hand tools, a buffalo or a head of Bali cattle.

4. UNTAET shall select irrigation schemes in accordance with criteria agreed with the IDA, including the following:

(a) the rehabilitation has an economic rate of return of at least 10 percent, such rate of return to be estimated through an economic analysis;

(b) the selected irrigation schemes will benefit the greatest number of poor beneficiaries;

(c) the rehabilitation will have no negative impacts on the environment;

(d) the selected irrigation schemes have the highest beneficiary participation; and

(e) the selected irrigation schemes have users that are willing to take over the responsibility for the operation and maintenance of the irrigation system (with the exception of large works) and, therefore, the selected irrigation schemes have the least fiscal impact on government budget.

5. UNTAET shall enter into a subsidiary agreement, acceptable to the IDA, with each Pilot Agriculture Services Center, such agreement to include the conditions for qualifying for works, goods and services under the Project, and the requirements for financial management of the Pilot Agriculture Services Center.

In order to become eligible and receive grants from the proceeds of the Project Grant, the Pilot Agriculture services centers shall satisfy the following criteria:

(i) shall be established as private legal entities and registered with the relevant authorities;

(ii) has a confirmed commitment for its management from a qualified NGO or a professional manager provided by the PMU under the ARP or by another donor; and

(iii) has submitted an acceptable request for a grant and work plan to the PMU.

6. UNTAET shall take all measures to avoid the acquisition of land or assets of villagers and to avoid the displacement of said villagers.

7. Training under the Project shall be carried out in accordance with a training program acceptable to the IDA.
H: Readiness for Implementation

1. Completeness and readiness of the engineering design documents for the first year’s activities.
   Discussions for the execution of the priority production asset restoration component is under preparation between UNTAET’s IDARD and consultants.

2. Completeness and readiness of the procurement documents for the first year’s activities.
   - A request for proposals, for the conduct of pre-feasibility studies and detailed designs for the irrigation schemes to be rehabilitated has been prepared.
   - The procurement documents for the rehabilitation of irrigation schemes will be prepared by the consultants who will undertake the pre-feasibility studies described above.
   - Tender documents for other project procurements will be prepared by the PMU with assistance from the central procurement office of UNTAET.

3. The Project Implementation Plan
   The Project Implementation Plan has been evaluated during appraisal and was found to be realistic and of satisfactory quality.

4. The following items are lacking and are discussed under Grants conditions (Section G):
   - Nomination of PMU director and staff
   - Designation of adequate office space to house the PMU/UNTAET’s Department of Agriculture
   - Other covenants

I: Compliance with Bank Policies

[X] 1. This project complies with all applicable Bank policies.

<table>
<thead>
<tr>
<th>Policy</th>
<th>Risk of Non-Compliance</th>
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</thead>
<tbody>
<tr>
<td>X Environmental Assessment (OD 4.01)</td>
<td>L</td>
</tr>
<tr>
<td>X Natural Habitat (OP/BP/GP 4.04)</td>
<td>L</td>
</tr>
<tr>
<td>NA Forestry (OP 4.36)</td>
<td>L</td>
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<tr>
<td>X Pest Management (OP 4.09)</td>
<td>L</td>
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<tr>
<td>NA Cultural Property (OPN 11.03)</td>
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<tr>
<td>NA Indigenous People (OD 4.20)</td>
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<tr>
<td>NA Involuntary Resettlement (OP 4.30)</td>
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<tr>
<td>NA Safety of Dams</td>
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<tr>
<td>NA Project on International Waterway</td>
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<tr>
<td>NA Projects in Disputed Areas (OP 7.60)</td>
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</tbody>
</table>

2. The following exceptions to Bank policies are recommended for approval
   Not Applicable

Team Leader: Mohamed Noureddine Benali

Sector Manager/Director: Geoffrey B. Fox

Country Manager/Director: Klaus Rohland
### Annex 1: Project Design Summary

**East Timor: Agriculture Rehabilitation Project**

**Project Appraisal Document**

<table>
<thead>
<tr>
<th>Hierarchy of Objectives</th>
<th>Key Performance Indicators</th>
<th>Monitoring and Evaluation</th>
<th>Critical Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Development Objective:</strong> 1. Improve food security of selected poor households 2. Increase agricultural production in selected Project areas and promote rural growth.</td>
<td><strong>Outcome / Impact Indicators:</strong> 1.1. Increased availability of eggs, poultry meat and rice at household level. 2.1. Irrigation systems are rehabilitated and in operating order. 2.2. Condition of selected agriculture access roads is improved. 2.3. Farmers have access to essential production inputs/Grant, mechanization services and other high-demand services.</td>
<td><strong>Project Reports:</strong> 1.2 &amp; 3. Beneficiary survey results included in Project progress reports.</td>
<td><strong>(from Objective to Goal)</strong> 1.1. Outcomes are sustainable. 2.1. Irrigation systems are well maintained and irrigation water is available. 2.2. Easier access to main roads and markets reduces crop losses. 2.3. Services are used by farmers to increase their production.</td>
</tr>
</tbody>
</table>

**Sector-related CAS Goal:**
CAS is under development. Agriculture sector strategy goal: Improve national food security through efficient use of resources.

**Sector Indicators:**
- Improved coverage of food import costs by exports of goods and services.
- Improved agricultural production.

**Country Economic Memorandum:**
Equitable distribution of benefits.
Special focus on the poor.
<table>
<thead>
<tr>
<th>Output from each component:</th>
<th>Output Indicators:</th>
<th>Project Reports:</th>
<th>(from Outputs to Objective)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priority Productive Assets</strong>&lt;br&gt;<strong>Restoration:</strong>&lt;br&gt;1. Household egg, poultry meat and rice productions increased.</td>
<td>1.1. Egg production increases by 1.5 eggs per day per household by year 2 and poultry meat increases by one chicken per month per household by year 3.</td>
<td>1.1 &amp; 2. Beneficiary survey results in Project progress reports.</td>
<td>1. Egg and poultry meat productions are sustained and consumed by household.</td>
</tr>
<tr>
<td>2. Livestock health improved.</td>
<td>1.2. Livestock mortality rates decline from 25 to 12 by end of year two.</td>
<td>1.2. Livestock health services are sustained.</td>
<td></td>
</tr>
<tr>
<td>3. Households are better tooled</td>
<td>1.3. About 4,000 have farming/household tools by end of year 2.</td>
<td>1.3. Procurement contracts.</td>
<td>1.3. Tools are used by beneficiaries for productive purposes.</td>
</tr>
<tr>
<td><strong>Irrigation/road infrastructure rehabilitation:</strong>&lt;br&gt;2.1. Irrigation systems rehabilitated.</td>
<td>2.1. Irrigation schemes covering an area of 2,000 ha by end of year 2 and an additional 5,000 ha by the end of the Project are rehabilitated &amp; maintained.</td>
<td>2.1. Contracts for works.</td>
<td>2.1. Irrigation water is available and farmers use it to produce irrigated crops.</td>
</tr>
<tr>
<td>2.2. Irrigation systems maintenance improved.</td>
<td>2.3. 100 km of earth agriculture access roads rehabilitated by year 2.</td>
<td>2.3. Work supervision reports by PMU and Community Empowerment project.</td>
<td>2.3. Rehabilitated roads are used by transport vehicles.</td>
</tr>
<tr>
<td>2.3. Agricultural roads rehabilitated.</td>
<td>3.1. To 8 service centers established by end of Project.</td>
<td>3.1. PMU supervision and progress reports.</td>
<td>3.1. Centers activities are demand-driven and are used by farmers.</td>
</tr>
<tr>
<td><strong>Agriculture Services:</strong>&lt;br&gt;3.1. Agriculture Service Centers established.</td>
<td>3.2. Up to 5 community radio stations established by end of year 3.</td>
<td>3.2. PMU and CEP progress reports.</td>
<td>3.2. Radio stations sustain their operation and provided the messages intended.</td>
</tr>
<tr>
<td>3.2. Community radio stations established.</td>
<td>3.3. 10 farmer field days organized by end of year one.</td>
<td>3.3. PMU progress reports.</td>
<td>3.3. Farmers attend field days and adopt advice.</td>
</tr>
<tr>
<td>3.3. Farmer information messages delivered.</td>
<td>3.4. Twenty research &amp; extension, ASC, etc. staff trained in country/abroad.</td>
<td>3.4. PMU progress reports.</td>
<td>3.4. Trainees are motivated and use their know-how for the purposes intended.</td>
</tr>
<tr>
<td>3.4. Research and extension staff trained.</td>
<td>3.5. One faculty of agriculture laboratory established.</td>
<td>3.5. PMU progress reports.</td>
<td>3.5. Laboratory is staffed and used for relevant research purposes.</td>
</tr>
<tr>
<td>3.5. Faculty of agriculture laboratory equipped.</td>
<td></td>
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<tr>
<td>Project Components/Sub-components:</td>
<td>Inputs: (budget for each component)</td>
<td>Project Reports:</td>
<td>(from Components to Outputs)</td>
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<tr>
<td>-----------------------------------</td>
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<tr>
<td><strong>1. Priority Productive Assets Restoration:</strong></td>
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<tr>
<td>1.1. Provision of 5 six-week old chicks to each of 20,000 poor households.</td>
<td>1.1. Procurement &amp; distribution of chick and starter feed: US$0.9 million.</td>
<td>1.1. Households accept and care for chicks.</td>
<td></td>
</tr>
<tr>
<td>1.2. Livestock vaccination and medication campaign.</td>
<td>1.2. Vaccines &amp; medications dispensed: US$0.8 million</td>
<td>1.2. Livestock owners accept to vaccinate animals &amp; vaccines and medications are administered properly.</td>
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</tr>
<tr>
<td>1.3. Replacing of buffalo and Bali cattle on a revolving scheme.</td>
<td>1.3. Purchase &amp; distribution of 1,000 head of buffalo and 1000 head of Bali cattle: US$0.9 million.</td>
<td>1.3. Buffalo and cattle are cared for and used for puddling.</td>
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</tr>
<tr>
<td>1.4. Replacing household hand tools.</td>
<td>1.4. Purchase and distribution of farm/household hand tools: US$0.2 million.</td>
<td>1.4. Tools are kept by beneficiaries.</td>
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</tr>
<tr>
<td>1.5. Farmer information campaign.</td>
<td>1.5. Farmers training days, Leaflets, workshops, media programs: US$0.1 million</td>
<td>1.5. Information is understood and used by farmers.</td>
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<tr>
<td><strong>2. Irrigation/road infrastructure rehabilitation:</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.1. Conduct feasibility, detailed designs/supervision studies and reconstruction of irrigation systems.</td>
<td>2.1. Consultant and works contracts: US$7.1 million</td>
<td>2.1. Studies and construction works are timely and relevant.</td>
<td></td>
</tr>
<tr>
<td>2.2. Improve the maintenance of irrigation schemes.</td>
<td>2.2. Irrigation systems maintenance contracts and community works: US$1.2 million.</td>
<td>2.2. Maintenance of irrigation canals is taken sustainable and ultimately taken over by users.</td>
<td></td>
</tr>
<tr>
<td>2.3. Rehabilitation of agricultural access roads.</td>
<td>2.3. Community rehabilitation of agriculture access roads: US$0.3 million</td>
<td>2.3. Communities rehabilitate roads properly.</td>
<td></td>
</tr>
<tr>
<td><strong>3. Agriculture Services:</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3.1. Set-up and support up to eight Agriculture Service Centers (ASC).</td>
<td>3.1. Establishment of up to eight community-owned ASCs: US$3.5 million.</td>
<td>3.1. Centers are adequately managed.</td>
<td></td>
</tr>
<tr>
<td>3.2. Assist communities establish and operate rural radio stations for the information of farmers.</td>
<td>3.2. Establishing community owned and operated rural radio stations: US$0.1 million</td>
<td>3.2. Communities are interested and administrative licensing is obtained.</td>
<td></td>
</tr>
<tr>
<td>3.3. Research and extension staff training and Technical assistance.</td>
<td>3.3. Research/extension staff training: US$0.8 million</td>
<td>3.3. Trained staff is motivated by salary and work conditions.</td>
<td></td>
</tr>
<tr>
<td>3.4. Faculty of agriculture</td>
<td>3.4. Support to the faculty of agriculture: US$0.7 million.</td>
<td>3.4. Faculty of agriculture is interested and adequately staffed.</td>
<td></td>
</tr>
<tr>
<td>3.5. Studies/Documentation center.</td>
<td>3.5. Land use, soils, marketing, DRC studies and document center: US$0.9 million.</td>
<td>3.5. Studies are relevant and information/documents are accessible and used.</td>
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<tr>
<td><strong>4. Project Implementation Unit (PMU).</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4.1. PMU established to implement ARP.</td>
<td>4.1. Establishment and operation of PMU: US$1.3 million.</td>
<td>4.1. PMU staff is motivated and competent.</td>
<td></td>
</tr>
</tbody>
</table>
I. The Context.

1. The intense level of violence that followed the 30 August referendum resulted in the temporary and/or permanent displacement of about 75 percent of the population. Displacement occurred both within and across the borders of East Timor and current estimates put the number of people who are still in refugee status in West Timor at approximately 100,000 people. Food distribution and marketing systems, together with commerce and essential services, were paralyzed and the agriculture production cycle was severely disrupted in several areas of the country. Although infrastructure and property damage was extensive, particularly in urban areas and villages, the damage to agricultural crops was less severe as crops had already been harvested and only limited burning was inflicted on the relatively minor second-season crop.

2. Livestock health has deteriorated significantly in the past few months and the spread of disease has increased due to lack of vaccines and emergency clinical care. Livestock numbers suffered significant losses, particularly buffalo, Bali cattle, and poultry. Buffalo and cattle are used to puddle rice paddies and prepare them to receive transplants. The loss of buffalo is very likely to delay soil preparation in paddies and may reduce the area cropped to rice in regions where mechanization services or alternative forms of soil preparation is not available. The replacement of buffalo in regions where paddy fields are small and are not amenable to mechanized tilling is most urgent. Bali cattle are a multi-purpose animal used for puddling and traction as well as meat and milk. Poultry, both the industrial and household types suffered heavy losses. The two major industrial poultry farms were looted and are out of commission and many of the households lost their poultry flocks. Eggs and chicken meat are a major source of food and/or cash for many poor rural households. Their replacement is also a matter of urgency and would contribute to the alleviation of malnutrition and poverty.

3. Many farmers and landless rural people have also lost many of the hand tools they use for household or farming chores. Without these tools many are unable to cultivate their family gardens nor collect brush and wood to repair their dwellings or make fire. The replacement of these hand tools is also a matter of priority.

4. Much of the damage to agriculture infrastructure was due to delayed maintenance over a long period of time. The condition of agricultural access roads and irrigation infrastructure deteriorated because users were unable to maintain them. This lack of maintenance was due, in part, to the lack of security and risks associated with the freedom struggle. It was also due to the fact that some of the maintenance work needed the use of heavy machinery that was not available to the users. The lack of road maintenance made it very difficult for farmers to move their agricultural products to markets (coffee and maize in the highlands and paddy in the low lands). The damage to large intake structures and poor state of major irrigation canals kept large areas from being irrigated and cropped. In some schemes (Maliana I and II in Bobonaro; Oebaba in Covalina; Fatuboro in Liquica; Sare in Ermera; Caraulun, Dotik, and Quiaras in Manufahi, etc.) more than 50 percent of the command area cannot be irrigated because of broken intakes or major canals being clogged by heavy sediments.

5. Agriculture services, i.e. research, extension, input supply, Grant, marketing information, etc. are for all practical purposes, now non-existent. The UNTAET has recently recruited a number of Agriculture District Officers (ADO) and their East Timorese counterparts. Although crops such as coffee are in no need of chemical inputs and have captured a niche market as an organic crop, many of the staple crops such as maize and rice could gain in productivity with the proper use of fertilizers and Integrated Pest Management (IPM) practices. The Project will encourage organic coffee growing and support the introduction of improved, environment-friendly cultural practices such as proper pruning and density in
coffee gardens and the use of IPM techniques. Yields of irrigated rice average around 2 tons of paddy per hectare compared to 4 to 5 tons of Paddy in Java and 5 to 6 tons in Egypt. Food security, a streamlined and efficient public service and an active role for communities and the private sector in the development process are a high Government priority. Lessons from other projects in countries similar to East Timor, point to the fact that while support to agricultural production is essential to improve food security and the livelihood of rural populations, the delivery of these support services is best achieved through empowered communities and the private sector.

6. Restoring productive assets and improving agricultural productivity are high government priorities. The proposed Agriculture Rehabilitation Project (ARP) would support these priorities by pursuing the following Project objectives: (i) improving food security of selected poor households; and (ii) increasing agricultural production and promoting rural growth. In order to achieve the above objectives, the Project would finance four project components representing two sets of activities. The first set of activities make up Project component one and would focus, over the next six to twelve months, on restoring lost or destroyed productive assets at the farmer level. The second set of activities make up Project components two and three would focus, over the next 30 months, on rehabilitating selected agriculture access roads and irrigation schemes, as well as improving farmers' access to agriculture services and information. Project component four concerns the creation of a Project Management Unit (PMU) as a way of building the capacity of the proposed Interim Department of Agriculture and Rural Development to undertake Project planning, implementation and management, as well as monitoring and evaluation.

7. Because the East Timor Trust Fund does not have all of the necessary project funding at this stage, Project financing would therefore be divided in two grants. The first will finance priority activities to be carried out during the initial 12 months of the Project. The second grant would finance the remaining Project activities whose implementation may have started during the first grant, but would need to continue until the Project closing date of December 31, 2002. The implementation of the second grant could start before the end of the first grant as soon as funding from the Trust Fund becomes available. A description of the Project activities/components that will be financed under the first grant is given first. It is followed by a description of the Project components as a whole. The implementation arrangements for all Project activities are included in the section entitled "Description of the Components of the Project as a Whole."

II. PROJECT DESCRIPTION

A. Description of the Components to be Financed Under the First Grant.

The implementation of the Project components/activities to be financed under the first Grant will start immediately after Project signing (expected on June 23, 2000) and continue until the closing date of the first grant, which would be on June 30, 2001.

Component 1 – Priority Productive Asset Restoration (total estimated cost US$3.0 million).

Activities that would be financed under this component would include:

a. Conducting national vaccination campaigns to immunize cattle, small ruminants and pigs against infectious diseases and provide emergency clinical services where required.

b. Providing up to 20,000 rural families with 5 four to six-week old chicks each and chicken feed to improve household nutrition and income. The chicks will be given free of charge to the neediest families as determined by community consultation.

c. Replacing up to 1,000 head of buffalo and 1000 head of Bali cattle to allow farmers who have lost their animals during the violence to regain the ability to prepare their paddy fields for planting rice. The livestock will be given to beneficiaries under a revolving scheme where the first beneficiaries pass on a calf to another designated beneficiary within a three-year period. Priority would be given to the poorest farmers and community organizations would be used to prioritize beneficiaries.

d. Replacing simple hand tools needed by rural people to undertake farming, household and communal work such as agricultural roads or irrigation canal maintenance.
e. Conducting farmer information campaigns. Under this activity, farmer field days and workshops would be organized for the purpose of informing farmers of the availability and modalities of accessing rural Grant and other agricultural services provided under the ARP or other development projects.

Component 2 – Irrigation and Rural Infrastructure Studies, Rehabilitation and Maintenance (total estimated cost US$1.1 million).

9. Four activities would be financed under this component:

a. Feasibility and engineering studies for the purpose of: (i) conducting surveys and profiling of irrigation schemes for the purpose of identifying feasible improvements and selecting the schemes where rehabilitation would be most viable. The selection of schemes would be undertaken according to the criteria listed under Section G of the PAD; (ii) preparation of sketches of canal improvement and structure rehabilitation, as well as the preparation of LIB tender documents for the selected rehabilitation; (iii) the establishment wherever they already exist, of Water User Association (WUA).

b. Community rehabilitation and maintenance of irrigation infrastructure and agriculture access roads for the purpose of bringing selected irrigation systems to good working condition and improving the movement of agricultural products from farms to main roads.

c. The procurement of equipment, vehicle, motorcycles.

d. The training of staff and the provision of irrigation and road maintenance technical assistance.

Component 3 – Pilot Agriculture Services Centers (total estimated cost US$3.4 million).

10. Seven activities would be financed under this component:

a. The establishment, through the provision of inputs, supplies and inventory (up to a maximum of US$0.35 million) to communities, of five Pilot Agriculture Services Centers (five PASC during the first grant and eight for the whole Project). The purpose of the PASCs would be to provide farming communities in the area they cover with the agricultural services they require. The services offered will be demand-driven and could include the provision of farm inputs, mechanization services, veterinary services, mechanical repair services and transport services, etc. The pilot PASCs/centers would be legal commercial entities (limited liability companies, cooperatives, farmers or rural associations, etc.) owned by the communities they serve. They would be governed by independent board of directors representing stakeholders and civil society and a government representative as an observer. Government staff would not be allowed to be members of the PASCs board of directors. The management of the PASCs would initially be entrusted to NGOs or professional managers paid for by donors and/or the Project as technical assistance.

b. Providing support to the Faculty of Agriculture of the University of East Timor for the design of a research laboratory and field research stations.

c. Procurement of radios and the establishment of community radio stations to provide information to farmers and rural dwellers.

d. Provision of local and international staff training, as well as the organization of workshops and study tours for PASC, research and extension staff and key farmer.

e. Provision of technical assistance for agricultural research, management of PASCs.

f. The procurement of equipment, vehicles, and motorcycles.

Component 4 – The Project Management Unit (total estimated cost US$0.5 million).

11. To facilitate the implementation of Project activities, the ARP would finance:

a. The recruitment of local East Timorese and expatriate (experienced UN volunteers) counterparts staff,
b. Technical assistance specialized in procurement, financial management, enterprise management to help establish and manage the PASCs, monitoring and for auditing Project accounts.

c. The training for East Timorese staff
d. Procurement of equipment, vehicles.
e. The operating cost of the PMU, which would include office and vehicle operation and maintenance, as well as staff travel allowances.

B. Description of the Components of the Project as a Whole.

Project Component 1 – Priority Productive Asset Restoration (total estimated cost US$3.0 million).

12. Activities that would be financed under this component would include:

f. Conducting national vaccination campaigns to immunize cattle, small ruminants and pigs against infectious diseases and provide emergency clinical services where required.

g. Providing up to 20,000 rural families with 5 four to six-week old chicks each and chicken feed to improve household nutrition and income. The chicks will be given free of charge to the neediest families as determined by community consultation.

h. Replacing up to 1,000 head of buffalo and 1000 head of Bali cattle to allow farmers who have lost their animals during the violence to regain the ability to prepare their paddy fields for planting rice. The livestock will be given to beneficiaries under a revolving scheme where the first beneficiaries pass on a calf to another designated beneficiary within a three-year period. Priority would be given to the poorest farmers who have lost their livestock and community organizations would be used to prioritize beneficiaries.

i. Replacing simple hand tools needed by rural people to undertake farming, household and communal work such as agricultural roads or irrigation canal maintenance.

j. Conducting farmer information campaigns. Under this activity, farmer field days and workshops would be organized for the purpose of informing farmers of the availability and modalities of accessing rural Grant and other agricultural services provided under the ARP or other development projects.

Implementation Arrangements for Component 1

13. It is anticipated that implementation of this component would be completed within the first six to twelve months of the life of the ARP. Implementation of the priority productive asset restoration activities would be the responsibility of the PMU which will procure the services of a consultant for the provision of technical assistance. The agreement between UNTAET and the consultant would have to be acceptable to IDA. In addition, the PMU and consultant would enter into collaborative contractual arrangements with local and international NGOs to assist in the implementation of the activities financed under this component. For the distribution of the chicks, livestock, and hand tool sets the PMU and associated NGOs would give first priority to the poorest of the poor among the population of farmers and/or rural people who have lost animals during the period of strife. The PMU and NGOs would work with community councils and village elders to define the poor who will benefit from the Project.

Project Component 2 – Irrigation/Rural Infrastructure Rehabilitation and Maintenance (total estimated cost US$8.6 million).

14. Four major activities would be financed under this component:

a. Engineering studies for the purpose of: (i) conducting surveys and profiling of irrigation schemes, categorized as having light to medium damage in the UNTAET damage assessment list, for the purpose of identifying feasible improvements and selecting the schemes where rehabilitation would be most viable; the selection of schemes would be undertaken according to the criteria listed under implementation arrangements below (Also Ref to Section G of
PAD); (ii) the establishment and consolidation, wherever they already exist, of Water User Association (WUA); and (iii) designing and preparing cost-effective designs including alignment surveys (where needed) and preparation of sketches of canal improvement and structure rehabilitation, as well as the preparation of tender documents (using IDA standard documents).

b. Rehabilitation/construction and maintenance of irrigation infrastructure to bring selected irrigation systems (selected under a above) to good working condition before turnover to farmer groups for their operation and maintenance (O&M). The rehabilitation works would include main structures and canals, as well as secondary and tertiary canals covering an area of up to 7,000 ha.

c. Hydrological studies, structural studies, etc. and redesign of major works that have been extensively damaged mainly because they were either poorly designed or not sufficiently protected.

d. Repairing and maintaining up to 100 km of feeder/access roads (not main asphalt roads) through labor-intensive community participation. The rehabilitation of these roads by local populations using hand tools and hand handled materials (Gabions). The aim of this activity is to facilitate the transport of agricultural production to main roads (markets) and to provide work opportunities for rural people.

Implementation Arrangements for Component 2.

15. The specific schemes that will be considered for rehabilitation are listed in Annex 14 under the category light to medium damage. The schemes that will be selected for rehabilitation would have to satisfy all of the agreed criteria. The agreed criteria are:

   (i) the rehabilitation of the scheme has an economic rate of return of at least 10 percent;
   (ii) rehabilitation would benefit the greatest number of poor beneficiaries;
   (iii) the rehabilitation would have a positive impact on the environment;
   (iv) the schemes with the highest beneficiary participation; and
   (v) schemes with users that are willing to take over responsibility for the operation and maintenance of the irrigation system (with the exception of large works) and hence, schemes that have the least fiscal impact on government budget.

It is anticipated that a short list of consultant firms would be asked to submit proposals for pre-feasibility studies to prioritize viable schemes, detailed designs and preparation of ICB tender documents, as well as supervision of construction. Because of the emergency nature of the rehabilitation, consulting firms may be contracted directly. Capacity building and training of East Timorese staff in O&M, irrigation systems planning, design of irrigation systems, as well as the cost of delayed maintenance on several schemes has been included in the cost of this component.

16. Contracting for construction/rehabilitation of irrigation schemes will be done by the PMU using Limited International Bidding tendering procedures. In view of the relatively small size of individual schemes and the unavailability of contractors in East Timor, the PMU will group all the schemes selected for rehabilitation into two or three contracts in order to attract contractors from abroad. At critical stages of the studies and construction, the PMU may recruit an irrigation engineer consultant to follow up and supervise the work of the consulting firm in charge of the feasibility studies, design and work supervision. The conduct of hydrological and design studies of major works would be contracted on the basis of proposals submitted by firms selected from a short list for this purpose. Terms of reference for these studies would be developed by the consulting firm selected to undertake the feasibility studies described in paragraph 10 above.

17. Implementation of the delayed maintenance of irrigation schemes and the rehabilitation of agriculture access roads will be undertaken by communities through the same guidelines established by the
recently-approved, IDA-financed Community Empowerment and Local Governance Project. These guidelines can be summarized as follows. The PMU’s rural engineer (whose cost is included in the Project) would consult and enlist the active participation of village, sub-district and district councils, as well as civil society (churches) in defining the access roads and irrigation schemes that need repair and/or maintenance. The engineer will use the same process to obtain the nomination of the villagers (priority given to the poor, as defined by the councils) who will be recruited by the PMU as temporary laborer to repair and maintain the roads and irrigation canals. The PMU’s rural engineer consultant will set the technical guidelines for the maintenance work and help organize work crews from the laborers chosen by the community councils. The engineer will designate crew chiefs who will supervise the work and record work progress. It is expected that the engineer will first make an estimate of the cost of the work to be undertaken by communities and then contract the work to one or several communities on the basis of a lump sum contract per kilometer of road rehabilitated or length of canals maintained. Most of the work will be conducted by laborers using simple hand tools. Work completion will be certified by the engineer prior to making full payment to the communities.

Project Component 3 – Pilot Agriculture Services Centers (total estimated cost US$8.5 million).

18. The ARP would finance three activities under this component. The first activity would be to establish up to eight Pilot Agriculture Services Centers (PASC). The purpose of the PASCs would be to provide farming communities in the area they cover with the agricultural services they require that are not now provided by other businesses in the area. The services offered will be demand-driven and could include the provision of farm inputs, mechanization services, veterinary services, mechanical repair services, etc. The pilot PASCs/centers would be legal commercial entities (limited liability companies, cooperatives, farmers or rural associations, etc.) owned and governed by the villages or villagers the centers serve. However, their management would initially be entrusted to professional managers paid for by donors, NGOs and/or the Project as technical assistance.

19. The second activity to be financed under this component is the short and long-term (maximum 2 years) training of East Timorese research staff, extension and PASC managers, as well as the exchange of researchers, twining arrangements and procurement of experimental equipment and materials to set up research laboratories and experiment fields and stations for the Faculty of Agriculture of the University of East Timor.

20. Support to Community Radio Extension would be the third activity to be financed under this component. In collaboration with the IDA-financed Community Empowerment and Local Governance Project, the ARP would finance the procurement of radio sets and short range transmission stations. The radios and transmission stations will be operated by trained community volunteers for the purpose of providing farmers and other rural dwellers with information and technical advice.

Implementation Arrangements for Component 3.

21. The initial steps in the establishment of the PASCs would be taken by the PMU and the Agriculture District Officer (ADO) in a given district. The PMU Director, the ADO and his counterpart, assisted by an experienced agriculturist (consultant paid by the Project), would organize meetings in promising districts to provide information to farmers and gauge their interest in engaging in the creation of a PASC. The PMU would select five districts where farmers are most engaged and interested and would contact NGOs, other donors to seek their collaboration in assisting with the management of the initial PASCs. The PMU may also choose to recruit on Project funds qualified professionals to manage the first five centers. The PMU, ADO and consultants (sociologist and agriculturist) and the newly recruited managers (each in his district) undertake a social and needs assessments to ascertain the interest of farming communities and feasibility of the establishment of the PASCs. Once this process is complete, a specialist is recruited (Project consultant) to draft the bylaws for the centers (as cooperatives, associations or limited liability companies) and complete the registration process. After the registration of the center, the PMU and the ADO help the new manager in seating the board and launching the business. To avoid capture by politicians, board members may not be civil servants nor elected government officials. members of the board of directors would be
selected by community focus groups. The board of directors would have representatives from: (i) farmers-two; civil society-one from the church; businessman-one; women organization-one; financial institution-one; local NGO/cooperative-one and one government representative as an observer. Government officials may not serve on the boards. After the registration of the PASC, the PMU and the ADO help the new manager in organizing the first meeting of the Board of Directors.

22. Once the PASC is registered with the authorities and becomes a legal entity owned by the communities, the manager drafts a letter on behalf of the Board requesting provision of goods and services from UNTAET (represented by the PMU) in the form of inputs, supplies and inventory. Along with the request for the inputs, supplies and inventory, the manager will provide a work plan in which he will explain the nature of the services that will be provided by the center that are not available from other businesses in the area. Provisions have been made in the Project for the PMU to recruit specialized consultants to help in the management and training of managers for the centers. In order to become eligible and receive in-kind grants from the ARP, each pilot center would have to fulfil the following criteria:

   a. be registered with the relevant authorities as a legal entity;
   b. have a confirmed commitment for its management from a qualified NGO or a professional manager provided by the PMU under the ARP or by another donor; and
   c. have submitted an acceptable business work plan to the PMU.

23. Upon receipt of a complete and satisfactory request and business plan submitted by the PASC’s manager on behalf of its board of directors, UNTAET’s Department of Agriculture and the PMU will enter into a subsidiary agreement with the center to provide it with works, goods and services commensurate with the number of its members and business plan. Successful and profitable PASCs who require additional resources to expand their services in response to demonstrated needs, can apply and receive additional resources up to a total not to exceed US$0.35 million. Once the first five centers are established, the PMU will follow the same process in establishing other centers. All of the services provided by the pilot centers would be against full payment. The PASCs would therefore operate as commercial enterprises.

24. When an NGO volunteers to manage a PASC, the NGO’s capacity to manage the funds and other assets of the centers would have to be assessed by the PMU before its responsibility for managing the pilot center is accepted by IDA. Eligible pilot centers would receive inputs, supplies and inventory paid for from the proceeds of the TFET Grant. The value of the goods and services would be in proportion to the number of villages and area served and a function of the likely services to be rendered. It is anticipated that up to eight PASCs may be created under the Project. They would most likely be needed in areas where agriculture practices require the use inputs, transport, processing and mechanization services. The management and bookkeeping of the centers would be audited regularly by the Government and annually by a private auditor. With the exception of the manager and an accountant whose salaries will initially (for a maximum of 24 months) be paid by the Project, the salaries of other staff working at the PASCs will be paid by the centers. The local and external training and technical assistance needs, particularly in enterprise management would be paid for under the Project and/or other donors.

25. While the Project is designed to minimize risks, there can be no guarantee that all PASCs will become viable, self-sustaining enterprises. Some may fail after a number of years, as is typical everywhere for new businesses. Beyond the normal good business practices, such as keeping accounts and having them independently audited, other aspects of the PASC design which minimizes risk, are the independent (non-political) board, the provision of business management mentoring, and the provision of independent advice to the board. In the event that some PASCs become non-viable after a start up period of about four years, they should be allowed to fail. Their assets would liquidated and invested in the successful centers. Failure of a PASC should not be seen as a failure of this component of the grant. Even a failed PASC would have accomplished its immediate goal of providing farm inputs and services over the transition period.

26. With regard to capacity building in research and extension, it is anticipated that district and/or sub-district extension agents would be recruited under a fixed duration contract and placed within the PASCs where they exist. These agents would be paid by and remain under the authority and control of the Department of Agriculture for the first three years. Subsequently, the PASCs would either take over the
payment of the agents’ salary or, if the agents’ performance is unsatisfactory, terminate their employment contract. The cost of research and extension staff training, the funding of exchange programs, research and extension equipment and materials, faculty of agriculture exchange and twining programs have been included in the Project.

27. Implementation of the community radio extension will be done through the process established and by the on-going IDA-financed Community Empowerment Project. Village, sub-district and district councils would be involved in the choice of the location for setting up the stations and for the content of messages.

Project Component 4 – The Project Management Unit (total estimated cost US$1.3 million).

28. To facilitate the implementation of Project activities, the ARP would finance the establishment of a Project Management Unit (PMU). The PMU would be an integral part of UNTAET’s Interim Department of Agriculture and Rural Development (IDARD). During the first year of the Project, the PMU would be headed by the director of IDARD and his deputy would be East Timorese. During the initial year of the Project, the deputy PMU Director would be trained and mentored by the head of the IDARD/PMU. In the second year, the deputy PMU director would take over the function of PMU director and the previous director would become his advisor. Leadership of the IDARD would remain with the UNTAET designated director. Under the ARP, East Timorese staff would be recruited to undertake the following functions: Project financial management, procurement, monitoring and evaluation, irrigation engineering, etc. Expatriate technical assistants would also be recruited under the Project to train and mentor their Timorese counterparts. The objective of the creation of the PMU and the recruitment of expatriate staff (UN volunteers) is to build project management capacity within the IDARD and enable it to sustain its Project planning, management and monitoring capacity. To build this capacity, the ARP would finance, over the two-and-half-year life of the Project, the recruitment of local and expatriate personnel, technical assistance, training for East Timorese staff, as well as equipment, vehicles and operating costs. As indicated above, the PMU would be headed by a Director and would include in its core staff a procurement specialist, a financial/disbursement specialist, an operations and monitoring and evaluation specialist and a secretary.

29. The PMU would be responsible for: (i) preparing, advertising, evaluating tenders and awarding contracts for the procurement of civil works, goods and services for the various activities of the Project; (ii) obtaining relevant clearances, including customs and transporting the equipment to the Project sites; (iii) managing the Project’s special account and preparing withdrawal/replenishment applications; (iv) making payments and keeping Project accounts; (v) having Project account audited annually and submitting audit reports regularly to IDA; (vi) implementing, following up, supervising, monitoring and evaluating the implementation of all Project activities including those that have been contracted out or are being implemented through the Pilot Agriculture Services Centers (PASC) or District Agriculture Offices; and (vii) consolidating and submitting to IDA Project progress, mid-term review and implementation completion reports as well as following up and consolidating reports on monitoring and evaluating of Project actions. The PMU would be based in Dili.

Implementation Arrangements for Component 4.

30. Project implementation would be the responsibility of the Interim Department of Agriculture and Rural Development (IDARD) and its PMU. In addition to IDARD regular staff (East Timorese and expatriate staff) the PMU would recruit short-term consultants to complete specific assignments. The PMU staff would be recruited by IDARD. The payment salaries for the PMU staff would be funded by UNTAET. Expatriate technical assistants and consultants would be funded by the TFET Grant. An amount of about US$1.3 million has been earmarked for this purpose and for the operation of the PMU. The selected Director and staff of the PMU would have to be acceptable to IDA. The PMU Director would be nominated by the UNTAET by May 30, 2000 in order to allow for his participation in Project appraisal and negotiations. The remaining PMU staff will be appointed before Project effectiveness.
31. UNTAET would delegate all Project oversight responsibility (both operational and financial authority) to its Interim Department of Agriculture and Rural development. The following are the key functions of Project management that would require delegation from the Head of the UNTAET to the director of the IDARD/PMU:

  Planning. Technical planning of Project implementation including consultation of affected communities and other stakeholders.

  Procurement. The process by which contracts for works, equipment and consulting services are made.

  Disbursement. The process by which funds are withdrawn from the IDA Grant Account to pay for contractors, suppliers, consultants and other service providers.

  Implementation Management. The technical monitoring of Project's progress, both physical and financial.

  Financial Management. Accounting and reporting of Project expenditures and ensuring that Project funds are disbursed for the purposes intended. The production of periodic financial reports that would enable UNTAET and IDA to monitor Project progress and exercise oversight of Project management.

32. The decentralization of the above functions to the sector offices would be a significant step in the development of implementation capacity in the country. UNTAET would monitor performance of the Project Management Team through the Central Fiscal Authority. The CFA would ensure that decentralized functions are carried out in accordance with agreed policies and procedures and within approved budgets. In addition, IDA would require an independent annual audit of the Project financial statements.

IDSA Project Supervision.

33. IDA staff would carry out periodic supervision of Project implementation. This would involve IDA staff and the Project Management staff working together to review progress in procurement, disbursement and physical completion of Project activities. IDA would also review compliance with the grant agreement in procurement of goods and services and disbursement of funds. IDA's mission findings and recommendations will be shared with the Project Management and UNTAET.

34. IDA would provide initial training to Project Management staff in procurement and disbursement procedures. Assistance would also be available on Project implementation issues from the Dili office of IDA. In addition, IDA may commission technical audits of Project implementation when necessary. These audits should result in providing training of Project Management staff if needs are identified.
## Annex 3: Estimated Project Costs

### East Timor: Agriculture Rehabilitation Project

#### Project Appraisal Document

<table>
<thead>
<tr>
<th>Project Cost By Component</th>
<th>Local</th>
<th>Foreign $ million</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>Priority Productive asset Restoration</td>
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<td>2.46</td>
<td></td>
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<tr>
<td>Irrigation Systems Maintenance and Rehabilitation</td>
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<td>6.72</td>
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<td>Pilot Agriculture Services Centers (including Ag. Grant)</td>
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<td>5.21</td>
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<td>15.56</td>
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<td><strong>Price Contingencies</strong></td>
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<td>18.90</td>
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</tr>
<tr>
<td>Contribution</td>
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<td></td>
<td></td>
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<tr>
<td><strong>Total Financing Required</strong></td>
<td></td>
<td>18.20</td>
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### Project Cost by Category

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<th>Category</th>
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<th>Foreign $ million</th>
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</tr>
</thead>
<tbody>
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</tr>
<tr>
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<td>6.07</td>
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</tr>
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<td>Services</td>
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<td>4.84</td>
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<tr>
<td>Training</td>
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<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td><strong>Total Project Costs</strong></td>
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<td></td>
</tr>
<tr>
<td>Interest during construction</td>
<td>NA</td>
<td>NA</td>
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</tr>
<tr>
<td>UNTAET Financing</td>
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<tr>
<td>Contribution</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Financing Required</strong></td>
<td>18.20</td>
<td>18.20</td>
<td></td>
</tr>
</tbody>
</table>
Annex 4: Cost Benefit Analysis Summary

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

Summary of Benefits and Costs:

A cost benefit analysis was carried out for the Project as a whole. All Project benefits and costs were considered for this analysis. Costs for the vaccination programs were considered as it would help lower the mortality rate of the livestock sector; costs towards access road maintenance would help the rural community in getting produce to markets; costs for research and extension service were included in full although the benefits were recognized only from the Project area; all PMU costs (staff under the PMU are expected to be the future Department of Agriculture and Rural Development after the life of the Project) associated with the development of institutions and institutional capacity have been included in the analysis. The duration of the analysis is for a period of ten years. Conservative estimates for agriculture and livestock yields have been provided by the specialists from the sector. Assumptions, analysis and documentation are provided in the Project files. The results show a rate of return of 23.1% with an NPV of about US$5.4 million. With the exception of coffee, the agricultural sector in East Timor does not have any taxes or subsidies.

Cost-benefit analysis was not carried out for the Grant line of the Project as it is part of the analysis carried out under the Small Enterprise Project.

Priority Productive Asset Restoration: Quantitative analysis of representative enterprises indicate that these enterprises are profitable and if managed properly these incomes not only can be sustained but can also be improved (representative budgets and assumptions are included in the working papers). The cost of vaccinations and vaccinators has been included in the individual cattle budgets to be paid by the owner of the livestock. The net present values of the priority investments are positive at 12%.

(i) Hand Tools: Hand tools provided by the Project is expected to provide income during the cultivation period for irrigation and road maintenance work or for home gardens. The income generated from these hand tools is expected to be about US$100/year. They are expected to have a life of 3 years. The net present value for investment for each hand tool package is about US$208 over a three year period.

(ii) Chickens: Chickens are expected to provide income to rural families. The income from chickens is expected to be about US$52/family/year for each set of five chicks. The net present value of investment for each set of chickens is expected to be about US$222 over a ten year period.

(iii) Buffalo: Buffalo is used for land preparation. Owners of buffalo generally get income in kind for their use in rice fields. The income generated from buffalo is expected to be about US$95/year. The net present value of investment for each buffalo is expected to be about US$269 over a ten year period.

(iv) Bali cattle: Bali cows are multi purpose both for milk and for land preparation. The income from Bali cow is expected to be about US$ 165/year. The net present value of investments for each Bali cow is expected to be about US$325 over a ten year period.

This priority productive asset restoration is expected to improve the nutrition and income of beneficiary rural families. These priority income-generating investments are also expected to create savings and demand for agricultural services that could be provided by the proposed PASCs.

Irrigation System Rehabilitation:

A cost benefit analysis was carried out on some of the irrigation schemes proposed for rehabilitation to ascertain the highest costs per hectare that could be incurred for viable rehabilitation. It is expected that the life of such rehabilitation would be about 10 years. Without the proposed rehabilitation, it is expected that
the productive capacity (a combination of decrease in irrigated area and in crop yields) of the schemes will
decrease by two percent annually due to irrigation system inefficiencies (see note from irrigation engineer
in the working papers). Analysis indicate the highest cost that can be incurred for the rehabilitation of
schemes that do not bring about an incremental irrigated area is about US$525. For schemes that have an
incremental irrigated area, the highest cost that could be incurred for their rehabilitation is expected to be
about US$800. These cost levels will help decide the potential financial viability of the proposed schemes.
An overall cost benefit analysis for the small to medium damaged irrigation schemes was also evaluated.
At 12 percent cost of capital, the NPV for these schemes is expected to be about US$1.7 million with an
IRR of about 19%. Assumptions and analysis are included in the working papers.

The costs for redesigning studies of damaged major works were not included in this analysis.

Pilot Agriculture Service Centers: Pro-forma annual income statement for a representative PASC was
established for a ten year period. The PASCs are expected to have a sales margin of about 20% to generate
a positive NPV. Assumptions and income statements are provided in the working papers.

Range of Alternatives Considered in Project Design

While designing the Project, alternatives were considered as follows:

a) The Project could have provided resources as grants. However, only priority investments needed to
jump start the rural economy, such as small implements for house gardens, buffaloes to prepare land for
rice cultivation, cows for milk, and chickens were provided as grants-in-kind. Other resources are
provided on the basis of sound business practices to encourage private sector and sustainability.

b) Strategic sequencing of investments: The Project considered initially providing finances to commercial
banking institutions to provide Grant and financial services. The poor have lost their assets and since
they are the targets of the proposed Project, such a strategy was not deemed efficient as the investments
is first expected to provide urgently needed humanitarian assistance for employment and income
generation. This would then permit individual farms/households to be able to apply for Grant to
financial institutions. (See discussion with Bank’s rural Grant experts on these options, provided in
the Project files).

Assessment of Fiscal Impact and Financial Sustainability

The recurrent costs for the Project is about US$729,512. These are expected to be less than 3% of the total
government’s recurrent budget. The Project design mandates that the local communities take over the
responsibilities of maintaining the secondary and tertiary irrigation systems and the management of Pilot
Agriculture Service Centers. The government would be responsible for certain research and extension
expenses and maintaining the primary irrigation channels. Also, the economic evaluation suggests that the
Project investments are expected to generate sufficient rural incomes for sustainability. Mechanisms could
be eventually developed to recover costs for such services.

Sensitivity Analysis

Sensitivity analysis was carried out for individual investments. If the yields increased by only 5% instead
of 10% at full development the net present value is reduced to US$4.0 million with an IRR of about 18%.
The cost threshold per hectare for irrigation maintenance would be reduced to US$300 if there are no
additional lands are brought under irrigation and to US$700 for schemes that do.

The livestock investments are sensitive to calving rates. If the productivity of cows and buffalo are reduced
by about 30% the livestock sub-component could become financially unsustainable. The chickens are able
to withstand a fall in productivity for several years longer.
The PSACs are sensitive to bad debts and Grants. If the bad debts are more than 25% of total revenue PSACs will not be profitable.

Risk Analysis

All critical risks mentioned in Section 2 of the PAD were modeled and evaluated. The results and mitigating measures are indicated below:

Critical Risk 1: Livestock production is not sustained: A ten percent reduction in benefits in each of the ten years of analysis resulted in the NPV reductions as follows:

<table>
<thead>
<tr>
<th>Single Enterprise</th>
<th>Baseline NPV</th>
<th>With 10% reduction in benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td>222</td>
<td>146</td>
</tr>
<tr>
<td>Cow</td>
<td>325</td>
<td>59</td>
</tr>
</tbody>
</table>

Critical Risk 2: Livestock health services are not sustained: This is expected to increase the mortality rates of the animals and reduce the benefits from the livestock investments. The risk was modeled to show that elimination of the livestock enterprises in three years would reduce the net present value of the overall Project from US$ 5.4 million to US$ 0.03 million.

The above two critical risks are expected to be minimized by the Project investments to make vaccination services sustainable. It is expected that vaccination programs will continue along with access to veterinary services and affordability of such services from the incomes generated by these livestock enterprises. Costs for vaccinations have been included in the individual livestock budgets to verify profitability.

Critical Risk 3: hand tools are not used by beneficiaries for productive purposes: This risk was modeled by eliminating the benefits from the incomes generated by the hand tools. The overall NPV reduced from US$5.4 million to US$1.3 million. The hand tools that are being provided are those that are suitable for home gardening and are not expected to cause any serious damage.

Critical Risk 4: Buffalo and cattle calves are not passed on to second generation beneficiaries: It was not possible to model this risk as it was one of distribution of wealth created by the livestock investments and subsequent benefits, which is not expected to be affected. However, the Project expects that subsequent beneficiaries with the help of the community would create sufficient pressure to prevent this from occurring.

Critical Risk 5: Irrigation water is not available and farmers are not able to irrigate because of lack of rainfall: This risk was modeled by reducing the benefits by 75% once every three years due to droughts. The results indicate the overall NPV would reduce from US$ 5.4 to about US$ 0.7. The incidence of droughts is linked to El Nino. It is expected that the farmers would find methods to develop efficient water storage and use mechanisms.

Critical Risk 6: PASCs activities are poorly managed or politicized: This risk was modeled by increasing cost of sales, administrative and staff costs of the PASCs and its profitability by 15%. The net present value will reduce from US$ 5.4 million to about US$ 0.6 million. It could be expected that some of the PASCs might fail due to the above factors but they would meet the immediate need of providing urgently needed inputs to the farmers. The Project has provided resources for competent NGOs to provide technical and managerial support. Also annual audits are required of PASCs. The above measures will help constant monitoring of PASC’s operations.

Other critical risks could not be modeled and evaluated. But inferences from the earlier risk modeled could be extrapolated.
Sustainability

Under the priority first grant, productive activities will be sustained with the help of investments in a vaccination program. Sufficient training and technical assistance is provided for the veterinary staff after the life of the Project. Market forces and family needs would also be factors for the sustainability of livestock. For example, a large income from livestock will ensure that livestock are well-cared for. Conservative budget estimates of the livestock component show financial viability at present prices.

Only minor and medium deferred maintenance and rehabilitation have been planned under the Project. It is expected that the farmers in the Project schemes will take over subsequent annual maintenance of secondary and tertiary irrigation canals. Many of the communities had assigned a member for monitoring the requirements of irrigation maintenance and had an informal method of assigning responsibilities of annual irrigation maintenance. This has been discontinued in recent years. It is expected that a one-time investment in deferred maintenance and rehabilitation of these schemes will be sufficient and the community will then be able to generate contributions for subsequent maintenance. The Project has provided resources for training irrigation engineers to help the communities in the future.

Establishing PASCs will provide urgently needed inputs and services to the rural communities. To ensure good management and profitability of PASCs safeguards have been included: technical assistance, training, organizational structure, annual audits, etc. However, it can be expected that some of these PASCs will fail. This should not be seen as a failure of the Project as the component would have provided priority inputs to jump-start rural growth and entrepreneurship.

All of the above investments will generate rural incomes which will eventually produce tax revenue.

Contribution to Poverty Alleviation

No poverty assessment is yet available for East Timor. However, given that the population of East Timor is rural and agrarian, poverty is widespread. The Project design seeks the knowledge of the rural community to provide information on the allocation of chickens and livestock. Measures to improve incomes and increased agricultural production will improve welfare. It is expected that the priority investments made in the first year will provide benefits to about 26,000 poor households. It is expected that about 7,000 tons additional rice would be produced due to the Project. Other investments under the Project are expected to benefit most of the farmers in the Project area as irrigation efficiency, and farm inputs and services have been financed under the Project.

Economic Performance Indicators

In the short term, the Project assumes that agricultural yields are stabilized and additional areas can be brought back into irrigated agriculture. The Project expects household incomes to increase due to agriculture, use of buffaloes and Bali cows, chickens and family gardens.

The performance of all services can be indirectly gauged by increases in productivity, profitability and employment generation in agriculture and other rural enterprises (See Annex 1 for performance parameters). Also performance can be measured by the demand for rural services. If productivity does not increase then demand for services will not increase.
**Annex 5: Financial Summary**

**East Timor: Agriculture Rehabilitation Project**

**Project Appraisal Document**

**FY Years Ending 2001 to 2003 (during project implementation)**

<table>
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<th>Fiscal Year</th>
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<th>2003</th>
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<td>Project Costs</td>
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<td>7,942,639</td>
<td>7,888,298</td>
<td>5,607,590</td>
</tr>
<tr>
<td>Total Financing</td>
<td>7,942,639</td>
<td>7,888,298</td>
<td>5,607,590</td>
</tr>
</tbody>
</table>

**Financing**

<table>
<thead>
<tr>
<th></th>
<th>TFET</th>
<th>UNTAET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Financing</td>
<td>7,942,639</td>
<td>7,888,298</td>
</tr>
</tbody>
</table>

**FY Years Ending 2001 to 2007 (during project implementation and after closing of grant)**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Financing Required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment Costs</td>
<td>7,807,737</td>
<td>7,635,349</td>
<td>5,265,929</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recurrent Costs</td>
<td>134,902</td>
<td>252,949</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
</tr>
<tr>
<td>Total Project Costs</td>
<td>7,942,639</td>
<td>7,888,298</td>
<td>5,607,590</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
</tr>
<tr>
<td>Total Financing</td>
<td>7,942,639</td>
<td>7,888,298</td>
<td>5,607,590</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
<td>341,661</td>
</tr>
</tbody>
</table>

**Financing**

<table>
<thead>
<tr>
<th></th>
<th>TFET</th>
<th>UNTAET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Financing</td>
<td>7,942,639</td>
<td>7,888,298</td>
</tr>
</tbody>
</table>

**Main assumptions:**

1. UNTAET will cover all recurrent costs during and after the life of the Project.

2. The Trust Fund will finance both the first grant and subsequent funding required to complete the Project.
## Annex 5, Table A: Financial Summary for Revenue Earning Project Entities

### East Timor: Agriculture Rehabilitation Project

**Project Appraisal Document**

**Forecasted Income Statement for Pilot Agricultural Services Center**

<table>
<thead>
<tr>
<th>Years Ending</th>
<th>2000: 2010 (In Current US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Capital from Project</td>
<td>200,000</td>
</tr>
<tr>
<td>Capitalization from Profits</td>
<td>0</td>
</tr>
<tr>
<td>Total Operating Capital</td>
<td>200,000</td>
</tr>
<tr>
<td>Sales (margin)</td>
<td>20%</td>
</tr>
<tr>
<td>Machinery</td>
<td>10%</td>
</tr>
<tr>
<td>Machinery Rental</td>
<td>10%</td>
</tr>
<tr>
<td>Repair</td>
<td>10%</td>
</tr>
<tr>
<td>Fertilizer (of sales)</td>
<td>50%</td>
</tr>
<tr>
<td>Seeds (of sales)</td>
<td>20%</td>
</tr>
<tr>
<td>Pesticides (of sales)</td>
<td>10%</td>
</tr>
<tr>
<td>Total Sales</td>
<td>220,000</td>
</tr>
<tr>
<td>Grants &amp; Bad Debts</td>
<td>20%</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>176,000</td>
</tr>
<tr>
<td>Beginning Inventory</td>
<td>0</td>
</tr>
<tr>
<td>Less: Ending Inventory</td>
<td>3 mos.</td>
</tr>
<tr>
<td>Cost of Sales</td>
<td>140,800</td>
</tr>
<tr>
<td>Gross Margin %</td>
<td>20%</td>
</tr>
<tr>
<td>Salaries &amp; Wages (5 staff)</td>
<td>3%</td>
</tr>
<tr>
<td>General Expenses</td>
<td>10%</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>6,600</td>
</tr>
<tr>
<td>Interest</td>
<td>0%</td>
</tr>
<tr>
<td>Profit after Interest before Depreciation</td>
<td>6,600</td>
</tr>
<tr>
<td>Depreciation</td>
<td>10%</td>
</tr>
<tr>
<td>Profit after Interest and Depreciation</td>
<td>4,200</td>
</tr>
<tr>
<td>Tax</td>
<td>0%</td>
</tr>
<tr>
<td>Profit after Tax</td>
<td>4,200</td>
</tr>
<tr>
<td>Cash inflow from Operation</td>
<td>6,600</td>
</tr>
<tr>
<td>Cumulative Cash Inflow</td>
<td>6,600</td>
</tr>
</tbody>
</table>

### Distribution of Profits

- **a. General manager**: 5%
- **b. Employees**: 8%
- **c. Board**: 7%
- **b. Patron dividends**: 20%
- **c. Capitalization**: 80%
- **Operating income as a % of Revenue**: 4%
- **Net Income as a % of Revenue**: 2%

**Main assumptions:**

1. It is expected that 5 PASCs will be established in Year 1 and three in Year 2 of the Project implementation.
2. The following personnel will be at least required for PASCs initial operation: General manager; Accountant; Store Keeper; Drivers(2); Mechanics(2); Service clerks(2).
3. The following will be the initial expenditure for setting up the PASCs: 3 ton trucks - $40,000; Building - $25,000; Pickup - $15,000; Shop tools - $10,000; Generator - $1,000; Computer - $4,000; Telephones - $1,000; Cash Registers - $2,000; Office Supplies - $2,000.
4. Sales is expected to have a mark-up of 20%.
5. PASCs initial purchase includes machinery -20%, fertilizer -5%, seeds -20%, pesticides -10%.
6. Bad Grants and write off are expected to be 20% of total sales.
7. Year-end inventory is expected to be worth 3 months of total sales.
8. The profits from the operation will be distributed on the basis of the following: 5% to General manager, 8% to employees, 7% to the Board, 20% for discounts to patrons, and 60% for capitalization.
Annex 6: Procurement and Disbursement Arrangements

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

Procurement Assessment.

The UNTAET has recently established a central procurement office that deals with the UNTAET Trust Fund financed procurements. This central procurement unit is supported by the United Nations Operational Services (UNOPS) to develop a government procurement unit within the administrative services component. However, to date, no procurement capacity has been established in the sectoral units that are likely to evolve into departments or ministries in the future. Since these units will need to conduct their own procurements, and given the technical nature of some of these issues the Agriculture Rehabilitation Project (ARP) Management Unit (PMU) needs to establish some procurement capacity. This capacity consisting of a qualified international consultant will assist the Project Director in all steps of procurement including the preparation of procurement documents, publishing advertisements, preparation of short lists, evaluation of bids, preparation of contracts and so forth. The consultant will also ensure that the Bank Guidelines for the procurement under the Project are followed and will prepare reports needed for the supervision mission. The procurement officer will also work closely with East Timorese counterparts who will be identified by the PMU Director. This will facilitate transfer of skills and capacity building efforts. Moreover, procurement training will be conducted as part of the Project Launch workshops.

Procurement Methods (Table A).


Project Financing.

Because the East Timor Trust Fund does not have all of the necessary project funding at this stage, project financing will be divided in two grants. The first will finance priority activities to be carried out during the initial 12 months of the Project. The second grant will finance the remaining Project activities whose implementation may have started during the first grant, but would need to continue until the Project closing date of December 31, 2002. The implementation of the second grant could start before the end of the first grant, as soon as funding from the Trust Fund becomes available. The table below shows the procurement activities required for the implementation of Project activities under the first grant.

**First Grant Procurement Activities**

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Amount in US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods and Equipment (vehicles)</td>
<td>4.6</td>
</tr>
<tr>
<td>Civil Works</td>
<td>0.3</td>
</tr>
<tr>
<td>Consultant Services and Studies</td>
<td>1.5</td>
</tr>
<tr>
<td>Training, Workshops &amp; Fellowships</td>
<td>0.3</td>
</tr>
<tr>
<td>PMU Operating costs</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total Project Costs</strong></td>
<td><strong>7.8</strong></td>
</tr>
</tbody>
</table>
Implementation.

A procurement officer will be recruited to support the PMU Director in the implementation of the agreed procurement plan. In addition, UNTAET's central procurement unit will be used to purchase the basic office equipment, i.e., printers, computers, furniture, supplies, photocopier, hand tools, radio sets and short range transmission stations, motorcycles, vehicles and mini buses.

Advertisement.

A General Procurement Notice will be published in the June 30, 2000 issue of Development Business announcing goods and consultants services to be procured and inviting eligible suppliers, contractors and consultants to express interest, request expressions of interest/invitation to bid and to request any complementary information from the PMU (UNTAET – GPA/Agriculture). In addition, specific procurement notices will be published in newspapers and/or Development Business, depending upon the value of the individual requirements.


International Shopping (IS). Procedures for IS will be used for contracts for equipment to cost less than US$200,000 (i.e. computers, vehicles and motorcycles, office supplies, equipment and furniture). These contracts will be awarded after solicitation and evaluation of at least three written price quotations from suppliers in at least two different countries, in accordance with procedures acceptable to the Bank. The total value of IS is estimated to cost no more than US$5.34 million or equivalent.

National Shopping (NS). Because of East Timor's extraordinary destruction, procurement under the grants anticipates eventual recovery of the internal market. National shopping procedures will be phased in as local markets develop and goods become available. Sundry items including spare parts, office supplies, vehicles, motorcycles and many of the inputs to be procured for the PASes, as well as selected equipment costing less than US$50,000 per contract may be purchased on the basis of shopping by comparing price quotations obtained from at least three local suppliers, in accordance with Bank Guidelines. Aggregate amount of national shopping is estimated to cost less than or equal to US$0.32 million or equivalent.

Procurement from United Nations Agencies. IAPSO will also be used for contracts valued US$100,000 or equivalent or less with an aggregate value not exceeding US$0.50 equivalent. This will be used for small-scale procurements that may not be feasible through national shopping due to limited local markets. This will includes goods like other equipment, vehicles, supplies, consumables, and spare-parts.

2. Civil Works

Limited International Bidding (LIB). Given the emergency nature of the situation in East Timor, LIB procedures may be used for two contracts for civil works for the rehabilitation/construction of selected irrigation systems which are estimated to cost US$2.33 million equivalent or more per contract. Estimated total value for this procedure will not exceed US$4.67 million or equivalent.

Small Works Contracts (SW). SW will involve contracts for less than US$100,000 (aggregate not to exceed US$0.75 million or equivalent) for building and or renovating service centers, road maintenance, and irrigation scheme restoration and maintenance. Procurement of small scale works will be under lump sum fixed price contract awarded on the basis of quotations obtained by at least 3 qualified domestic contractors in response to a written invitation and according to Bank Guidelines. The invitation would include a detailed description of the works including basic specifications, the required completion date,a form of agreement acceptable to the Bank and relevant drawings where applicable. The award will be made to the contractor offering the lowest price quotation for the work and who has the experience and resources to complete the contract successfully. Moreover, the capacity of local contractors is presently sufficient to carry out this work and is anticipated to grow further as more foreign companies establish offices in East Timor. There are a number of local contractors presently engaged in the construction, repair and renovation of buildings and roads in East Timor.
Community Maintenance of Irrigation Schemes and Agriculture Access Roads. Rural communities around small to medium irrigation schemes and agriculture access roads will be organized to undertake the maintenance and light rehabilitation of these works. Both the irrigation schemes and about 100 km of feeder/access roads (not main asphalt roads) would be maintained through labor intensive community work crews using mostly hand tools and some large machinery and earth moving equipment, which will be rented locally. The aim of this activity is to bring into production small irrigation schemes whose maintenance has been neglected and facilitate the transport of agricultural production to main roads (markets), as well as provide work opportunities for rural people. The estimated value per package may be as high as US$50,000, but the average is expected to be <US$20,000. It is anticipated that the total expenditures on this category would be US$0.65 million.

Implementation of the community maintenance of irrigation schemes and the rehabilitation of agriculture access roads will be undertaken by community groups through the same guidelines established by the recently approved IDA-financed Community Empowerment Project. These guidelines are summarized as follows. The PMU’s rural engineer (whose cost in included in the Project) would consult and enlist the active participation of village, sub-district and district councils, as well as civil society (churches) in defining the access roads and irrigation schemes that need repair and/or maintenance. He will use the same process to obtain the nomination of the villagers (priority given to the poor, as defined by the councils) who will be recruited by the PMU as temporary laborer to repair and maintain the roads and irrigation canals. The PMU’s rural engineer consultant will set the technical guidelines for the maintenance work and help organize work crews from the laborers chosen by the community councils. The engineer will designate crew chiefs who will supervise the work and record work progress. It is expected that the engineer will first make an estimate of the cost of the work to be undertaken by communities and then contract the work to one or several communities on the basis of a lump sum contract per kilometer of road rehabilitated or length of canals maintained. Most of the work will be conducted by laborers using simple hand tools. Work completion will be certified by the engineer prior to making full payment to the communities.

3. Consulting Services

The following procurement procedures will be used:

a. Quality- and Cost- Based Selection (QCBS) procedures will be used for the following activities; estimated to cost >US$100,000 per contract: redesign of major head works and conveyance canals, land capability and aptitude studies, soil mapping, domestic resource cost analysis and marketing studies. The total value is estimated not to exceed US$ 1.86 million or equivalent.

b. Least Cost Selection (LCS) procedures will be used for selection of an auditor to carry out audit of the Project. The value of contracts awarded through LC selection will not exceed US$0.1 million or equivalent.

c. Single Source Selection. Single source selection will be used for Project activities that need to be implemented during the next 6 to 8 coming months. For these activities the following firms will be contracted: (i) a consulting firm to be identified and selected by UNTAET to undertake the pre-feasibility/screening studies for the selection of irrigation schemes to be rehabilitated, detailed designs of the viable schemes and supervision of the rehabilitation works, the total cost of this activity is estimated at about US$0.75 million; (ii) the A consulting firm to be identified and selected by UNTAET to provide technical assistance, organization and logistic support to the implementation of the priority productive assets restoration component. The fees for this implementation have an estimated cost of US$0.218 million. The consultant will work with local and international NGOs and act on behalf of the Department of Agriculture of UNTAET in the following areas: the procurement and distribution to poor households of hand tools, replacement buffalo and replacement chicks, livestock vaccination and the conduct of farmer information campaigns. The total direct cost of activities (i) and (ii) described above is estimated to be about US$0.97 million.
d. Individual consultants would also be employed for activities estimated to cost less than US$50,000 per contract with selection on the basis of their qualification, consistent with Section V of the Guidelines. It is expected that individual consultants will be needed for the following (procurement specialist, financial management specialist, irrigation and road engineers, monitoring and evaluation specialist, PMU director and an East Timorese counterpart for each of the above specialist and Project management TA, as well as management specialists for the Pilot Agriculture Services Centers (PASC). The total estimated cost of these individual consultants would US$1.92.

4. Support to the Pilot Agriculture Services Centers (PASC).

It is expected that the Project will help in the establishment of up to eight PASC by providing them with buildings, farm inputs, supplies, machinery, vehicles and inventory (mainly spare parts). The purpose of the PASC is to provide farming communities with agricultural services. The services offered will be demand-driven and could include the provision of farm inputs, mechanization services, veterinary services, mechanical repair services, etc.

Eligible pilot centers would benefit from Project-financed works, goods and services in amounts commensurate with the business plans they are required to present to the PMU and in relative proportion to the size of the communities that will own the centers. The estimated value of the works, goods and services that a PASC can benefit from may not exceed US$0.35 million. The PASCs would not provide financial services to their members. PASCs would most likely be needed in areas where agriculture practices require the use inputs, mechanization services, processing and transport services (particularly for coffee). The Pilot Agriculture Services Centers would be legal commercial entities (limited liability companies, cooperatives, farmers or rural associations, etc.) owned by the communities they serve. They would be governed by board of directors selected in community focus groups from farmers, civil society and NGOs. A government representative would sit on the board as an observer. Government employees may not be members of the PASC boards. The management and bookkeeping of the centers would be audited regularly by the Government (UNTAET) and annually by a private auditor.

5. Training, Workshops and Study Tours.

Expenses for staff training will be disbursed with prior approval of the Bank based on annual training plans. Training costs will cover in-service training for basic Agriculture services as well as local and external training for extension staff, research sabbaticals and workshops. The total cost of the training activities will not exceed US$ 1.0M or equivalent.

6. Operating Costs.

This includes the operating costs of the PMU, which would cover expenditures of a non recurring nature for transport and per diem for consultants, communications, office consumables, utilities and honorarium of consultants. These expenditures will be made on the basis of UNTAET procedures, acceptable to the Bank. The estimated operating costs that will be borne by the Project because of their non-recurring nature are estimated to cost about US$0.131 million. Staff salaries and other recurrent costs of the PMU are financed by UNTAET and not by the Trust Fund Grant, their cost is estimated at about US$0.728 million.

Prior Review Thresholds (Table B)

IDA's prior review of procurement will cover the following:

a) Master lists of equipment, packaging of contracts and updated cost estimates.

b) Goods: the first two packages of IS and NS each year and all procurements through the United Nations Agencies.

c) Works: all LIB and the first two package of SW; and

d) Consultants: terms of reference for all consulting assignments; all consulting contracts costing more than or equal to US$100,000 for firms and $50,000 for individuals and all single source contracts.
Annex 6, Table A: Project Costs by Procurement Arrangements
(in US$million equivalent)

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Procurement Method</th>
<th>Total Cost (including Contingencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIB</td>
<td>NBF</td>
</tr>
<tr>
<td>1. Works$^{6}$</td>
<td>(4.67)</td>
<td>(1.40)</td>
</tr>
<tr>
<td>2. Goods</td>
<td>(6.16)</td>
<td></td>
</tr>
<tr>
<td>3. Services</td>
<td>(4.84)</td>
<td></td>
</tr>
<tr>
<td>4. Miscellaneous$^{7}$</td>
<td>(1.13)</td>
<td></td>
</tr>
<tr>
<td>5. O &amp; M Cost &amp; Salary</td>
<td>(4.67)</td>
<td>(13.53)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>(4.67)</strong></td>
<td><strong>(13.53)</strong></td>
</tr>
</tbody>
</table>

Note: N.B.F. = Not Bank-financed (includes elements procured under parallel co-financing procedures, consultancies under trust funds, any reserved procurement, and any other miscellaneous items).

The procurement arrangement for the items listed under "Other" and details of the items listed as "N.B.F." need to be explained in footnotes to the table or in the text. Figures in parenthesis are the amounts to be financed by the IDA Grant.

---

$^{4}$ For details on presentation of Procurement Methods refer to OD11.02, "Procurement Arrangements for Investment Operations." Details on Consultant Services can be shown more easily in the Table A1 format (additional to Table A, where applicable).

$^{5}$ Other & NBF = includes civil works and goods to be procured through international and rational shopping, single source selected consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating cost related to managing the Project, and lending Project funds to the local community to build pilot centers.

$^{6}$ Includes two LIB contracts (US$4.67), SW (US$0.75), community irrigation maintenance and access roads (respectively US$0.75 and US$0.25).

$^{7}$ Miscellaneous is training, workshops, study tours and investment operating costs.
### Annex 6, Table A1: Consultant Selection Arrangements (optional)
(in US$ million equivalent)

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Selection Method</th>
<th>Total Cost (including contingencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QCBS</td>
<td>CQ</td>
</tr>
<tr>
<td>A. Firms</td>
<td>(1.8)</td>
<td></td>
</tr>
<tr>
<td>B. Individuals</td>
<td></td>
<td>(1.93)</td>
</tr>
<tr>
<td>Total</td>
<td>(1.8)</td>
<td>(1.93)</td>
</tr>
</tbody>
</table>

**Note:**
- QCBS = Quality- and Cost-Based Selection
- QBS = Quality-based Selection
- SFB = Selection under a Fixed Budget
- LCS = Least-Cost Selection
- CQ = Selection Based on Consultants' Qualifications
- Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.
- N.B.F. = Not Bank-financed.
- Figures in parenthesis are the amounts to be financed by the TFET grant.
Annex 6, Table B: Thresholds for Procurement Methods and Prior Review

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Contract Value (Threshold)</th>
<th>Procurement Method</th>
<th>Contracts Subject to Prior Review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Works</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>US $ thousands</td>
<td>US $ millions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;US$100,000</td>
<td>LIB</td>
<td>All – US$4.6</td>
</tr>
<tr>
<td></td>
<td>&lt;US$100,000</td>
<td>SW</td>
<td>First Two Packages each year US$0.75</td>
</tr>
<tr>
<td></td>
<td>&lt;US$20,000</td>
<td>Community Participation</td>
<td>None</td>
</tr>
<tr>
<td><strong>2. Goods</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;US$200,000</td>
<td>IS</td>
<td>US$5.34</td>
</tr>
<tr>
<td></td>
<td>&gt;US$50,000</td>
<td>NS</td>
<td>First Two Packages Annually US$3.2</td>
</tr>
<tr>
<td></td>
<td>&lt;US$100,000</td>
<td>UN Agencies</td>
<td>All – US$0.5</td>
</tr>
<tr>
<td><strong>3. Services (T.A.)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;US$ 100,000 (Firms)</td>
<td>QCBS</td>
<td>All – US$1.8</td>
</tr>
<tr>
<td></td>
<td>&gt;US$50,000 (Firms)</td>
<td>SS, LCS</td>
<td>All – US$1.07</td>
</tr>
<tr>
<td></td>
<td>&gt;US$50,000 (Individuals)</td>
<td>CQ,</td>
<td>All – 1.92</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>Other</td>
<td>All training programs–US$1.01</td>
</tr>
<tr>
<td><strong>Total value of contracts subject to prior review:</strong></td>
<td></td>
<td></td>
<td>US$16.24</td>
</tr>
</tbody>
</table>

**Overall Procurement Risk Assessment:**
- High [X]
- Average
- Low

**Frequency of procurement supervision missions proposed:** Once every 3 month(s) (includes special procurement supervision for post-review/audits)

---

8 Thresholds generally differ by country and project. Consult OD 11.04 “Review of Procurement Documentation” and contact the Regional Procurement Adviser for guidance.
Disbursement.

The proposed Agriculture Rehabilitation Project (ARP) is expected to disburse in two grants over a period of 30 months from date of effectiveness. In addition, disbursement may continue for another four months past December 31, 2002 (expected closing date) for expenditures covering goods or services delivered to the Project before the closing date of the Grant. Disbursements will use IDA's standard disbursement methods, i.e. Special commitments/direct payments and/or Statement of Expenditure reimbursements.

Use of Statements of Expenditures (SOE).

SOEs will be used for:

- Contracts for goods with a value of less than US$200,000.
- Contracts for works with a value of less than US$100,000.
- Contracts with consulting firms with a value of less than US$100,000.
- Contracts with individual consultants with a value of less than US$50,000.
- All community executed activities (contracted by the PMU), including the maintenance of irrigation schemes and agriculture access roads.
- Training, workshops and study tours expenditures.
- Operating costs of the PMU and other components (salaries, travel and other allowances, office equipment and supplies, vehicle operating and maintenance costs, postage and communications costs, etc.).

Special Account.

To facilitate timely Project implementation, UNTAET will establish a Special Account denominated in US$ under terms and conditions acceptable to IDA with a commercial bank acceptable to IDA. The authorized allocation for the Special Account will be US$0.5 million. The replenishment applications should be submitted by the PMU and/or UNTAET/CFA on a monthly basis or when 20 percent of the SA has been used, whichever comes first. The Special Account will be audited annually by independent auditors acceptable to IDA.

Financial Management Assessment.

The UNTAET Financial Office in Dili is currently responsible for all accounting and reporting activities. There is a proposal to establish a Central Fiscal Authority (CFA) to assume financial management responsibilities of UNTAET. The financial management functions of CFA are being established and the staff is being recruited. Therefore, the basic institutional framework is present to establish sound internal control procedures and accounting and reporting arrangements. Most of the financial management staff of UNTAET needs to be trained on IDA disbursement procedures. Although senior IDA Disbursement Officer visited Dili at the end of March and conducted a training seminar on IDA disbursement procedures, further training workshops are needed as a number of new projects (health, education) become effective and UNTAET/PMU's financial management capacity remains limited. Subject to the above, it is the assessment of the IDA mission that UNTAET is taking adequate steps to meet the minimum standards of financial management and accountability as required by IDA. The following paragraphs describe the financial management arrangements expected to be put in place for accounting, reporting and auditing of Project expenditures (Ref. Annex 15).

Proposed Financial Management Arrangements.

The objectives of the FM arrangements are summarized below:

(a) to ensure proper planning, budgeting, accounting, reporting and auditing of IDA funded activities including the Pilot Agriculture Services Centers; and
(b) to ensure proper planning, budgeting, accounting, reporting and auditing of ETA funded activities.

A financial management action plan, acceptable to IDA, was formulated by UNTAET and is attached as Annex 14.
Accounting Organization and Staffing.

A Project Finance Officer (PFO) with qualifications and experience acceptable to IDA will be appointed in the PMU. Terms of reference for the staff of the PMU have already been made available to UNTAET’s Department of Agriculture. The PFO will report to the PMU Director and be responsible for all financial management activities of the Project. The PFO will be assisted by an East Timorese counterpart in carrying out planning, budgeting, accounting and payment of petty cash as well as regular reporting on the Project’s financial aspects.

Funds Flow.

Funds Flow. The funding sources for the Project will come from the IDA-managed Trust Fund for East Timor (TFET - for investment costs) and UN Trust Fund (for recurrent costs). The PMU will be responsible for preparing, attaching relevant documentation, obtaining the approval of designated signatories and sending withdrawal application to IDA. Based on these authorized requests to disburse funds, IDA will withdraw and pay funds directly to a supplier or transfer funds to the Special Account managed by the PMU/UNTAET/CFA under agreed procedures. The disbursement procedures for UN TF allocated to the Project will be determined by UNTAET/CFA. It is likely that the Project funds will flow from IDA directly to suppliers and contractors of the Project components subject to Limited International Bidding procedures, i.e. civil works.

Planning & Budgeting. The fund flow arrangements described above requires careful planning and budgeting to ensure that financial resources are available for Project implementation. The preparation of the annual and quarterly budget plans for investment and operating cost components will be the responsibility of the Project Management Unit under the coordination of the PFO. The budgets will be prepared for the following categories: (a) investment costs and any operating costs of the PMU to be financed by IDA; (b) recurrent costs to be financed by UNTAET/UN Trust Fund.

Accounting and Reporting. The primary responsibility for maintaining accounting records for the Project will be with the PMU and particularly its director and PFO. The PFO, with the assistance of his East Timorese counterpart will establish appropriate accounting and internal control procedures for authorizing payments, recording of all project related expenditures, periodic financial reporting and preparation of annual financial statements for external audit. The accounting system should be designed to maintain separate Project accounts for IDA funded activities in accordance with the Trust Fund Grant Agreement. The PFO will ensure that quarterly and annual financial reports comparing budgeted and actual expenditures are prepared for the Project. The draft formats of the reports will be agreed at negotiations. The financial reports shall be prepared and submitted to IDA no later than 30 days following the end of the quarter.

Auditing. The UNTAET/CFA will be responsible for carrying out internal auditing of the Project activities and of the Pilot Agriculture Services Centers established under the Project. The PMU will prepare annual financial statements for the Project and have them audited by an independent external auditor acceptable to IDA. The auditor will be required to provide an opinion on the financial statements, the operations of the Special Account and the withdrawals from the grant based on statements of expenditures (SOEs). The independent auditor will be appointed on terms of reference acceptable to IDA.

Financial Management Arrangements for PASCs. The PFO will ensure that adequate accounting and reporting arrangements are established and a suitably qualified accountant is appointed to each PASC to be established under the grant. The PFO should certify the adequacy of accounting and reporting arrangements before any grant funds are disbursed to PASCs. When a PASC is managed by a NGO, the PFO will also be responsible for assessing the capacity of NGO to manage funds, and suitable accounting and reporting arrangements agreed before contracting NGO to manage the PASC.
Annex 6, Table C: Allocation of Trust Fund Proceeds

**First Grant**

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Amount in US$ million</th>
<th>Financing Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Works</td>
<td>0.30</td>
<td>100%</td>
</tr>
<tr>
<td>Goods (including transportation)</td>
<td>4.30</td>
<td>100%</td>
</tr>
<tr>
<td>Training, fellowships, Workshops &amp; Study tours</td>
<td>0.30</td>
<td>100%</td>
</tr>
<tr>
<td>PMU Operating costs</td>
<td>0.16</td>
<td>100%</td>
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<tr>
<td>Consultant Services and Studies:</td>
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<td></td>
</tr>
<tr>
<td>a. Part C.2 of the Project</td>
<td>0.20</td>
<td>100%</td>
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<tr>
<td>b. Other</td>
<td>1.00</td>
<td>100%</td>
</tr>
<tr>
<td>Unallocated</td>
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<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6.8</strong></td>
<td></td>
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</table>

Annex 6, Table C: Allocation of Trust Fund Proceeds

**Whole Project**

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Amount in US$ million</th>
<th>Financing Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Works</td>
<td>5.5</td>
<td>100%</td>
</tr>
<tr>
<td>Goods (including transportation)</td>
<td>5.6</td>
<td>100%</td>
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<tr>
<td>Training, fellowships, Workshops &amp; Study tours</td>
<td>1.0</td>
<td>100%</td>
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<tr>
<td>PMU Operating costs</td>
<td>0.1</td>
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</tr>
<tr>
<td>Consultant Services and Studies</td>
<td>4.2</td>
<td>100%</td>
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<tr>
<td>Unallocated</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.2</strong></td>
<td></td>
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</table>

\[9\] No taxes would be levied on works, goods and services financed through the TFET. Should taxes become due, the financing percentage from the TFET would be reduced proportionately.
Annex 7: Project Processing Budget and Schedule

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

<table>
<thead>
<tr>
<th>Project Schedule</th>
<th>Planned (At final PCD stage)</th>
<th>Actual</th>
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<tr>
<td>Time taken to prepare the Project (months)</td>
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<td>01</td>
</tr>
<tr>
<td>First Bank mission (identification)</td>
<td>04/01/2000</td>
<td>04/01/2000</td>
</tr>
<tr>
<td>Appraisal mission departure</td>
<td>05/15/2000</td>
<td>05/13/2000</td>
</tr>
<tr>
<td>Negotiations</td>
<td>06/07/2000</td>
<td>08/07/2000</td>
</tr>
<tr>
<td>Planned Date of Effectiveness</td>
<td>06/30/2000</td>
<td>.7/1 /200019</td>
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</tbody>
</table>

Prepared by: UNTAET, East Timorese (CNRT), bilaterals and NGOs (Fundacao Naroman)

Preparation assistance: the IDA-managed Trust Fund for East Timor

IDA staff who worked on the Project included:

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malcolm Bale</td>
<td>Sector Manager, Strategy and Operations</td>
</tr>
<tr>
<td>Shawki Barghouti</td>
<td>Agriculture Economist</td>
</tr>
<tr>
<td>Mohamed Noureddine Benali</td>
<td>Agriculturist – Task Team Leader</td>
</tr>
<tr>
<td>Sofia Bettencourt</td>
<td>Natural Resources Economist</td>
</tr>
<tr>
<td>Sarah Cliffe</td>
<td>Chief of Mission</td>
</tr>
<tr>
<td>Evelyn Cowan</td>
<td>Team Assistant</td>
</tr>
<tr>
<td>Cynthia Dharmajaya</td>
<td>Team Assistant</td>
</tr>
<tr>
<td>Peter Dukes</td>
<td>Procurement Specialist</td>
</tr>
<tr>
<td>Abdul Haji</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Hilary Kiel</td>
<td>Procurement</td>
</tr>
<tr>
<td>Srish Kumar</td>
<td>Agriculture Economist</td>
</tr>
<tr>
<td>Maurice Le Blanc</td>
<td>Procurement</td>
</tr>
<tr>
<td>Glenn Morgan</td>
<td>Environment</td>
</tr>
<tr>
<td>Karin Nordlander</td>
<td>Sr. Counsel</td>
</tr>
<tr>
<td>Hung Kim Phung</td>
<td>Disbursement</td>
</tr>
<tr>
<td>Klaus Rohland</td>
<td>Country Director (EACNI)</td>
</tr>
<tr>
<td>Dina Umali-Deininger</td>
<td>Economist</td>
</tr>
<tr>
<td>Wijaya Wickrema</td>
<td>Financial Management</td>
</tr>
<tr>
<td>Mark D. Wilson</td>
<td>Acting Sector Director (EASRD)</td>
</tr>
</tbody>
</table>
Annex 8: Documents in the Project File*

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

A. Project Implementation Plan
   TORs of PMU staff and technical assistants
   Manual of implementation (to be completed during Project launch)

B. Bank Staff Assessments
   Economic/financial assessment working papers

C. Other
   Project Cost Tables
   Procurement Plan per component

*Including electronic files.
Annex 9: Statement of Grants

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

Not Applicable for East Timor
Annex 10: Country at a Glance

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

Not yet available for East Timor.
Annex 11: Agriculture Rehabilitation and Development Strategy

East Timor: Agriculture Rehabilitation Project
Project Appraisal Document

Agriculture in East Timor:
A Strategy for Rehabilitation and Development

May 2000

On August 30, 1999, a majority of the people of East Timor voted for independence from Indonesia. That decision unleashed widespread violence by anti-independence supporters, and in succeeding weeks many people were killed, many (perhaps 150,000) were forcibly moved to West Timor, the majority of houses were burned, and there was widespread looting. The city of Dili and towns of any size were largely destroyed, and the majority of the population have no jobs. In addition the agricultural sector was brought to a halt. Livestock for meat and traction were destroyed or driven to West Timor, farm and food-processing machinery were destroyed, and food stocks and seeds were looted.

The international community reacted by sending a UN peace-keeping force to East Timor and installing a UN Temporary Administration in East Timor (UNTAET), charged with managing the country and rebuilding civilian government. The IDA is charged with managing a trust fund for the rehabilitation and reconstruction of productive assets in East Timor. As part of that work, the IDA fielded a joint-donors mission to East Timor in April 2000 to formulate a short-term agricultural development strategy for the country and to identify the best way to rebuild and rehabilitate agriculture. This note presents the findings of the mission.

The Economy and Agriculture

East Timor is a small (19,000 km sq.), lightly populated (750,000), mountainous country that occupies about half of the island of Timor, 300 kms north of Australia at latitude 8-10 degrees south. Per capita income, before independence was around US$450, and is estimated at approximately half that now. The economy is predominantly agricultural, with 90% of the population living in rural areas, where they work as subsistence or small-scale farmers of rice, corn, vegetable gardens, tree crops, and livestock.

Most of East Timor’s land is occupied by paddy and rainfed rice (80,000 ha), tree plantations (30,000 ha), and forests (130,000 ha). Most of the land is not used intensively and there is potential to increase crops, pastures, and livestock production. There also appears to be considerable potential to diversify crop production for both local consumption and export. Much of the south coast is flat lowlands, but land utilization there is limited by the erratic availability of water for irrigation and poor road access to markets. There is abundant rainwater, but rainfall is seasonal and runs freely to the sea. Constructing water capture systems is difficult because rain is torrential and watercourses are itinerant. Thus many farmers live in highland areas, and most of them utilize diversified farming systems to ensure food security: shifting (swidden) cultivation of rainfed crops, mainly maize; cultivation of rice (in lower, flatter areas); house gardens of vegetables, cassava, beans, and maize; household chickens, pigs, and perhaps a buffalo; and harvesting of forest products such as tamarind, candlenut, sandalwood, and yams. Forest coffee plantations

10 Members of the mission were Robert Ferraris, AusAID; Jose Reis Abel, Estaneslau Da Silva,CNRT/UNTAET; Hiroyki Konuma, Fransisco Dias Chmoco, Keith Chapman, Denis Hoffman, FAO; Edio Da Costa, FUNDAROMAN; Malcolm Bale, Shawki Barghouti, (Co-Leaders), Mohamed Noureddine Benali, Peter Dukes, IDA; Anthony Marsh, NCBA/USAID; Fernando Gomes Da Silva, Representative of the Portugese Government; Serge Verniou, Livingstone Sindayigaya, Zijun Chen, Maria Regina Ismail, UNTAET.

11 The numbers are approximate. Data bases on East Timor agriculture are poor.
are also found in the highlands, and coconuts are grown in the lowlands. The agricultural production systems overlap one another, with a single-family being involved in three or more farming activities.

Prior to the 1999 referendum agriculture and its support activities (agroprocessing and agricultural input industries) employed more than 85 percent of the population, contributed 40 percent of GDP, and accounted for 90 percent of foreign exchange. Coffee, some sandalwood and (formerly) some live cattle are exported. Agriculture’s key position in the economy has created an imperative for rapidly rebuilding agricultural capacity for both food security and income-generating reasons.

Table 1 provides a breakdown of the agricultural sector’s contribution to East Timor’s GDP, and Table 2 shows production and yield by crop.

The Principles Underlying the Rebuilding Strategy

In formulating an agricultural strategy for East Timor, the team was strongly influenced by certain characteristics of the country and of the post-conflict situation:

- Agriculture will continue to be the principle economic activity in East Timor and will be the chief engine of growth for the economy;
- East Timor will have very limited public resources to spend on agriculture. Estimates of tax revenue when reconstruction is completed are around US$30 million. The priorities of schooling and health will require at least half of this, leaving very little for other sectors, including agriculture. Further, in the absence of expatriate assistance, institutional capacity to administer and implement public programs is weak;
- East Timor is presently receiving substantial amounts of foreign assistance to reconstruct its economy. In agriculture alone, foreign grants over the two to three year transition period are likely to be approximately double the amount of annual tax revenues. These foreign grants should be seen as a one-time event and should be used for capital investment to put in place the framework and infrastructure for a thriving agriculture. Moreover, there is a pressing need for foreign aid to be coordinated. The dangers of uncoordinated ad hoc interventions that do not conform to an agreed agricultural strategy are very real and may already be occurring. Well-intentioned but poorly-designed aid interventions may perpetuate an “entitlement” mentality in East Timor.
- Foreign aid is likely to diminish sharply at the conclusion of the transition period and judging by the present lack of interest of many bilaterals in agriculture, the sector will not be able to rely on significant foreign aid;
- The great advantage possessed by East Timor is that it is starting life with a clean slate. It can design the enabling framework for its economy -- and for agriculture in particular -- from the ground up. East Timor can learn from the successes and failures of other countries to put together a policy environment based on appropriate best-practices from around the world;
- Even though agriculture has the potential to expand and is being provided with a large injection of capital, it is unrealistic to expect the sector to grow quickly. Recent agricultural growth rates, helped by many subsidies, have been about 4 percent annually. In the absence of subsidies and other forms of government intervention, such as extension, it is likely that growth will approximate past rates. While aid flows may produce a one-time jump in output, future growth will be limited by the ability of small farmers to borrow capital, and limits on their farming expertise.

A Strategy for the Short- and Medium-Term Development of Agriculture

The team’s vision for agriculture in East Timor is one where agriculture is the engine of growth for the economy, where farmers can freely choose how to market their crops and animal products, where the population need not fear food shortages created by civil strife and poor policies, and where government is the ‘enabler’ or ‘facilitator’ of rural development rather than the ‘provider’ of agricultural services.
East Timor will need to be very selective in the number and size of interventions in the sector, and in the number and size of public programs, since the revenues needed to finance many activities often thought to be public in nature will not be available. While development aid will help, it typically does not pay for the recurrent costs of agricultural projects nor a ministry’s operating costs. This implies a very small ministry or department of agriculture and leads to the first set of policy decisions:

- In the spirit of “first-things-first”, the interim government needs to make sure that the short-term reconstruction and development activities recommended in the Joint Assessment Mission report\(^2\) and complemented by this mission (see Table 3) are completed. This means ensuring that donors are matched with activities and that Projects are completed successfully. These activities will be the foundation for rebuilding the sector.

- Agriculture, including agricultural inputs and value-added processing and marketing, should be regarded as private sector activities where private farmers, business owners, bankers, etc make decisions about production. In other words, the private sector should finance and manage most agricultural-related activities.

- Government’s role should be to create and implement a policy framework that rewards hard work and innovation, and that offers employment opportunities for rural people through market-driven growth. The government’s efforts need to be limited to such public activities as agricultural education, simple adaptive research, limited public aspects of extension, data collection and analysis, and sanitary and phytosanitary regulation. The interim government, in close collaboration with East Timorese counterparts, should draft statements on the framework and policies for agriculture, livestock, forestry, fisheries, research, extension, land management, and environment and conservation.

- When public intervention is appropriate, the principle should be public financing and private delivery of most of those services. For example, the government may wish to support mass-media or group extension activities. It can do this by financing those activities and contracting with private extension agents or NGOs to deliver the services. The government does not need to operate the extension service nor employ extension agents.

- In order to ensure that Projects and programs undertaken by government best fit the needs of beneficiaries, interventions should be participatory in design, selection, and implementation, and should be community owned. Existing organizations and infrastructure, where present, should be strengthened.

- Wherever possible, the government should utilize regulations and codes of international or other national sources as its standards, rather than creating a set of regulations and standards for itself. Further, it would be advisable to recognize the testing and certification process of selected other countries, such as Australia, so that East Timor does not need to establish the institutions to conduct its own certification of agricultural products.

- Because of its severe financial constraint, East Timor needs to make careful decisions as to which agricultural activities will be in the public domain. In particular, the government should not own revenue-generating enterprises, such as meat slaughterhouses, warehouse facilities, grain storage facilities, tractor pools, or rural service centers. Government participation in these and similar activities would be costly and would inhibit private entrepreneurship.

- The general regulatory environment for agriculture should allow private enterprise to make choices that will develop agriculture in a sustainable way. A “light-handed enabling environment”, is part of modern governance. Such an approach minimizes the demand for government resources and minimizes opportunities for corruption in the civil service. This approach implies that both internal and external trade should be free and open (free of tariffs, quotas, and export taxes) in order to allow producers and consumers to receive price signals based on world prices. This will allow for the most efficient allocation of resources and the most rapid and sustainable growth in income. This approach

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will also minimize the size of a customs service, which is typically very corrupt and collect minimal revenue.\footnote{Relatedly, generation of public revenue in the aftermath of a civil conflict is a concern. The method usually adopted is to impose import and export duties. If East Timor finds it necessary to impose such duties, it should limit the life of the duties to, say, five years. The same criteria applies to current taxes. The mission found the recently imposed coffee tax to be arbitrary and capricious, its incidence falling directly and solely on poor and illiterate highland farmers.}

- Similarly, government should adopt a regulatory environment for rural non-farm industries that allows private entrepreneurs to establish businesses free from unnecessary regulation and controls. Industries servicing agriculture will arise, and are being provided with an initial start through a component of the “Agricultural Rehabilitation Project”. Such businesses can be expected to proliferate and diversify over time, creating employment opportunities and income in rural areas for rural residents, including farm families.

- East Timor is in that part of the world most affected by the Southern Oscillation, or “ElNino” weather pattern. Although the food crisis is over and food production will be returning to its long-term trend, East Timor can expect drought conditions every four to eight years. In addition East Timor is subject to numerous adverse weather events, such as the recent flooding in Suai, which reduce agricultural output and may cause long-term damage to irrigation. It is a legitimate function of government to plan for such contingencies. Although there has been discussion of a policy that would ensure self-sufficiency in cereals or food, other countries have found this approach to be expensive and difficult to maintain. A more recent approach has involved replacing physical stocks of food with a buffer fund with which to purchase rice (say) in times of shortage while ensuring greater food security by creating the conditions for a vibrant and profitable overall economy. Under these conditions much of the population will be able to afford food and farmers will receive the right price signals to produce the right type and quantity of food products. Separately, East Timor may decide to establish a social safety net program that provides income to poor people so they can purchase food, but the government does not need to purchase food, store grains, or control cereal prices itself. National income, and growth in income, is generated most rapidly when actions in the private sector determine the quantity and combination of agricultural goods that will be produced. Food security, not food self-sufficiency, should be the orientation of the policy discussion.

- Because of geographic proximity, product prices in East Timor will approximate those in Indonesia, and pricing policy in East Timor will, in large part, be set in Jakarta. Arbitraging of prices through smuggling is a tradition in the region. If East Timor sets the price for any product significantly above its price in Indonesia, traders will move the product to East Timor, thus lowering the price in East Timor to the c.i.f. Indonesia price. If the price in East Timor is below that in Indonesia, the product will be smuggled out of East Timor, thus the price in East Timor will rise to that of Indonesia. Arbitraging, in short, will effectively restrict pricing discretion.

- Agricultural education and institutional capacity are starting from a very low base and should be given high priority in government expenditure. To leverage resources, innovative partnerships with church groups, overseas donors, and NGOs could be developed. One partner might provide the physical facilities, another the expert instructor, with the government paying building rental and other variable costs.

- Farmer and other similar organizations have historically been weak in East Timor. Government should support the building of farm and community organizations; such as cooperatives constituted under the Rochdale principles of one member one vote, equal equity participation, and profit distribution based on patronage. Other forms of business organization such as limited liability companies, partnerships, associations, and NGOs should also be encouraged. Supporting women’s groups is an effective way of empowering women entrepreneurship so that women can be part of rural business. The overall objective is to foster individual and community self-reliance and develop organizations capable of implementing government programs. Government should solicit technical assistance from donors for a program that raises awareness and builds capacity of such organizations.
• It would be advantageous to construct a ministry that would integrate agriculture, rural development, livestock, fisheries, forestry, and conservation activities. There would also be some savings through eliminating overlapping functions. The IDA “Agricultural Rehabilitation Project” suggests an integrated Department of Agriculture and Rural Development.

• Much of East Timor’s farmland is fragile and steep. Soils are subject to degradation and erosion by the heavy downpours common in the country and some of the land that should remain under forest cover has been cleared. The government has a responsibility to ensure the conservation of land and to promote sustainable farming techniques under shifting agriculture. Much of the area under swidden agriculture is being farmed sustainably but could be improved. Other areas are being degraded because of population pressure.

• It is important to note that it would be a mistake to attempt to turn swidden farmers into sedentary farmers too soon. Many of those involved in shifting agriculture in East Timor use sustainable methods, and there is evidence that extension workers who do not fully understand shifting agricultural systems have given such farmers poor advice.

• Land tenure and ownership is an emerging issue. Most of the rural land in East Timor is held in customary custodial ownership by clans or communities. There are large areas of unused or under-used land where the custodian has moved away or has not allocated the land. Because farmers of this land are subject to expulsion, they only grow annual food crops; they do not grow perennial crops or make other improvements. East Timor faces the challenge of investigating land tenure issues and initiating a dialogue to resolve them. This is necessary for both social equity and agricultural efficiency reasons.

A Program of Actions

As of April, 2000, the rebuilding of agriculture was just being planned. The immediate food shortage has been dealt with by donations and now plans are being assembled to restore and boost agricultural output. The IDA “East Timor: Agriculture Rehabilitation Project” is one of the first. It provides financing for most of the immediate actions that need to be undertaken to rebuild agriculture. The Project is designed to deliver the most urgently required services to the agricultural sector over the next two years. In brief, that Project has four components:

1. Restoring Productive Assets
   a. Conducting national vaccination campaigns to immunize animals;
   b. Providing rural families with six-week old chicks to improve household nutrition and income;
   c. Replacing up to 1,000 head of buffalo to allow farmers who have lost their animals to regain
   d. the ability to prepare their paddy fields for planting rice;
   e. Replacing simple hand tools needed by rural people; and
   f. Conducting farmer information campaigns so farmers know of the availability of agricultural services.

2. Providing Irrigation Rehabilitation and Maintenance
   a. Identifying feasible improvements and selecting the schemes where rehabilitation would be most viable; establishing water user associations; and preparing cost-effective designs for structure rehabilitation;
   b. Rehabilitating irrigation infrastructure covering an area of up to 7,000 ha;
   c. Undertaking hydrological studies and redesign of major works that have been extensively damaged; and
   d. Repairing and maintaining up to 100 km of feeder/access roads through labor-intensive community participation.
3. Establishing Pilot Agriculture Services Centers

a. Establishing Pilot Agriculture Services Centers (PASC) to provide farming communities with the agricultural services they require;

b. Training of East Timorese research staff, extension, and PASC managers; and

c. Financing radio sets and short range transmission stations to provide rural dwellers with information and technical advice.

4. Establishing a Project Management Unit

Establishing a PMU within the Department of Agriculture and Rural Development that would manage the Project and at the same time strengthen the capability of the department in human skills and management.

In addition to this Project other bilateral donors are coordinating their efforts to provide agriculture with priority inputs and infrastructure:

- Japan, Macau, and Norway have provided tractors and tillers;
- Japan, over the next three years, will be rehabilitating three major irrigation systems and undertaking land mapping for planning and land regularization projects;
- Australia is restoring the meteorological stations, small-scale fishing infrastructure, and undertaking research on Siam weed control;
- Portugal planning to restore Dili and village market places, and is interested in assisting with the PASCs and in developing the coffee industry; and
- The United States is providing Grant for coffee marketing and is developing an agricultural training center.

Still, there are many priority activities that remain to be funded by donors. Some involve restoring or developing infrastructure, such as the holding nursery and seed center, and the construction of abattoir facilities in Dili and major towns. Yet many others involve providing technical assistance to the government as it sets the framework for the agricultural sector. Setting up efficient public institutions that can manage the policy, regulatory, and programmatic aspects of agriculture and natural resource management is an early priority. Associated with this is the need to train staff for those institutions. Assistance is also needed to establish sanitary and phytosanitary regulations for the trade of plant and animal products, to put in place regulations for the sale and use of agrochemicals, to develop a banking system that provides Grant and savings facilities for rural people, and to undertake studies on production and marketing of agricultural products to minimize post-harvest losses of existing crops and provide alternative crop possibilities for farmers. The actions above are first-generation activities needed within the next two years. Next, assistance is needed to liaise with the CGIAR system so that useful agricultural research developments can be brought to East Timor. These developments would be tested and adapted locally before the information or plant material is released to nurseries or farmers. At the same time, work should begin on management plans for the protection and development of watersheds and land. This is a large task that will require a multi-year commitment by the government and international donors to finance and implement, but is needed if East Timor is to develop its agriculture in a sustainable way. It will lead to the development of larger irrigated areas, crop diversification for local use and possibly export, the reforestation of eroded or overused slopes areas, and the eventual graduation of subsistence farmers to small commercial farmers. These activities can be planned by donor technical assistance in two years time for funding and implementation in three or more years time.

The small states that have succeeded in agriculture have concentrated their attention on one cash commodity for export. Tonga concentrates on vanilla; Maldives concentrates on tuna. Organic coffee
seems to be the special commodity for East Timor. A disproportionately large effort of government should go into ensuring that the premium that East Timor receives for its coffee is maintained and developed, that the coffee industry is developed by finding improved cultivars, and that coffee marketing ventures are allowed to develop. The remainder of government effort should go into lowland development to ensure food security. This work should start right away and be maintained through time.

The above agenda represents the major activities that will need to be addressed over the next three years. Other policy and technical issues will undoubtedly arise over that time and can be addressed within the framework of the strategic principles.

Concluding Comments

Because of the large number of activities to be undertaken during the transition to self-government, it will be tempting for the authorities to compromise long-term principles in favor of expediency. In instances where there is a need for considerable government intervention, such as the monitoring and administration of capital projects, UNTAET should design a “phase-down” plan so that when it turns over the administration to a new government, the phase-down has occurred.

The overall strategic objective of the interim administration should be to use the transition time to restore agriculture with the large capital inflows that donors are providing. This is a one-time opportunity. The entire basic framework for agriculture should be in place when the transition period ends. In designing its investments, the transitional government will want to make sure that recurrent costs do not exceed its financial servicing capability. This means that recurrent costs should be the responsibility of the beneficiaries, which has implications for the ownership of those assets. In large part, such assets should be community-owned, operated, and maintained. The administration should resist trying to pattern public support of agriculture after the top-heavy and unnecessary structures in many other countries. This will mean being innovative and thinking hard about what is public and what is private. Where public action is justified, the first thought should be of public financing but private delivery. There will be strong pressures for government intervention and a danger of losing sight of this objective. Farmers in East Timor have operated in a culture where the government regulated agriculture, formed so-called “cooperatives”, and provided free or subsidized inputs. Changing farmer’s mentality to one of “reward based on effort” will be a challenge. Maintaining focus on this strategic approach will require the vigilance and advice of key donors, including the IDA.

Despite the huge capital investment program planned by donors and adoption of the best public policy by government, there will continue to be considerable rural poverty and a large subsistence agriculture in East Timor for the foreseeable future. This will not be solved quickly but will need to be addressed systematically. Reducing rural poverty and generating rural development is a slow, purposeful activity. East Timor, however, has the natural resource base to expand agricultural output considerably and make agriculture the engine for growth in the economy. The question is “Can the government take full advantage of this opportunity”?

Finally, it would be advisable for the IDA, on behalf of the donors, to monitor the agricultural strategy over the next three to four years to refine the approach, based on what is occurring over the intervening period.
### Table 1. East Timor: Agriculture's Contribution to Rural GDP, 1990

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food crops</td>
<td>51.5</td>
</tr>
<tr>
<td>Plantations</td>
<td>25.8</td>
</tr>
<tr>
<td>Livestock</td>
<td>20.5</td>
</tr>
<tr>
<td>Forestry</td>
<td>1.0</td>
</tr>
<tr>
<td>Fisheries</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

### Table 2. East Timor: Agricultural Production, 1997

<table>
<thead>
<tr>
<th>Food Crops</th>
<th>Production (tons)</th>
<th>Yield (tons/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>52,000</td>
<td>2.70</td>
</tr>
<tr>
<td>Maize</td>
<td>106,600</td>
<td>1.80</td>
</tr>
<tr>
<td>Peanut</td>
<td>3,200</td>
<td>1.00</td>
</tr>
<tr>
<td>Soybean</td>
<td>1,200</td>
<td>0.80</td>
</tr>
<tr>
<td>Cassava</td>
<td>66,500</td>
<td>4.00</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>16,200</td>
<td>3.90</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Tree Crops</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td>9,700</td>
<td>0.20</td>
</tr>
<tr>
<td>Coconut</td>
<td>9,900</td>
<td>0.20</td>
</tr>
<tr>
<td>Candlenut</td>
<td>690</td>
<td>0.20</td>
</tr>
<tr>
<td>Cocoa</td>
<td>42</td>
<td>0.08</td>
</tr>
<tr>
<td>Cloves</td>
<td>12</td>
<td>0.05</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Livestock Slaughtered</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Chickens</td>
<td>806,000</td>
</tr>
<tr>
<td>Broilers</td>
<td>449,000</td>
</tr>
<tr>
<td>Goats</td>
<td>37,500</td>
</tr>
<tr>
<td>Pigs</td>
<td>19,700</td>
</tr>
<tr>
<td>Cows</td>
<td>5,500</td>
</tr>
<tr>
<td>Buffalo</td>
<td>1,700</td>
</tr>
<tr>
<td>Sea Fish</td>
<td>2,400 (tons)</td>
</tr>
<tr>
<td>Pond/ Paddy Fish</td>
<td>350 (tons)</td>
</tr>
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</table>

## Table 3. Reconstruction and Development Budget, FY2001 – 2003 (US$’000)

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY01</th>
<th>FY02</th>
<th>FY03</th>
<th>Total</th>
<th>Donor</th>
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<tbody>
<tr>
<td>Priority Productive Asset Restoration 14</td>
<td>2000</td>
<td>79</td>
<td>83</td>
<td>3200</td>
<td>TFET 15</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>300</td>
<td>200</td>
<td>1000</td>
<td>Portugal</td>
</tr>
<tr>
<td>Farmer Information Campaign</td>
<td>140</td>
<td>15</td>
<td>17</td>
<td>173</td>
<td>TFET</td>
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<tr>
<td>Rural Road Program</td>
<td>200</td>
<td>100</td>
<td>0</td>
<td>300</td>
<td>TFET</td>
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<tr>
<td>Community Extension Program</td>
<td>54</td>
<td>42</td>
<td>55</td>
<td>151</td>
<td>TFET</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>Others 16</td>
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<tr>
<td>Irrigation System Rehabilitation</td>
<td>3,220</td>
<td>4,865</td>
<td>3,065</td>
<td>10,146</td>
<td>TFET</td>
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<tr>
<td></td>
<td>3000</td>
<td>3000</td>
<td>17,150</td>
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<td>JICA</td>
</tr>
<tr>
<td>Technical Advice and Service Centers</td>
<td>3,200</td>
<td>2,865</td>
<td>1,495</td>
<td></td>
<td>TFET</td>
</tr>
<tr>
<td></td>
<td>800</td>
<td>2000</td>
<td>800</td>
<td>10,960</td>
<td>Portugal</td>
</tr>
<tr>
<td>Rural Grant</td>
<td>1,000</td>
<td>1,000</td>
<td>500</td>
<td>2000</td>
<td>TFET</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>1000</td>
<td>500</td>
<td>4000</td>
<td>Others</td>
</tr>
<tr>
<td>Project Management</td>
<td>212</td>
<td>212</td>
<td>214</td>
<td>639</td>
<td>TFET</td>
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<tr>
<td>Agrochemicals</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>450</td>
<td>Bilaterals</td>
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<tr>
<td>Fertilizers</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>900</td>
<td>Bilaterals</td>
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<td>Agricultural Documentation Center 17</td>
<td>400</td>
<td>50</td>
<td>50</td>
<td>500</td>
<td>TFET</td>
</tr>
<tr>
<td>Land Mapping (recovery)</td>
<td>150</td>
<td>150</td>
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<td>300</td>
<td>JICA</td>
</tr>
<tr>
<td>Siam Weed Control</td>
<td>100</td>
<td>60</td>
<td>40</td>
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<tr>
<td>Regulation and Standardization TA 18</td>
<td>200</td>
<td>200</td>
<td>200</td>
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<tr>
<td>Pasture Improvement</td>
<td>200</td>
<td>50</td>
<td>50</td>
<td>300</td>
<td>Others</td>
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<tr>
<td>Agro-processing and Post-harvest TA 19</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>350</td>
<td>TFET</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Small-scale fisheries 20</td>
<td>150</td>
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<td>50</td>
<td>200</td>
<td>AusAID</td>
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<tr>
<td>Village Market Places 21</td>
<td>50</td>
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<td>50</td>
<td>150</td>
<td>Portugal</td>
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<td>Holding Nursery and Seed Center</td>
<td>300</td>
<td>80</td>
<td>380</td>
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<td>Others</td>
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<td>Watershed and Land Management Plan</td>
<td>250</td>
<td>250</td>
<td>500</td>
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<td>Others</td>
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<td>Restoration of Meteorological Stations</td>
<td>250</td>
<td>50</td>
<td>300</td>
<td></td>
<td>AusAID</td>
</tr>
<tr>
<td>Production and market studies 22</td>
<td>100</td>
<td>100</td>
<td>200</td>
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<td>Others</td>
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<tr>
<td>Liaison with CGIAR system 23</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td></td>
<td>Others</td>
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<td>Monitoring and Evaluation Unit 24</td>
<td>25</td>
<td>50</td>
<td>50</td>
<td>125</td>
<td>Others</td>
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<tr>
<td>Restoration of Agr Education 25</td>
<td>1000</td>
<td>500</td>
<td>500</td>
<td>2000</td>
<td>USAID</td>
</tr>
<tr>
<td>Abattoir Reconstruction 26</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
<td>Others</td>
</tr>
<tr>
<td>Farm mechanization</td>
<td>1,600</td>
<td></td>
<td></td>
<td>1,600</td>
<td>Macau/Norw/Japan</td>
</tr>
<tr>
<td>Coffee development</td>
<td>3000</td>
<td>1,500</td>
<td>1,500</td>
<td>6000</td>
<td>USAID</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,992</strong></td>
<td><strong>19,641</strong></td>
<td><strong>10,470</strong></td>
<td><strong>53,103</strong></td>
<td></td>
</tr>
</tbody>
</table>

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14 Details of line items 1 to 8 are provided in the Project documentation.
15 TFET is the Trust Fund for East Timor, administered by the IDA.
16 "Others" in donor column denotes that a donor has not been identified.
17 Line items 11-19, and 19-21 are provided in the November, 1999 Joint Assessment Mission.
18 This would provide technical assistance and advice to the Department of Agriculture on policy and regulatory issues.
19 This would provide technical assistance and advice to the Department of Agriculture on policy and regulatory issues.
20 This would provide replacement fishing nets, lines, and rehabilitate or replace lesemakers for the artisanal fishing industry.
21 This would provide grants for the reconstruction of municipal market places.
22 This would provide financing for rehabilitation, production, and marketing feasibility studies for existing tree crops (tamarind, coconut, cajuput) and high-value horticultural and industrial tree crops.
23 This would finance the part time services of a former CGIAR official to create linkages with relevant research centers in the CGIAR system (IRRI, CYMMIT, ICRISAT, CFOR) in order to bring relevant recent research development and material to East Timor for evaluation and an adaptive research program.
24 This would finance the setting up of a monitoring and evaluation unit for the activities undertaken during the reconstruction/transition period.
25 This would restore agricultural education at the agricultural university and at private agriculture training schools.
26 This would finance the construction of a new abattoir in Dili. The present abattoir was destroyed and is poorly located. The new abattoir would be in a more appropriate location. It would be owned by the local government and leased out to a private operator, with a time-bound plan for the municipality to sell the facility.
1. Restoring productive assets and improving agricultural productivity are high government priorities. The proposed Agriculture Rehabilitation Project (ARP) would support these priorities by pursuing the following project objectives: (i) improving food security of selected poor households; (ii) ameliorating the state of irrigation and other rural infrastructure; and (iii) improving the quality and delivery of agriculture services. In order to achieve the above objectives, the Project would finance four project components representing two sets of activities. The first set of activities make up Project component one and would focus, over the next six to eight months, on restoring productive assets at the farmer level. The second set of activities make up Project components two and three would focus, over the next 30 months, on rehabilitating selected agriculture access roads and irrigation schemes, as well as improving farmers’ access to agriculture services and information. Project component four concerns the establishment and operation of a Project Management Unit (PMU).

Project Component 1 – Priority Productive Asset Restoration

2. Activities that would be financed under this component would include:

   a. Conducting national vaccination campaigns to immunize cattle, small ruminants and pigs against infectious diseases and provide emergency clinical services where required.
   b. Providing up to 20,000 rural families with 5 four to six-week old chicks each to improve household nutrition and income.
   c. Replacing up to 1,000 head of buffalo and 1,000 head of Bali cattle to allow farmers who have lost their animals during the violence to regain the ability to prepare their paddy fields for planting rice. Replacing simple hand tools needed by rural people to undertake farming, household and communal work such as agricultural roads or irrigation canal maintenance.
   d. Conducting farmer information campaigns.

3. The procurement and distribution to poor households of chicks and livestock would not negatively impact the environment because they would not represent a significant increase of the poultry and livestock populations in East Timor. The hand tools, also to be distributed by the Project, would be used essentially for gardening purposes in households and would not adversely impact the environment.

Project Component 2 – Irrigation/Rural Infrastructure Rehabilitation and Maintenance.

4. Four major activities would be financed under this component:

   a. Engineering studies for the purpose of: (i) conducting surveys and profiling of irrigation schemes for the purpose of identifying feasible improvements and selecting the schemes where rehabilitation would be most viable; (ii) the establishment and consolidation of Water User Associations (WUA); and (iii) designing and preparing cost-effective designs and preparing sketches of canal improvement and structure rehabilitation, as well as the preparation of tender documents (using IDA standard documents).

   b. Rehabilitation/construction and maintenance of irrigation infrastructure to bring selected irrigation systems to good working condition before turnover to farmer groups for their operation and maintenance (O&M). The rehabilitation works would include main structures and canals, as well as secondary and tertiary canals covering an area of up to 7,000 ha.
c. Hydrological studies, structural studies, etc. and redesign of major works that have been extensively damaged mainly because they were either poorly designed or not sufficiently protected.

d. Repairing and maintaining up to 100 km of feeder/access roads through labor-intensive community participation. The rehabilitation of these roads by local populations using hand tools and hand handled materials (Gabions). The aim of this activity is to facilitate the transport of agricultural production to main roads (markets) and to provide work opportunities for rural people.

5. The rehabilitation of irrigation schemes would bring back into irrigation areas that are within existing irrigation schemes and are presently starved of water. Since irrigation water is generally diverted from river flows during and immediately after the rainy season, the rehabilitation of irrigation schemes would not affect ground water supply but would only reduce the amount of runoff water that goes to the sea.

6. The rehabilitation of agriculture access roads would be undertaken only on existing roads and would not enlarge or lengthen them. The impact on the areas served by these roads would be minimal as the increased traffic would be due to general economic growth and activity rather than due to the maintenance of the access roads.

**Project Component 3 – Pilot Agriculture Services Centers and Line of Grant through SEP/BNU**

7. The ARP would finance four activities under this component. The first activity would be to establish up to eight Pilot Agriculture Services Centers (PASC). The purpose of the PASCs is to provide farming communities in the area they cover with the agricultural services they require that are not now provided by other businesses in the area. The pilot PASCs/centers would be legal commercial entities owned and governed by the villages or villagers the centers serve.

8. The establishment of the PASCs would make it easier for farmers to have access to farm inputs and support services. While it is likely that fertilizer and pesticide use may increase as a result of intensification of rice production, it is unlikely that this phenomenon would happen in the uplands and coffee-growing areas. The Project is providing support to research and extension services that will provide recommendations on appropriate uses of fertilizers and advice and demonstrate the safe use of pesticides by farmers. Integrated pest management techniques and products will be demonstrated to farmers.

9. The majority of the PASCs will be located in areas where crop intensification is possible and in the uplands where coffee and fruit trees are grown. It is expected that the PASCs will encourage organic coffee growing in the uplands and sustainable rice intensification in the lowlands.

10. The ARP would finance the procurement of pesticides by the PASCs on the condition that they and the extension agents stationed at their headquarters promote integrated pest management techniques. Any and all pesticides to be procured by the PASCs would be done in accordance with Bank policy and guidelines on pest management.

11. The second activity to be financed under this component is the short and long-term (maximum of 2 years) training of East Timorese research staff, extension and PASC managers, as well as the exchange of researchers, twinning arrangements and procurement of experimental equipment and materials to set up research laboratories and experiment fields and stations for the Faculty of Agriculture of the University of East Timor. Research staff and extension workers will be trained in good environmental practice and will help to raise the consciousness of farmers to sustainable environmental practice in their work and interaction with farmers. The Project would also finance studies on land/soil mapping, and land aptitude
surveys which will be used for land use planning purposes. Other studies to be financed under the Project would also include marketing and domestic resources analysis studies.

12. Support to Community Radio Extension is the third activity to be financed under this component. In collaboration with the IDA-financed Community Empowerment Project, the ARP would finance the procurement of radio sets and short range transmission stations. The radios and transmission stations will be operated by trained community volunteers for the purpose of providing farmers and other rural dwellers with information and technical advice, including information on good environmental practice.

13. The fourth activity is the provision of a line of Grant dedicated to the agricultural sector. Grant would be disbursed through the on-going Small Enterprise Project and the Banco National Ultramarino. The line of Grant would be disbursed on the basis of the existing agreed arrangements between IDA and the BNU. The environmental requirements already specified by the SEP would be adopted for Grants originating from this line of Grant.

**Project Component 4 – The Project Management Unit**

14. To facilitate the implementation of Project activities, the ARP would finance the establishment of a Project Management Unit (PMU). The PMU would be an integral part of UNTAET’s Interim Department of Agriculture and Rural Development (IDARD). The objective of the creation of the PMU and the recruitment of expatriate staff (UN volunteers) is to build Project management capacity within the IDARD and enable it to sustain its Project planning, management and monitoring capacity. To build this capacity, the ARP would finance, over the two-and-half-year life of the Project, the recruitment of local and expatriate personnel, technical assistance, training for East Timorese staff, as well as other operating costs.

15. IDARD, as part of its mission, will be responsible for green environmental issues, sustainable agriculture, and forestry. Staff will be advocates for the environment and for sustainable farming practices. The Project finances this training. The goal is to help farmers develop integrated cropping and livestock systems including agroforestry based systems that permit improved nutrient cycling and biological control of pests and diseases. The Project is designed to help farmers achieve sustainable intensification, which ensures simultaneous increase in returns to land and labor and the maintenance of soil nutrient balance. Investment in farm inputs will be provided only to sustain the economic and environmental framework of the prevailing traditional production system which relies on locally available resources instead of purchased externally produced inputs.

16. The PMU would be responsible for all the mechanics of the Project: preparing, advertising, evaluating tenders and awarding contracts for the procurement of civil works; obtaining clearances, including customs; managing the Project’s special account; making payments and keeping accounts; implementing, supervising, monitoring and evaluating the implementation of Project activities; and submitting to IDA Project progress and implementation completion reports.

17. In preparing and evaluating tenders, PMU staff will be formulating contracts and selecting contractors based, in part, on environmentally compatible construction methods and least-disturbance techniques. Part of the monitoring and evaluation will include oversight on environmental matters.

18. The potential environmental impacts of each of the sub-project components and the remedies included in the Project are indicated in the matrix below.
## Potential Environmental Impacts and Remedies of Project Sub-Components

<table>
<thead>
<tr>
<th>Project Subcomponent</th>
<th>Potential Environmental Impact</th>
<th>Project Remedial Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The procurement and distribution to poor households of six-week old chicks and buffalo.</td>
<td>Negligible impact on the environment because they would not represent a significant increase of the poultry and buffalo populations in East Timor.</td>
<td>Extension messages would be delivered to farmers to encourage the use of manure to increase soil fertility.</td>
</tr>
<tr>
<td>Distribution of hand tools for gardening.</td>
<td>No impact on the environment.</td>
<td></td>
</tr>
<tr>
<td>Rehabilitation of irrigation schemes would bring back into irrigation areas that are within existing irrigation schemes and are presently starved of water.</td>
<td>No significant impact on the environment. Irrigation water is diverted from river flows during and immediately after the rainy season; the rehabilitation of irrigation schemes would not affect ground water resources.</td>
<td>On-farm water management and conservation techniques would be demonstrated to farmers.</td>
</tr>
<tr>
<td>Rehabilitation of agriculture access roads.</td>
<td>The rehabilitation would be undertaken only on existing roads and would not enlarge or lengthen them. The impact on the areas served by these roads would be minimal.</td>
<td></td>
</tr>
<tr>
<td>The establishment of the Pilot Agriculture Services Centers</td>
<td>Would make access and use of fertilizers and pesticides easier and could potentially harm environment and users.</td>
<td>The Project would procure pesticides according to Bank guidelines. Extension staff of the PASCs would demonstrate proper use of fertilizers and IPM techniques.</td>
</tr>
<tr>
<td>Land capability studies to be financed by the Project will be used by the Department of Agriculture for land use planning.</td>
<td>This would result in guidelines and government actions that would reduce soil and water erosions and protect biodiversity and sensitive areas.</td>
<td></td>
</tr>
</tbody>
</table>
The following indicators shall be monitored on a semi-annual basis by the Project Management Unit (PMU). These indicators will be used to follow up on Project implementation progress and to evaluate the achievement of its development objectives and eventually its impact.

<table>
<thead>
<tr>
<th>Key Performance Indicators</th>
<th>Source/Process for Verifying Indicator</th>
<th>Project Calendar Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Project Outcomes:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### East Timor
### Agriculture Rehabilitation Project

#### Continued

<table>
<thead>
<tr>
<th>Key Performance Indicators</th>
<th>Source/Process for Verifying Indicator</th>
<th>Project Calendar Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Project Outputs:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cattle, buffalo, small ruminants mortality rates decline by half by end of year two.</td>
<td>Random survey in Dec. 2001.</td>
<td>25%</td>
<td>12%</td>
</tr>
<tr>
<td>2. Area of irrigation schemes maintained and rehabilitated in hectares.</td>
<td>Memorandum of hand-over of fully operating schemes to water users associations</td>
<td>NA</td>
<td>2000</td>
</tr>
<tr>
<td>3. Length of access roads rehabilitated by communities in Km.100</td>
<td>Memos of Hand-over of completed roads.</td>
<td>NA</td>
<td>100</td>
</tr>
<tr>
<td>4. Number of Pilot Agriculture Services Centers established and capitalized.</td>
<td>Number of grant requests accepted and funded. Project records &amp; reports.</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5. Number of community radio stations established.</td>
<td>Number of transmission gears procured. Project records &amp; reports.</td>
<td>NA</td>
<td>2</td>
</tr>
<tr>
<td>6. A minimum of twenty research, extension, PASC staff trained in country and/or abroad.</td>
<td>Project records and reports.</td>
<td>5</td>
<td>15</td>
</tr>
</tbody>
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East Timor
Agriculture Rehabilitation Project

1. UNTAET will recruit a Director of the Agriculture Project Management Unit (PMU) responsible for execution of the Project. It is expected that the Director will be in place before Project effectiveness.

2. UNTAET will recruit a Project Financial Officer (PFO) for the Project with qualifications and TORs acceptable to IDA.

3. Immediately upon his/her appointment, the PFO will familiarize himself with the Project design, IDA procedures for procurement and disbursements, including operation of Special Account and establish procedures for flow of funds for various Project components. He would also begin to establish accounting and internal control procedures to ensure that the funds are utilized for the purposes intended and that these adequately substantiated and properly recorded in the books of the Project.

4. As the Project operations increase, the PFO will assess the requirements for additional support staff for financial functions and in agreement with UNTAET recruit the necessary staff to maintain adequate financial and accounting systems and procedures.

5. The PFO will have the overall responsibility to prepare and submit each quarter to UNTAET and the IDA, the two financial reports - Sources and Uses of Funds and Uses of Funds by Project Activities.

Note: Format and contents of the financial forms have been briefly explained to UNTAET staff involved in the Project so far. However, these will need further discussion with the PFO once appointed.

6. The PFO will be responsible for preparation of annual financial statements of the Project soonest after the end of the fiscal year (presumably, June each year). UNTAET will recruit independent external firm of professional auditors, acceptable to IDA, who will audit the Project's annual financial statements. Report of the auditor will be submitted to UNTAET and the bank not later than six months after the end of the fiscal year.

Notes:

(i) Assuming July-June to be the fiscal year of the Project, the first audit report of the Project will be due by December 31, 2001. For this audit to be completed in time, UNTAET will need to appoint the auditors by June 30, 2001.

(ii) IDA will assist the Project PFO to formulate audit TORs.

*Note: Project indicators could be modified by common agreement of UNTAET/IDA during project implementation.