

**GLOBAL  
ENVIRONMENT  
FACILITY**

**Papua New Guinea**

**Biodiversity Conservation and  
Resource Management Programme**

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Project Document

*This Project Document has been edited to facilitate public dissemination.  
The original is on file in the GEF Office at UNDP Headquarters in New York.*



## ABBREVIATIONS

ADB	Asian Development Bank
AIDAB	Australian International Development Assistance Bureau
BSP	Biodiversity Support Program
CI	Conservation International
CRC	Conservation Resource Centre
DAL	Department of Agriculture and Livestock
DEC	Department of Environment and Conservation
EEC	European Economic Community
FAO	United Nations Food and Agriculture Organisation
FSP/PNG	Foundation of the Peoples of the South Pacific, Papua New Guinea
GTZ	(Deutsche) Gesellschaft für Technische Zusammenarbeit
ICAD	Integrated conservation and development
IIED	International Institute of Environment and Development
IUCN	International Union of Conservation and Nature
NCC	National Conservation Council
NEC	National Executive Council
NFCAP	National Forestry and Conservation Action Programme
NGO	Non-governmental organisation
OPS	Office of Project Services
PA	Preparatory Assistance
PARP	Protected Areas Rehabilitation Project
PNGRIS	Papua New Guinea Resource Inventory System
PPER	Project Performance Evaluation Report
PRA	Participatory rural appraisal
SPBCP	South Pacific Biodiversity Conservation Programme
SPREP	South Pacific Regional Environment Programme
TFAP	Tropical Forestry Action Plan
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Populations Activities
USAID	United States Agency for International Development
WMAs	Wildlife Management Areas
WWF-International	World Wide Fund for Nature

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UNITED NATIONS DEVELOPMENT PROGRAMME

GLOBAL ENVIRONMENT FACILITY

Project of the Government of Papua New Guinea

**Title:** Biodiversity Conservation and Resource Management Programme  
**Number:** PNG/93/G31  
**Duration:** Five years  
**Project Site:** Port Moresby and field locations  
**UNDP Sector:** Environment  
**Subsector:** Biodiversity  
**Implementing Agency:** Department of Environment and Conservation (DEC)  
**UNDP Approval:** July 1993  
**Government Inputs:** PNG Kina 1.7 million<sup>1</sup>  
**UNDP Inputs:** US\$ 5,000,000

**Brief Description:**

The project supports the Government of Papua New Guinea in undertaking significant conservation activities and expanding the country's conservation system. It will establish conservation areas using integrated conservation and development (ICAD), a process that integrates conservation management principles with community development ventures. An important priority in this process will be to develop experience and innovative methodologies for the conservation of the nation's biodiversity. Associated activities include an institutional strengthening project for the Department of Environment and Conservation (DEC). This department focuses on the management of biodiversity and the legal, financial, and policy issues surrounding the expansion and maintenance of the country's conservation system.

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<sup>1</sup> United Nations official exchange rate at date of signature of project document: 1 US\$ = 0.947 PNG Kina.

## A. CONTEXT

### 1. Description of subsector

Papua New Guinea contributes significantly to the world's biodiversity (at least 5 percent) because of its extensive, relatively unmodified natural habitats and ecosystems. This is especially true for coastal ecosystems and for the rainforests that cover more than 75 percent of the country.

The Government of Papua New Guinea has demonstrated its commitment to conservation in specific ways. It has legislated the establishment and administration of conservation areas, put into operation an actual network of conservation areas, and funded the DEC to support the network. At the national level, the Constitution of Papua New Guinea provides in its Fourth Goal "for Papua New Guinea's natural resources and environment to be used for the collective benefit of us all, and to be replenished for the benefit of future generations."

GoPNG has also adopted a National Forestry and Conservation Action Programme (NFCAP), one goal of which is "ensuring that Papua New Guinea's forest resources are managed in an ecologically sound and sustainable way, and that the country's diverse ecosystems and biota are adequately protected."

A significant NFCAP reform has been the development of National Forestry Development Guidelines. These guidelines, gazetted by the Government in late 1993, require impact assessments and an environmental plan before logging may occur. Forestry Environmental Plan Guidelines, also gazetted in 1993, stipulate what must be in the plans. For example, conservation zones and environmentally critical and fragile areas must be identified.

About 2 percent of Papua New Guinea's total land area is currently part of some kind of conservation area. This system, managed by the Conservation Division of DEC, comprises 4 national parks, 4 provincial parks, 21 wildlife management areas, and a number of sanctuaries and other conservation areas. Almost all existing conservation areas are on land—the need for coastal and marine conservation has been only recently recognised. The Conservation Division also operates some species management projects—most notably for crocodiles and butterflies—and administers species protection legislation.

#### Customary land ownership

Approximately 97 percent of the total land area of Papua New Guinea and most associated land-based resources are held under the customary ownership of clan groups. Customary rights extend into freshwater and marine resources. Mineral resources, however, are vested in the State. Rights to resource use are a central feature of Papua New Guinea culture. There is ongoing community participation in all decision-making about land and land use. Since little land is publicly owned in Papua New Guinea, the processes for establishing and managing conservation areas must be designed within the framework of customary land ownership.

## Legislation

A variety of approaches to conservation are possible under existing legislation. The National Parks Act (1982) provides for the designation of land for various categories of national parks, but the land must be government land, obtained through purchase, gift, or lease. DEC manages these lands directly.

The Conservation Areas Act (1980) has similar objectives to the National Parks Act, but its provisions apply to all types of land tenure, not just government land. The Act accommodates different conservation methods. It also provides for the establishment of a National Conservation Council (NCC) to guide the development of a conservation system. The Act specifies that the Council must have a minimum of five members, with the chair and deputy appointed by the Minister. The functions of the Council are:

- To advise the Minister on matters relating to conservation areas
- To endorse the recommendation criteria for selecting lands to become conservation areas
- To consider any proposals for development affecting a conservation area
- To advise the Minister on the formulation of rules and regulations for the conservation areas and on their administration and control
- To encourage public interest in and knowledge of nature conservation.

The Council should have access to all relevant information, including development proposals that are in or near conservation areas.

The Council has not been appointed to date. This lack of action (and others) under the Conservation Act is largely because methods and models do not yet exist for applying the Act to land in customary ownership. The ICAD project will break through this bottleneck by developing the lacking methods and models.

The Fauna (Protection and Control) Act (1966) provides for the establishment of sanctuaries, protected areas, and wildlife management areas on customary land. A major strategy implemented under this legislation is the voluntary establishment and management of Wildlife Management Areas (WMAs) by resource owners, in conjunction with DEC. DEC responds to requests from resource owners who want to establish a WMA, and, once established, the resource owners monitor, change, and enforce the management rules. Formal establishment of WMAs lends government authority to landowner management.

Resource owners have a variety of motives for establishing WMAs. A review by Fisk (1991) concludes: "At the bottom of many communities' interest in conservation and protected areas is a basic land rights/ownership issue. Most WMAs arise from the desire of a community to consolidate ownership over a particular parcel of land and regulate the use of that land by

outsiders. These outsiders may be visiting hunters or squatters." The ability of WMA resource owners to change the status of the areas if they wish—and the lack of a clear strategy by DEC for dealing with that eventuality—makes WMAs potentially vulnerable in the long term to pressure from resource owners who want to take advantage of development opportunities regardless of their effect on conservation.

Biodiversity conservation in Papua New Guinea requires relatively large conservation areas (at least 80,000 ha) in locations that are species rich and/or high in endemism. These areas need to be managed for conservation on a long-term basis. Existing WMAs are often an inappropriate size and poorly located from the point-of-view of biodiversity conservation. The vulnerability of their futures also makes them risky. So, while WMAs play an important role in meeting certain social and conservation needs felt by resource owners, they can only be regarded as one component of a biodiversity conservation strategy for Papua New Guinea.

### Integrated conservation and development approaches

ICAD refers to a new way of thinking in the worldwide search for new approaches to conservation, especially in developing regions. This search started in the late 1970s when it became clear that traditional strategies based on total government ownership of conservation areas as national parks or reserves did not always work. Essential to the ICAD idea is eliciting the commitment of customary landowners when establishing relatively large areas for conservation and gaining their support in maintaining and managing these areas on a long-term basis. The approach recognises that such a commitment will require ongoing incentives for landowners that meet community needs. The overarching goal of the ICAD approach is finding ways to meet the development needs of local people without compromising long-term conservation objectives.

Experimenting with the ICAD concept was the focus of the Project Brief approved by the Government and GEF Participants. Conceptually, an operating ICAD area would have four components:

- A relatively large area, established by agreement with the resource owners and zoned on the basis of common conservation and development objectives
- A negotiated and agreed upon package of phased, socio-economic development benefits that address the resource owners' needs, with delivery linked to the maintenance and management of the conservation area
- A social organisation that provides resource owners with an acceptable means of collective decision-making for their part in establishing and carrying out the ICAD project in partnership with the Department of Environment and Conservation and other implementing agencies
- Institutional support to maintain the above three elements on an adaptive, ongoing basis.

Papua New Guinea non-governmental organisations (NGOs) have already launched a few projects that offer socio-economic development incentives to landowners to advance the cause of conservation. The Wau Ecology Institute's project on the Kuber Range includes the building of a lodge and other visitor facilities. At an early, consultative stage the project involves the Village Development Trust's Lasanga project, the Research and Conservation Foundation of Papua New Guinea's Crater Mountain project, and the East Sepik Council of Women and Friends of the Sepik project for the Hunstein Range.

#### The socio-economic environment of the subsector

DEC's Strategic Plan states that "while traditional beliefs and customs have helped to protect the environment in the past and are often still operative, the integrity of natural environments throughout Papua New Guinea is now under increasing threat from pressures associated with population growth, the development of extractive industries, and the growth of a cash economy." The future of Papua New Guinea's biological resources is largely in the hands of landowners, and landowners' decisions will be largely influenced by the wider socio-economic environment. Thus, economics is a significant determinant of the success of the ICAD approach.

Growth in the Papua New Guinea economy depends largely on the mining and petrochemical sectors, industries with weak linkages to downstream employment growth. Subsistence activities are therefore still very important for the majority of the population and are likely to remain so in the medium term. Subsistence agriculture is considered a priority for employment growth.

Papua New Guinea's population growth is estimated to be 2.3 percent per year, while the young adult (ages 15-29) population—the bulk of new entrants to the labour force—is growing by 3.3 percent per year. The total labour force is now 1.6 million persons and formal sector employment has stagnated at around 250,000 for most of the past decade (World Bank 1992). Despite some migration that swells the ranks of urban unemployed, village communities in many areas are having to accommodate increasing populations with agricultural activities. Slash and burn clearing of land (for subsistence agriculture and cash crops) accounts for most of the net annual deforestation of natural forests, which was estimated by FAO to be 22,000 hectares per year during 1981 to 1985.

Commercial logging operations were estimated to cover 70,000 hectares per year over the same period, and log volumes exported have increased since then. In the area identified as having high zoological and botanical value at a Conservation Needs Assessment Workshop (Madang, April 1992), existing timber concessions cover 37 percent. Despite the formal moratorium on new timber concessions, numerous exemptions have been granted as the Government continues to receive intense pressure from resource owner groups, contractors, and provincial governments. It is possible that almost all of the lowland rainforest—an important, species-rich component of the overall biodiversity of Papua New Guinea—will have been committed to timber contracts over the next few years.

The Forest Revenue Study (Shedden Agribusiness 1991) estimated that average revenues to landowners are about US\$ 40 per hectare, although actual revenues may vary greatly with

location, future levels of export tax, and other factors. A major thrust of the current reform effort in the forest sector is to increase returns to resource owners from forestry operations and to deliver these, in part, as investment funds for the socio-economic development of their communities. Roads are perceived as a benefit by resource owners, as are the health and education services in some cases.

To date, landowners have opted for extractive resource development projects largely because these have been the only development opportunity offered in their areas. They have not had an alternative that would meet their socio-economic development needs with less disruption. Moreover, high-cost structures associated with the Papua New Guinea economy reduce export market opportunities for non-timber forest products and make investment in sustainable rural development activities relatively unattractive. These factors, and the short-term economic incentives offered for timber operations, dictate the level of incentive that must be offered for biodiversity conservation to succeed in Papua New Guinea.

## **2. Host country strategy**

The broad thrust of the Government's strategy, as contained in the DEC Strategic Plan 1992, is to extend the conservation system—the network of places and resources that carry out conservation. "This will involve creating new conservation areas, bringing new resources into protected status, and generally increasing the scope and field of influence of conservation management. For the foreseeable future this will be the most important objective of all. This is the objective on which the Conservation Division's success or failure will ultimately be judged. The Division also has a more specific responsibility to achieve the Government's target of having 20 percent of Papua New Guinea's land and coastal waters under some form of conservation management."

The conservation system has a range of objectives besides biodiversity conservation. These include protection of beautiful landscapes, preservation of important historical and cultural sites, development of recreation and tourism, and protection of habitats critical for the sustainable harvest of species. It is important not to lose sight of these other objectives. The strategy therefore sees the establishment of ICAD areas for biodiversity conservation as complementary to, rather than a replacement for, other components of the conservation system.

### Biodiversity conservation strategy

To achieve stable conservation of a representative sample of Papua New Guinea's biodiversity, a series of high-priority areas must be carefully selected, and any risks to biodiversity must be effectively managed. Two strategic points of significance: (i) at least some of these areas need to be relatively large (80,000 hectares or more) and (ii) they need to be managed on a long-term basis.

Advantages of the ICAD approach in implementing biodiversity conservation include:

- The ability to locate conservation areas according to a biodiversity plan based on criteria for species richness, endemism, and representation
- The ability to achieve conservation area units of adequately large size to maintain biodiversity and individual species in the long term
- The ability to establish linkages between conservation and development to reduce pressure on natural habitats and maintain the commitment of resource owners to conservation.

The project's goals of institutional strengthening and predictable, continuous financial support gives rise to the need for strong project leadership to maintain landowner commitment to the ICAD.

The Government strategy for institutional strengthening involves the establishment of a Conservation Resource Centre (CRC) within DEC to for management and support. The strategy also proposes a Trust Fund for sustainable funding of ICAD areas and a National Conservation Council to strengthen networking, to review progress, and to advocate conservation issues. It is recommended that the Trust Fund be placed outside of DEC as a statutory authority, with DEC represented on the Board of Directors. This is in part to build the confidence of the NGO community and international donors in the management and integrity of the Trust, and partly to minimise the risk that uncommitted funds in the Trust might justify reduced Government funding to DEC. The proposed Trust Fund is recommended to be a separate entity with a very narrow focus, based on the appraisal of proposals presented for funding of biodiversity projects. Once projects have been approved for funding, the Trust should disperse the funds and put in place a monitoring system to ensure accountability.

A discussion paper compiled by DEC in August 1993, "Proposed National Strategy for Rehabilitation of Mining, Petroleum, Forestry, and other Environmental Significant Developments," reviewed environmental levies such as application fees, management fees, bonds, clean-up levies, resource taxes, and off-set benefit levies. At present the only environmental levies charged in PNG are application and management fees for water use, leaving this source of funds nearly untapped.

The establishment and maintenance of partnerships between DEC and other implementing organisations is a necessary part of the strategy for ICAD development. Potential partners include provincial governments, other government agencies involved in resource use planning, extension services, or infrastructure development in rural areas, and NGOs that run resource owner awareness extension programmes and village development projects.

Finally, a key element in the strategy is to elicit the commitment of all stakeholders through a participatory process that starts with project design and follows through implementation and monitoring.

### 3. Prior and ongoing assistance

Recognising both the importance of the forest resources and the gravity of the management problem faced, the Papua New Guinea Government requested the Tropical Forestry Action Plan (TFAP) to review the forestry sector and propose an Action Programme for the future. In May 1989, the TFAP mounted an inter-agency mission to Papua New Guinea under the World Bank, with participation of the Asian Development Bank (ADB), the United Nations Food and Agriculture Organisation (FAO), the United Nations Development Programme (UNDP), the International Institute of Environment and Development (IIED), the International Union of Conservation and Nature (IUCN), and the bilateral development assistance agencies of Australia, New Zealand, and the (then) Federal Republic of Germany.

Following submissions by DEC, the original TFAP was broadened into the National Forestry and Conservation Action Programme. NFCAP incorporates a comprehensive array of conservation projects with an emphasis in the initial stages on the institutional strengthening of DEC. A technical support team managed by the World Bank and IIED with funding provided by UNDP, Australia, and the UK has been established for the programme, and it includes a conservation management specialist. The NFCAP Project Status Report in January 1992 (updated where information is available) describes the following projects relevant to the subsector:

#### National sustainable development strategy

The aim of this project is to assist in the Government of Papua New Guinea's efforts to achieve sustainable development by enhancing human resource skills and planning capacity, both inside and outside of government. The focus for the initial phase of the project will be to submit to the National Executive Council (NEC) the criteria for sustainable development.

#### Conservation needs assessment

This exercise collated available data on species distribution, habitats, endemism and richness from national and international sources. The main purpose was to identify areas of significance for biodiversity, enabling identification and prioritisation of new conservation areas, both terrestrial and marine. Landowner, NGO, and social science perspectives were included in the project. A workshop brought participants together in April 1992, and a final report was produced in 1993. Donor support was from the United States Agency for International Development (USAID), the Biodiversity Support Program (BSP), and from Conservation International (CI).

#### Research/Database/GIS priorities assessment

This aspect of the project is linked to the Australian International Development Assistance Bureau's (AIDAB) Papua New Guinea Resource Inventory System (PNGRIS). It aims to strengthen the capacity for research, monitoring, and information processing to support policy development, planning, and management of biological resources.

### Protected areas rehabilitation project (PARP)

The principal objective of the first phase of this project is to assess the management effectiveness and deficiencies of Papua New Guinea's existing conservation system and develop recommendations for strengthening. This phase was carried out by the World Wide Fund for Nature (WWF-International), using funding from the European Economic Community (EEC). A draft report has been evaluated by DEC and a project document is being developed for EEC consideration based on the Government's requirements.

### Representative conservation areas system design

This project, linked to PARP, will help field managers to identify, classify, establish, and manage conservation areas.

### Queen Alexandra Birdwing Butterfly conservation project

This project will develop and set up a conservation action plan to ensure the survival of the butterfly. Its funding is an integral component of a World Bank Oil Palm Development Project.

### DEC strategic plan

This plan has been completed and is now progressing to implementation phase. It sets out goals, objectives, strategies, and priority actions to focus the work in all DEC programmes. Funding came from the New Zealand Government and the World Bank.

### Management systems analysis and human resource development plan

This project has completed an evaluation of DEC's management systems, personnel recruitment, and training needs. A project design document completed by AIDAB sets out a five-year institutional strengthening programme.

### Alternative income study

This project, which is at the concept stage and for which no donor is yet committed, is intended to provide recommendations, prescriptions, and criteria for the development of alternative revenue generation schemes associated with ICAD areas.

### Environmental standards, management, and assessment project

This project will establish in the DEC the necessary competencies to assess and monitor the environmental implications of major natural resource projects. The mining and forestry monitoring components associated with this project are now underway.

### Legislation and policy review

This project will review and consolidate legislation administered by DEC, including that concerning biodiversity conservation. The project is in the conceptual stage.

### Flora conservation project

This project aims to create genetic banks of Papua New Guinea orchid species and to establish a national industry for the export and local use of flaked and cut-flower orchids and other ornamental plants. It may support the ICAD programme by providing an alternative rural income option. The project is to be submitted to the EEC and implemented by the Foundation of the Peoples of the South Pacific, Papua New Guinea (FSP/PNG). The project is currently on hold, awaiting agency approvals.

### Landowner awareness project

This project aims to create landowner awareness programmes, together with the forestry and conservation sectors. The project is being funded by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and will be mobilised in January 1994.

## **4. Institutional framework for subsector**

The DEC has three divisions: Policy/Administration, Nature Conservation, and Environmental Protection and Pollution Control. The DEC's mission, as approved by the National Executive Council, is "to ensure natural and physical resources are managed to sustain environmental quality and human well being."

This is supported by a number of functional goals set out in the DEC Strategic Plan:

- To develop and implement appropriate policies for the effective management of natural and physical resources for the benefit of the people in a sustainable manner
- To ensure people are actively involved in the development of policies and projects and are well informed about the activities of the DEC
- To conserve the diverse natural, physical, and cultural resources of Papua New Guinea
- To be a competent and professional department with a reputation for being effective.

In 1983 DEC, along with other government departments, faced a considerable budget cut which resulted in the loss of many provincial staff. There are sixteen provincial staff working in the Conservation Division of DEC at present. The remainder of the Conservation Division is divided into three cost centres—National Parks and Wildlife, Resource Inventory, and Species Management. A fourth centre, Policy and Planning, is proposed.

During 1992, DEC received additional funding from the Government in recognition of the need to improve skills and inputs to conservation and environmental issues. A number of new staffing positions were also approved by the Department of Personnel Management, although these have not yet received funding. Since 1987, there have been no significant extensions or additions to the conservation system. This stagnation demonstrates DEC's limited institutional capacity in terms of planning, analysis, and provincial contact.

Under the NFCAP umbrella, these weaknesses have begun to be addressed with the completion of a Strategic Planning exercise, the Management Systems/Human Resources Development analysis project, and the active development of this GEF project.

#### Department of Agriculture and Livestock

The Department of Agriculture and Livestock (DAL) is in a reform process. It is moving away from the plantation/commercial sector and emphasising the subsistence and semi-subsistence sectors. Extension staff are located within provincial Departments of Primary Industries with up to 15 staff positions per province. Although positions exist, many extension personnel have returned to their villages. In some locations, very skilled people are active and could contribute to the implementation of the GEF project.

The constraints facing the agriculture sector have been identified as:

- Inadequate extension delivery
- Insufficient skilled people
- Inadequate marketing
- Weak infrastructure support
- High transport costs
- Declining world market prices.

A World Bank Report—Papua New Guinea Competitiveness, Growth and Structural Adjustment (March 1992)—noted that agriculture contribution was falling due to low world prices, low productivity, poor product quality, excess processing capacity, and costly marketing systems. "This combination of factors has made Papua New Guinea significantly non-competitive in many of its traditional markets."

Papua New Guinea is a very high-cost producer. For example, the cost of coffee production is three to four times that of Indonesia. Small-holder labour costs are approximately six times the cost of other countries, while transport costs are up to five times the cost of similar nations. All this suggests that the concept of using export-oriented production in agriculture as an integral part of the GEF ICAD project is unlikely to provide benefits.

On the other hand, specific niches may exist in the domestic market for commercial production, such as fresh vegetables and storable crops like onions and garlic. The largest potential for increasing the production of food in the subsistence sector would be through agricultural intensification programmes that minimise the threat of "slash and burn" agriculture. Specific personnel in DAL, along with NGOs with proven capacity, will need to be identified and provided with a comprehensive orientation before being introduced into this project.

### Forest-sector institutions

The Forestry Act was passed in July 1991 and took effect on 25 June 1992. The new Act resulted from findings of malpractice, corruption, and ineffective management in the Barnett Inquiry Report. Following this, the World Bank reviewed the forestry sector, a draft National Forest Policy was approved by the NEC, and the NFCAP suite of projects was set.

The new Act establishes the Papua New Guinea Forest Authority, which is to be managed by the National Forest Board. Staff of the new Authority will be known as the National Forest Service. Each province will have a Provincial Forest Management Committee which, along with a specialist advisory committee, will make recommendations to the National Forest Board. The structure is designed to provide a forum for consultation and cooperation among resource owners, and national and provincial governments in planning forestry projects. In addition, it is an attempt to disperse the power held by single individuals. The provincial committees will become planning units and negotiators of contracts. These procedures will also require a feasibility study to determine the viability of forest-use proposals and the completion of an environmental plan before obtaining a timber permit.

Forestry remains the largest threat to biodiversity in Papua New Guinea due to the concentration of commercially successful logging operations in the lowland forest areas that hold PNG's highest concentrations of biodiversity. Forestry's ability to generate significant direct benefits at the village level means that conservation plans need to determine the conservation values of forests and address the irreversibility of logging. In addition, the added value of options to forestry should be documented in a more balanced manner.

New systems and regulations are being progressively developed. The recently gazetted National Forestry Development Guidelines and Forestry Environmental Plan Guidelines provide positive evidence of the Government's overall policy directions. The 1994 Budget contains further evidence: "A significant proportion of this area (6.5 to 7 million hectares of unharvested forest) has been identified as having high conservation value and, under the procedures outlined in the National Forest Development Guidelines, will be zoned as protected forest."

The extent to which non-forestry options and components will be addressed in the new procedures is unclear. The ability of the process to fully represent the total costs of forestry developments is also unclear. The former Department of Forests, most of whose staff now work for the Papua New Guinea Forest Authority, strongly emphasised developing forest resources, albeit in a sustainable manner. During the reform process, at least ten major and several minor forestry proposals were initiated under the "old" legislation, despite the proclaimed existence of a moratorium on new projects.

Some NGOs have been promoting walkabout sawmills, including, in some cases, a comprehensive training programme. These small mills sometimes provide an alternative means of meeting local needs for a period, and they have been used in efforts to keep large-scale timber exploitation out of certain localities. Five hundred thirty sawmills have been distributed, but there is little monitoring of, or control over, their operations. A considerable number are used in association with clearing of land for agriculture. These enterprises also suffer from poor product quality, which limits their market potential. FSP/PNG is establishing an eco-forestry programme to address these problems.

### Petroleum and mining

This subsector is currently by far the most important contributor to the Papua New Guinea economy and to Government revenues. It also makes very large contributions to socio-economic development of landowners in the communities where minerals are recovered. Extensive prospecting is underway, and new mineral discoveries are frequent.

The impacts of mining on biodiversity are potentially intense, but if properly managed could be confined to a relatively small area. The largest impact results from the removal of vegetation at the site of the mine, and associated activities lead to the loss of flora and fauna. Cases of considerable impact on freshwater and/or marine biodiversity—through discharges from mines or pipelines—are also regularly reported to the authorities. Indirect effects could potentially be more substantial, involving land clearance for subsistence gardening, fire-lighting, and other impacts. Any mining proposal for an ICAD area would clearly have to be extremely carefully managed, but raising local expectations about economic benefits from the mine could determine the viability of the entire ICAD.

### Non-governmental organisations

NGOs have an important role to play in the conservation of biodiversity in Papua New Guinea, and national NGOs were consulted in this GEF project formulation. While it is fundamental that DEC is the lead agency for implementation of the project, DEC will draw strength for its task from partnerships with NGOs able to add value to the project.

Both Papua New Guinean national NGOs and international NGOs are active in the country. Several national NGOs already implement Government-funded projects, particularly in the fields of literacy and awareness programmes, and in delivery of rural and village development projects. In addition, the Government increasingly recognises a role for national NGOs at the policy and planning level. NGOs have been given representation on the National Forests Authority and on Provincial Forest Management Committees. Papua New Guinea NGOs, however, have limited financial and staff resources and they will need some institutional strengthening to effectively contribute to the project.

With strengthening, national NGOs could potentially contribute as follows:

- Some possess particular skills and experience useful for the project, particularly in implementing village development and public awareness projects

- NGOs are a source and testing ground for new ideas and innovative practices
- Most are strongly oriented to local contact, good at seeking out social and environmental problems and, at times, effective as watchdogs
- They run low-cost operations, mobilise volunteer effort, and are committed to achieving goals
- Their vision of village-led development and opposition to large-scale resource projects is largely complementary to DEC's mission
- Their linkages to national and provincial government at both political and departmental levels are significant and the ability to mobilise this network would be a strategic advantage to DEC.

The areas proposed for NGO involvement in the project:

- In the implementation of specific project components at the ICAD-area level where NGOs can use their specialized skills
- At the policy and planning level where they can contribute skills, experience, and networking ability to help the DEC achieve its broader mission.

To facilitate the second role, it is proposed that the NGO community be represented on the NCC and the Trust Fund Board. Appointment to these bodies should be determined on a functional skill basis.

International NGOs potentially useful to the project include recognised conservation NGOs and a variety of development NGOs, ranging from those funding village development projects to those that place international volunteers in Papua New Guinea.

International NGOs could contribute by:

- Implementing components of the project on contract
- Providing project staff, such as ICAD project managers
- Advising on policy and management issues, based on their experience working on ICAD projects in other countries
- Mobilising international funding and political support
- Channeling funds from overseas governments and multilateral institutions directly to grassroots projects in Papua New Guinea.

## **B. PROJECT JUSTIFICATION**

### **1. Problem to be addressed and the present situation**

In Papua New Guinea's current stage of development, landowners in areas of high biodiversity do not recognise the value of natural resources to local, national, and global communities. Consequently, they do not manage them sustainably. There is evidence that, unless Papua New Guinea's current pattern of development is deliberately modified to make greater provision for biodiversity conservation, the country's biodiversity will continue to be threatened by expanded land clearance for subsistence food and cash crop production, by logging projects, and, to a lesser extent, by some infrastructure development, mining, fishing, hunting, and gathering activities.

The DEC Strategic Plan, completed in May 1992, reviews the present situation in the Conservation Division and identifies its needs, including those that can be addressed through technical cooperation.

The Strategic Plan calls for "a series of major ICAD projects" as a key strategy for achieving its most important immediate objective—the expansion of the conservation system. The Conservation Division currently lacks both ICAD project methodologies and the institutional capacity to carry them out. It also lacks the expertise needed to provide input and advocacy for conservation within the forest planning and feasibility study process. These deficiencies threaten the division's ability to achieve its conservation objectives.

The Division has considerable experience in the establishment and management of national parks and wildlife management areas. However, the expansion of the conservation system using the ICAD approach requires additional skills and capacity that the division does not currently have, particularly regarding:

- Conservation planning and advocacy
- Participatory rural appraisal (PRA)
- Planning and implementation of socio-economic development projects in rural areas
- Project management for complex, multi-stakeholder projects
- Training in each of the above
- The predictable, long-term funding required for ICADs.

Present staffing of the Division includes 44 permanent positions, with an additional 5 approved, but unfunded positions, and 91 casual staff. Of the funded permanent positions, 23 are concentrated in national park management, including 16 ranger and field staff located out of Port Moresby. There are 6 staff involved in conservation surveys and 13 involved with wildlife

management areas, species management, and conservation policy. The complete lack of conservation or resource planners in the division will impede the development of ICAD projects. There are no in-house staff with skills in participatory rural appraisal or the planning and implementation of rural development projects. Overall, staff capacity to manage projects—especially complex, multi-stakeholder projects such as ICAD projects—is inadequate. If staff are diverted for this purpose, the division would be left largely unable to respond to its wider responsibilities, including the urgent need for conservation input and advocacy in the forest planning process.

The capacity for networking necessary in implementing ICAD projects and conservation advocacy is also insufficient. The Strategic Plan states that to overcome this shortfall the Division is "seeking cooperation and partnership roles with other agencies—including other Government agencies, universities and NGOs—to implement conservation objectives." The National Conservation Council, provided for in the Conservation Areas Act of 1980, would provide an important advocacy and networking mechanism in this regard. The Strategic Plan suggests that networking efforts are also needed at the provincial level, but there are only 6 provincial rangers for 19 provinces and they lack the project orientation necessary to fully achieve conservation objectives.

There is also insufficient training for Division personnel to carry out ICAD projects, with management training and training in PRA being the key deficiencies. At present there is no basic training module for PRA adapted to Papua New Guinea's conditions.

## **2. Expected end-of-project situation**

A Conservation Resource Centre will have been established within the Conservation Division of DEC to provide technical, managerial, and skills development support for the establishment of ICAD areas and to enhance DEC's capacities in conservation policy development and planning. Associated with the CRC will be a strong network of partnerships among national and provincial government agencies, NGOs, and other organizations to help expand the conservation system.

At least two new conservation areas will have been established under the Conservation Areas Act as extensions to the conservation system. They will cover a range of high-priority biodiversity areas and demonstrate the integration of conservation with development to meet the needs of landowners (ICAD). In the process of establishing these areas, methodologies will have been developed and tested, resulting in the capacity to initiate and implement further ICAD projects.

The CRC will also have gained the capacity to provide input into conservation policy and management planning, feasibility studies and environmental plans, and national and provincial forest and land use planning. A trained person capable of managing the CRC will be in place and staff with appropriate skills will have been recruited and trained.

Within the CRC network there will be the capacity to carry out PRA and to plan and implement socio-economic development projects in rural areas. There will also be training

programmes to spread the use of these skills. Systems for resource inventories and monitoring, and procedures for delivering a range of social services and development support programmes will be in place.

Within each of the ICAD areas, the initial ICAD Management Committees, representing the partnership of landowners and DEC, will have evolved into a co-management mechanism for the newly established conservation areas. The project's planning activities will have determined the decision-making procedures of these Committees, to be applied to site-specific management plans with zones defined according to certain conservation and development objectives. Each conservation area will be covered by a conservation agreement defining those objectives, such as a covenant.

The NCC will be in place and operational. There will be an operational Biodiversity Trust Fund to provide continuity and predictable levels of continuous financial support.

### **3. Target beneficiaries**

The target beneficiaries of this project are:

- Landowners, present and future, in the areas of high biodiversity where ICADs are to be established. They benefit both from the development opportunities provided and from the conservation of their natural environment.
- National and global communities, including future generations. They benefit from conserving the diversity of species, habitats, ecosystems, and gene pools, because these things are fundamental resources for sustaining life on earth.

### **4. Project strategy and institutional arrangements**

A representative sample of Papua New Guinea's biodiversity will be conserved by developing the methodologies, institutional capacity, and partnerships necessary to implement ICAD projects, with the ultimate goal of establishing a network of areas where risks are effectively managed.

Key to this strategy is the commitment of landowners to the establishment and long-term co-management of ICAD areas in a continuous partnership with DEC. Under this partnership strategy, the landowners will benefit through the conservation of their natural environment and through associated, appropriate, and sustainable socio-economic development. DEC, for its part, will secure biodiversity resources for communities at national and global levels and for all future generations.

The Government perception of the project strategy is summarised in the 1994 Budget documents. "Approaches to biodiversity conservation in the Papua New Guinea context have to be particularly innovative, given often conflicting economic and social pressures and landowners' development aspirations. One solution, currently being tested (under the GEF Biodiversity Conservation Programme) involves developing compacts with landowners—to provide income

opportunities and services (in return for conservation commitments). Discrete Integrated Conservation and Development projects in high biodiversity areas will help to better structure and coordinate interventions."

An essential challenge of the GEF project is to provide, through the ICAD experiments, convincing evidence that methods exist for applying the Conservation Act to land in customary ownership. Success will in part be measured by whether the results provide sufficient impetus to form the NCC and to create a conservation Trust Fund—two key project goals.

The GEF project, and the ongoing CRC within DEC, will be set up to operate in an open and transparent manner. In addition to the formal reviews and evaluations of the project monitoring process, the CRC will regularly communicate its activities and seek responses through a widely circulated newsletter and in project workshops to be convened at key stages of the project. An ICAD Project Consultative Working Group has been established to ensure coordination between ICAD project activities and other conservation/environment programmes such as the NFCAP process. This group includes the DEC National Project Director, Department of Finance and Planning, Office of International Development Assistance, NGOs, and UNDP.

The Papua New Guinea GEF project is not seen in isolation, but as one of many throughout the world. Cross fertilisation of ideas is a key project strategy. Linkages have been established with other ICAD projects and the CRC will strengthen these as the project progresses by sharing ideas, methods, and results. One particularly important exchange will be with the South Pacific Biodiversity Conservation Project, a regional GEF project.

#### Implementation arrangements

Execution of the project will be through the UNDP Office of Project Services (OPS). The project will be implemented within the DEC Nature Conservation Division, supported by a suitably qualified DEC Project Manager, UNDP Chief Technical Adviser, specialist consultants, and counterpart staff.

A range of alternatives was considered for execution of the project, including (i) the Government, (ii) UNDP OPS, (iii) the World Bank, (iv) an international NGO, and (v) a single consulting firm. Option (v) was eliminated on the basis that at least one (and probably two) additional layers of contracting would be required with margins being taken at each level and there appeared to be no compensating advantages to outweigh these additional costs. As regards option (iii), it was considered that the project is essentially a technical assistance project, for which the UNDP would be a more appropriate external executing agency than the World Bank. In considering the remaining three options, the Project Formulation Mission noted that its terms of reference placed emphasis on timely and effective implementation and the need to institutionalize management and operational experience within the DEC structure.

Timely execution is particularly important given the rapidity with which Papua New Guinea's natural resources are currently being committed to other uses. Another factor given consideration was the ability of UNDP to subcontract components of the project to suitably

qualified consulting firms, companies, and NGOs. This allows maximum flexibility for implementation (a key factor), which will be maintained until complete transfer to the Government.

The Mission was made aware of the current weak institutional capacity of DEC but also noted the expectation of the Government that, as part of the wider responsibility to manage biodiversity programmes in Papua New Guinea, the ICAD project should be transferred to government execution during the life of the project. Discussions will be held as part of the established tripartite review process for projects and the overall strengthening programme for DEC, so that a definitive timetable is established for the transfer of execution functions to the Government. For the above reasons, initial execution will be by the UNDP through OPS.

#### **5. Reasons for assistance from UNDP**

Assistance from UNDP is needed because the project is essentially a technical cooperation and institution-building activity for which grant assistance is considered appropriate. The project brief has been approved by the GEF participants and the UNDP is the most appropriate of the GEF partners to support this type of project.

#### **6. Special considerations**

Continued rapid population growth within ICAD areas would normally lead to increased encroachment on natural forest over time to meet subsistence agriculture needs.

Zoning of areas for expansion of subsistence agriculture and implementation of agricultural intensification projects are the key short- and medium-term strategies for addressing the deforestation impacts of population growth. Over the longer term, rising health and education levels, especially among women, and improved socio-economic circumstances are likely to be associated with reduced population growth. As to the provision of health services in ICAD areas, family planning services should be made available where they are accepted and would address needs felt in the community. Possible cooperation with the United Nations Fund for Populations Activities (UNFPA) will be explored.

#### **Landowners and others**

Dealings in ICAD areas should reinforce the notions of co-management, partnership, and shared responsibility. Negotiations should be carried out in a way that respects and reinforces the traditional rights and authority of landowners. The term landowner is used in this project document to include landowners who are not currently residents in the area, but have claims to landownership recognised by custom. It also includes the owners of coastal and marine resources, as these resources also have customary tenure.

There is a category of persons sometimes called "landholders" (Papua New Guinea Mining Act) who have rights to land use conferred by landowners, or who may have planted some fruit trees and thus have "ownership" of those particular resources, but who are not *ipso facto* included in the term landowner. Those holding such use rights will frequently also be

landowners. However, some will be migrants to the area who have established relationships with the community. If benefits are conferred on this group, their numbers may well grow rapidly, giving rise to confusion and disputes. This group should be involved in the PRA process so that their needs are identified. Ways of involving them in the project that are acceptable to, and that reinforce the authority of, the landowners should also be identified. In landlocked situations, project benefits may need to extend to groups that are not landowners in an ICAD area, but effectively control access to it.

### Involvement of women

Different traditional roles and responsibilities of women means that women will be affected in different ways than men in the implementation of ICAD development projects. A particular effort should be made to ensure that women's needs and viewpoints are identified and represented equally in the PRA process. This consideration is also important in any landowner committee or resource management forum that may be established for ongoing decision-making about the project. Because participation in the project is time-consuming and is likely to add to women's existing responsibilities, attention will also need to be paid to ensuring that appropriate community support is available to those women who need it.

Moreover, opportunities for women to take advantage of employment generated by the project should be identified and promoted. There should be a considerable number of opportunities, particularly in the delivery of education, training, health, and other social services, where appropriately skilled women could be offered employment.

### Intergenerational and intergroup issues

Leadership in Papua New Guinean societies is subject to challenge from time to time. The political divisions in this process are often formed along lineage or generational lines. Experience from other situations in Papua New Guinea where communities are recipients of benefits from an external agency has shown that the benefits (and any costs) are not always perceived as having been distributed fairly. This factor or the perceived adequacy of the project benefits can become an issue in a leadership challenge, with sometimes unfortunate results in terms of general community support for the project. Of particular concern is the tendency for partly educated, unemployed young people to become disaffected and disruptive.

It is important that the viewpoints and aspirations of each group in the community, including the leaders of the younger generation, are identified and addressed during planning and implementation of the project, so that a sense of ownership of the project is not confined to particular sections of the community. Opportunities for youth employment in the project should be identified and developed where appropriate. Project management will need to be alert to the emergence of new leadership and to any potentially disaffected groups within the community as the project develops.

## Law and order

Papua New Guinea has a significant law and order problem, particularly in urban areas. Many people have moved into urban areas in search of a better life only to remain unemployed and frustrated. Social inequality is particularly apparent in urban areas and ethnic differences and rivalries flourish in the relative absence of traditional social controls. Security therefore needs to be a special consideration in project planning and management, and recruitment of personnel may be affected. It should be noted that the security situation varies considerably between provinces and is markedly less of a problem in most rural areas.

## Decision-making in the forest sector

Papua New Guinea's biodiversity will ultimately be either lost or conserved through decisions taken by landowners at the local level. Government policies, plans, and actions can influence those decisions by creating incentives that facilitate or constrain local decision-making. Government decisions currently being made on the commitment of forest resources to timber production are the most immediate opportunities to put such incentives in place. Conservation advocacy at the government level, as well as at the landowner level, is vital to the success of biodiversity conservation in Papua New Guinea. Advocacy for conservation at that level is an important dimension of the project.

The most species-rich ecosystems of Papua New Guinea are the lowland rainforests. These are limited in extent—forests below 300 metres occupy 128,000 square kilometres or 27 percent of Papua New Guinea—but they contain the major exploitable timber resource. Forests committed to logging, mostly lowland forests, currently total 87,406 square kilometres. The logging of these forests has a substantial and extensive environmental impact on ecosystems and habitats. These forests already committed to logging will not be considered as potential ICAD sites.

Mapping completed under the Conservation Needs Assessment process has identified that 37 percent of the areas of high conservation priority for their botanical or zoological diversity is already overlapped by timber rights purchases or local forest area agreements, with many more such proposals in the pipeline. From a conservation point-of-view, decisions that commit extensive areas of these highly diverse forests to logging have the critical consequence of irreversibility. Decision-makers must fully understand the impact these decisions will have on Papua New Guinea's ability to conserve its biodiversity.

While the GEF project focuses primarily on establishing pilot ICAD sites, forethought will be given to keeping options open for future ICAD projects on sites important for biodiversity. Thus it is important that:

- Priority is accorded to providing information and advocacy on biodiversity conservation needs in the forest planning process—particularly through provincial forest planning committees and forest project feasibility studies—so that options are kept open for future ICAD projects in key areas

- The imminent scarcity of biodiversity conservation sites in lowland forests is recognised in the initial ICAD site selection process.

### Partnerships

A key success factor for this project and for the establishment of further ICADs will be the ability to form effective and committed partnerships.

The fundamental partnership between DEC and the landowners of the ICAD sites requires commitment from both sides to an ongoing, open, participatory, and adaptive relationship. In the implementation of the ICAD projects, DEC will also depend on partnerships with other government agencies and NGOs. In its conservation advocacy work it will also need effective partnerships with provincial governments, the Papua New Guinea Forest Authority, and NGOs. To secure ongoing funding for ICAD establishment and maintenance, DEC will need to establish an effective partnerships with donors. The ability to form successful relationships will be a consideration in recruitment of personnel at all levels, and attention to partnerships will be a priority for project management at all times.

### Variability of ICAD site costs

Only one of the two ICAD pilot sites has been selected. The project budget has been prepared on a notional basis that assumes each ICAD will have the same profile of activities and costs. In reality, however, it is expected that there may be considerable variability in the initial costs of establishing ICADs, depending on factors such as the economic opportunity cost of the areas to be conserved, the alternative employment/economic opportunities available to the people, and the kinds of benefits the people expect.

The ICADs should be at least 80,000 hectares, preferably much larger. The eventual scale of conservation areas and the scope of conservation influence will depend on the success of the ICAD methodology trials. One site could well be substantially larger than the other. The aim will not be to spend an equal amount on each ICAD site, nor to spend all the money allocated per site in the project budget, but rather to achieve over the project as a whole, as much biodiversity conservation as is possible on two sites.

Budgets for the ICAD sites will need to be revised once both sites have been selected, local needs have been identified and costed, and the implications of all the objectives of the project have been further elaborated.

### Negative impacts

The project will not have any negative impacts on the environment or on particular groups. Integral to the design of the ICAD project is a careful, participatory process of identifying all the groups involved and their needs, negotiating with them, and obtaining their agreement and partnership for activities.

## **7. Coordination arrangements**

The DEC has the lead government role in activities of the South Pacific Regional Environment Programme (SPREP) and consequently is aware of the South Pacific Biodiversity Conservation Programme (SPBCP), also being funded by the GEF. A process for close and ongoing consultation and cooperative effort between the two projects has already been established. As the two projects become fully operational, formal and regular contact will be maintained on at least an annual basis.

### National coordination

The GEF project is one of a group of projects organised under the umbrella of the NFCAP. All NFCAP project elements are coordinated through an interdepartmental committee, the NFCAP Steering Committee, which is chaired by the Department of Finance and Planning. As the GEF project develops, other ICAD-type projects will likely be placed on the agenda.

## **8. Counterpart support capacity**

The GEF Project Brief, as submitted to the GEF Participants, was approved by the Government. DEC wholeheartedly supports the project, the objectives of which are accorded a key place in the DEC Strategic Plan. At interdepartmental meetings which took place during project formulation, senior representatives of other departments expressed their support and agreement to cooperate in implementation. The Department of Finance and Planning has incorporated the budget provision for the Government contribution to the project into budget provisions for 1993 and succeeding years.

## **C. DEVELOPMENT OBJECTIVE**

The development objective is to expand the conservation system of Papua New Guinea to provide for biodiversity conservation.

This goal is reflected in the DEC Strategic Plan and in the submission to the GEF Participants that was approved by the Government.

## **D. IMMEDIATE OBJECTIVES, OUTPUTS, AND ACTIVITIES**

Given the project's innovative and experimental character and the vital importance for further project development by the mid-term evaluation and review to be held 24 months after the start of project implementation, the presentation of project outputs in the paragraphs below is limited to the project period leading up to the evaluation-and-review exercise. Outputs for the subsequent period will be determined in the light of the results of the evaluation and review.

## **IMMEDIATE OBJECTIVE 1**

To develop innovative methodologies for conservation of biodiversity through the establishment of pilot ICAD sites.

### **Output 1.1**

Two ICAD project sites established with a Conservation Area Manager (DEC position) and Technical Adviser (project position) at each, along with sufficient facilities for an effective conservation management operations base. Close working relationships will have been established with local communities, based on a shared awareness of conservation values.

#### **Activities for Output 1.1**

- 1.1.1 Select the ICAD sites.
- 1.1.2 Negotiate with landowners.
- 1.1.3 Promote conservation awareness.
- 1.1.4 Develop the conservation management base.

### **Output 1.2**

Sociological studies, inventories of natural resources, PRA studies, and other data.

#### **Activities for Output 1.2**

- 1.2.1 Survey biodiversity.
- 1.2.2 Conduct PRA studies.
- 1.2.3 Survey opportunities for alternative income.
- 1.2.4 Register land ownership.

### **Output 1.3**

An ICAD planning and decision-making process that addresses broadly defined social service needs and planned benefit delivery programmes for both sites. Resource management issues will have been defined and a participatory process of preparing comprehensive ICAD management plans will have begun.

### Activities for Output 1.3

- 1.3.1 Establish ICAD decision-making forums.
- 1.3.2 Review ICAD project targets.
- 1.3.3 Record management decisions in ICAD management plans.
- 1.3.4 Negotiate conservation agreements with landowners.
- 1.3.5 Develop conservation management systems.

### **Output 1.4**

ICAD benefit delivery methods. (Note that FAO assistance will be sought in piloting development support programmes in agriculture and alternative forest products.)

### Activities for Output 1.4

- 1.4.1 Pilot development support programmes in social services.
- 1.4.2 Pilot development support programmes in agriculture.
- 1.4.3 Pilot development support programmes in alternative forest products.
- 1.4.4 Pilot development support programmes in tourism.
- 1.4.5 Pilot other development programme options.

## IMMEDIATE OBJECTIVE 2

To establish a CRC within the Nature Conservation Division of the DEC that will provide the technical and managerial skill training necessary for expanding the conservation system and for contributing to national and provincial biodiversity conservation policy and planning.

### **Output 2.1**

An established CRC managed effectively within the Conservation Division of DEC, with a core staff including a Chief Technical Adviser, a Project Manager, Conservation Area Technical Advisers, a Resource Economist, a Biologist, a Sociologist, an NGO Facilitator, and national counterparts.

### Activities for Output 2.1

- 2.1.1 Recruit CRC staff.

- 2.1.2 Mobilise short-term consultants.
- 2.1.3 Purchase equipment.
- 2.1.4 Plan, manage, and evaluate the project.

### **Output 2.2**

Technical inputs and orientation and training programmes for national ICAD project personnel provided by the CRC. CRC also facilitates NGO involvement in the ICAD projects and effectively builds a network of consultation and liaison on ICAD matters within Papua New Guinea (with other government agencies) and throughout the world (with donor agencies).

#### Activities for Output 2.2

- 2.2.1 Make technical inputs to ICAD sites.
- 2.2.2 Provide training programmes for national ICAD personnel.
- 2.2.3 Facilitate NGO participation.
- 2.2.4 Network and communicate with relevant organisations.

### **Output 2.3**

Support from the CRC for the whole Conservation Division, particularly in the areas envisaged in DEC's Strategic Plan.

#### Activities for Output 2.3

- 2.3.1 Support the Conservation Division in priority areas established in DEC's Strategic Plan through planning, training, project coordination, conservation education, and research and assessment.

## **IMMEDIATE OBJECTIVE 3**

To establish institutional, legal, financial, and policy frameworks for the expansion and future maintenance of the conservation system.

### **Output 3.1**

Development of the Papua New Guinea conservation system through the establishment of a conservation Trust Fund with resources from international donors, the Government, and the NCC.

### Activities for Output 3.1

- 3.1.1 Conduct a feasibility study for establishing a conservation Trust Fund.
- 3.1.2 Analyse the feasibility study.
- 3.1.3 Prepare a submission for a Government funding commitment and prepare funding proposals for the international donor community.

### **Output 3.2**

Development of the Papua New Guinea conservation system through the establishment of the NCC.

### Activities for Output 3.2

- 3.2.1 Conduct a feasibility study for establishing the NCC.
- 3.2.2 Analyse the feasibility study.
- 3.2.3 Prepare drafting instructions for the required legislative changes, staffing, and so on.

### **Output 3.3**

Development of the Government's executing capacity by specifying capacity-building needs and drawing a timetable for the transfer of execution functions to the Government.

### Activities for Output 3.3

- 3.3.1 Prepare a paper assessing the implementation and executing capacity of the Government.
- 3.3.2 Present the paper for discussion at the mid-term review to facilitate decision on a timetable for transfer of executing functions to the Government.
- 3.3.3 Prepare and implement a national training workshop on the concept and principles of national execution.

## **E. INPUTS**

### **1. Government (in kind)**

#### Personnel

- Administrative Personnel for the duration of the project

- Full-time national professional personnel, including a project manager, two conservation area managers, a marine biologist, and a resource economist.

Office accommodation facilities and supplies

- Suitably equipped office space, equipment, and support costs such as duty travel, public utilities, houses, and other miscellaneous support.

The government input totals approximately PNG Kina 1.7 million.

**2. UNDP**

Long-term Advisers

Chief Technical Adviser	54 p/ms
Natural Resource Economist	24 p/ms
Biologist	24 p/ms
Conservation Area Management Adviser (Site 1)	24 p/ms
Conservation Area Management Adviser (Site 2)	24 p/ms

Consultants

Conservation Planner	6.3 p/ms
Short-term Consultants	15 p/ms

National Professional Project Personnel

*Fixed-term*

NGO Facilitator	48 p/ms
Conservation Worker (Site 1)	42 p/ms
Conservation Worker (Site 2)	42 p/ms

*Short-term*

National Consultants	18 p/ms
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Personnel component, including Administrative Support Personnel and Preparatory Assistance (PA) Phase, totals an estimated US\$ 2,552,858.

### Subcontracts

Landowner/Rapid Rural Appraisal/ Alternative Income Studies (Site 1)	32 p/ms (est.)
Landowner/Rapid Rural Appraisal/ Alternative Income Studies (Site 2)	28 p/ms (est.)
Landowner Development Support Phase Contracts	36 p/ms (est.)

Subcontracts component totals an estimated US\$ 620,907.

### Training

Envisaged training under the project totals an estimated cost of US\$ 482,451, of which US \$5,001 was spent during the PA phase. Other costs include equipment and supplies totalling an estimated US\$ 611,014, of which US\$ 70,189 was spent during the PA phase.

The total UNDP/GEF input, including the PA phase, amounts to US\$ 5,000,000. For budgetary reasons, the Preparatory Assistance (PA) phase is being treated as a separate project, referred to as PNG/92/G31, but is to all intent and purposes an integral part of the full project and is included in the budget for this project.

## **F. RISKS**

### **1. Initial risks**

- DEC's experience in designing ICAD projects is limited
- The project will provide institutional strengthening to DEC through technical support, capacity-building, and training
- DEC's capacity to manage the ICAD project is limited.

The project will provide technical assistance, in-service training, and training in management skills. Partnerships will be established with other government agencies and NGOs to deliver ICAD services.

- A delayed project start may result if an experienced Chief Technical Adviser is unavailable

- Technical Assistance will recruit through UNDP to gain access to international experience
- The Government commitment is required for co-financing. (The National Project Director will ensure this commitment is forthcoming.)

## 2. Project risks

- The GEF funding will be inadequate to fund alternative development options essential to a successful ICAD programme. Additional funding will need to be sought during the life of the project from the Government and other agencies.
- Sustainability of the ICAD approach will depend on predictable levels of long-term funding beyond the project. The establishment of a Biodiversity Trust Fund is an objective of the project. Scheduling of social services and long-term flow of benefits from development activities can partly offset this risk.
- The ICAD approach is untested in Papua New Guinea. The design recognises the experimental nature of the project and will seek to incorporate lessons on stakeholder participation and partnerships learned elsewhere.
- The local community/landowners may change their minds during the project and opt for development options other than conservation. Landowner commitment to conservation is a precondition. Landowner commitment is reinforced through phased benefits, education, extension, and their participation in design and management.
- The local government may encourage other land uses, including exploitation, in the ICAD area. Advocacy, extension, and partnerships with local government agencies and the development of provincial commitment to conservation as a viable land use option are important components of the project.
- Local NGOs and other agencies may lack the capacity to deliver required services in the ICAD area. To limit this risk, the project will involve organisations with proven capacity, or provide training and strengthening first.
- Stakeholders (landowners, DEC, provincial governments, government agencies, NGOs) may not develop effective partnerships. The project will emphasise participation and active involvement of all partners in project design and implementation, especially landowners.
- The opportunities for business development are unknown. Funding will be allocated for consultancies to identify development opportunities, and then those business activities appropriate to individual ICAD sites will be developed.

- The economic pattern of growth in Papua New Guinea—with its emphasis on natural resource exploitation—is likely to raise expectations without creating sufficient employment opportunities. This will put increasing pressure on forests and other areas important for biodiversity. The project will confront this pressure by creating local employment and by helping to provide alternative income-generating opportunities to landowners who choose the conservation option.

## **G. PRIOR OBLIGATIONS AND PREREQUISITES**

### **1. Prior obligations**

None.

### **2. Prerequisites**

- The Government will allocate funds in national budgets as indicated in Section E.
- The Government will agree to make data available to the Technical Adviser, consultants, and project staff as required for implementation of the project.
- The Government will agree to recruit CRC staff from within DEC as counterparts to the project and to allocate funding and resources for these as line positions from year two of the project.
- Subject to National Executive Council (Cabinet) approval, the Government will establish the NCC within 1.5 years to act as a steering committee to guide implementation of the project. It will consist of representatives of institutions engaged in conservation and undertake ICAD activities as a primary activity.
- The Government will support the drafting and enactment of legislation consistent with the establishment of the conservation Trust Fund.

The project document will be signed by UNDP and UNDP assistance to the project will be provided, subject to UNDP receiving satisfaction that the prerequisites listed above have been fulfilled or are likely to be fulfilled. When anticipated fulfillment of one or more prerequisites fails to materialise, UNDP may, at its discretion, either suspend or terminate its assistance.

## **H. PROJECT REVIEW, REPORTING, AND EVALUATION**

The project will be subject to review by representatives of the Government and UNDP at least once every 12 months, the first such meeting to be held within the first 12 months of the start of full implementation. The first review should include participation of an external consultant and involve an in-depth evaluation of experiences learned during the initial

implementation phase, as well as consider relevant aspects of developments in the NFCAP process. The Chief Technical Adviser (and national project coordinator) shall prepare and submit to each review meeting a Project Performance Evaluation Report (PPER). Additional PPER's may be requested, if necessary, during the project.

The project shall be subject to mid-term evaluation and review 24 months after the start of full implementation to allow for changes in project design, reviews of execution responsibilities, and reallocation and strengthening of resources for ICAD implementation.

The project shall be subject to evaluation 50 months after the start of full implementation and 6 months prior to scheduled termination to determine needs and options for extension of certain ICAD activities. The organisation, terms of reference, and timing will be decided after consultation between the parties to the project document.

A project terminal report will be prepared for consideration at the terminal review meeting. It shall be prepared in draft at least four months in advance to allow for review by the Government and UNDP.

A national workshop will be held two months prior to project termination to include the widest possible range of interests. It will evaluate lessons learned and give guidance on future ICAD policies in Papua New Guinea, prior to project terminal review. A publication on the outcomes of the first ICAD will be prepared in time to be presented at the national workshop.

A handbook will be prepared on lessons learned on the planning, design, implementation, and maintenance of ICAD projects to provide guidelines for future ICAD projects in Papua New Guinea. A draft will be prepared sufficiently in advance to allow review by Government, UNDP, and other participating agencies four months prior to the terminal review.

## **I. LEGAL CONTEXT**

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Papua New Guinea and the United Nations Development Programme, signed by the parties on 7 April 1981. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government cooperating agency described in that Agreement.

The following types of revisions may be made to this project document with the signature of the UNDP Resident Representative only, provided he or she is assured that the other signatories of the project document have no objections to the proposed changes:

- Revisions in, or addition of, any of the annexes of the project document
- Revisions which do not involve significant changes in the immediate objectives, outputs, or activities of a project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation

- Mandatory annual revisions that rephase the delivery of agreed project inputs or increased expert or other costs due to inflation or that take into account agency expenditure flexibility.

**J. BUDGET**

The project budget is attached.

1. Project Budget Covering UNDP Contribution in US dollars

Description	Total wm	1993\$ wm	1994 \$ wm	1995 \$ wm	1996 \$ wm	1997 \$ wm	1998 \$ wm
Personnel							
Int'l experts							
Proj manager	867,600 60.0	115,680 8.0	173,520 12.0	173,520 12.0	173,520 12.0	173,520 12.0	57,840 4.0
Economist	464,400 36.0	25,800 2.0	154,800 12.0	154,800 12.0	129,000 10.0		
CA mgmnt	267,800 24.0	25,800 2.0	110,000 10.0	132,000 12.0			
Consultants							
Cons planner	112,000 8.0	28,000 2.0	28,000 2.0	28,000 2.0	14,000 1.0	14,000 1.0	
Sociologist	66,000 6.0		33,000 3.0	33,000 3.0			
Marine bio.	198,000 18.0		66,000 6.0	66,000 6.0	66,000 6.0		
Agriculturist	66,000 6.0		22,000 2.0	22,000 2.0	22,000 2.0		
Nontimber	66,000 6.0		22,000 2.0	22,000 2.0	22,000 2.0		
S-t consult	154,000 14.0	22,000 2.0	66,000 6.0	66,000 6.0			
Subtotal	2,261,800 178.0	217,280 16.0	675,320 55.0	697,320 57.0	426,520 33.0	187,520 13.0	57,840 4.0
Admin supp							
Admin asst.	33,600 56.0	2,400 4.0	7,200 12.0	7,200 12.0	7,200 12.0	7,200 12.0	2,400 4.0
Secretary	27,600 46.0		3,600 6.0	7,200 12.0	7,200 12.0	7,200 12.0	2,400 4.0
Subtotal	61,200 102.0	2,400 4.0	10,800 18.0	14,400 24.0	14,400 24.0	14,400 24.0	4,800 8.0
Duty travel	205,000	15,000	40,000	45,000	45,000	45,000	15,000
Subtotal	205,000	15,000	40,000	45,000	45,000	45,000	15,000

Description	Total wm	1993\$ wm	1994 \$ wm	1995 \$ wm	1996 \$ wm	1997 \$ wm	1998 \$ wm
Mission costs	95,000	15,000	20,000	30,000	10,000	10,000	10,000
Subtotal	95,000	15,000	20,000	30,000	10,000	10,000	10,000
Nat'l profs							
Soc. Anthro.	35,000 10.0	7,000 2.0	14,000 4.0	14,000 4.0			
Facilitator 1	56,000 56.0	4,000 4.0	12,000 12.0	12,000 12.0	12,000 12.0	12,000 12.0	4,000 4.0
Facilitator 2	48,000 48.0		8,000 8.0	12,000 12.0	12,000 12.0	12,000 12.0	4,000 4.0
Health Vol. 1	40,000 40.0	6,000 6.0	4,000 4.0	12,000 12.0	12,000 12.0	6,000 6.0	
Health Vol. 2	40,000 40.0		4,000 4.0	12,000 12.0	12,000 12.0	12,000 12.0	
Subtotal	219,000 194.0	17,000 12.0	42,000 32.0	62,000 52.0	48,000 48.0	42,000 42.0	8,000 8.0
Component total	2,842,000 474.0	266,680 32.0-	788,120 105.0	848,720 133.0	543,920 105.0	298,920 79.0	95,640 20.0
Subcontracts							
Land owner education	66,000	6,000	18,000	18,000	18,000	6,000	
Alt income	66,000	6,000	18,000	18,000	18,000	6,000	
Aerial survey	25,000	5,00	12,000	8,000			
PRA	61,000	6,000	18,000	18,000	13,000		6,000
Anthro study	18,000		9,000	9,000			
Land registry	42,000		24,000	18,000			
Covenant document	36,000		12,000	12,000	12,000		
Trust fund document	48,000		24,000	24,000			
NCC formulation	60,000		30,000	30,000			
Bio surveys	75,000	20,000	20,000	15,000	10,000	10,000	
Drama (ACT)	30,000	8,000	10,000	6,000	6,000		

Description	Total wm	1993\$ wm	1994 \$ wm	1995 \$ wm	1996 \$ wm	1997 \$ wm	1998 \$ wm
Component total	527,000	51,000	195,000	176,000	77,000	22,000	6,000
Training							
Fellowships	84,000 24.0		42,000 12.0	42,000 12.0			
In-service							
Village ed	70,000		20,000	20,000	15,000	15,000	
Ed support	130,628		30,000	25,000	25,628	30,000	20,000
Train trainers	81,000	6,000	15,000	20,000	20,000	20,000	
Workshops	49,000	12,000	12,000	10,000	8,000	5,000	2,000
NGO develop	60,000	8,000	15,000	15,000	15,000	5,000	2,000
ICAD tours	50,000	10,000	20,000	20,000			
Parataxo- nomists	17,000		7,000	5,000	5,000		
Counterpart	65,000	10,000	25,000	15,000	15,000		
Facilitators	20,000	5,000	10,000	5,000			
Component total	626,628 24.0	51,000	196,000 12.0	177,000 12.0	103,628	75,000	24,000
Equipment and supplies							
Local procurement		218,400	172,500	13,000			
Subtotal	403,900	218,400	172,500	13,000			
International procurement							
Subtotal							
Component total	403,900	218,400	172,500	13,000			
Op and Maintenance	111,000	16,000	20,000	20,000	25,000	20,000	10,000
Reporting costs	13,000	1,500	1,500	1,000	1,000	5,000	3,000
Sundries	63,628	11,628	20,000	20,000	6,000	6,000	

Description	Total wm	1993\$ wm	1994 \$ wm	1995 \$ wm	1996 \$ wm	1997 \$ wm	1998 \$ wm
Field office admin costs	137,615	18,486	41,794	37,672	22,696	12,808	4,159
Component total	325,243	47,614	83,294	78,672	54,696	43,808	17,159
Support cost	275,229	36,973	83,587	75,343	45,393	25,615	8,318
Budget total	5,000,000 498.0	671,667 32.0	1,518,501 117.0	1,368,735 145.0	824,637 105.0	465,343 79.0	151,117 20.0
Net GEF contribution	5,000,000	671,667	1,518,501	1,368,735	824,637	465,343	151,117