

**REPORT AND RECOMMENDATION
OF THE
PRESIDENT
TO THE
BOARD OF DIRECTORS
ON A
PROPOSED TECHNICAL ASSISTANCE LOAN
TO
PAPUA NEW GUINEA
FOR
NUCLEUS AGRO-ENTERPRISES**

November 2001

CURRENCY EQUIVALENTS

(as of 15 November 2001)

Currency Unit	–	Kina (K)
K1.00	=	\$0.2684
\$1.00	=	K3.724

ABBREVIATIONS

ADB	–	Asian Development Bank
COS	–	Country Operational Strategy
DAL	–	Department of Agriculture and Livestock
DNPM	–	Department of National Planning and Monitoring
MOU	–	Memorandum of Understanding
MTDS	–	Medium-Term Development Strategy
NE	–	Nucleus Enterprise
NGO	–	nongovernment organization
PP	–	pilot project
PPTA	–	project preparatory technical assistance
PNG	–	Papua New Guinea
SFS	–	subproject feasibility study
TA	–	technical assistance
TASMU	–	Technical Assistance Screening and Management Unit
TOR	–	Terms of Reference

NOTES

- (i) The fiscal year (FY) of the Government and its agencies ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

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TECHNICAL ASSISTANCE LOAN SUMMARY

Borrower	Independent State of Papua New Guinea
Project Description	The Technical Assistance (TA) Loan will provide financing for a program of (i) feasibility studies for nucleus enterprise-based development projects in agriculture and agro-processing, and (ii) small-scale pilot project activities in and around potential nucleus enterprises.
Classification	Poverty reduction
Environmental Assessment	Category B. Environmental impact and social assessments will be integral components of the subproject preparatory process supported under the TA Loan.
Rationale	<p>Both the private and the public sectors have shown a strong interest in the concept of using nucleus enterprises as the focus for wider commercially based smallholder and agro-industry development, with a view to improving incomes and standards of living in rural areas throughout the country.</p> <p>It is envisaged that nucleus enterprises will provide market outlets, technical support, planting materials, and social services that cannot be provided by either the public sector or the smallholders themselves.</p> <p>Under the proposed TA Loan, financing will be provided to help prepare a framework for nucleus enterprise development, develop a pipeline of suitable subprojects, and undertake piloting of selected project activities.</p> <p>The TA Loan will help to overcome the difficulties currently experienced in mobilizing finance for agriculture sector activities in Papua New Guinea.</p>
Objectives and Scope	The proposed TA Loan will identify and prepare a pipeline of subprojects based on the nucleus enterprise and smallholder development concept that can be packaged into a series of subproject proposals for financing by the Asian Development Bank (ADB) or other financing agencies. The TA Loan will consist of three activities: (i) initial project identification and screening, (ii) subproject feasibility studies, and (iii) pilot project activities.
Cost Estimates	The total cost of the TA Loan is estimated at \$7.4 million, of which \$4.5 million (about 60 percent) will be foreign exchange and the balance local currency equivalent.
Financing Plan	It is proposed that ADB provide a loan of Special Drawing Rights 4,616,000 (\$5.9 million equivalent) from its Special

Funds resources to finance all of the foreign exchange and a portion of the local currency requirement of the TA program. The TA Loan will have a repayment period of 32 years, including an 8-year grace period, and will carry an interest charge of 1.0 percent per annum during the grace period and 1.5 percent thereafter. The Borrower will be the Independent State of Papua New Guinea. The remaining local currency cost of about \$1.5 million equivalent will be financed by the Borrower including private sector proponents.

Period of Utilization	Until 30 June 2004
Implementation Arrangements	Initial proposals for feasibility studies and pilot activities under the TA Loan will be submitted to a Technical Assistance Screening and Management Unit (TASMU). TASMU will examine proposals and undertake rapid appraisals, submitting reports and recommendations to a screening committee. Proposals passed by the screening committee will be provided funding for full feasibility studies or for the implementation of pilot activities. These will be undertaken under the supervision of TASMU. Results will be made available to ADB, the Government, and the private sector proponents for possible investment funding.
Executing Agency	Department of National Planning and Monitoring
Consulting Services	All consulting services will be recruited in accordance with ADB's <i>Guidelines on the Use of Consultants</i> . Two types of consultants will be required for the TA: (i) domestic and international consultants to staff TASMU, and (ii) consultants recruited for the subproject studies. A total of 90 person-months (18 international and 72 domestic) of consulting services will be required to staff TASMU. This expertise will be provided through a firm recruited on the basis of international bidding. A total of 200 person-months (100 international and 100 domestic) with a wide range of expertise will be required to undertake the subproject studies. The required expertise will include agriculture development, agroprocessing, livestock production, aquaculture, marketing, social impact assessment, environmental impact assessment, institutional arrangements, and financial analysis. TASMU will prepare a long list of international consulting firms for participation in the TA program, and ultimate selection for individual feasibility studies will be on the basis of competitive bidding among firms depending on the expertise required.
Estimated Project Completion Date	30 March 2004
Project Benefits and Beneficiaries	The TA Loan will provide the Government and the private sector with the opportunity to test new modalities in

development financing that are intended to bring out the combined benefits of solid private sector entities (nucleus enterprises), small private sector beneficiaries (smallholders and outgrowers), and the public sector (through infrastructure provision) working together to stimulate sustainable economic growth in the previously neglected rural areas of the country. The TA Loan will allow the preparation of investment packages that would not otherwise have been possible, and the testing of such packages through full feasibility analysis and pilot activities. Significant poverty reduction benefits are expected from the implementation of subprojects identified and prepared in this way.

I. THE PROPOSAL

1. I submit for your approval the following Report and Recommendation on a proposed technical assistance (TA) loan to the Independent State of Papua New Guinea (PNG) for Nucleus Agro-Enterprises.

II. INTRODUCTION

2. In 2000, the Government of PNG requested assistance from the Asian Development (ADB) for the preparation of an agro-industry development project to generate income-earning opportunities for the rural population. A project preparatory technical assistance (PPTA) was approved in November 2000.¹ The consultants were fielded in January 2001, and the final report was presented to ADB and the Government in May 2001.

3. Experience has shown that nucleus enterprises (NEs) in rural areas can provide the market outlets and access to technology needed to support smallholder agricultural development. It was determined that there are private sector enterprises eager to obtain funding for this kind of development in PNG. The Government and the PPTA consultants identified various nucleus enterprise development proposals for which feasibility studies would be required to prepare them for financing. The Fact-Finding Mission concluded that support would be required to assist these enterprises and their potential smallholders to develop proposals to the level where they could be evaluated for financing by potential financiers, including ADB.

4. In view of these circumstances a TA loan was proposed to assist the Government and individual private sector enterprises in undertaking the preparatory work required, covering both the proposals identified during the PPTA and those later identified. During a Post Fact-Finding Mission² undertaken in early September 2001, the scope, design, and implementation arrangements for such a TA Loan were agreed to in consultation with the Government, private sector representatives, and other major funders of the rural sector. The TA Loan framework is attached as Appendix 1.

III. BACKGROUND

A. Poverty in the Rural Sector

5. PNG has a total population of 5.2 million, which is the largest among the island developing countries in the Pacific. It has a very heterogeneous population structure. There are several thousand separate communities and over 650 language groups with very different cultures. About 85 percent of this population is estimated to live in isolated rural areas, with most people cut off from the capital, Port Moresby, by either rugged mountains or the sea. Economic and social disparities are severe, with PNG ranking last on both the United Nations Development Programme human development and human poverty indexes for the Pacific nations. This status largely reflects a relatively low rate of economic growth, the underfunding of essential services, and the difficulty of providing these services across remote and scattered regions.

¹ TA 3545-PNG: *Agro-Industry Development* for \$500,000, approved on 14 November 2000.

² The Mission comprised D. Ponzi, Senior Economist (Environment)/Mission Leader and E. Breckner, Staff Consultant. Mr. R. Siy, Manager, Office of Pacific Operations, also assisted and guided the Mission from 31 August to 6 September.

6. The country's economy is dualistic with an export-oriented and capital intensive minerals sector operating in parallel with a traditional subsistence economy. Despite significant wealth having been generated over the last 20 years, the minerals sector has provided relatively few employment opportunities either directly or indirectly. Subsistence agriculture remains the dominant way of life, with more than 85 percent of the population relying on household production to meet their daily nutritional requirements. For many households, participation in the cash economy involves only the sale of surplus crops or the planting of small stands of tree crops as a means of obtaining small amounts of cash for essential traded items, school fees, medical expenses, and consumer goods. For others, production on a diversified smallholder basis does provide a regular modest cash income from food crop production, cash crop production, fishing, and livestock raising.

7. Of the 37 percent of the country's population classified as poor, 93 percent live in the rural areas, where over 41 percent of the population live below the poverty line.³ Many of the poor are subsistence cultivators who earn some cash income. Poverty is highest among those engaged in small-scale tree crop production, domestic agriculture, and hunting/gathering. Tree crop producers constitute the largest group of the poor and account for 42 percent of the poverty-ranked population. The sharp decline in world prices for most tree crops in the past two years has exacerbated poverty.

8. The extent of poverty in rural areas is a result of low levels of investment in capital, technology, infrastructure, education, and health. Rural people have limited access to education and health services. In terms of literacy, there are large regional disparities, with only one third of adults in the highland regions being literate compared with about 80 percent in the National Capital District and New Guinea Islands. Only half of the primary-age children in the Highlands go to school, and only one in seven girls completes primary school. Lack of appropriate education and/or training is a constraint to the commercialization of agriculture.

B. The Agriculture Sector

9. The main focus of commercial agricultural production in the country has traditionally been export-oriented tree crops. These include coffee, cocoa, coconut, and, more recently, oil palm and rubber. These crops are grown by both smallholders and commercial estates. In the past, commercial estates accounted for a large part of the country's production, but in the past few decades, except for oil palm, the trend has been for a decline in the number of estates. Smallholders currently account for 80 percent of coconut, 75 percent of coffee, 70 percent of cocoa, and 25 percent of oil palm production.

10. Commercial production in nontraditional products, including poultry, cattle, and food crops, has shown some increase. PNG is endowed with a variety of agroclimatic zones and favorable soil resources, and a wide range of tropical and temperate crops can be grown. However, in almost all cases, expansion of the area in existing crops or the establishment of new crops is constrained by a lack of markets, restricted access to credit, and land ownership uncertainties, exacerbated by severe infrastructure constraints. One way of overcoming these constraints has been through focusing development efforts around a nucleus commercial enterprise that can provide a market for smallholder crops, improved technology, and a degree of infrastructure support. The best example of this has been in oil palm production. Much of the

³ Defined as K461 per adult equivalent per year in 1996 prices in the World Bank publication: *Papua New Guinea: Poverty and Access to Public Services*; World Bank; Washington, D.C.; October, 1999

oil palm development in the country has been through nucleus estate production supplemented by smallholders who sell their produce directly to the estate for processing. The past three decades have seen a major expansion in the area of oil palm both as an estate crop and as a smallholder crop.

11. Agriculture policies are handled by a range of bodies including the Department of Agriculture and Livestock (DAL), provincial governments, commodity corporations, and the National Agricultural Quarantine and Inspection Service. Commodity corporations such as the Copra Marketing Board, the Cocoa Board, the Coffee Industry Corporation, and the Oil Palm Industry Corporation, have powers under their legislative mandates to regulate the prices of inputs and outputs, to control quality, and to impose compulsory levies to fund their activities. These powers are, however, under review. Extension services are the responsibility of each commodity corporation as well as the provincial governments. Research is undertaken by the National Agriculture Research Institute, which focuses mainly on food crops and livestock, and by the commodity corporations.

12. Obtaining commercial financing for agricultural development in PNG is fraught with difficulties. Despite being relatively liquid, the commercial banks' loan portfolios are significantly underweight in the agriculture sector. Agriculture accounts for 24 percent of gross domestic product (GDP), but only 7 percent of business loans. There is a reluctance among commercial lenders to target the agriculture sector due to difficulties in determining land ownership, low commodity prices, long gestation periods for tree crops, and the logistical difficulties in supervising loans spread over a wide geographic area. As a result, borrowers are faced with high interest rates and onerous demands for collateral. These difficulties need to be overcome, and financing for the sector needs to be made available if the country is to return to a path of sustained economic growth.

C. Government Policies and Plans

13. The Government's current economic policies are set out in the Medium-Term Development Strategy (MTDS) 1997-2002: A Bridge Into the 21st Century. The MTDS established a new direction for the National Government. At the heart of the strategy is the goal of broad-based economic growth. Private sector development is to be encouraged by trade liberalization and other measures designed to improve the environment for private sector investment. The Government is thus moving away from an economic development strategy based upon extensive government intervention in markets and commercial activities, to a market-based economic development strategy. The reforms will benefit agriculture, including semicommercial and commercial smallholders, plantations, and agroprocessing. These include a phased trade liberalization program with average nominal tariff levels falling substantially over the next five years, providing wide-ranging benefits to export-oriented agriculture.

14. In September 2001, the Government adopted the National Agriculture Development Strategy – Horizon 2002-2012. This new strategy has an overarching policy thrust: revitalize the agriculture sector through facilitating an efficient private sector.⁴ The policy interventions proposed in this strategy include, among others, legislative reforms to consolidate agriculture sector legislation, organizational reforms of DAL, new provisions for agricultural credit, reform of the technical extension system, and preparation of a National Agriculture Development Plan.

⁴ The National Agriculture Development Strategy – Horizon 2002-2012: executive summary by the Secretary, Department of Agriculture and Livestock.

15. The Government has increasingly recognized the importance of agricultural production as a basis for the reduction of poverty in rural areas and for growth of the economy as a whole. Moreover, with few new high-return extractive ventures such as mining or forestry expected in the near future, there has been a realization that the country will depend on the agriculture sector for a significant part of its future economic growth. In this regard, the importance of removing infrastructure and marketing constraints has been recognized, as has the value of the nucleus enterprise concept.

16. The concept of using a private sector-managed NE as the basis for smallholder and outgrower development through the provision of a market as well as technical support has recently been adopted by the Government. NEs that will be encouraged are those agro-industrial companies that are in a position to provide markets for smallholder products as well as the technical and financial support and a good part of the infrastructure required to enable smallholders to profitably access those markets. In this sense, NEs to be promoted by the new policy encompass, but are much broader than, the typical nucleus estates that are active in the oil palm sector. They could include rubber or copra factories or processing facilities; integrated livestock production with a smallholder outgrower component; aquaculture ventures with a guaranteed marketing component; or the rehabilitation of abandoned cocoa, coffee, or coconut estates and associated processing facilities on a joint shareholder basis.

D. External Assistance to the Agriculture Sector

17. PNG has received external assistance from a host of agencies for agricultural development. The main sources of this assistance have been ADB, the World Bank, the European Union, and the Australian Agency for International Development. Appendix 2 presents a list of external assistance to the agriculture sector.

18. ADB has approved loans for agricultural development in PNG totalling \$172 million since 1976. In the late 1970s and 1980s, the focus of ADB loans was on the development of smallholder tree crops. This included a rural development project in East Sepik in 1976 (cocoa and rubber) and smallholder development projects for rubber in the Cape Rodney area,⁵ oil palm in West New Britain,⁶ and cocoa and coconut development in East New Britain.⁷ The focus of ADB loans in the 1990s shifted towards institutional strengthening and improved extension service delivery. The Agricultural Program Loan for the Agricultural Sector Program (ASP) represented the most ambitious attempt by ADB to assist in rationalizing the PNG agriculture sector.⁸ More recent ADB assistance includes the Agricultural Research and Extension Project in 1991⁹ and the ongoing 1998 Smallholder Support Services Pilot Project.¹⁰

⁵ Loan 656-PNG(SF), *Cape Rodney Smallholder Development Project*, for \$15 million, approved on 24 November 1983.

⁶ Loans 785/784-PNG(SF), *West New Britain Smallholder Development Project*, for \$29.9 million, approved on 14 August 1986.

⁷ Loans 852/853-PNG(SF), *East New Britain Smallholder Development Project*, for \$10 million, approved on 3 November 1987.

⁸ Loans 998/997-PNG(SF), *Agriculture Sector Program* for \$80 million, approved on 12 December 1989.

⁹ Loans 1110-PNG(SF), *Agricultural Research and Extension Program*, for \$22 million, approved on 29 October 1991; TA 1375-PNG, *Agricultural Research and Extension (Phase 1)*, for \$56,500, approved on 19 September 1990; TA 1587-PNG, *Agricultural Research and Extension (Phase 2)*, for \$436,000, approved on 29 October 1991.

¹⁰ Loan 1652-PNG, *Smallholder Support Services Pilot Project*, for \$7.6 million, approved on 10 December 1998.

E. ADB Sector Strategy

19. ADB's Country Operational Strategy (COS) for PNG was adopted in October 1998. It is in line with the Government's Medium Term Development Strategy. The COS aims at poverty reduction through improved governance, private sector development, and improved social services. Agricultural development plays a key role and is identified as a strategic priority. Transport infrastructure, social infrastructure, and rural development are considered critical to ensure sustainable economic growth and poverty reduction. The basic presumption of the COS¹¹ is that broad-based economic growth, led by the private sector, is the most effective means of poverty reduction in the long term.

20. The COS considers that the Government does not have a comparative advantage over the private sector in delivering support services for agriculture. The focus of the strategy is to strengthen government capacities for both policy management and provision of an enabling environment for the private sector. A similar approach is proposed in the rural financial services subsector, where ADB supports an increased role of the private sector, nongovernment organizations (NGOs), and cooperatives. For sustainable agricultural development to occur, the private agribusiness sector must be encouraged and enabled to take a primary role in such development. In addition, the development of rural infrastructure will facilitate the delivery of social services such as education and health, which will directly contribute to poverty reduction through human development.

F. Policy Dialogue

21. Recent policy dialogue with the Government has focused, among other themes, on the means to build on the initial encouraging results of the ADB Smallholder Support Services Pilot Project and encourage private sector ventures to undertake agricultural development activities. In discussions undertaken in the context of agro-industrial development, several private sector companies have expressed an interest in setting up or expanding NEs, which could be combined with infrastructure improvement to have major spin-off benefits for surrounding smallholders. A task force from the Government is currently identifying opportunities for NE development. In some cases there is an interest in diversifying into new markets or developing new products or higher value processing. Other NEs are likely to express interest if a source of funding for NE projects is to be established. Putting in place a policy environment that will encourage this type of development has now become a high priority. This will need to include:

- (i) actions to revive or create mechanisms to provide development credit to rural smallholders; and
- (ii) assistance with agriculture sector policy and institutional reform to ensure that commodity corporations credibly perform their mandated role of representing and protecting producers without interfering with market mechanisms; concrete activities to promote such structural reforms are included in the current PNG Country Strategy and Program Update for 2002-2004.

¹¹ Also in accordance with ADB's Private Sector Development Strategy and ADB's Poverty Reduction Strategy.

IV. THE TECHNICAL ASSISTANCE LOAN

A. Rationale

22. PNG is considered to have a comparative advantage in most of the tree crops and in many high-value food crops. Agro-industry enterprises operating in PNG have demonstrated that the private sector is in a position to increase rural household incomes by providing inputs, extension services, and assured markets for smallholder production. However, agribusiness investment faces the following constraints for expanded growth:

- (i) law and order issues and the overall policy environment which distorts price signals and adds to the uncertainty and risk;
- (ii) institutional weakness, which results in poor service delivery;
- (iii) lack of infrastructure and also poor maintenance, affecting the flow of inputs and products to the markets; and
- (iv) lack of credit and equity capital for such ventures (including credit for smallholders).

23. Strong interest is being shown by the private sector, smallholders, and concerned Government agencies in using NE-smallholder partnerships to achieve mutually beneficial results. While several potential ventures combining a private sector NE, smallholder development, and associated infrastructure have been, and many more are being, identified, these need to be taken up for detailed preparation. More importantly, a coordinated approach is required to establish a mechanism for screening, policy analysis, and awareness building. Based on careful up-front analyses of the enabling environment, detailed feasibility studies need to be undertaken, marketing studies need to be carried out, social benefits and impacts need to be assessed, and environmental impact assessments must be done. In addition, there is a need, in some cases, to field test some of the technology or institutional arrangements being proposed. The conclusion was that, prior to considering direct project financing for NE-focused development, it is desirable to help develop agrobased NE project concepts and to assess their viability thoroughly.

24. Under the proposed TA Loan, based on a central unit to undertake the enabling environment-related work, assistance will be provided to help package subprojects consisting of private sector NE ventures along with associated smallholder and outgrower schemes and infrastructure improvements. Support will be provided to assess social and environmental impact; assess the subprojects' economic and financial viability; and provide assistance with market strategies, business development, and technology improvement.

25. It is envisaged that such assistance will help to overcome the difficulties currently experienced in agriculture sector activities in PNG. The TA Loan will be used for obtaining development finance from multilateral, bilateral, and commercial sources including ADB for the project proposals developed.

B. Objectives and Scope

26. The objective of the proposed TA Loan is to identify and prepare a pipeline of subprojects based on NE and smallholder development that could be packaged into a series of projects for financing by ADB and/or other financing agencies. The TA will consist of three activities: (i) initial project identification and screening, (ii) subproject feasibility studies, and (iii) pilot project activities. The process of developing the proposals will include: (i) close interaction

with other major stakeholders, (ii) a promotional campaign to create awareness of the TA, (iii) background analysis of the enabling environment, and (iv) use of local expertise with knowledge in relevant areas.

1. Initial Project Identification and Screening

27. Several potential private sector-based NE and smallholder development projects have been identified in PNG and the Department of National Planning and Monitoring (DNPM) is currently engaged in identifying further opportunities. Initial activities will thus entail screening the project proposals identified so far while at the same time publicizing the availability of funding for feasibility studies and pilot projects under the TA Loan for other interested parties. This will be undertaken by a small Technical Assistance Screening and Management Unit (TASMU). The unit will include, among others, a project economist/financial analyst, an agronomist, an engineer, an environmental specialist, and a social specialist. This team will also be able to call on additional specialist consultant expertise as required such as institutional, marketing, and enterprise financing specialists. Appendix 3 presents core eligibility and selection criteria for both subproject feasibility studies and pilot project activities.

28. TASMU will undertake necessary background assessments relating to the investment environment for the priority agro-industry areas. Then, each proposal put forward to TASMU will be screened to establish its *prima facie* viability. For proposals that appear viable after the preliminary rapid appraisals, terms of reference (TOR) and cost estimates will be prepared for studies that will lead to a full technical, financial, social and economic assessment of each proposal. These proposals will then be assessed by a screening committee made up of representatives of ADB, the Government, and the private sector. Those proposals passing this scrutiny will then be approved for funding of subproject feasibility studies. Similarly, in the case of pilot project activities, for those proposals that have been positively assessed after the preliminary rapid appraisal, TASMU will prepare micro-investment plans and related cost estimates. These pilot project proposals will be recommended for immediate funding support and submitted to the screening committee for approval.

2. Subproject Feasibility Studies

29. It is expected that 40-50 feasibility study proposals will be presented to TASMU, and that of these about 20 will be approved by the screening committee. The studies approved may be simple supplementary activities to complete the required range of studies for already well developed proposals (i.e., environmental impact assessments, marketing studies, or social assessments) or they may be full feasibility studies looking at all aspects of a particular proposal. Part of the work to be undertaken for these activities will be project packaging for commercial or multilateral financing, making sure that all investments as well as the contributions of all proponents are properly identified and costed, and that financing opportunities are optimally allocated.

30. The subproject studies will be undertaken by teams of consultants suitably selected by TASMU, and work will be carried out under the supervision of this unit.

31. On the basis of 20 subproject studies costing on average \$150,000 each, \$3.0 million has been allocated for this component. Funds will be provided to the NEs on an initial grant basis. Subproject feasibility study costs exceeding \$100,000 will be repayable to the Government should the subproject be taken up for subsequent funding by ADB or any other potential funding source.

3. Pilot Project Activities

32. Funding will be available to finance small-scale pilot project activities to be undertaken by those NEs wishing to test a proposed technology or a set of institutional arrangements. Access to this funding will be on the basis of a counterpart contribution by the NE. The sum of \$1.5 million has been allocated to this component. The maximum single pilot project investment will be \$200,000. The NE will be required to contribute at least 33 percent of each pilot investment. Pilot activities will be selected on the basis that the investment undertaken and the subsequent follow-up investments that will be facilitated will have important social and economic benefits for the population in the area. All pilot activities will be financed on a grant basis.

C. Cost Estimates and Financing Plan

33. The total cost of the program is estimated at \$7.4 million, of which \$4.5 million (about 60 percent) is foreign exchange and the balance local currency equivalent. Detailed cost estimates are provided in Appendix 4. It is proposed that ADB provide a loan of \$5.9 million equivalent from its Special Funds resources to finance all of the foreign exchange and a portion of the local currency requirement of the TA. The proposed ADB loan will have a repayment period of 32 years including an 8-year grace period and will carry an interest charge of 1.0 per cent per annum during the grace period and 1.5 percent per annum thereafter. The Borrower will be the Independent State of Papua New Guinea. The remaining local currency cost of about \$1.5 million equivalent will be financed by the Government of PNG (\$1.0 million) and the NEs (\$0.5 million). A summary financing plan is shown in Table 1.

Table 1: Financing Plan
(\$ million)

Source	Foreign Exchange	Local Currency	Total Cost	Percent
ADB	4.5	1.4	5.9	80.0
Government	0.0	1.0	1.0	14.0
NEs	0.0	0.5	0.5	6.0
Total	4.5	2.9	7.4	100.0

V. IMPLEMENTATION ARRANGEMENTS

A. Executing Agency

34. The Executing Agency for the TA Loan will be DNPM which is responsible for development and investment planning in different sectors and is considered the appropriate agency to undertake this program, which is expected to involve investment in activities from aquaculture to roads. DNPM has been the counterpart agency of ADB during the past two and a half decades and is thus well experienced with ADB's procedures, guidelines, and project preparation requirements.

B. Organization and Management

35. In view of the need to attract private sector participants, the program management structure will be made as independent as possible. To this end, TASMU will be set up in an independent office.¹² The unit will be headed jointly by a consultant appointed under the TA and a senior appointee nominated by DNPM. Including those two, it will have a core staff of five domestic experts and one international expert. This expertise will be supplemented by internationally recruited consultants and domestic experts seconded from educational and research institutes, the private sector, and government line agencies as required. TASMU will be responsible for screening initial proposals for support under the TA and for recommending them to the screening committee for approval, preparing TOR for subproject feasibility studies, contracting out and supervising these studies once they have been approved, and preparing pilot project proposals for funding.

36. In particular, the initial project identification and screening process will include the following:

- (i) preliminary rapid appraisals by TASMU of all initial subproject proposals submitted to TASMU;
- (ii) preparation by TASMU of either (a) consultants' TOR and related cost estimates for carrying out full technical, financial, social, and economic assessments of those subproject proposals whose *prima facie* viability has been established as a result of the preliminary rapid appraisals and that are deemed by TASMU to merit a subproject feasibility study; or (b) micro-investment plans and related cost estimates for small-scale pilot projects that have been identified in the course of the preliminary rapid appraisals and that are recommended for immediate funding support; and
- (iii) review by the screening committee of all rapidly appraised subproject proposals referred to it by TASMU, and approval by the screening committee of (a) approximately 20 in-depth feasibility studies for funding, and (b) eight or more small-scale pilot project activities for funding.

37. TASMU will be supervised by the screening committee, which will include representatives from DNPM (the chair), ADB, DAL, the Rural Industries Council, the Investment Promotion Authority and the National Agriculture Research Institute. The screening committee will meet at least once every two months to review proposals screened and prepared by TASMU. Once a proposal for either a feasibility study or a pilot project is approved by the screening committee, it will be eligible for financing, under the supervision of TASMU.

38. The subproject feasibility study proponents and the pilot activity proponents will contribute to the implementation of the TA activities in various ways. For the feasibility studies, the proponents will provide access to any previous studies, subproject cost estimates, or background research that they may have undertaken on their own. They will also provide access to the proposed project site for TASMU and the subproject feasibility study consultants; organize stakeholder meetings with the local population for visiting consultant teams; provide logistical support in and around the subproject area; and, if necessary and feasible, provide logistical support in and around Port Moresby for the feasibility study teams.

¹² To be provided by the Rural Industries Council or the Investment Promotion Authority and to be agreed upon before loan effectiveness.

39. For the pilot project activities, proponents' contributions of 33 percent of the costs will consist of minor civil works, planting materials, labor, and/or technical input in the form of specialized expertise (for example in aquaculture, animal husbandry, or tree crop agronomy). It will also include any taxes and duties on equipment and materials purchased with TA loan proceeds when taxes and duties are not paid by the Government. In addition, as with the feasibility studies, the pilot project proponents will provide logistical support to TASMU during rapid rural appraisals, organize stakeholder meetings as required, and provide logistical support in and around the pilot project area.

40. With respect to smallholders, and NGOs' participation and consultation, TASMU, all throughout project implementation, will (i) identify specific mechanisms for smallholder participation in planning and implementation of both feasibility studies and pilot projects in the subproject areas, and (ii) promote NGO involvement in facilitating the formation of smallholders' associations, social mobilization, and awareness-raising activities in the subproject area aimed at effective smallholder participation in both feasibility studies and pilot project activities.

41. Supervision of the activities of TASMU will be through monthly reports submitted to the screening committee and quarterly reports submitted to the Secretary, DNPM and ADB. Overall implementation arrangements will be reviewed by DNPM and ADB one year after loan effectiveness. TOR for TASMU are provided in Appendix 5. A flow chart of program responsibilities and activities is shown in Appendix 6.

C. Implementation Schedule

42. The TA will be implemented over a 24-month period. Start-up activities will be recruitment and training of staff, and initial identification and selection of project proposals. Since some proposals have been identified, it is expected that subproject feasibility studies could begin within the first three months, after TOR have been prepared and consultants recruited. The main operations will take place over an 18-month period with a final 3 months at the end of the implementation period to finish off ongoing studies and prepare a final report and review. An implementation schedule is shown in Appendix 7. It is estimated that the implementation period will start in April 2002 and end in April 2004.

D. Procurement

43. Goods and services financed by ADB will be procured in accordance with ADB's *Guidelines for Procurement*. These will, in the main, consist of (i) office equipment and supplies, vehicle leasing, and other support requirements for TASMU and the subproject study consultants (a list of such requirements is in Appendix 8); and (ii) equipment, materials, vehicles, and/or very minor civil works for the pilot project component. Under the first category (consultant requirements), procurement of the various supply contracts will be done on a direct purchase basis. Under the second category (pilot projects), contract packages amounting up to \$100,000 or less will be procured through direct purchase, while contract packages above \$100,000 will be procured through international shopping. In addition, with respect to pilot projects, minor civil works might include such items as small wharfs and pontoons for aquaculture, fencing and water supply for cattle development, and minor feeder road upgrading to improve access to smallholder supplies. These activities will be undertaken by the NE proponents themselves and will be of such a small nature as to be unlikely to interest international or even domestic contractors. Any procurement for equipment and materials exceeding \$100,000 will be carried out by international shopping.

E. Consulting Services

44. All consulting services will be recruited in accordance with ADB's *Guidelines on the Use of Consultants*. Two types of consultants will be required for the TA: (i) domestic and international consultants to staff TASMU and (ii) consultants recruited for the subproject feasibility studies. A total of 90 person-months of consulting services will be required to staff TASMU. This will include 18 person-months of international and 72 person-months of domestic consultancy. International expertise will be required in project design and analysis, while the domestic expertise required will include agricultural development, infrastructure engineering, social analysis and impact assessment, and environmental analysis and impact assessment. (TOR for individual experts are provided in Section B of Appendix 5). This expertise will be provided through a firm recruited on the basis of international bidding. As the TA is being provided as a loan, selection of the consulting services will be the responsibility of the Government. In view of the complexity of the consulting package and the direct link to future lending from ADB, the Government has agreed that recruitment of consultants for TASMU will be undertaken in close cooperation with ADB. In this regard, ADB will assist with the shortlisting, ranking, and selection of the firm as well as with contract negotiations.

45. A total of 200 person-months (100 international and 100 domestic) with a wide range of expertise will be required to undertake the subproject studies, however, prior to the studies being identified it is not realistically possible to determine the exact expertise required. This will most likely include agricultural development, agroprocessing, livestock production, aquaculture, marketing, social impact assessment, environmental impact assessment, institutional arrangements, and financial analysis. However other disciplines may also be required. Moreover, most of the studies will be rather small in nature, and any individual study is unlikely to exceed \$500,000 in cost.

46. In view of this situation and in order to reduce the time needed to recruit consultants for subproject studies, TASMU will prepare a long list of international consulting firms with the expertise required for participation in the TA Loan (feasibility studies). Once TOR and cost estimates for the studies have been prepared, a short list of three firms will be asked to submit a short proposal and curricula vitae for the various experts being sought. These submissions will then be ranked by TASMU, and the first-ranked firm selected for contract negotiations. If these should prove unsuccessful, negotiations will proceed with the second-ranked firm.

F. Disbursement

47. Fees for consulting services will be paid by direct payment on the basis of certification by TASMU of services rendered. To ensure timely release of the funds required for pilot activities and incidental expenditures such as office equipment and vehicle hire, the Government will, immediately after the loan becomes effective, establish an imprest account in a reputable commercial bank. The initial amount for deposit into the imprest account will not exceed \$500,000 equivalent. Further payments will be made from and to this account for all eligible expenditures under the TA. Replenishment will be on the basis of documented liquidation of expenditures from the account. This will be done in accordance with ADB's *Loan Disbursement Handbook*. ADB's statement of expenditure procedure will be used for liquidating advance payments from the imprest account not exceeding \$50,000 equivalent.

G. Reporting Requirements

48. TASMU will be responsible for providing monthly summary reports on its operations to all the members of the screening committee. It will also be responsible for submitting quarterly reports on TA operations to the Secretary, DNPM and ADB. All subproject feasibility study reports and reports documenting the results of pilot project activities will be submitted to ADB, DNPM, and any other concerned agency as soon as they have been completed.

49. Prior to the completion of the first year of TA activities, a consolidated report on its results will be submitted as the basis for a full review by ADB and the Government of the TA activities and implementation arrangements. A final TA completion report covering all aspects of the TA and summarizing its experiences, successes, and failures will be submitted to ADB by DNPM within three months of the completion of all field work.

H. Social and Environmental Aspects

50. The subprojects to be examined during implementation of the TA Loan will entail a wide range of activities in all parts of the country. They will doubtless be associated with a number of social and environmental issues and concerns, both negative and positive. By including a social and gender dimension specialist and an environmental specialist as key members of the TASMU team, an effort has been made to ensure that (i) social and environmental concerns will be fully taken into account from the time of the formulation of detailed selection criteria to the completion of the feasibility studies, (ii) opportunities will exist to maximize potential social and environmental benefits and minimize social and environmental conflicts and costs, and (iii) the investment proposals will be tested on the basis of social and environmental parameters as well as technical and financial parameters. Moreover, the TA Loan provides the opportunity to recommend social and environmental mitigation measures for investments that might otherwise have proceeded on their own without adequate social or environmental safeguards. In this regard, an initial environmental examination or environmental impact assessment and a social impact assessment will be required for each subproject. Model TOR for environmental and social impact studies for individual subprojects have been included in Supplementary Appendix G.

VI. TECHNICAL ASSISTANCE LOAN JUSTIFICATION

A. Benefits

51. The TA Loan will provide the Government and the private sector with the opportunity to test a new modality in development financing that is meant to bring out the combined benefits of the large private sector (NE), the small private sector (smallholders and outgrowers) and the public sector (through infrastructure provision) working together to stimulate economic growth in the previously neglected rural areas of the country. The TA Loan will allow the preparation of investment packages that would not otherwise have been possible and the testing of such packages through full feasibility analysis. Bringing outside advice and scrutiny will allow the furtherance of new practices and concepts that may not have been considered by the status quo entities in either the public or the private sector and also will ensure a range of environmental and social safeguards that may not have been taken into account without an exogenous point of view or advice.

B. Risks

52. The main risks are the following: (i) there may not be sufficient interest on the part of the private sector (NEs) and the smallholders; (ii) the quality of work (feasibility studies and pilot project activities) may be less than satisfactory; and (iii) the expected follow-up financing may not be forthcoming. The issue of long-term sustainability of TASMU has also been raised.

53. The purpose of the TA Loan is to ensure project quality at entry. Sustainability of the quality assurance mechanisms like TASMU and the screening committee beyond the TA Loan implementation period is not essential. The process to be adopted should lead to the identification and selection of the most appropriate mechanism for coordination among major stakeholders, promotion of the concept/project opportunities, and up-front screening mechanisms.

54. The private sector has already expressed interest in the concept. Detailed preparation is the best way to screen and develop project proposals with their ownership. Agro-industry has potential in PNG. By organizing NE-smallholder partnerships, local law and order issues can be positively addressed. The TA Loan can only increase the interest of potential financiers. Regular review and close monitoring of its implementation will be undertaken to deal with potential difficulties to minimize the risks.

VII. ASSURANCES

A. Specific Assurances

55. The Government has given the following assurances, in addition to the standard assurances, which have been incorporated into the Loan Agreement:

- (i) The Government will ensure that technical personnel in its employ such as the staffs of research institutes and universities will make their services available to TASMU as required.
- (ii) The Government, through DNPM and TASMU, will ensure that (a) environmental concerns are fully taken into account from the time of the formulation of selection criteria to the completion of the subproject feasibility studies; (b) opportunities exist to maximize potential environmental benefits and minimize environmental conflicts and costs; and (c) any investment proposal resulting from a subproject feasibility study is tested on the basis of environmental parameters as well as technical and financial parameters.
- (iii) All environmental mitigation measures identified as the result of a subproject feasibility study or pilot project investment plan will be incorporated into the project design and followed during project construction, operation, and maintenance in consultation with the Government's Office of Environment and Conservation and in accordance with ADB's environmental guidelines.
- (iv) Any land acquisition and resettlement issues that arise will be dealt with in accordance with ADB's Policy on Involuntary Resettlement and ADB's *Handbook on Resettlement*.

B. Conditions for Loan Effectiveness

56. The following conditions will need to be met before the loan can be declared effective:

- (i) The Government must have appointed a PNG national with both public and private sector experience to act as joint head of TASMU.
- (ii) The Government must have entered into an agreement with a private sector or quasi-private sector entity acceptable to ADB under which that entity agrees to act as host to TASMU.

VIII. RECOMMENDATION

57. I am satisfied that the proposed loan would comply with the Articles of Agreement of ADB and acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve the loan in various currencies equivalent to Special Drawing Rights 4,616,000 to the Independent State of Papua New Guinea for Nucleus Agro-Enterprises, with a term of 32 years, including a grace period of 8 years, and with an interest charge at the rate of 1 percent per annum during the grace period and 1.5 percent per annum thereafter, and such other terms and conditions as are substantially in accordance with those set forth in the draft Technical Assistance Loan Agreement presented to the Board.

MYOUNG-HO SHIN
Vice-President

22 November 2001

APPENDIXES

Number	Title	Page	Cited on (page, para)
1	Technical Assistance Loan Framework	16	1, 4
2	External Assistance to the Agriculture Sector	18	4, 17
3	Core Eligibility and Selection Criteria for Subproject Feasibility Studies and Pilot Project Activities	21	7, 27
4	Cost Estimates and Financing Plan	24	8, 33
5	Terms of Reference for the Technical Assistance Screening and Management Unit	25	10, 41 11, 44
6	Flow Chart of Program Responsibilities and Activities	32	10, 41
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SUPPLEMENTARY APPENDIXES
(Available Upon Request)

Number	Title
A	The Nucleus Enterprise Model
B	The PNG Tree Crops Sector
C	High Value Food Crops Development
D	Initial Social Analysis
E	Profiles of Nucleus Enterprises
F	Structure of the Financial Market in PNG
G	Model Terms of Reference for Environmental and Social Impact Assessment

TECHNICAL ASSISTANCE LOAN FRAMEWORK

Design Summary	Performance Targets	Monitoring Mechanisms	Assumptions/Risks
<p>A. Goals</p> <p>To identify, develop, and support new arrangements for the development of commercially oriented agriculture in Papua New Guinea through private/public partnership and smallholder development</p>	<p>An expansion of commercial agriculture using new and expanded modalities based on the concept of a private sector NE (NE) serving outgrowers and smallholders</p>	<p>Direct monitoring and observation</p> <p>Provincial statistics</p> <p>Economic reports</p> <p>Crop export statistics</p> <p>Social surveys</p>	
<p>B. Objectives/Purpose</p> <p>Assess the feasibility of a series of development packages comprising the NE itself, associated smallholder development, and necessary infrastructure and prepare suitable proposals for funding.</p>	<p>A series of development packages comprising NEs, associated smallholder development, and supporting infrastructure are prepared and assessed for possible project funding</p>	<p>Technical Assistance Screening and Management Unit (TASMU) and Screening Committee reports</p> <p>Asian Development Bank (ADB) review missions</p> <p>Consultants' reports</p>	<p>Private sector or quasi-private sector entities exist that are willing to invest in NE development.</p> <p>Feasible enterprises and development packages can be identified.</p>
<p>C. Outputs</p> <p>1. Properly packaged and assessed subprojects are prepared for possible financing by ADB or other funding agencies.</p>	<p>About 20 subproject feasibility studies undertaken out of 30-40 initial study proposals</p>	<p>Consultants' reports</p> <p>ADB reviews</p> <p>Ministry of Planning and Monitoring supervision</p>	<p>Viable subproject proposals are presented to the screening committee by private, quasi-private, or public sector entities.</p>

<p>2. Viable and replicable models for NE and smallholder development are devised.</p>	<p>Models are devised that resolve issues of sustainable funding for NEs, and funding for smallholder development and rural infrastructure maintenance.</p>	<p>Review of the subprojects prepared and approved.</p> <p>Pilot project activities are assessed for replication.</p>	<p>Institutional recommendations made by the consultants are ultimately incorporated into government practice.</p>
<p>D. Activities</p> <p>1. Establishment and operation of TASMU</p> <p>2. Feasibility studies</p> <p>3. Pilot activities</p>	<p>Inputs</p> <p>18 person-months of international expertise plus 72 person-months of domestic expertise plus support costs</p> <p>200 person-months of international and domestic expertise for a range of studies including technical feasibility, social impact, environmental impact, marketing and financial analysis</p> <p>\$1,000,000 for pilot project activities for potential NEs, \$500,000 from NEs as counterpart contributions</p>	<p>Consultants' progress reports</p> <p>ADB review missions</p> <p>Consultants' progress reports</p> <p>ADB review missions</p> <p>Consultants' progress reports</p> <p>ADB review missions</p>	<p>Competent consultants recruited</p> <p>Support provided by Department of National Planning and Monitoring</p> <p>Competent consultants recruited and provided with guidance by TASMU</p> <p>NEs wishing to participate can provide counterpart funds.</p>

EXTERNAL ASSISTANCE TO THE AGRICULTURE SECTOR

Table A2.1: ADB-Approved Loans to the PNG Agriculture Sector

Loan No	Project name	Approved amount (\$'000)	Date of Approval
290-PNG(SF)	East Sepik Rural Development	7,740	21 Dec 1976
656-PNG(SF)	Cape Rodney Smallholder Development	15,000	24 Nov 1983
784-PNG(SF) 785-PNG	West New Britain Smallholder Development	15,900 14,000	14 Aug 1986
853-PNG(SF) 852-PNG	East New Britain Smallholder Development	5,000 5,000	3 Nov 1987
997-PNG(SF) 998-PNG	Agriculture Sector Program	56,000 24,000	12 Dec 1989
1110-PNG(SF)	Agricultural Research and Extension	22,000	29 Oct 1991
1652-PNG	Smallholder Support Services Pilot Project	7,600	10 Dec 1998
	Total	172,240	

Table A1.2: ADB-Funded Technical Assistance to the PNG Agriculture Sector

TA No.	TA Name	Approved Amount (\$)	Date of Approval
150-PNG	East Sepik Agricultural Development	300,000	14 Aug 1975
479-PNG	Cape Rodney Agricultural Development	190,000	31 Aug 1982
627-PNG	Rural Development	350,000	26 Sep 1984
666-PNG	Livestock Sector Review	300,000	22 Jan 1985
694-PNG	Agricultural Marketing Support Services	252,000	8 Aug 1985
790-PNG	Smallholder Oil Palm Productivity	300,000	14 Aug 1986
814-PNG	New Ireland Smallholder and Plantation Development	75,000	3 Nov 1986
1237-PNG	Review of Commodity Stabilization Fund Schemes	160,000	12 Dec 1989
1238-PNG	Review of Agricultural Taxation and Tariff Systems	120,000	12 Dec 1989
1239-PNG	Agricultural Credit and Rural Savings Study	340,000	12 Dec 1989
1240-PNG	Strengthening DAL Farm Management Information System	500,000	12 Dec 1989
1343-PNG	Central Province Smallholder Rubber Development	250,000	27 Jul 1990

TA No.	TA Name	Approved Amount (\$)	Date of Approval
1344-PNG	Smallholder Rubber Development in Selected Provinces	250,000	27 Jul 1990
1375-PNG	Agricultural Research and Extension	56,500	19 Sep 1990
1565-PNG	Horticulture Development	250,000	13 Sep 1991
1587-PNG	Agricultural Research and Extension (Phase 2)	436,000	29 Oct 1991
1642-PNG	Collingwood Bay and Kokoda Smallholder Development	250,000	2 Jan 1992
2898-PNG	Restructuring Plan for DAL	150,000	21 Oct 1997
2960-PNG	Improving Provincial Agricultural Support Services	150,000	22 Dec 1997
	Total	4,059,500	

Table A2.2: Current External Assistance: Non ADB

Agency	Project Name	Description	Amount (million)	Start	Finish
AusAID	Contribution to NARI	Support for Establishing NARI	A\$13.5	1998	2002
AusAID	Quarantine Support Program	Improve Capacity of National Agriculture Quarantine Inspection Authority	A\$9.5	1995	2000
AusAID	ACIAR R&D	Research in Resource Planning, Agriculture, Fisheries and Capacity Building	A\$8.5	1998	2003
AusAID	Bougainville Agriculture	Cocoa and Copra Rehabilitation and Planting	n.a.	n.a.	n.a.
ACIAR	ADP/1994/028	Indigenous Food Crops Genetic Diversity	A\$0.3	1996	2000
ACIAR	ASEM/1996/044	Agricultural Development and Land Management Planning	A\$0.6	1998	1999
ACIAR	ASEM/1997/118	Monitoring and Evaluation of Cocoa/Coconut Research and Development	A\$0.2	1998	2000
ACIAR	CS1/1996/140	Biological Threats - Sugar	A\$0.8	2000	2000
ACIAR	CS2/1994/043	Taro Genetic Research	A\$1.0	1998	2001
ACIAR	CS2/1996/225	Fruit Fly Quarantine Systems	A\$1.8	1998	2001
ACIAR	PHT/1995/136	Cocoa Product Quality Assessment	A\$1.0	1998	2001

Agency	Project Name	Description	Amount (million)	Start	Finish
ACIAR	LWR1/1995/126	Farm Systems Sustainability	A\$0.1	1997	2001
World Bank	Drought Assistance	Rehabilitation and Assistance	US\$5.0	1998	2000
World Bank	Oro Smallholder Oil Palm	Support for Oil Palm Industry Corporation Extension and Smallholder Plantings	US\$27.0	1992	2001
EU	Bougainville Agricultural Rehabilitation Program	Repairing Transport Infrastructure, Training, Planning Agricultural Rehabilitation	n.a.	n.a.	n.a.
EU	Taro Beetle	Plant Breeding	n.a.	n.a.	n.a.
EU	Coffee Industry Council support	Various Support	n.a.	n.a.	n.a.
EU	Agricultural Diversification		n.a.	n.a.	n.a.
NZ	Gender Equity FPDC	Promotes Role of Women in Food Production and Marketing	NZ\$0.3	2000	n.a.
NZ	Women in Agriculture Development	Unit in DAL	NZ\$0.5	2000	n.a.
FAO	Community Extension Services	Effective Community-based Services	n.a.	n.a.	n.a.
FAO	Reform of DAL	Legal and Institutional Structure	n.a.	n.a.	n.a.
FAO	Agricultural Data Collection and Planning	Pilot Survey	n.a.	n.a.	n.a.
Japan	Agricultural Development Project		n.a.	n.a.	n.a.
UNICEF FAD/FAO	Food Security		n.a.	n.a.	n.a.

ACIAR = Australian Centre for International Agricultural Research, AusAID = Australian Agency for International Development, EU = European Union, FAO = Food and Agriculture Organization, IFAD = International Fund for Agricultural Development, n.a. = not applicable, NZ = New Zealand, UNICEF = United Nations Children's Fund.

**CORE ELIGIBILITY AND SELECTION CRITERIA
FOR SUBPROJECT FEASIBILITY STUDIES AND PILOT PROJECT ACTIVITIES**

1. Presented below are core eligibility and selection criteria for (i) initial project screening by the Technical Assistance Screening and Management Unit (TASMU) and (ii) subsequent selection of subproject feasibility studies and pilot projects by TASMU and their approval by the screening committee. These may be refined or added to by TASMU with the approval of the screening committee during the course of the implementation of the Technical Assistance (TA) Loan.

A. Eligibility and Selection Criteria for Subproject Feasibility Studies

2. TASMU will not recommend any subproject proposal given an initial project screening under Part A of the TA to the screening committee for its approval to conduct a subproject feasibility study (SFS) unless the proposal meets the following core eligibility and selection criteria:

- (i) TASMU must have identified a nucleus enterprise (NE) with sufficiently strong financial, technical, and managerial capacities to carry out the subproject. The NE may be a company or registered commercial entity or a nongovernment organization (NGO) or similar nonprofit charitable organization, and may be based in Papua New Guinea (PNG) or abroad. Should such a NE not exist at the time of recommending the particular subproject proposal to the screening committee, TASMU must have identified the party or parties proposing to form the NE, such party or parties to have all the financial, technical, and managerial capacities that TASMU deems necessary to establish and operate the NE.
- (ii) The estimated total amount of the planned investment that is the subject of the SFS, including investments relating thereto (NE, smallholder and public sector infrastructure), must be at least \$1 million equivalent.
- (iii) The proposal to conduct a SFS should refer to a NE system wherein a NE will provide marketing outlets and other technical and financial support to smallholder agricultural production. This may include different typologies: (i) a NE system comprising a commercial estate (e.g., plantation) and related smallholders/outgrowers, (ii) a NE system comprising a NE owned and operated by an NGO or other similar nonprofit charitable organization, or (iii) a NE system comprising a NE owned and operated by a group of smallholders. Investment proposals relating to stand-alone NEs (e.g., a processing plant or a plantation without outgrowers) may also be considered when there are strong and identifiable potential benefits in terms of employment and poverty reduction for the surrounding population.
- (iv) TASMU must have reasonable cause to believe that as a result of the preliminary rapid appraisal undertaken by TASMU under Part A of the TA the investment proposal is *prima facie* economically and financially viable and that any NE, associated smallholder enterprise, and/or supporting infrastructure financed as a result of the SFS can be operated and maintained in a sustainable manner.

3. Whenever requesting approval of the screening committee to have a SFS carried out, TASMU shall ensure that the SFS provides for the following:

- (i) a business plan, comprising a financing plan including operation and maintenance estimates, potential/expected sources of capital and recurrent funds, and all other cost and revenue estimates required for a commercially viable private sector investment;
- (ii) a study or studies on identifiable social and economic benefits for the smallholders/outgrowers and the surrounding population;
- (iii) a study or studies on the environmental and social impacts of the subproject if these have not already been previously and satisfactorily addressed in accordance with the Asian Development Bank's (ADB) environmental guidelines; and
- (iv) study or studies on land use, land tenure and possible resettlement issues if these have not already been satisfactorily addressed in accordance with ADB's environmental guidelines.

4. Whenever the screening committee gives its approval for a SFS to be carried out, TASMU, before engaging consultants to commence work it, must enter into a memorandum of understanding (MOU) with the proponent/s. In that MOU, the proponent/s must agree that if the SFS leads to investment financing for a NE by ADB or any other funding source, as soon as the financing arrangements become effective, that portion of the amount of the TA provided by the Borrower out of the proceeds of the Loan that exceeds the equivalent of \$100,000 will be reimbursed to the Borrower.

B. Eligibility and Selection Criteria for Pilot Project Activities

5. TASMU will not recommend any pilot project to the screening committee for funding under Part C of the TA unless it meets the following core eligibility and selection criteria:

- (i) The party or parties offering to implement the pilot project must be incorporated as a company or registered commercial entity, or be an NGO or similar nonprofit charitable organization, based either in PNG or abroad, such party or parties to have been assessed by TASMU as having sufficiently strong financial, technical, and managerial capacities.
- (ii) The pilot project must involve a known and tested technology.
- (iii) The pilot project must have readily identifiable social and economic benefits for the rural population surrounding the proponent's pilot venture. In this regard, endorsement of the proposed pilot activity by a suitable representation of the local community should be sought by the proponent before submission of the proposal to TASMU.
- (iv) The pilot project must not entail any activity that could prove damaging to the environment. Clearance to this effect should be obtained during the preliminary rapid appraisal by TASMU.

- (v) The pilot project must not entail any activity that could have negative social impacts. Clearance to this effect should be obtained during the preliminary rapid appraisal by TASMU.
- (vi) The party or parties that will implement the pilot project must be able to provide to TASMU satisfactory evidence of commitment to contribute, in cash or in kind, at least 33 percent of the total cost of the pilot project, and must have signed a commitment to provide the agreed inputs on a timely basis.
- (vii) The pilot project, including the 33 percent contribution of the proponent/s, will not cost more than \$200,000 equivalent, making the maximum investment out of the proceeds of the Loan not greater than \$132,000 equivalent.

6. After approval of the micro-investment plan for a pilot project has been given by the screening committee, TASMU will not authorize the release of any proceeds from the loan account in respect of the pilot project until such time as an agreement has been entered into between TASMU on behalf of the Borrower and the NE or subproject proponent/s. Such agreement, which shall be in form and content satisfactory to ADB, will include, but not necessarily be limited to, provisions relating to (i) the overall investment and activities program of the pilot project, (ii) the manner in which financial accounts will be submitted and auditing requirements met, (iii) the quarterly reporting requirements, (iv) the organization for pilot project implementation/responsibilities, (v) detailed cost estimates, and (vi) the project work plan.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Foreign Exchange	Local Currency	Total Cost
A. Asian Development Bank Financing			
1. TASMU			
a. Consultants' Remuneration and Per Diem ^a	450	432	882
b. International and Local Travel	80	40	120
c. Administrative Expenses/Operational Costs ^b	30	20	50
d. Equipment and Vehicle Hire	90	10	100
2. Subproject Studies ^c			
a. Consultant Remuneration and Per Diem ^d	2,000	500	2,500
b. International and Local Travel	240	60	300
c. Reports and Communications	30	20	50
d. Equipment and Vehicle Hire	135	15	150
3. Equipment and Materials for Pilot Activities ^e	900	100	1,000
4. Contingencies (about 15 percent)	590	158	748
Subtotal (A)	4,545	1,355	5,900
B. Counterpart Financing (Government and Private Sector)			
I. Government Financing			
1. Consulting Services ^f	0	500	500
2. Counterpart Staff ^g and National Experts ^h	0	200	200
3. Office Accommodation	0	50	50
4. Travel and Per Diem for Counterpart Staff	0	70	70
5. Equipment, Vehicle Hire, Reports, Communications ⁱ	0	30	30
6. Workshop and Public Awareness	0	30	30
7. Contingencies (about 15 percent)	0	120	120
Subtotal (B.I)	0	1,000	1,000
II. Private Sector Financing			
1. Counterpart Pilot Activities	0	400	400
2. Equipment and Materials ^j	0	100	100
Subtotal (B.II)	0	500	500
Total (A plus B)	4,545	2,855	7,400

TASMU = Technical Assistance Screening and Management Unit.
Source: Staff estimates.

^a One international consultant and four domestic consultants for 18 months each.

^b Including costs for external auditing, reports, and communications.

^c Estimated 20 studies averaging \$150,000 per study.

^d 200 person-months consisting of 100 person-months of international expertise and 100 person months of domestic expertise.

^e 67% of total pilot activity cost.

^f Consisting of duties and taxes on consulting services.

^g Including the counterpart TASMU head/administrator, possibly a senior appointee of the Government.

^h For example, university and research institute personnel seconded to TASMU.

ⁱ Including duties and taxes on equipment, vehicle hire, and communications.

^j Including duties and taxes on equipment and materials.

TERMS OF REFERENCE FOR THE TECHNICAL ASSISTANCE SCREENING AND MANAGEMENT UNIT

A. General

1. As outlined in the implementation arrangements, approval for funding of a series of feasibility studies and PPs to be financed under the Technical Assistance (TA) Loan will be the responsibility of a screening committee composed of representatives of the Asian Development Bank, the public sector, and the private sector. Proposals presented to the committee will consist of (i) subproject feasibility study (SFS) proposals, and (ii) pilot project (PP) proposals. Prior to presentation of proposals to the committee, the Technical Assistance Screening and Management Unit (TASMU) will be responsible for the initial screening of all proposals, for packaging SFS and PP proposals into "bankable" subprojects and preparing Terms of Reference (TOR) for the feasibility studies, for assessing and costing PP proposals, and for making recommendations on approval to the committee. Once funds are approved by the committee, TASMU will be responsible for (i) consultant recruitment, (ii) supervision of the SFS, and (iii) monitoring implementation of PP activities.

2. TASMU will be staffed by a full-time team of six. Five of these will be consultants (one international and four domestic) with the following expertise: project design and analysis, agriculture, engineering, social impact assessment and environmental impact assessment. The sixth member of TASMU will be a senior appointee nominated by the Department of National Planning and Monitoring, who will function jointly as team leader for the unit in conjunction with the project analyst/team leader. TASMU will also have the ability and funding to call upon specialist international and domestic expertise to assist with specific subjects.

3. Each SFS or PP proposal submitted to TASMU will be examined by the team during a short field visit, during which a preliminary rapid appraisal and a preliminary social and environmental impact assessment will be carried out. This will include an initial assessment of the financial viability of the proposed project, the technology being proposed, quantifiable costs and benefits, marketing prospects, supporting infrastructure requirements, social benefits, and potential environmental concerns. Institutional arrangements and requirements will also be examined, as will the degree of involvement or sponsorship of the provincial and/or national government. TASMU team will also examine how to maximize the positive social impact of the proposal and will provide advice or assistance as to how to formulate or reformulate the proposal so that it meets a predetermined set of selection criteria: (i) *prima facie* economic and financial viability, (ii) positive social impact and poverty reduction potential, (iii) no significant potential environmental impacts, (iv) sustainability, (v) replicability (Appendix 3)¹.

4. For SFS proposals that meet the selection criteria and appear to be promising development initiatives, TOR and cost estimates will be prepared and shortlists of consultants will be requested from long-listed consulting firms. For PP proposals that meet the selection criteria, memoranda of agreement between TASMU and the NE on PP implementation, costs, and workplan will be prepared (see Appendix 3). Should a proposal not meet the selection criteria and thus not be recommended for further financing, a full explanation will be provided for the screening committee.

¹ Detailed selection criteria will be prepared by TASMU at the inception of the TA and approved by the screening committee.

5. Full documentation on nonqualifying proposals, qualifying SFS proposals, and qualifying PP proposals will be presented to the screening committee once every two months.

6. Once appraised proposals have been approved by the screening committee, TASMU will select consultants, supervise the implementation of the feasibility studies or the pilot investments, and report periodically on the success of implementation to ADB, the Government, and the screening committee.

B. Specific

1. Project Analyst/Team Leader (international, 18 person-months)

7. The project analyst/team leader will be a senior development specialist with at least 15 years of experience in the development, preparation, and analysis of projects for multilateral financing. His/her duties will include:

- (i) joint overall management of TASMU together with the government-appointed counterpart team leader, including the physical establishment of TASMU and the day to day logistics of its management;
- (ii) initiation and organization of a publicity campaign and series of workshops to bring the existence of the TA Loan and TASMU to the attention of the private sector, the nongovernment development sector, and the provincial governments in the country;
- (iii) establishment, together with the counterpart team leader and members of the screening committee, of operating procedures for TASMU;
- (iv) finalization, along with other members of TASMU and members of the screening committee, of detailed selection criteria for qualifying SFS and PP proposals;
- (v) scheduling of initial rapid appraisals of SFSs and PP proposals;
- (vi) designation of TASMU staff and additional expertise from other agencies for rapid SFS and PP proposal appraisals;
- (vii) participation in rapid appraisals with a view to assessing the overall financial and economic viability of investment projects outlined in the SFS proposals, advising on the reformulation of proposals to maximize social impact and reviewing institutional arrangements;
- (viii) supervising the formulation of TOR for feasibility studies for SFS proposals;
- (ix) supervising the formulation of bills of quantity and work and financing plans for full PP proposals;
- (x) together with the counterpart team leader, presenting the findings of TASMU to the screening committee;
- (xi) together with the counterpart team leader, recruiting and supervising the work of feasibility study consultants and experts from national agencies; and

- (xii) together with the counterpart team leader, reporting on the activities of TASMU and results of feasibility studies and PP investments to all concerned parties.

2. Counterpart Unit Head/ Administrator (domestic 24 person months Government-financed)

8. The counterpart unit head will be a respected citizen of Papua New Guinea (PNG) with experience in both the public and private sector who will be appointed by the Government. He/she will jointly manage TASMU along with the Project Analyst/ Team Leader. His/her role will emphasize, but not be limited to, administrative and managerial functions as opposed to the project analyst/team leader who will have a more technical role. His/her duties will include:

- (i) working with the project analyst/team leader to establish TASMU and undertake a promotional campaign among the private sector, the nongovernment development sector, and the provincial governments;
- (ii) providing full backup and logistics support to the TASMU consultant team;
- (iii) providing advice and guidance to the consultant team on investment conditions in PNG; the institutional situation; developments in public sector policy; and developments in financial policy, especially with regard to rural enterprise financing;
- (iv) liaising closely with private sector entrepreneurs, church and/or social groups, commodity corporations and/or agencies and other NGOs interested in promoting rural nucleus enterprises (NEs) to ensure that they understand the opportunities provided by the TA, and assist them in making initial presentations;
- (v) arranging for specialized experts from universities, research institutes, commodity corporations, and private sector entities to be seconded to TASMU to assist with the rapid appraisal of project proposals;
- (vi) serving as secretary for the screening committee and arranging for, scheduling and organizing sessions of the committee;
- (vii) negotiating, on behalf of the Government, with prequalified consulting firms being recruited to undertake feasibility studies; and
- (viii) assisting the project analyst/team leader with monitoring and reporting functions, including liaison with ADB.

3. Agriculture Specialist (domestic: 18 person-months)

9. The agriculture specialist will be an experienced professional agriculturalist with at least 10 years of experience working in agriculture in PNG, with experience in a range of crops, particularly tree crops. His/her role will be to assess the *prima facie* technical feasibility of agriculture-based subproject proposals; assess the costs and benefits of agricultural development, agro-industry and agroprocessing proposals; and review the market prospects of agriculture-based outputs. His/her duties will include:

- (i) participation in finalizing screening criteria for SFS and PP proposals;
- (ii) undertaking a *prima facie* review of the technical aspects of subproject and PP proposals to ensure that there are no serious, readily identifiable climatic, soil, agronomic, or physiographic constraints to their implementation;
- (iii) reviewing the institutional and structural arrangements being proposed including the linkages between NEs and smallholders;
- (iv) identifying data and information gaps that will need to be filled either prior to rapid field appraisal or during subsequent feasibility studies;
- (v) identifying and quantifying returns to smallholders and determining how they can be maximized;
- (vi) providing a "first cut" assessment of the proposed development costs, estimated benefits, and implementation arrangements for the proposed subprojects or PPs;
- (vii) assessing supporting infrastructure requirements;
- (viii) assessing the need for and feasibility of secondary processing associated with the project proposals;
- (ix) participating in rapid appraisals;
- (x) formulating TOR for the agricultural aspects of feasibility studies; and
- (xi) supervising the implementation of feasibility studies.

4. Social Impact Assessment Specialist (domestic: 18 person-months)

10. The social impact assessment specialist will have had 10 or more years of experience working in the rural areas of PNG in a variety of environments, preferably with involvement in agricultural development projects of one type or another. He/she will be required to identify the potential social (including gender) benefits and costs (including gender impacts) of a project proposal and to provide advice on how to maximize positive impact and minimize negative impacts. Supplementary Appendix G provides additional guidance (TOR) for social impact assessment in subproject feasibility studies. His/her duties will include:

- (i) preparing a social and economic profile of smallholders (the primary target population of the TA) in selected subproject areas;
- (ii) preparing profiles of laborers working in selected NEs (subprojects), including wages, benefits, living situation, and needs;
- (iii) Identifying the distinct needs in terms of access to land, water, roads, credit, market, extension services, etc.; identifying the demands of smallholders (female/male); and laborers (female/male) in the NEs;
- (iv) identifying the number of smallholders presently attached to the NE (subproject) as suppliers of raw materials and/or providing labor to the NE;

- (v) making comparative analyses of the monthly or yearly incomes of smallholders from tree crops, food crops, livestock, and fishing with the income from food gardens;
- (vi) identifying the extent to which smallholders depend on forest resources for their livelihood (What would be the likely impact of cutting forests for expansion of NEs and the expansion of tree crop production?);
- (vii) identifying what categories of forest would be cleared for expansion of NEs and expansion of smallholders plots (Approximately what percentages of the forest would be in the primary and secondary categories?);
- (viii) identifying infrastructure needs of the subprojects (roads, bridges, processing plants, etc.); identifying whether roads and other infrastructure are needed for expansion of NEs/plantations and/or for access to smallholder plots;
- (ix) identifying whether infrastructure and road construction for NEs would require land acquisition; identifying whether it would be customary land or state land (If customary land, acquisition were required for road construction to get access to a NE, then what types of compensation would be provided to the community?); identifying whether the community would like to get in-kind contributions in terms of community social infrastructure or cash compensation; if feeder roads are needed for smallholders to market their produce, exploring whether the community will contribute customary land;
- (x) Identify whether a NE would lease or rent land and water bodies; given the previous experience in PNG related to land lease disputes, identifying better arrangements between smallholders and the NE for expansion of the NE; exploring whether renting of land by the NE would be the better option;
- (xi) identifying whether smallholders in a subproject area have their own association (If so, what is the role of the association?);
- (xii) preparing social criteria, which should be included in the criteria for selecting NEs and private companies for smallholder development;
- (xiii) documenting the gender division of food labor for food gardens, food crops, cash crops, tree crop production, commercial production of beef, and aquaculture (How will the Project alter the traditional gender division of labor?);
- (xiv) Identifying the extent to which the introduction of cash crops, commercial beef production and/or aquaculture would have an impact on family labor and time allocation for food gardens, and whether the expansion of tree crop production would decrease availability of land for food gardens;
- (xv) identifying whether men and women from a household receive identity cards from the NE for selling of cash crops, or only men receive them;
- (xvi) identifying how the Project could strike a balance between maintaining adequate land for family food gardens as well as developing agro-industries; and

- (xvii) determining if there are people in the subproject area who are particularly at risk, particularly shifting cultivators, fisherfolk, agro-industrial workers whose health is at risk (Will some group of people have to be relocated (e.g., to plantation and agro-industry sites?).

5. Environmental Specialist (domestic: 18 person-months)

11. The environmental specialist will have had at least 10 years of experience working in environment survey or impact assessment in PNG and will be familiar with the critical environmental issues in all parts of the country. He/she will be responsible for providing a preliminary assessment of the potential environmental impact of subproject and PP proposals and delineating the need for mitigation measures. Supplementary Appendix G provides additional guidance (TOR) for environmental assessment in SFS. His/her duties will include:

- (i) participating in the formulation of SFS and PP proposal selection criteria;
- (ii) analyzing subproject and PP proposals to provide a preliminary assessment of whether the project would impinge upon critical environmental areas or would have negative environmental impacts that would need major mitigation measures;
- (iii) working with other TASMU consultants and the subproject proponents to determine step-by-step activities involved in subproject implementation and operation to identify possible environmental concerns;
- (iv) undertaking field surveys in and around possible subproject areas to identify critical sites where special environmental measures may need to be taken during subproject implementation and operation (for example critical water bodies or areas of primary forest);
- (v) participating in rapid field appraisals;
- (vi) preparing the TOR for environmental impact evaluation and assessment and preparing monitoring guidelines during subproject feasibility studies; and
- (vii) supervising feasibility study consultants engaged in environmental impact assessment work and the formulation of mitigation and monitoring measures.

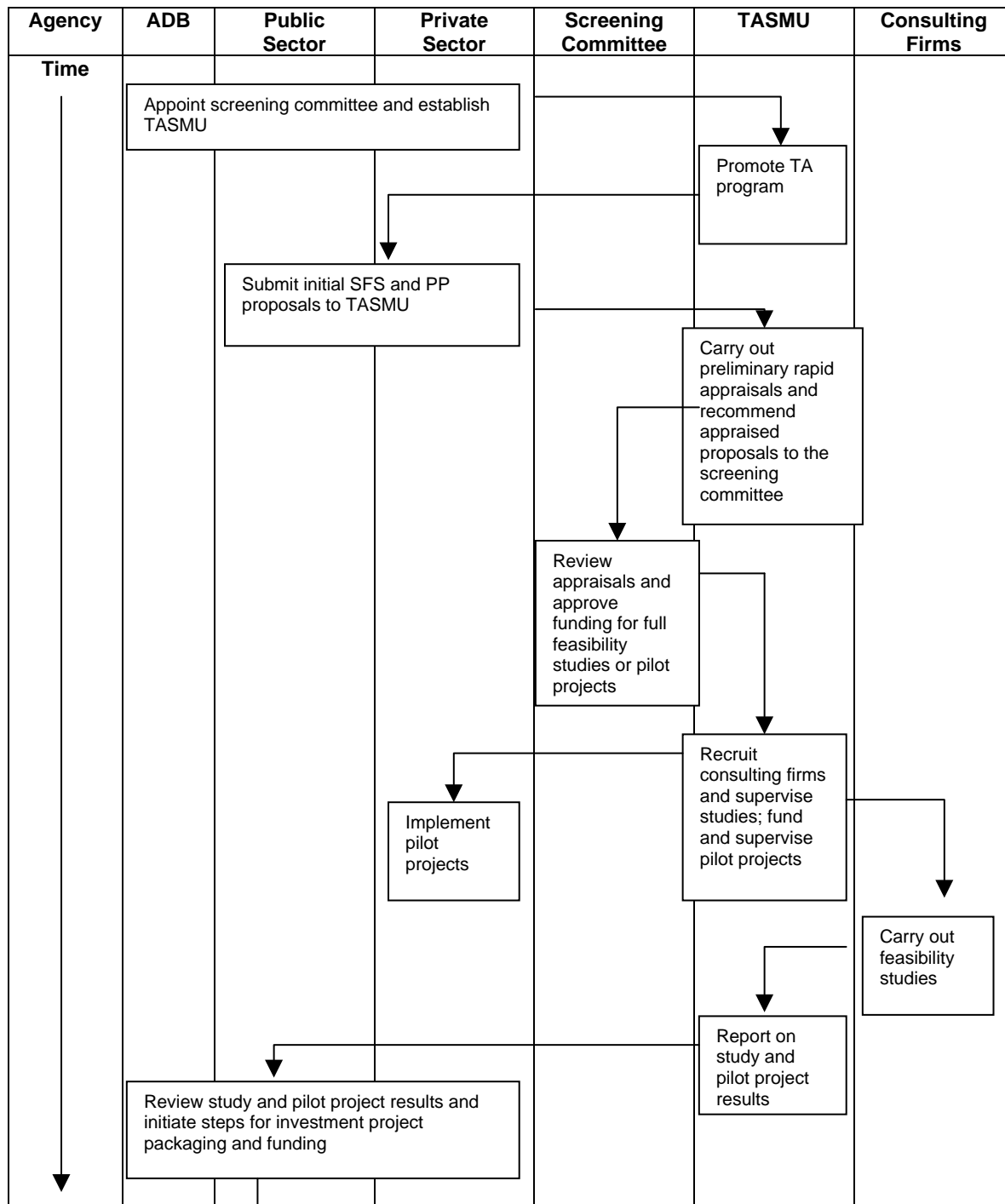
6. Infrastructure Engineer (domestic: 18 person months)

12. The infrastructure engineer will be a fully qualified civil engineer with at least 10 years of experience in the design, construction, and maintenance of a wide range of infrastructure in different parts of the country. This will preferably include infrastructure serving the rural areas. His/her duties will include:

- (i) participating in the formulation of selection criteria for SFS and PP proposals;
- (ii) assessing the infrastructure support needs of the various subproject proposals and estimating preliminary capital construction as well as maintenance costs;

- (iii) reviewing various design options with a view to reducing capital costs and maintenance requirements;
- (iv) reviewing possible institutional arrangements for infrastructure construction and maintenance including private sector involvement, especially in view of national and provincial budgetary constraints;
- (v) participating in rapid field appraisals, focusing in particular on the need for subprojects to serve a wide number of beneficiaries and also to have least-cost access to markets;
- (vi) preparing TOR for supporting infrastructure design and costing during feasibility studies for the various subprojects; and
- (vii) supervising the implementation of the engineering aspects of feasibility studies and working with consultants from other disciplines to provide advice on infrastructure requirements and costs.

FLOW CHART OF PROGRAM RESPONSIBILITIES AND ACTIVITIES



Investment Projects Packages: Potential Funding Sources

NEs' Own Funds	ADB PSG* Funds	ADF/OCR Loan Funds	Commercial Financiers Funds	Multilateral Bilateral Funds
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ADF=Asian Development Fund, NE=nucleus enterprise, OCR=Ordinary Capital Resources, PP=pilot project, PSG=Private Sector Group, SFS=subproject feasibility study, TASMU=Technical Assistance Screening and Management Unit, TA=technical assistance

IMPLEMENTATION SCHEDULE

	April 2002	Year 1				Year 2				April 2004
Quarter	First	Second	Third	Fourth	First	Second	Third	Fourth		
Activity										
Establish Technical Assistance Screening and Management Unit										
Promotional Activities										
First Meeting of Screening Committee										
Establish Detailed Selection Criteria										
Long Listing of Consulting Firms										
Accept and Analyze Proposals										
Undertake Rapid Appraisals										
Submit Results to Screening Committee										
Recruit Feasibility Consultants										
Supervise Feasibility Studies										
Supervise Pilot Investments										
Reporting										
Prepare Final Report										

INDICATIVE SUPPORT REQUIREMENTS FOR TASMU

ITEM	NUMBER
1. Office Space (for 6 professionals and 4 supporting staff)	1
2. Personal/Laptop Computers	5
3. Fax Machine	1
4. Photocopy Machine	1
5. Telephone Lines	10
6. Office Furniture (to accommodate 6 professionals and 4 support staff)	1 Set
7. Vehicles on Lease	3
8. Internet Account	10
