DEPARTMENT OF ENVIRONMENT AND CONSERVATION

A PROTECTED AREA POLICY FOR
A
NATIONAL PROTECTED AREA SYSTEM
FOR PAPUA NEW GUINEA

Discussion Paper

December 2011

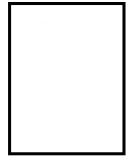**YOUR SUBMISSIONS AND FEEDBACK ARE INVITED**

The Discussion Paper on a National Protected Area Policy for Papua New Guinea can be obtained in person from the Office of the Secretary, 7TH Floor, Department of Environment and Conservation, Somare Foundation Building, Corner of Sir John Guise Drive and Independence Drive, Waigani, NCD or via email at officesec@dec.gov.pg

Public Submissions on this Discussion Paper are required by Close of Business (4.00pm),

Friday, 27 January 2012

Public Submissions will be accepted in hardcopy or digital form to the above addresses

Minister's statement

As the recently appointed Minister for Environment and Conservation in the O'Neill/Namah Government, I am pleased to be responsible for the release of this Discussion Paper on a Protected Area Policy for Papua New Guinea.

Papua New Guinea contains a wealth of biodiversity and is one of eighteen megadiverse countries which have a very high total number of species. PNG contains more than 7% of the world's biodiversity in less than 1% of the land area. It has more than 18,894 described plant species, 719 birds, 271 mammals, 227 reptiles, 266 amphibians and 341 freshwater fish species, 600 species of coral and 3000 species of reef fish.

This biodiversity provides the timber, food resources and medical supplies for a large proportion of the population. It is under significant threat from major resource developments and a rapidly expanding human population. It needs to be better protected.

Our Constitution, in particular the 4th Goal which states that *'Papua New Guinea's natural resources and environment should be conserved and used for the collective benefit of all and should be replenished for future generations'* gives the strongest mandate for the development of this policy and the actions which will follow its adoption.

I am personally committed to the development of a National Protected Area System to protect PNGs biodiversity. I am also keen to support the Provinces and Local Level Governments to protect areas of importance to local communities, however my priority as a Minister in the national government is to identify and protect nationally significant areas.

The greatest impediment to protecting biodiversity in PNG is the lack of sustainable financing for protected areas. Landowners cannot be expected to give up rights over areas of land or water without seeing benefits in the form of service delivery or support for economic development. Protected areas need to be seen as an alternative development option to resource developments in the forestry, agro-forestry or agriculture sectors. We will then see significant support for their establishment.

The first step in moving towards development of a National Protected Area System (NPAS) is to develop a National Protected Area Policy (Policy). This document will provide a roadmap for use by my Department, other Agencies in the National Government and other levels of Government and all Papua new Guineans on how we move forward in delivering on the NPAS.

The journey to achieve the goal of the NPAS will have many obstacles and challenges for us all but it is critical that we start to move forward at this critical time in PNG's development.

The release of this Discussion Paper is the first step in the consultation process for development of the Policy. I look forward to a robust discussion about the issues and ideas it raises and the lessons to be learned from previous experience in establishing protected areas in PNG.

HON. THOMPSON HAROKAQ'VEH
Minister for Environment and Conservation

Secretary's statement

I am pleased to be able to introduce this Discussion Paper on 'Development of a National Protected Area Policy for Papua New Guinea' (Policy). The release of this document is the first step in the development of the Policy.

The Discussion Paper has drawn from the PNG and international literature relating to establishment of protected area systems and aims to:

- Summarise PNG's experiences in the areas of priority setting and selection, establishment, and management of Protected Areas;

- Identify and discuss the major issues we need to be resolve if we are to be successful in establishing a National Protected Areas System (NPAS); and

- Document the main elements of a new approach to establishing protected areas which will lead to the creation of the NPAS.

Some of the key lessons to be learned from the Discussion Paper include the need to:

- Work cooperatively with the natural resources development sectors in the selection of areas for inclusion in the NPAS given their need to access land and marine resources to assist in developing the economy. Cooperation not competition is the way forward;

- Formally acknowledge that we are developing the protected area system on customary land tenure which is privately owned land not public land as in most countries;

- Recognise that landowners should not be expected to give up use rights over their land without some mechanism in place for the sharing of the benefits which derives from biodiversity conservation; and

- Develop sustainable financing systems to support benefit sharing agreements with landowners and to bring in external sources of finance through mechanisms such as the proposed Endowment Trust Fund and 'Payment for Ecosystem Services' such as catchment management.

New approaches are needed and this paper outlines the current thinking about the new direction the Government will need to take to develop the NPAS.

This paper is being released to promote discussion and comment. I encourage all interested stakeholders to read it and provide comments to the Department so we might improve the paper and strengthen the new directions being proposed here.

DR. WARI LEA IAMO
Secretary
Department of Environment and Conservation

Contents

Acronyms

BIORAP - Rapid Biodiversity Assessment
BPA - Biodiversity Priority Areas
CAR - Comprehensive, Adequate, Representative
CBD - Convention on Biological Diversity
CI - Conservation International
CITES - Convention on International Trade in Endangered Species
CNA - Conservation Needs Assessment
DEC - Department of Environment and Conservation
FMA - Forest Management Agreement
GEF - Global Environment Facility
ICDP – Integrated Conservation and Development Project
IUCN – International Union for the Conservation of Nature
LLG - Local Level Government
MBMCCP - Milne Bay Community-based Marine and Coastal Conservation Project
NCC - National Conservation Council
NEC - National Executive Council
NGO - Non-Governmental Organization
PES - Payment for Environmental Services
PoWPA - Programme of Work on Protected Areas
PNGFA - PNG Forest Authority
RAPPAM - Rapid Assessment and Prioritization of Protected Areas Mechanism
TNC - The Nature Conservancy
WCS - Wildlife Conservation Society
WMA - Wildlife Management Area
WWF - World Wide Fund for Nature

Definitions

Protected Area = This is a generic term for any area which is gazetted under legislation whose primary purpose is the conservation of biodiversity. All the 'types' in Table 1 are forms of protected area.

Customary Land Tenure = customary tenures can be seen as a balance between group and individual rights and obligations, with land ownership being held at group level and land use being exercised at the individual or household level.

Executive Summary

The mandate for the Policy on Protected Areas derives directly from the 4th Goal of the National Constitution and its Directive Principles.

The 4th Goal States that:

'Papua New Guinea's natural resources and environment should be conserved and used for the collective benefit of all and should be replenished for future generations'
We accordingly call for –

1) *Wise use to be made of our natural resources and the environment in and on the land or seabed, in the sea, under the land, and in the air, in the interests of our development and in trust for future generations*
2) *The conservation and replenishment, for the benefits of ourselves and posterity, of the environment and its sacred, scenic and historical qualities; and*
3) *All necessary steps to be taken to give adequate protection to our valued birds, animals, fish, insects, plants and trees*

The most effective mechanism for protecting biodiversity is the establishment of protected areas which are areas whose primary objective is the conservation of biodiversity.

This paper is the first step in moving towards a systematic framework and process for establishing a National Protected Areas System (NPAS) and draws lessons from PNG and selected International experience. The main conclusions drawn in the paper are:

- The current protected area system is small, fragmented, and is highly unlikely to be adequate in providing protection to PNG's extraordinarily high biodiversity;

- The lack of a protected area policy framework and effective legal framework is a major impediment to developing the NPAS;

- Whole-of-government land-use planning processes are required to ensure coordinated decision making regarding allocation of land and marine areas to resource development or conservation purposes;

- The protected area system will be developed primarily on customary land tenure whether on land, marine or freshwater and the long term support of local communities will be critical to the success of the initiative to create the NPAS;

- The nature of customary land tenure means landowners will continue to live in and utilise the natural resources within the protected area and this fact needs to be enshrined in the legislation underpinning the creation of protected areas;

- A system of sustainable and guaranteed financing for the communities living within protected areas is needed to ensure communities that their commitment to biodiversity will not result in them becoming trapped in poverty; and

- The NPAS will be managed by landowners and considerable effort and funding support will be needed to ensure landowner communities can meet the obligations that flow from having a protected area gazetted over their land.

These are not the only lessons to be learned from our experience to date with establishment and management of protected areas in Papua New Guinea but they are key lessons emerging from this paper.

The conclusion of the Discussion Paper is that PNG has an enormous opportunity to deliver on its Constitutional obligations and international obligations to protect the environment and biodiversity whilst at the same time reducing poverty for communities within protected areas and providing many opportunities.

1. Introduction

The purpose of this paper is to stimulate a discussion on the issue of protected areas in Papua New Guinea and the development of a strategy to develop a National Protected Area System (NPAS). The need for a comprehensive protected area system is clear from a simple consideration of PNG's domestic and international obligations to protect biodiversity for future generations, in particular the 4th Goal and Directive Principle of the Constitution.

The question is not whether PNG should have an NPAS but how we should deliver it so it contributes to poverty reduction and environment protection, whilst protecting the rights of landowners who are interested in their customary land becoming part of the protected area system.

The paper provides an overview of the current status of the protected area system, discusses in critical terms the current approaches to protected area priority setting, selection, establishment and management and lays the groundwork for the development of a National Policy on Protected Areas.

The paper does not pretend to have all the answers or to have considered all the issues but has been developed to stimulate discussion and to provide the opportunity for key stakeholders to provide their views as an input to the development of the Government's Policy.

2. Policy and Legal Context

The aim of creating a National Protected Area System is unlikely to be achieved unless the policy and legislative environment is supportive. Until recently this has not been the case and Government policy has primarily focused on economic development and poverty reduction.

The Government has committed to the United Nations Millennium Development Goals, one of which is Goal 7: Environment Sustainability. Goal 7 aims to:

- Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources;

- Reduce biodiversity loss, achieving, by 2010:

    o reduction in the rate of loss of forest;

    o increased proportion of fish stocks within safe biological limits;

    o increased proportion of terrestrial and marine areas protected;

    o reduction in proportion of species threatened with extinction.

Domestically PNG has committed to the Vision 2050 policy which includes an explicit commitment to environmental sustainability and the challenges associated with managing climate change. Together the Government commitment to these policies is changing attitudes and provides an opportunity to gain policy support for the NPAS.

2.1 Policy

The Government does not have a protected area policy which is why this paper has been developed.

The Government endorsed Vision 2050 during 2010. It is a national policy framework to guide the country's development from now until 2050. It is underpinned by seven Strategic Focus Areas, which are referred to as pillars:

- Human Capital Development, Gender, Youth and People Empowerment;
- Wealth Creation;
- Institutional Development and Service Delivery;
- Security and International Relations;

- Environmental Sustainability and Climate Change;
- Spiritual, Cultural and Community Development; and
- Strategic Planning, Integration and Control.

The Vision 2050 policy enshrines environmental sustainability and resilience to climate change as a central pillar for future planning, including a number of specific commitments, including:
- Oceans and marine and terrestrial areas protected;
- Forests are protected and sustained.

This policy commitment provides support to the aim of this Discussion Paper.

2.2 Legislation

DEC administers three Acts of Parliament whose objectives are to facilitate the gazettal of protected areas for biodiversity conservation purposes. They are:

- National Parks Act, 1982

- Fauna (Protection and Control) Act, 1966

- Conservation Areas Act, 1978.

National Parks Act

The National Parks Act provides for the establishment of protected areas on State owned land which are alienated lands acquired from the customary owners by mutual agreement or compulsory acquisition. The objectives of the Act are to:
(a) provide for the preservation of the environment and of the national cultural inheritance by –

    (i) the conservation of sites and areas having particular biological, topographical, geological, historical, scientific or social importance; and

    (ii) the management of those sites and areas, in accordance with the 4th goal of the National Goals and Directive Principles.

Since independence the practice of alienating land for the purposes of the State has substantially declined and current pressures are more to convert State owned land to customary tenure.

The total area of existing parks and reserves gazetted under the National Parks Act is less than 10,000 ha.

Fauna (Protection and Control) Act

The purpose of the Act is to make provision for the protection, control, harvesting and destruction of fauna, and for related purposes. The Act is essentially a fauna management Act which does not recognise the importance of protecting habitats or ecosystems or even plant species, the main food resource for many animal species.

The Act is not a traditional protected area Act where biodiversity conservation is the primary focus of the gazetted area. Notwithstanding this point the vast majority of protected areas in PNG have been established under the Act as Wildlife Management Areas (WMAs). They now comprise more than 90% of protected areas coverage in PNG (Table 1).

The Act has very weak regulatory provisions and essentially provides the framework for landowners to manage the area, including setting rules for wildlife management, with the Government having little or no powers to intervene in the event of over-exploitation of fauna resources.

Conservation Areas Act

The Conservation Areas Act is the most recent of the protected area Acts to be gazetted. Its purpose is to:
(a) to provide for the preservation of the environment and of the national cultural inheritance by –

(i) the conservation of sites and areas having particular biological, topographical, geological, historic, scientific or social importance; and

(ii) the management of those sites and areas,

in accordance with the 4th goals of the National Goals and Directive Principles; and

(b) to give effect to those Goals and Principles under Section 25 of the Constitution; and

(c) to establish a National Conservation Council.

The Act's provisions relate directly to meeting the 4th Goal of the Constitution and interestingly recognise both natural and cultural heritage protection, including biodiversity.

The Act purports to transfer significant property rights from landowners to the Government following gazettal of the Conservation Area and gives significant powers to the Minister in the event landowners wish to undertake development on their land. The Act appears to rely on Section 53 (*protection from unjust deprivation of property*) of the Constitution, which recognises that protection of the environment for the purpose of preservation is a public purpose, to prevent landowners from claiming compensation for the implicit transfer of property rights to the Minister following a Conservation Area gazettal.

The Act also provides for the creation of a National Conservation Council to advise the Minister on matters relating to the establishment and management of protected areas.

The Conservation Areas Act is also the only Act which requires broad consultation and an NEC decision on gazettal of the protected area.

Only one Conservation Area, Yus Conservation Area in Morobe Province has been declared under this Act.

Table 1: Number, type and area of protected areas in PNG

Legislation	Type	No.	Area (Hectares)	%
Fauna (Protection and Control) Act	Wildlife Management Area	38	1,723,773	90.8
Fauna (Protection and Control) Act	Sanctuary	5	75,271	3.9
Fauna (Protection and Control) Act	Protected Area	2	20,245	1.1
Conservation Areas Act	Conservation Area	1	76,000	4.0
National Parks Act	National Park	8	8,059	0.4
National Parks Act	Provincial Park	1	77	0.004
National Parks Act	Reserve	3	49	0.003
National Parks Act	Memorial Park	3	5	0.0003
	Total	**61**	**1,897,595**	**100**

2.3 Implications

Policy

To date most discussions on PNG's environmental policy commitments have been framed in terms of high-level international agreements such as the Convention on Biological Diversity. These international agreements have not been translated into domestic policy hence have had little or no impact on the behaviour of Governments or commitment to biodiversity conservation. Since attaining political independence in 1975, PNG has ratified and acceded to many multilateral environmental agreements, however it is hard to identify tangible outcomes from many of them (Baines, G. et al. (2006), Chasek, P. (2010)).

The recent adoption of Vision 2050 as a PNG developed strategic vision which provides a commitment to the theme of Environmental Sustainability and Climate Change provides an opportunity to be pro-active with respect to the development of environment policies and to gain support for their adoption by Government.

Legislation

As noted above, PNG has three Acts whose aim is to facilitate the establishment of protected areas.

The National Parks Act is of limited value in PNG today as it relies upon alienation of customary land tenure by the State. This is unlikely to occur.

The Fauna (Protection and Control) Act is extensively used for gazetting land and marine areas as protected areas, however its powers are very weak and arguably areas gazetted under this Act are not protected in any meaningful sense. This can be evidenced by the number of resource exploration and development leases which are given over Wildlife Management Areas (WMAs) and the extent of damage to WMAs through commercial logging and intensification of subsistence agriculture.

The Conservation Areas Act has the greatest potential to provide the legal framework for developing the NPAS because of the powers it gives to the State to regulate development in the Conservation Area. The major concern with the Conservation Areas Act is whether its provisions for transferring power over land from landowners to the Minister would be considered to meet the definition of public purpose as specified in Section 53 of the Constitution and whether political support would exist for the exercise of these powers.

The Courts tend to take a negative view of the State assuming property rights without paying compensation. This aspect of the Conservation Areas Act has never been tested in the Courts and could be a significant risk to the viability of an NPAS created through Conservation Areas Act gazettals.

One approach to reducing the risk of a Constitutional challenge to Conservation Areas Act provisions would be to develop a framework for benefit sharing and provision of sustainable financing for communities within Conservation Areas. This issue is addressed later in this paper.

Further analysis of legal options to underpin development of a robust legal framework for the NPAS is required.

3. Institutional Context

Understanding the institutional context for creation of the NPAS requires identifying all the key stakeholders and their rights, roles and responsibilities in the process of policy analysis, research, consultations and decision making which is required to establish a protected area and provide for its effective management and financing. Given protected areas are generally established on customary land tenure, whether terrestrial or marine, this means understanding the complex network of stakeholders from the national government level down to the local level, and the roles that they play.

3.1 The Stakeholders and their Current Roles and Responsibilities

As discussed earlier the majority of protected areas established in PNG have been Wildlife Management Areas gazetted under the Fauna (Protection and Control) Act. This is an old Act inherited from the Colonial Administration prior to independence. Its provisions only require consultation with landowners and in practice it has been most widely applied by non-government organisations, particularly International NGOs, who have received donor grants for biodiversity conservation purposes. To date in fact, conservation and the establishment of protected areas in PNG have been driven almost entirely by NGOs.

The outcomes of NGO-driven conservation agendas have generally not been effective and have resulted in the current highly fragmented and poorly resourced protected area system which does not effectively deliver on PNG's obligations for biodiversity conservation whilst causing, at times, significant conflicts with industry. The NGOs have taken the initiative on establishing protected areas partly because of the lack of Government support and action in this area.

The NGO-driven procedures for negotiating protected areas and the ability of the DEC under the provisions of the Fauna (Protection and Control) Act to gazette areas without consultation with other National Government

Agencies or other levels of Government has contributed to the conflicts which have been seen between biodiversity conservation and resource development.

The NGOs have been frustrated with what they see as slow Government implementation of commitments made under the Convention on Biological Diversity which has led many international conservation NGOs pursuing a range of alternative governance approaches, either working directly with communities to develop WMAs (i.e. World Wildlife Fund [WWF] and Wildlife Conservation Society [WCS]), or bypassing the national level by attempting to have Local Level Governments or Provincial authorities establish protected areas (i.e. The Nature Conservancy [TNC] and Conservation International [CI]). Such actions can lead to the perception that foreign NGOs are attempting to set up a parallel governance system for conservation. Clearly, this is not conducive to developing a nationally supported conservation agenda.

The Global Environment Facility (GEF) funded Milne Bay Community-based Marine and Coastal Conservation Project (MBMCCP) project which was a major initiative to establish a system of Marine Protected Areas in Milne Bay failed to deliver any significant benefits and was wound up early under a cloud of controversy largely due to the failure of a foreign NGO to provide effective leadership (Baines, G et al (2006)). The MBMCCP was established on the basis of ecosystem assessments, in which communities were offered incentives to pursue conservation with a view to establishing a locally-supported network of marine protected areas.

However, within PNG, the impression was that most money was diverted externally, (i.e. to the managing NGO, consultants, travel and expensive vehicles), leaving local communities feeling neglected and upset having seen no demonstrable benefits. Moreover, the various tiers of government were aggrieved by the lack of consultation by the NGO. Milne Bay provides a stark reminder of the need for any conservation project to be fully supported, and overseen by Government at all stages, rather than controlled by external parties who – rightly or wrongly – are open to accusations of self-interest and lacking accountability to local communities and national interests.

One of the major concerns stemming from NGO-driven conservation is that the conservation decisions are being made unilaterally. In some cases NGO projects follow opportunistic funding and it is doubtful that the areas targeted would meet national protected areas criteria, in terms of national significance.

The underlying concern is the apparent leadership role of NGOs rather than communities in the establishment of protected areas. In reality, environmental NGOs have often led communities through the process to have protected areas gazetted by DEC. Following gazettal, most NGOs are unable to support the protected areas with ongoing financing or capacity development. In many cases, further support is not feasible, even if funding is available, due to the isolation, poor communications and conflicted community objectives in the absence of clear management objectives (Kinch, J (2007)).

In the worst cases, the gazettal of WMAs has later been contested, such as was the case for the Hunstein Ranges WMA, which was facilitated by WWF in 1997. WWF was competing with the PNG Forest Authority who were, in parallel, developing a proposal for a Forest Management Area (FMA) over a similar area of forest. The end result was the spatial overlap of the WMA and the FMA which continues to cause local conflict. Following the WMA gazettal, landowner factions made claims against the Government, for alleged lost income opportunities because of the incorrect claim that the WMA prevented forest logging from proceeding under the FMA (Filer, C. Wood, M (2011)).

In other cases, such as the Mt Bosavi WMA (again facilitated by WWF) boundaries remain contested with forestry leases, once more placing DEC and the PNG Forest Authority in an insidious position. A similar situation may be emerging at Crater Mountain WMA, where some anti-WMA factions are promoting mining opportunities following disenchantment with the WMA established with the assistance of WCS in 1994.

In the absence of national Government support, TNC have also attempted to develop protected areas, through alternative means, including an attempt to acquire the rights to an FMA (which was unsuccessful) and working with Local-Level Governments to make their own by-laws about the 'local environment', subject to the approval of the Minister for Inter-Governmental Affairs.

These NGO approaches may be understandable, given frustrations with government process, and donor pressure to establish protected areas, however, in the long term a national system of sustainable protected areas will not be achieved without ownership of the system at a national level.

More recently, Conservation International has played a leading role in the establishment of the Yus Conservation Area as the first gazetted Conservation Area under the Conservation Areas Act. The gazettal of Yus broadly followed the requirements of the Act and was endorsed by the NEC.

Whether the Yus experiment by CI will be successful is still uncertain. CI is continuing to provide support to the area, primarily for biological work which generates support from some in the community. However, the sustainability of this initiative is uncertain given the difficulty of delivering broader community benefits in the area of service delivery, in particular for health and education through an NGO model. This may, over time, undermine the success of the Yus experiment.

There has been a repeated pattern in PNG of landowner expectations being raised during consultations and through to the gazettal process of protected areas and following gazettal landowners becoming increasingly frustrated at the lack of 'development' following their commitment to the protected area.

3.2 Implications

A Systematic and Comprehensive Framework for Stakeholder Consultations

PNG has had mainly negative experiences with protected area gazettal and management, as documented above. It is clear that a systematic framework for stakeholder consultations is needed with respect to priority setting, selection, establishment and management of the NPAS, in particular NEC endorsement of the national priority areas for protection in the NPAS and endorsement prior to gazettal of the individual protected area.

Whole-of-Government or Governments, including Provincial and Local Level, processes need to be established prior to the gazettal of protected areas. These processes need to be formalised at the National level and adopted as the basis for establishment of all areas to be included in the NPAS.

It is also clear that NGOs, particularly international NGOs, need to be brought within the formal Government processes. One option for doing this is for the DEC to develop strategic partnership agreements with each NGO which clearly articulate the roles and responsibilities of each party to the agreement(s). This issue is the subject of a separate discussion paper the Department is developing.

To move from the current unsatisfactory and negative situation with regard to protected area establishment which exists today to a new and more cooperative model an attempt has been made below to propose roles for each stakeholder group in the process of protected area establishment and management.

The discussion starts at the national level with the National Executive Council. This is not to imply they are the most important stakeholder but they are the ultimate decision maker with respect to gazettal of protected areas under the Conservation Areas Act which is likely to be the framework legislation for the NPAS.

National Executive Council (NEC)

The NEC as the major decision making body of the Government of the day will be asked to endorse the protected areas policy and the priority areas identified for inclusion in the NPAS.

The NEC's endorsement will also be required prior to the gazettal of each protected area whether through existing processes under the Conservation Areas Act or a new process under new legislation.

The endorsement of the NEC is essential for gaining recognition and commitment to delivering on the policies objectives and for establishment of the NPAS.

Minister for Environment and Conservation

The Minister will need to endorse the protected areas policy, priority areas and the proposals for gazettal for all protected areas and will lead Cabinet level discussion and debate on these issues.

National Conservation Council (NCC)

The NCC is a body established under the Conservation Areas Act. Its functions are:

(a)   to furnish advice to the Minister on matters relating to conservation areas, including action to conserve and improve conservation areas; and

(b)   to establish the criteria for areas to be recommended as conservation areas; and

(c)   to consider any proposals for development affecting, or in the vicinity of, a conservation area or proposed conservation area; and

(d)   to advise the Minister on the formulation of rules applicable to conservation areas, and on the administration and control of conservation areas; and

(e)   to advise the Minister on the formulation of regulations; and

(f)   to encourage public interest in and knowledge of conservation areas and conservation generally; and

(g)   to advise the Minister on any matter referred to it by the Minister.

The functions of the NCC are likely to need amending to also include review of all proposals for Conservation Areas to ensure they meet the requirements of the Act or new legislation.

Department of Environment and Conservation

The Department will coordinate all matters related to protected areas policy and administration of protected areas legislation, including the making of amendments to bring the legislation into line with the policy, once endorsed.

The Department's primary roles with respect to protected areas selection, establishment and management will be to:

- Identify the national priority areas for inclusion in the NPAS (see discussion under 4.1 below);

- Coordinate the consultations across all levels of Government, with landowners and civil society organisations prior to development of the gazettal proposal;

- Negotiate the benefit sharing agreements with landowners or review benefit sharing agreements developed by NGOs for compliance with protected area legislation provisions; and

- Endorse the Management Plan developed for the area and regulate the protected area for compliance with provisions of the Management Plan. This role will also include liaison with the Endowment Trust Fund Manager (discussed further under 4.3 below) on whether payments to landowners need to be suspended due to non-compliance with Management Plan provisions.

Resource Sector Agencies

The resource sector Agencies (e.g. Mineral Resources Authority and PNG Forest Authority) are key partners in the decision to establish a protected area to ensure its gazettal minimises the potential for economic impacts whilst ensuring Government policy on establishment of the NPAS is implemented.

Provincial and Local Level Governments

Provincial and Local Level Governments are critical partners throughout the process of consultation and decision making prior to gazettal of the protected area and following gazettal in the strengthening of service delivery and local economic development opportunities.

Landowners

The clan-based resource ownership structure is one of the most important features of natural resource management and conservation in PNG. Approximately 98% of the land base and forest in PNG is owned by clans under customary law, and most coastal and marine resources (reef fisheries, beche-de-mer harvests, mangrove and seagrass beds) are also managed under clan structures. Customary ownership is also recognized in national laws such as the Forestry Act 1991, Mining Act 1992, Lands Act 1996 and the Oil and Gas Act 1998. These resources are owned collectively rather than by individuals or household units, and decisions on resource use are made largely by consensus through extensive consultative processes.

Therefore, by definition, any process of protected area establishment and management must be undertaken in collaboration with the local community as they will make the decision through their own customary practices and processes whether or not to agree to the establishment of a protected area over their land.

Further, if the new legal framework for protected area establishment and management requires the development of benefit sharing agreements with landowners a process of social mapping will be needed to identify the legitimate owners and users of the land who should be included in the BSA framework. These practices are well established in the petroleum and gas industry and to some extent the mining industry and are not new to PNG.

Industry

The resource development sectors, in particular forestry, agro-forestry and agriculture, require access to large areas of land for resource extraction and management and are important partners of the Government supporting economic development and poverty reduction. Engagement of the Industry to obtain their views on the establishment of protected areas will be essential to minimise conflict.

NGOs

NGOs are the logical partners to support the DEC with priority setting and the establishment and management of protected areas and with landowners to support the management of protected areas. Supporting landowners with the development of Management Plans for protected areas, implementing the key actions in the Management Plan and reporting to the DEC as the Regulator are critical roles which NGOs are well placed to undertake.

Summary

The development of a systematic and comprehensive framework for consultations prior to the decision to establish a national protected area will be central to the ability of the Government to deliver the NPAS. The purpose of this paper is not to define this framework in detail but to identify deficiencies in the current approaches and suggest what the roles and responsibilities of the different stakeholders would be in the new consultation framework as outlined above.

Further analysis will be needed prior to amending the Conservation Areas Act or drafting new protected area legislation as the legal framework adopted for protected areas establishment will have to incorporate new processes for consultation in the development of Cabinet Submissions for protected areas gazettals.

Sustainable Financing

The second critical issue that emerged from the outline of current approaches to establishing protected areas is the need to ensure sustainable financing is available to support landowner aspirations and management of the protected area prior to the gazettal occurring. It is not reasonable to expect landowners to give up rights over the use of their land as occurs with the Conservation Areas Act until financing mechanisms have been put in place, and it may well be unconstitutional.

Sustainable financing for protected areas is an area of policy in which PNG has little or no experience. There are no sustainably financed protected areas in PNG or financial mechanisms which, as currently designed,

could be used to generate sustainable financing. This section of the paper briefly discusses existing approaches to financing in PNG but focuses on new approaches which will need to be developed if this aspect of the NPAS initiative is to be effective.

The issue of sustainable financing will be discussed under three headings:

- Endowment Trust Funds

- Payment for Ecosystem Services

- Local Economic Development

Endowment Trust Funds

Financially, trust funds can be structured in three ways. Creating an **endowment** allows capital to be invested. Only income from those investments is used to finance conservation activities. **Sinking funds** disburse their entire principal and investment income over a fixed period of time, usually a relatively long period, e.g., 10 years. **Revolving funds** provide for the receipt of new resources on a regular basis— such as proceeds of special taxes designated to pay for conservation programs—which can replenish or augment the original capital of the fund and provide a continuing source of money for specific activities. Any particular fund can combine these features as part of its mix of resources.

The time horizon of activities the Fund needs to support is generally the primary determinant of the decision regarding the nature of the fund that is required. The focus in this discussion is on Endowment Trust Funds as the funding needed to support sustainable management of protected areas is by definition long term in nature.

The current situation in PNG is that the Government provides very limited recurrent funding for protected area management but does provide Program Funds to support protected area selection and establishment. This situation is unlikely to change in the near future but may as PNG moves from a low to middle income status as envisaged by the Vision 2050 policy.

PNG does not have a functional Endowment Fund able to support the establishment and management of the NPAS but does have the Mama Graun Conservation Trust Fund which was created in 2000 by a Trust Deed through the efforts of The Nature Conservancy. Mama Graun is registered as a private charitable trust corporation with a governing Board of 12 regional and international trustees representing sectors of civil society. Mama Graun is working to mobilize funding from a variety of public and private sources to build an endowment of at least US$30 million.

Mama Graun operates a grants fund, through a grant programme that supports the Melanesian Countries Protected Areas Network supporting local community projects to promote sustainable resource management and biodiversity conservation. In addition to providing financial support, Mama Graun aims to build the capacity of Melanesian land owners and resources users' organizations.

Mama Graun is respected within the conservation community, but it has struggled to upscale activities to the provincial and national level and thus far has been unable to impact significantly upon the national conservation agenda, partly because of concerns over its governance model and the lack of financial expertise to manage the large grants needed for an effective endowment fund.

The Mama Graun Trust Fund has an important role to play in supporting community level protected areas and its role would complement the role of the Endowment Fund being proposed to support sustainable financing for the NPAS.

Payment for Environmental Services

Payment for ecosystem services (PES) schemes compensate landowners for management that provides conservation or ecosystem service benefits to other parties but which necessarily constrains their own revenue-generating opportunities. PES approaches have received much publicity and have been implemented in various guises throughout temperate and tropical countries with varying degrees of success (Pagiola, S. et al

(2002)). Costa Rica began its landmark payments for environmental services (PES) scheme in 1997 and Brazil implemented PES schemes in 2000.

Within PNG, options and opportunities exist for payments for landowners who protect and manage their customary lands through emerging markets for payments for ecosystem services such as carbon, biodiversity and water.

It should be noted that while the potential enrichment of communities is a desirable spin-off, this is not the primary role of PES, rather it is to enhance environmental outcomes. It is also important to acknowledge that experience shows that PES is most effective in marginal situations – that is, PES alone is unlikely to modify behaviour or land-uses but may succeed in situations where additional incomes or incentives can persuade landowners away from environmentally deleterious practices. For example, PES payments combined with a guaranteed income stream from an Endowment Trust Fund could generate the necessary support within communities for biodiversity conservation. PES may also work in cases where there are other viable conservation compatible business enterprises that can also be considered (e.g. tourism on the Kokoda Trail), but are unlikely to compete successfully against commercial resource extraction.

This limitation was shown in the GEF-funded Integrated Conservation and Development Project (ICDP) at Lak, which attempted to convince landowners to trade conservation-compatible activities (e.g. community forestry, carbon forestry and tourism) against a commercial logging operation. In retrospect this approach was always destined to fail, as funding limitations meant the project could never match the provision of quick cash and benefits from a commercial logging operation. Unsurprisingly, the community played off the ICDP against the loggers for immediate gains and commercial logging proceeded. The main lesson was that a conservation project dependent upon PES schemes should never set up in direct competition against a commercial operation.

Overseas experience has shown that Conservation Trust Funds (CTF) are well-positioned to use their experience in administering PES for serving as the financial intermediary between buyers and sellers of ecosystem services. CTFs can also use their expertise and independence as grant making institutions and financial intermediaries to channel long-term subsidies, financial incentives and compensation to rural communities for shifting away from ecologically unsustainable practices to more sustainable forms of natural resource use. Another advantage of using a CTF is that it well placed to bundle ecosystem services and/or buyers and sellers to achieve economies of scale. Experience has shown that PES is more likely to be competitive and attractive to buyers when ecosystems services and offsets such as watershed, protection, carbon and biodiversity can be 'credit stacked'.

For example, Guatemala's Sierra de las Minas Water Fund proposes to receive user fees from watershed services (i.e. commercial and individual water consumers), and then channel these fee revenues to pay suppliers of watershed services (i.e. small farmers and landowners) for conserving the forests that help to maintain water flow and water quality. Costa Rica's FONAFIFO channels revenues from 3 different sources (i.e. 3.5% of the national gasoline tax; carbon sequestration payments by foreign electric utility companies; and watershed conservation payments by Costa Rican hydroelectric power companies and commercial water users) in order to pay small landowners for signing five-year renewable contracts not to cut down the trees on their lands (thereby sequestering carbon emissions and conserving watersheds).

Local Economic Development

Protected area authorities are increasingly attempting to generate income themselves or channel revenues by either tapping into users' or tourists' willingness to pay or by taxing users and other key stakeholders that have a negative impact on biodiversity. Income generating activities can include tours, hunting levies, souvenirs and crafts and cultural displays programmes. These can be very lucrative for highly visited places such as the Kokoda Track, but in more remote less visited areas generally only deliver low incomes.

Too often in PNG, protected areas funding has been predicated upon unrealistic attempts to develop local economies based upon eco-enterprises, for low value products with no market access (i.e. WWF's attempts to

stimulate village industries based upon non-timber forests products and ecotourism in remote locations in the TransFly and the Southern Highlands).

However, in cases where markets exist (i.e. rubber, eaglewood, crocodile skins), such projects may be up-scalable, with coordinated industry and government support – however, this should be assessed by feasibility studies before attempts are made to promote development schemes with communities.

Trade in wildlife under the Convention on International Trade in Endangered Species (CITES) - currently restricted to crocodile products in PNG – could also be a potentially high-value option for remote communities, and, moreover, discourage illegal trading. PNG is well placed to benefit from well-managed wildlife trade, given the high numbers of sought after species and the close control that landowners maintain over their resources.

Eaglewood has been exploited through illegal and unregulated trade, providing relatively low returns for local people. A regulated trade would not only enable landowners to gain fairer prices, but would offer the possibility of introducing more sustainable harvesting practices (Zich, F. Compton, j. (2001)). Other options to encourage sustainable resource use in return for premium prices through fair trade marketing, have met with only limited success after long effort (e.g. TNC's efforts to establish a Fair Trade cocoa-producing cooperative in the Adelbert Range).

However, such projects may also benefit from a more formalized national focus in PNG to market products under fair trade; a market that is currently strongly focussed on African and Latin American countries, despite the direct landowner benefits delivered by many PNG products.

4. Protected Area - Priority Setting and Selection, Establishment and Management

International experience has demonstrated that a systematic approach to the development of a NPAS through a formal process of priority setting and selection, establishment and management provides the most effective use of the limited resources available for conservation and can minimise the economic costs and environmental benefits associated with creation of a NPAS.

The **Priority Setting and Selection** component is basically concerned with the issue of identifying areas which are a high priority for biodiversity conservation often because they contain high concentrations of endemic or threatened species and or ecosystems. Early approaches to selection of priority areas generally relied upon expert opinion combined with review of mapped distributions of biodiversity using readily available data sources (e.g. Conservation Needs Assessment).

More recent approaches have evolved in parallel with the development of Geographic Information Systems and improved availability and quality of spatial data on biodiversity as well as decision support systems (DSS) which allow many different spatial data sources to be combined to identify areas which meet criteria which can be applied in the DSS. Two examples from PNG are the BioRap assessment and the PoWPA Gap Analysis which are further discussed below.

The **Establishment** component concerns the process of consultation and decision making which results in the gazettal of the protected area. As discussed earlier (Section 3) the current approaches to establishment of protected areas are weak and require significant strengthening through a whole-of-Government(s) and inclusive stakeholder consultations model prior to gazettals.

The **Management** component is concerned with the post-gazettal period and traditionally involves, for public sector managed protected areas, the development of a Management Plan and the monitoring of its implementation and compliance with its requirements. This is the area of greatest weakness in PNG as the tendency has been for NGOs to facilitate the gazettal of areas and then move on the next project and the next gazettal.

The model for this phase of development of the NPAS for PNG is also very different to the models developed for public land protected areas. Protected areas in PNG are primarily developed on customary land tenure and implicitly involve the community giving up rights over their land in terms of acceptable land use practices. This aspect of the NPAS development is the one requiring most work as the model is weakly developed and currently ineffective.

Current approaches to Priority Setting and Selection, Establishment and Management of the protected area system are discussed further below.

4.1 Priority Setting and Selection

The Current Protected Area System

PNG's current terrestrial protected area system comprises 66 protected areas which together cover approximately 3.2% of PNG's land area. The current marine protected areas system comprises one large protected area of approximately 200 000 hectares and a small number of integrated marine/terrestrial protected areas whose combined area is less than 200 000 hectares.

As noted previously, the current system is largely the result of NGO-driven processes.

The majority of protected areas are Wildlife Management Areas comprising approximately 90% of the total terrestrial and marine protected area estate. As discussed earlier WMAs have no effective legal protection from development so all are vulnerable to conversion and modifications to intensive and extractive land uses.

The majority of these protected areas are small with only three exceeding the minimum recommended area determined by the Conservation Needs Assessment for a viable protected area. Fifty-one (75%) of the protected areas are smaller than 10 000 hectares and are highly unlikely to meet the criteria for inclusion in the NPAS. Many WMAs have been modified for agricultural use and some have been commercially logged reflecting their weak legal status and lack of monitoring and compliance efforts.

The distribution of protected areas across PNG is biased towards particular PNG Bioregions with the percentage protected varying from around 1% of the New Britain/New Ireland region and approximately 6% of the Southern Plains Bioregion which encompasses Western and Gulf Provinces.

Given the small, fragmented nature of the current protected area system and its biased distribution the NPAS will require the further identification of national priority areas. Some of the larger WMAs may be suitable for inclusion in the NPAS but this decision needs to await the outcome of appropriate analyses.

As context for the following discussion, Box 1 provides an explanation of criteria used for selecting areas for inclusion in a national protected areas system.

Box 1. Criteria for Selecting Areas for Inclusion in the NPAS

The first step in the selection process is determining the criteria for selecting areas which are important for biodiversity. Parameters must be set for what constitutes important biological diversity components for conservation (endemism, threatened status, important community assemblages), collate data of their current distribution and status, and define priority areas on a map.

The science of conservation planning has advanced in recent decades and it is now recognized that long-term biodiversity outcomes are better served by trying to maintain intact and viable ecosystems rather than focusing all protection efforts on threatened species or habitats. The important point is that this coverage should not be random, but strategically focused in areas that are identified as representative of significant ecological values, retain good chances of being maintained and are large enough and/or resilient enough to be ecologically viable. Very small or fragmented habitats or populations are unlikely to constitute viable long-term conservation investments, rather it may be better to try and protect fewer, larger areas.

A well developed and accepted approach to the issue of criteria for the selection of protected areas is the methodology developed for the Australian Government forest planning process. New criteria were developed

for this process using the concepts of comprehensiveness, adequacy, and representativeness (CAR). These criteria are defined below.

1. <u>Comprehensiveness</u>: includes the full range of vegetation communities recognized by an agreed national classification at an appropriate hierarchical level.

2. <u>Adequacy</u>: the maintenance of ecological viability and integrity of populations, species and vegetation communities; protected areas should be large enough to sustain the viability, quality and integrity of populations (species).

3. <u>Representativeness</u>: those sample areas that are selected for inclusion in reserves should reasonably reflect the biotic diversity of the vegetation communities.

A second critical issue is whether to adopt a target for the total area to be protected in the NPAS or targets for the representation of individual vegetation communities or species. Until recently, the International Union for the Conservation of Nature minimum target of 10% of the area of the country was accepted by the Secretariat for the Convention on Biological Diversity.

PNG will need to develop its own criteria and targets for use in the identification of priority areas for the NPAS guided by its own circumstances and needs. The concept of CAR criteria has proved effective in the Australian context but would need adaptation to be successful in PNG.

Protected Area Priority Setting/ Selection Assessments completed previously

Three major biodiversity priority setting assessments developed for use in selecting protected areas have been completed for PNG. They include: the Conservation Needs Assessment (1993); BioRap (2001); and, most recently, the PoWPA Gap Analysis (2010). These are described briefly below.

Conservation Needs Assessment (1993)

The mapping of conservation values at a national scale in PNG was first attempted through a 'Conservation Needs Assessment' (CNA) implemented by the Biodiversity Support Programme at the request of the national government in the early 1990s. Teams of internationally recognized experts compiled and analysed the existing base of scientific information on the countries terrestrial and marine ecosystems and the biodiversity they support. The process identified: 42 terrestrial high biodiversity areas and 13 important wetland habitats, 30 marine and coastal high biodiversity areas and 5 watersheds critical to the health of these and 16 biologically unknown areas that merit immediate survey and study (Alcorn, J (ed) (1993; Beehler, B. (ed) (1993)).

This assessment was the first attempt at a biodiversity priority setting exercise which whilst useful for guiding future biodiversity survey work was not developed in a form that was able to be used to select protected areas for a NPAS. This was primarily because the areas defined were 'broad brush strokes' on a map which for the three priority categories very high priority terrestrial areas, high priority terrestrial areas and very high priority wetlands, together cover over 50% of PNGs land.

BioRap (2001)

The CNA maps led to a more sophisticated attempt to identify the most efficient set of protected areas to capture 10% of PNGs terrestrial biodiversity through the implementation of a rapid biodiversity assessment. The BioRap Toolbox was assembled under the first BioRap Project during 1994-95. This project was carried out using AusAID-World Bank funding, by a Consortium of four Australian scientific and technological agencies: the Centre for Resource and Environmental Studies of the Australian National University; the CSIRO; the Environmental Resources Information Network (ERIN) and the Great Barrier Reef Marine Park Authority.

The BioRap methodology utilised biodiversity surrogate information based on modelled species distributions, 'environmental domains' summarising bioclimatic and other data, vegetation types, and socio-economic data.

The PNG project applied the BioRap Toolbox to identify an initial Conservation Biodiversity Plan based on a set of Biodiversity Priority Areas (BPAs). These BPAs would be established within the context of establishing a

national protected areas network and the selection of explicit options and constraints for land management within the forestry and agricultural sectors. The point of this exercise was to determine a flexible scheme of 'trade-offs' between the spatial distribution of biodiversity values and the temporal change in patterns of land use which threaten the conservation of these values (especially commercial logging). BioRap analyses indicated that an allocation of 16.8% of PNG's land area to some form of biodiversity protection was required, in order to achieve the 10% level of biodiversity representation/persistence that would have been possible if there were no constraints on land allocation and no land-use history (Faith, D. et al (2001)).

The expectation was that BPAs would be subject to ongoing revision by PNG Government agencies in response to land use change, change in economic, social and political conditions and change in ecological and biological knowledge. The main project was carried out over a two year period, from July 1997 to July 1999, with workshops presented in PNG in 1997 and 1998. Knowledge transfer through workshops and training, for scientists and officers of relevant PNG Departments plus other planners and policy makers, was provided to assist the DEC to apply the BioRap methodology on an ongoing basis.

The BioRap whilst an important exercise in demonstrating a more explicit data driven approach to identification of priority areas had major limitations for use in supporting the establishment of an NPAS. The reasons for this include the highly fragmented and 'unusual' shapes of areas selected by the software. So whilst the selected areas might efficiently incorporate 10% of PNGs biodiversity which was the goal of the selection process the resulting set of areas would be administratively extremely expensive and complex to manage.

CBD Program of Work on Protected Areas (PoWPA) - Gap Analysis (2010)

As part of PNG's commitment to the CBD PoWPA process, DEC worked with The Nature Conservancy (TNC) to undertake a National Terrestrial Gap Analysis. The project aimed to assess the effectiveness of the 'existing' protected areas system in representing PNG's biodiversity, identify 'potential' protected areas systems that best capture representative samples of PNG's ecosystems and plant and animal species, and identify areas with potential to serve as climate refugia for the biodiversity of PNG. As part of this process, a draft set of criteria for the establishment of a National Comprehensive, Adequate, Representative (CAR) protected area system was developed.

A range of options for potential protected areas systems were developed. The process evaluated the relative influence of five main factors: i) three different surrogates of biodiversity, ii) inclusion and exclusion of existing protected areas, iii) the inclusion and exclusion of the probability of climate change, iv) 10 and 20% targets, and v) the relative clumping or scattering of priority areas. Based on these results a decision tree was developed to formulate a final set of Conservation Priority Areas that would maximize the inclusion of all biodiversity; maximize the consideration of climate change refugia; and, minimize the overall area impact of protected areas on the terrestrial areas of PNG.

The resulting products represent an interim set of Conservation Priority Areas to guide decision makers regarding priority areas for the establishment of a NPAS (Lipsett-Moore et al (2010)).

Although the PoWPA analysis forms the basis for an Interim National Priority Areas Report, the gap analysis failed to exclude areas that had already been converted to other land uses, hence many of the selected areas are unsuitable for inclusion in the NPAS. For example one priority area includes the town of Kavieng in New Ireland Province. However, the PoWPA has one major advantage over the BioRap assessment in that the selection software can ensure the resulting protected area system is not highly fragmented hence unmanageable from an administrative viewpoint.

The PoWPA approach appears to have the greatest potential to design an Interim NPAS which could guide priority setting for the protected area system into the future once the analyses are re-run to remove converted areas from the spatial database.

4.2 Protected Area Establishment

As documented earlier current approaches to protected area establishment primarily involve NGOs and local communities nominating areas for Gazettal with no reference to any identified national priorities. The DEC is frequently only made aware of the proposal to gazette a protected area when the proposal for gazettal is mailed to the Department.

The Department generally has no input to the areas being selected for inclusion in the protected area system and is expected to gazette areas whether they are considered significant for biodiversity or suitable for inclusion in the protected area system.

This situation partly reflects a lack of strategic planning capability within the Department and the limited resources provided by the Government to support the Department's conservation functions. The end result is far too much reliance on NGOs driving the protected area agenda, the outcome of which is the highly fragmented, unrepresentative protected area estate that exists in PNG today. The protected area system which is created through this process is not effectively protected as the legislation under which most areas are gazetted is weak.

Further, the failure to support landowner aspirations generally results in the search for alternative development options which impact on the protected area values and purpose.

This ad-hoc and un-coordinated approach to protected area establishment cannot continue as it is delivering few benefits to PNG in meeting its Constitutional obligations and International to protect biodiversity.

4.3 Ongoing Management

The WWF funded a review of protected area management in PNG which was published as the RAPPAM Report during November 2009. The assessments for this report involved visiting many protected areas in PNG and undertaking a systematic assessment of management effectiveness. The conclusions of the Report included:

- that no protected area visited by the assessment team was under any formal management regime;
- many had been significantly degraded by human activities; and
- there was an urgent need to focus resources on effective management.

The simple conclusion of the Report was that protected areas aren't being managed. This is consistent with the issue raised earlier that the main imperative for the NGOs undertaking protected area establishment is obtaining the gazettal and that Government funding for protected area management is extremely limited.

This model will not work for the creation of the NPAS and unless effective management regimes are put in place the gazettal process is a waste of the limited resources available for protected areas.

4.4 Implications

Priority Setting and Selection of Protected Areas

DEC and the NGOs have demonstrated an ability to work together on the issue of priority setting for the NPAS and have made significant progress on identification of priority areas. Further work is needed to refine the current PoWPA Gap Analysis prior to it being used in a process of public consultation and then submitted to Cabinet for its approval.

Establishment of Protected Areas

The DEC needs to develop new procedures for the establishment of protected areas, particularly for areas being considered for inclusion in the NPAS. These new procedures need to take into account the issues raised earlier regarding whole-of-Government(s) coordination and have a strong focus on broadly based stakeholder consultation.

Key elements of the new framework should include:

- A legal requirement for NGOs to notify the Department of the intention to start consultations with landowners regarding protected area establishment. This would then become the trigger for the Department initiating formal consultations with other Government Agencies, other levels of Government and industry on their views regarding the proposed protected area;
- A requirement for formal social mapping of the area before gazettal to be used in developing a benefit sharing agreement with landowners;
- The undertaking of a socio-economic assessment prior to the gazettal to determine the level of funding needed to provide support for landowner aspirations, particularly in the areas of service delivery and local economic development. Options for PES mechanisms would be considered in this assessment;
- Support for landowners to establish a legal entity for the management of the protected area and to receive and disburse funds for service delivery and local economic development;
- A requirement to establish sustainable financing mechanisms in advance of the gazettal process, including a dedicated Endowment Fund for all areas to be considered for inclusion in the NPAS; and
- All protected area submissions for the NPAS to be endorsed by the NEC prior to gazettal.

If we accept that protected areas have to be protected for the long term, for there to be any point in declaring them then it is essential that we take responsibility for those issues which will determine the long term viability of the area. Most of these issues fall into the area of initially generating support for the gazettal through what will be an exhaustive process of consultation and process and secondly maintaining support through ensuring landowners benefit from giving up rights over their land. These are the two essential issues which have been neglected to date in the debate and discussion over protected areas.

On-Going Management of Protected Areas

The implication of this issue is very simple and was partly dealt with under the process for establishment of protected areas. Gazettal of a protected area to form part of the NPAS should not occur until a sustainable financing plan, Endowment Fund and benefit sharing agreements with landowners are developed. This will provide a guarantee that the protected area will continue to be managed to protect its values and won't be converted to other land uses.

The sustainable financing models being developed for protected areas and move towards development of formal benefit sharing agreements with landowners should provide the impetus for the development of a planning and management framework for protected areas. The provision of funding through benefit sharing agreements would be tied to landowners committing to develop and implement management plans with support from DEC and NGOs. Formal compliance monitoring of the management plan would be required to ensure continuity of funding.

This will need to be the major focus of DEC policy analysis and research to develop an effective sustainable financing model for protected areas.

5. A New Approach

5.1 Problem Statement

The earlier discussion has made clear many of the problems with the current approach to the priority setting and selection, establishment and management of the terrestrial protected area system in PNG. Whilst the issues highlighted draw primarily from the processes used for creation of the terrestrial protected area system the same issues will exist with respect to the marine protected area system where it is to be established on customary land tenure. In summary the issues are:

a) The total area of the protected area estate is too small to provide protection for PNG's extraordinary biodiversity and clearly does not meet comprehensiveness or representativeness criteria;

b) The distribution of protected areas across PNG is biased towards certain BioRegions and not representative;

c) The majority of protected areas are small and do not meet the minimum area requirement of 90 000 hectares proposed in the Conservation Needs Assessment;

d) These small protected areas are unlikely to be of adequate size to maintain their biodiversity in the face of significant current threats including commercial logging, intensification of subsistence agriculture, mining exploration and mining activities and potential future threats, in particular climate change;

e) The current approach of the National Government gazetting all protected areas whether large and of national significance or small and of only local significance is inconsistent with the separation of powers as reflected in the Organic Law on Provincial and Local Level Governments and the NEC Determination on roles and responsibilities of each level of Government.

f) The majority of protected areas have no effective legal protection as they are gazetted under the *Fauna (Protection and Control) Act* as Wildlife Management Areas over which the Government has no effective powers;

g) The extent to which permits and licenses for commercial logging, mining exploration, and agriculture are legally granted over existing protected areas, primarily WMAs, indicates that the *Fauna (Protection and Control) Act* is weak and unable to provide adequate levels of protection;

h) The *Conservation Areas Act* has much stronger provisions than the *Fauna (Protection and Control) Act* and legally transfers the right to make land-use decisions from landowners to the Minister for Environment and Conservation, however the constitutionality of these provisions is uncertain as compensation is generally payable when property rights are removed. This is a complex legal and political issue which requires further consideration in the creation of a new legal regime for protected areas;

i) Any legislation to establish protected areas has to be based on the principle of multiple use as landowner communities will continue to live within the protected area and to need to utilise its resources for food, shelter and medicines; and

j) The role of the different stakeholders including Government, landowners, NGOs and Industry in the selection, establishment and management of protected areas needs to be clearly specified to prevent the current ad-hoc and uncoordinated approach from continuing;

k) The issue highlighted in g) above also highlights the limited commitment that landowners have to WMAs which partly reflects the lack of benefits that flow from committing land to conservation purposes and in turn illustrates the need for some form of on-going financing for protected areas;

l) The lack of effective management of any protected areas as documented in the RAPPAM Report further illustrates the lack of financing for protected areas following their gazettal;

m) The issues in i) and j) illustrate the problem with the current International NGO-driven approaches to protected area selection and establishment which are focused primarily on obtaining donor grants for the purpose of gazettal and generally ignore the consequences of not maintaining support following the establishment of the protected areas; and

n) Reliance on local development opportunities such as ecotourism and eco-forestry to generate adequate income streams to meet landowner aspirations is considered unrealistic and alternative forms of sustainable financing including an Endowment Trust Fund and Payment for Ecosystems Services mechanisms such as a Catchment Management Levy will be needed to support communities living within protected areas.

In summary, the current approaches to priority-setting, selection, establishment and management of protected areas in PNG has failed to meet either the Constitutional commitment to protection of the environment as expressed in the 4th Goal of the National Goals and Directive Principles of the Constitution or

PNG's international obligations under the Convention on Biological Diversity. A comprehensive new strategy is needed.

The 1st stage in development of this strategy for the National Government is development of a Vision for the new approach. The draft Vision and its implications for protected area priority-setting and selection, establishment and management are outlined below.

The Vision and Strategy for terrestrial protected area system establishment will also apply to creation of the marine protected area system.

5.2 Proposed Vision

The creation of a sustainably financed and effectively managed National Comprehensive, Adequate and Representative (CAR) System of Terrestrial and Marine Protected Areas to protect PNG's Globally and Nationally Significant Biodiversity.

5.3 Strategy

The Strategy draws its elements directly from the lessons learned and issues identified earlier in this paper. The Strategy is pragmatic and based on the reality of needing to protect biodiversity for long periods of time on land and marine areas which are under customary land tenure and where the ownership and use rights lie with landowners. This reality has been avoided for a long period of time through the false assumption that landowners will voluntarily give up their property rights and opportunities for economic development through the establishment of a protected area over their land.

Institutional settings

- The DEC will focus its efforts on areas of national significance for biodiversity. Other levels of Government will focus on areas of Provincial or Local significance;

- The DEC will be responsible for managing the whole-of-Government coordination processes for identifying areas of national significance for biodiversity and for obtaining agreement from all affected Agencies at all levels of Government prior to gazettal of the protected area;

- The DEC will also manage consultation processes with external stakeholders including Industry, NGOs and landowners prior to gazettal of a protected area;

- The National Executive Council will be asked to approve the identified areas of national significance for biodiversity and each nominated protected area prior to gazettal;

New or amended Legislation

- New or amended protected areas legislation will be required to establish in law the new process and framework for protected area selection, establishment, management and financing. The key elements of the new/amended legislation are likely to be:
  - For third parties (e.g. NGOs) wishing to establish a nationally significant protected area there will be a requirement to notify the DEC prior to initiating landowner consultations so appropriate Government and Industry consultation processes can be initiated;
  - A requirement for the National Conservation Council established under the Conservation Areas Act or equivalent if new legislation is developed to review the protected area proposal prior to Submission to the NEC;
  - The requirement for the NEC to endorse the Submission to establish the protected area;
  - Provisions within the legislation for formal benefit sharing agreements to be developed prior to NEC consideration of the proposal to gazette the protected area. These are likely to be modeled on approaches used in the resource development sectors;

- Requirement for formal social mapping procedures to be utilised prior to determining the beneficiaries for the Benefit Sharing Agreement;

- The requirement for an economic needs assessment to be undertaken prior to gazettal to establish the funding support needs to meet landowner aspirations, particularly for service delivery and local economic development. The assessment will also consider opportunities for PES type payments;

- The requirement to provide funding to the proposed new Government Endowment Trust Fund or to establish an independent Endowment Fund for the protected area prior to its gazettal to ensure adequate funding is available for the areas management and to meet landowner aspirations;

- The creation of a landowner legal entity to manage the protected area in accordance with the management plan and to receive and expend funding for the protected area in partnership with Provincial and Local Level Governments;

- Establishing the role of the DEC as the Regulator of the protected area with responsibility for monitoring compliance with the Management Plan and the role for the Trust Fund to monitor the use of funding provided to support management of the protected area; and

- Provisions to allow funds to be withheld from the protected area manager in the event of non-compliance with the Management Plan or financial expenditure requirements.

Role of Non-Government Organisations

- Partnership agreements to be entered into between DEC and the NGOs interested in establishing national protected areas which clearly define roles and responsibilities of the parties and mechanism for dispute resolution;

- Under the new model the key role of NGOs would be to provide capacity development support to the landowner owned legal entity managing the protected area to ensure it is meeting its legal and financial obligations; and

- DEC and the NGOs may also cooperate on processes for selection and establishment of protected areas.

Priority setting and Selection of Areas of National Significance for Biodiversity for Inclusion in the NPAS

- A formal science-based process will be used for identifying areas of National significance for proposed inclusion in the National Protected Area System (NPAS). The elements of this process will include:
  - The use of bioregional frameworks for the selection of terrestrial and marine areas which are of national significance for biodiversity conservation and for establishment of the protected area system;
  - Formal threat assessments applied at the National and Bioregional level to assist in determining priorities for protection;
  - CAR criteria developed and endorsed by the NEC for the selection of areas of national significance, including minimum areas and potentially, targets;
  - High quality spatial datasets on biodiversity and land/marine uses developed to assist in identifying areas of national significance;
  - Formal land/marine use planning procedures developed and applied in partnership with all levels of Government, Industry and NGOs to identify areas for inclusion in the NPAS; and
  - Development of an Interim Priority Areas of National Significance for Biodiversity document to be endorsed by the NEC and publicly released.

Establishment of Protected Areas to form the NPAS

- The processes for establishing protected areas for the NPAS have been outlined under the Institutional and Legislation headings above. The key elements include:
  - Formal consultations with all levels of Government, landowners, Industry and NGOs to obtain agreement on areas proposed for inclusion in the NPAS;
  - NCC consideration and NEC endorsement of all proposals for gazettal;
  - Benefit sharing agreement in place with landowners following formal social mapping procedures and supported by funds in an Endowment Fund; and
  - Creation of a landowner legal entity to manage the protected area.

Management of Protected Areas that form the NPAS

- The framework for managing protected areas for the NPAS has been partly outlined under the Legislation heading above. The key elements include:
  - The DEC to be the protected area Regulator to ensure compliance with the requirements of the Management Plan and also to develop the standards for the Management Plan;
  - The Trust Fund managers to be responsible for financial auditing and compliance for funds provided to the landowner legal entity which will manage the protected area;
  - NGOs to provide capacity development support for protected area management and potentially financial management to the landowner legal entity managing the protected area; and
  - Landowners responsible for managing the protected area and through partnerships with Provincial and Local Level Government for administering and expending funds for service delivery and local economic development.

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