



INDEPENDENT STATE OF PAPUA NEW GUINEA



GOVERNMENT OF PAPUA NEW GUINEA

OCTOBER 2007



Cover Photo:	Milne Bay Community Based Marine Conservation Project
All other photos:	Professor Simon Saulei, Gai Kula, Dr. Eric Kwa, John Genolagani
Layout:	Benjamin Cheong



PRIME MINISTER'S STATEMENT



In my recent statement to the global community at the United Nations, I mentioned that more than ever, global challenges demand multilateral solutions. I also reiterated Papua New Guinea's strong endorsement of the five (5) UN priority issues: (1) climate change; (2) financing for development; (3) achieving the Millennium Development Goals; (4) countering terrorism; and (5) the reform agenda – to renewing the management, effectiveness and coherence of the United Nations. To complement efforts in other international and regional fora, Papua New Guinea with other countries in the Pacific Region, have agreed to pool our limited resources under the Pacific Plan to address many of these issues.

My government will continue to support our five-year Medium Term Development Strategy (MTDS) which is aligned to the Millennium Development Goals (MDGs). Achieving the MDGs by 2015 is a challenge for Papua New Guinea, but we have taken the first steps in providing budget funding for its implementation, within the context of my Government's Public Investment Program, where most of the MDGs activities will be catered for. This is an important proposal given that we are at the half-way mark on the road to implementing the MDGs by 2015. I called upon the United Nations system and other genuine development partners to work with us in the spirit of real partnership to meet these vital commitments.

We call on development partners, including the UN, to play a supportive role to sustain these gains. This can be done through fair trade opportunities, equitable markets, increased foreign investment, transfer of technology, capacity-building and providing quality overseas development assistance.

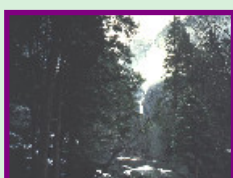
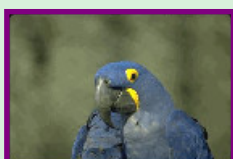
Let me now turn to an issue which my country feels strongly about – that of Climate Change and Sea Level Rise.

For many years now leaders of the Pacific, especially from our smaller Pacific countries, have highlighted the emerging problem of global climate change, particularly sea level rise. Today, like everyone else, we are happy to see the issue put at the top of the international agenda. It is a problem that will not go away, but one which we have to, as a global community, address together.

Small islands and low-lying atolls in Papua New Guinea and the Pacific Region are being submerged by rising sea levels. People on atolls islands of Carteret and Mortlock off the PNG coast are being re-settled on higher grounds due to sea level rises. We also note that small islands states like Tuvalu are also immediately threatened.

Papua New Guinea's strong position on the environment is drawn from the Preamble of our National Constitution which states:

"We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be



replenished for the benefit of future generation.”

This constitutional imperative underpins my country’s whole approach to sustainable development objectives, including those contained in the Johannesburg Plan of Implementation and the Mauritius Accord.

Environmental degradation is occurring at a frightening pace. Scientific studies suggest that climate change is causing increasing incidences of environmental catastrophes, such as hurricanes, tsunamis, landslides and flashfloods. Our planet is in distress! As co-inhabitants of this world, we all must equally share the responsibility to address the root causes of this problem.

We urge the industrialized countries to reduce their green house gas emissions. We call upon those that have not done so, to accede to and ratify the Kyoto Protocol. Papua New Guinea is prepared to play its part to protect and conserve the world’s tropical rainforest with the aim of stabilizing the earth’s climate.

The findings of the Intergovernmental Panel on Climate Change suggest that an estimated 20-25% of annual global emissions were generated through land use change, primarily from the degradation of forest resources. In this context, it is crucial for us to protect the tropical rainforests through sustainable and fair market-based incentives.

However, the dilemma for PNG is this, the forestry sector is a major revenue earner – provider of much needed employment, facilitator of important infrastructure projects and catalyst for the provision of basic services in the rural areas. The present incentives offered by international markets for agriculture, forestry and emissions reductions are inadequate. These are perverse incentives from the standpoint of the environment.

Papua New Guinea, along with Costa Rica and our Coalition for Rainforest Nations members comprising countries in Africa, Asia, Latin America and the Pacific, are pursuing an initiative to access the global carbon markets to support efforts to reduce rates of deforestation and degradation. Simply put, this approach seeks to recognize the contribution of resource owners for conserving and protecting rainforests for the benefit of mankind. We invite more nations to join our efforts to create new markets and reform outmoded market and regulatory mechanisms. This is necessary if we are to contribute more effectively towards environmental sustainability, economic development, climate stability and poverty reduction.

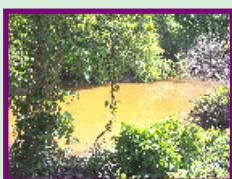
The Initiative on Avoided Deforestation is part of a broader agenda being pursued by my Government to implement under the MDG 7 on Environmental Sustainability. We are convinced that by implementing MDG 7, we will harness our ability to achieve environmentally and socially sustainable economic growth.

In addition the threat of HIV/AIDS is real in many of our countries and has serious implications on social and economic development. In Papua New Guinea, my Government has passed HIV/AIDS Legislation underpinned by a comprehensive HIV/AIDS policy framework. To ensure close scrutiny, I have vested my Depart-

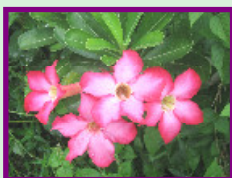


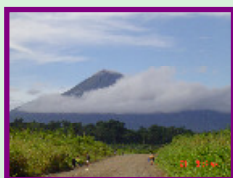
ment with the responsibility of overseeing implementation. In addition, I have appointed a specific Minister to assist me to provide political leadership on this issue. But our experience suggests that national action alone is not enough. It requires a concerted global response. This is a war that must be waged on all fronts and by all countries.

The PNG NBSAP provides us as a country the roadmap for mainstreaming and integrating nature conservation and protected areas into our respective national policies and strategies which will contribute to the health of our country and the Pacific Region.



Grand Chief Rt. Hon. Sir Michael T. Somare, GCL, GCMC, CH, CF, KStJ
Prime Minister of Papua New Guinea





Environment and Conservation Minister's Statement



As the newly appointed Minister for Environment and Conservation in the Somare-Temu Government, I have accepted two new challenges for the Department which are; the New Strategic Directions for the Department of Environment and Conservation; and the PNG National Biodiversity Strategy and Action Plan.

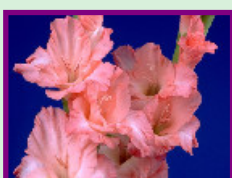
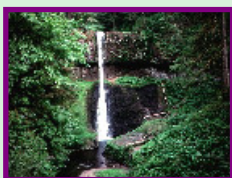
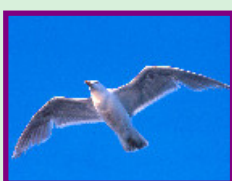
The two strategies and action plans are basically echoing the Prime Minister's undertaking on natural forest conservation and to mainstream conservation in our renewed development agenda with regional partnership and mobilization of resources and investment in PNG.

The NBSAP provides our initial response on the Convention's requirement for appropriate national biodiversity strategies and plans to be reflected in a cross sectoral manner. The mainstreaming of biodiversity conservation into all the main sectors is envisaged to be a gradual process and this document presents our framework for the short to medium term which will lay the foundation for a longer term action plan.

The Strategy's primary focus is Papua New Guinea's biodiversity. Implementation of the Strategy will require actions affecting virtually all of Papua New Guinea's land and sea, most of which will continue to be subject to a multiplicity of uses, either in parallel or in sequence. Governments, community communities and groups, the private sector and individuals are engaged in numerous activities aimed at the conservation of biodiversity in Papua New Guinea, but much remains to be done. There are deficiencies in resourcing and coordination, in the adequacy of the protected area system, and in the knowledge upon which we base our decisions. There is also scope to improve resource management and conservation outside protected areas and to coordinate this with the protected area system. Greater consistency in approaches between governments and improved information flows between all sectors of the community are also necessary.

Hon. Benny Allen, MP

Minister for Environment and Conservation



Introduction

Conservation of biological diversity is a foundation of ecologically sustainable development and is one of the three core objectives of the strategy for ecologically sustainable development. Biological diversity provide all our food and many medicines and industrial products. Biological diversity underpins human well-being through the provision of ecological services such as those that are essential for the maintenance of soil fertility and clean, fresh water and air. It also provides recreational opportunities and is a source of inspiration and cultural identity.

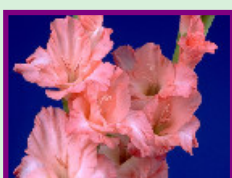
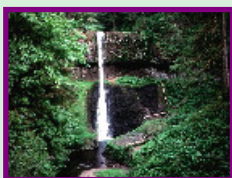
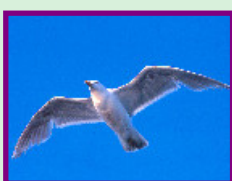
PNG occupies less than 1 percent of the world landmass but is home to 6-7 percent of the total world's biodiversity. This represents some 400,000 – 700,000 species from the estimated 14 million species on earth. It is also known for its Number 1 richest cultural diversity on earth. The unique rich biodiversity is mirrored by the rich ethnic and linguistic diversity that contributes to a quarter of the world's languages. It is estimated that Papua New Guinea's distinct ethno-linguistic group range between 700 to 850 and higher.

The Parliament of Papua New Guinea (PNG) ratified the Convention on Biological Diversity (CBD) in 1993 to commit the country to undertake its international obligations under the CBD. A key obligation under the CBD is the formulation and adoption of National Biodiversity Strategy and Action Plan (NBSAP). The present document marks the country's fulfillment of that obligation.

The NBSAP was developed over a period of two (2) years involving stakeholders from the Government and private sectors and the civil society. The PNG NBSAP is the product of the spirit of that cooperation by key stakeholders. The NBSAP provides a strategic roadmap for sustainable development over the next five (5) years (2008-2013) and beyond.

The NBSAP is the roadmap to the sustainable use and management of the country's biological resources. The NBSAP will enable the country to successfully meet some of its obligations under the CBD, the other Rio instruments, some of the multilateral environmental agreements and other international instruments such as the Millennium Development Goals, particularly Goal 7 (environmental sustainability) which is a core objective of the DEC's New Strategic Directions. Moreover, the NBSAP is a strategic plan that aligns, strengthens and ensures the implementation of the government's environmental commitments espoused by the major national development policies, particularly the Medium Term Development Strategy 2005-2005.

The NBSAP calls for a realignment of resources and collaboration by stakeholders for its successful implementation. The NBSAP will require adequate resourcing and coordination and regular monitoring and evaluation to make it viable.



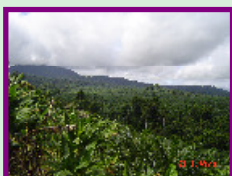
The Strategy and Action Plan

The adoption of the PNG NBSAP must of course be complemented with effective and functional government mechanisms. When these systems are operational from planning to policy formulation, and implementation, the decision-making structures, processes and institutions should act as the ‘catalyst’ in making biodiversity conservation objectives attainable in the long-term. With effective planning and informed decision-making based on a multi-sectoral approach at all levels of government, biodiversity conservation and sustainable use of biological resources can be achieved. It must be recognized, however, that biodiversity conservation is a process of continual improvement. The challenge facing PNG at the national level is how to build on the achievements to date in order to make further progress in the practical implementation of the principles of biodiversity conservation and sustainable use.

The following are the main goals of the NBSAP:

- Goal 1** To conserve, sustainably use, and manage the country’s biological diversity
- Goal 2** To strengthen and promote institutional and human capacity building for biodiversity conservation, management and sustainable use
- Goal 3** To strengthen partnership and promote coordination for conserving biodiversity
- Goal 4** To strengthen existing protected areas and ensure that protected areas for terrestrial species and marine species are increased to 10% by 2010 and 2012 respectively
- Goal 5** Ensure a fair and equitable sharing of benefits arising out of genetic and ecosystem resources
- Goal 6** Promote and strengthen research of the country’s biological diversity and the sustainable development of the country’s biological resources

These Goals are to be achieved through nine (9) broad programmes over the next five (5) years and beyond. These Programmes have been prioritized into four (4) different categories. Priority 1, Priority 2, Priority 3 and Priority 4. Priority 1 programmes are: (1) Policy and Legislation; (2) Financial and Technical Resources; and (3) Human Capacities. Priority 2 programme is: Access and Benefit Sharing. Priority 3 programmes are: (1) Research and Information on Biodiversity; and (2) In situ and ex situ Biodiversity Conservation. Priority 4 programmes are: (1) Measures of Sustainability of Biodiversity Use; and (2) Education and Public Awareness. Program nine (9): Monitoring and Evaluation applies equally across the breadth of the four different priority areas.



1. Policy, Legislation and Administration

OBJECTIVES

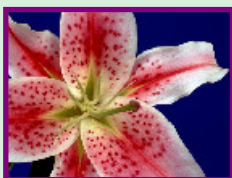
- Establish the NCC, expand mandate beyond advisory role and establish a NBSAP Coordination Sub-committee
- Review the functions of PINBio immediately to strengthen biodiversity conservation programs
- An effective legal framework for the implementation of the CBD and related Conventions
- Develop innovative policy and law that protect the intellectual property rights of organizations and individuals engaged in biodiversity research and development
- To regulate the introduction and use of Living Modified Organisms (LMOs)/Genetically Modified Organisms (GMOs) and alien species
- Improved effectiveness of existing legal mechanisms by creating greater awareness of conservation regulations and enhancing the capacity of law enforcement agencies (including the police, customs, airlines and NAQIA).

PROJECTS

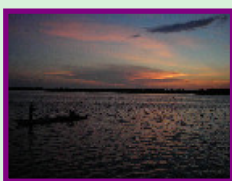
- Strengthening of the National Conservation Council and establish a NBSAP Coordination Sub-committee
- Comprehensive review and updating of national legislation on natural resources and linkages to MEAs and other relevant arrangements
- A legal regime for promoting the protection, compensation for local knowledge, innovations and techniques relating to biodiversity
- A legal regime for promoting the protection, compensation for local knowledge, innovations and techniques relating to biodiversity
- A legal regime for promoting the protection, compensation for local knowledge, innovations and techniques relating to biodiversity
- Enhance the enforcement of Biodiversity-related Laws

ACTIVITIES

- Establish Council and call inaugural meeting
- Establish functional Secretariat
- Form NBSAP Sub-committee
- Develop guidelines for the Council including orientation and training workshop for members of the Council such as: biodiversity planning; project development and management; fundraising; negotiation
- Improve administrative and other support services so as to create better systems of disseminating information, servicing meetings, tracking project status, record keeping, etc



- Document interests and competence of the NCC members and match with responsibilities, tasks and accountability
- Establish requirements for continuity of attendance at meetings, the implementation of tasks and the development and management of projects.
- Establish a Task Force of the NCC for purposes of future planning
- Improve technical support to ensure the NCC's ability to process applications for national conservation areas and applications for research, conduct field work etc
- Initiate incentives for increased levels of participation by members and expanded use of the pool of expertise in the Sub-Committee (e.g. honoraria for attendance at meetings of NBSAP and Sub-committee etc.)
- Improve level of preparation prior to attendance and reporting afterwards.
- Liaise with PINBio TSC for review
- Establish a Task Committee to review functions of PINBio
- Review and update the national legislation to ensure complementarity in sustainable resource use and the incorporation of biodiversity conservation considerations including protection of intellectual property
- Develop a national policy statement on biodiversity
- Approval of NBSAP by NEC
- Review and develop a national policy statement on microbes, fauna and flora
- Skills training of personnel in negotiations in international and regional arrangements
- Implement the Science and Technology Council Act 1996
- Institute the formulation and adoption of a national intellectual property rights policy and law within two years
- Parliamentary approval of Biosafety Policy and Bill
- Implement Biosafety and Biotechnology Policy and law
- Provision of training to relevant officers in identifying the species listed in CITES Appendices I and II, and Protected Fauna (and Flora?)
- Recognise the right of citizens, community-based organizations (CBOs) and NGOs to challenge administrative decisions which they believe have been taken in violation of conservation law.
- Take immediate remedial measures to protect species that are presently being subject to illegal trade.
- Take all necessary measures to fulfil the commitments of the agreements already signed under related International Conventions.
- Strengthen the national quarantine and biosafety processes.



2. Financial and Technical Resource

OBJECTIVES

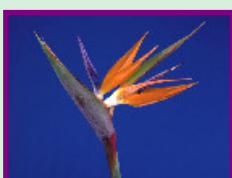
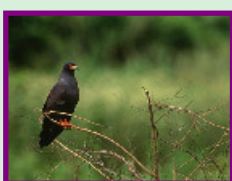
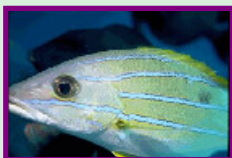
- To develop the human capacity to ensure the short- and long-term financing and sustainability of NBSAP
- To design and implement a spectrum of sustainable financing mechanisms for NBSAP implementation
- Obtain necessary financial support for biodiversity initiatives
- Encourage local investment in biodiversity conservation as a complementing measure to foreign donor support
- Expenditure reduction through reduction of duplication of effort, streamlining activities, and strategic actions to ensure maximum mileage from minimum investment by the Biodiversity Projects Coordinator.

PROJECTS

- Short and long term financing and sustainability for NBSA

ACTIVITIES

- Create and fill a position of Fund Raising Specialist at DEC. The responsibilities of this position are to identify and obtain financial and technical support for projects under NBSAP.
- Develop the following initiatives (by the Fund Raising Specialist):
 1. mobilisation of financial resources from the regional and international donor community, public/private mobilisation of financial resources from national sources
 2. community mobilisation of financial resources from the sustainable use for biodiversity and other new and innovative funding mechanisms (including support for the PNG Mama Graun Conservation Trust Fund)
 3. mobilise technical assistance from regional and international sources.
- Coordinate the management of projects by the Biodiversity Project Coordinator, once funds have been accessed by the Fund Raising Specialist. Develop demonstration projects to test selected priorities
- Support the development and activities of the PNG Mama Graun Trust Fund as a local initiative funding source.



3. Human Resources and Institutional Capacity Building

OBJECTIVES

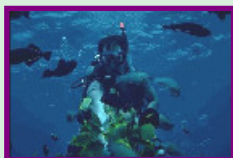
- Enhance the administration, planning and mobilizing funding and technical resources for the implementation of NBSAP
- Better coordination of the required policy, legal, scientific and economics work
- Enhance capacity as implementer, coordinator, delegator, mobiliser and motivator of stakeholders (i.e. helping them to help implement NBSAP)
- Strengthening human capacity in Biodiversity Conservation and Management
- Strengthen existing partnerships that promote biodiversity conservation and sustainable use of biological resources
- Identify new partnerships to encourage biodiversity conservation and sustainable use of biological resources.
- Devise programs that promote greater collaboration
- Introduce better mechanisms for stronger coordination
- Source funds to strengthen partnership collaboration
- Develop stronger partnerships with provincial and local-level governments
- Develop programs to build stronger partnerships with local communities

PROJECTS

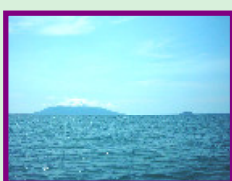
- Strengthening DEC's capacity for administration and integrated planning of the biodiversity sector
- Partnership strengthening and coordination for biodiversity conservation capacity building

ACTIVITIES

- Review and if needed create necessary positions, recruitment of staff to fill them and orientation of staff once in place
- Consolidate the biodiversity work programme (The necessary permanent DEC positions could include: Fund Raising Specialist; Biodiversity Project Coordinator; Environmental Lawyer, Senior Environmental Officer, Biodiversity Information Technology Specialist and Resource Economist)
- Assess current capacity and the biodiversity-related training needs of natural resource managers, conservation professionals and other con-



- cerned staff, and the extent to which these are currently being fulfilled
- Design and implement in-service training courses to address immediate gaps and priority requirements
 - Develop programmes that promote greater collaboration, create innovative project documents and encourage donor support
 - Enhance existing training programmes in natural resource management, through the provision of funding, staff, and equipment. Explore opportunities for “twinning arrangements” with institutions in other countries (universities, botanical gardens, national park authorities, etc)
 - Support the Conservation Strengthening Project as a creative initiative to establish one university degree programme in biodiversity and conservation biology particularly as it relates to community-based management of natural resources
 - Create at least one vocational diploma-level course to train protected area managers
 - Promote, through grants and other means, post-graduate specialization in biodiversity-related fields, (e.g. taxonomy) in a structured way
 - Strengthen the capabilities of NGOs and community institutions to play an effective role in the conservation and management of biodiversity; in particular, initiate training programmes with “umbrella NGOs” which have large networks of community-based organisations.
 - Integrate biodiversity concerns into the training curricula of rural development and extension staff, particularly in the fields of agriculture, forestry and fisheries
 - Design simple procedures for exchange of information between stakeholders, donors etc.
 - Formalize existing partnerships through Memorandum of Understanding or Memorandum of Agreement or other formal arrangements
 - Enable greater involvement of DEC staff in collaborative programs that promote biodiversity conservation to build their capacity
 - Strengthen partnerships that lead to better capacity building of provincial and local-level government officials
 - Strengthen partnerships that lead to better capacity building of local communities



4. Benefit sharing

OBJECTIVES

- To upgrade national legislation to enable the protection of intellectual property on biodiversity and to promote the use of prior informed consent in the granting and obtaining of access to biodiversity and knowledge of biodiversity.
- Ensure benefits arising out of genetic and ecosystems resources use promote sustainable rural development
- Genetic and ecosystems to be harnessed for the development of agricultural products to ensure food security
- Genetic and ecosystems to be harnessed for the development of pharmaceuticals products that support human health.

PROJECTS

- Policies and Laws to regulate access to genetic resources and promote the equitable sharing of benefits between resource owners and users

ACTIVITIES

- Ensure that the draft Biosafety and Biotechnology Policy and Bill are approved by the Parliament
- Initiate the formulation of the ABS Policy and Bill
- Promote public awareness on biosafety issues and access to genetic resources
- Develop simple procedures for obtaining prior informed consent of local communities regarding access to genetic resources located on their customary land
- Collate, storage and management of baseline data relating to genetic resources and on current practices of access to such resources for academic and commercial purposes
- Prepare an existing legal and institutional profile relating to the import, export, and use of genetic resources and traditional knowledge
- Develop scoping paper for process for rules and guidelines for control of internal movements of biological species
- Development of rules for the control of internal movements of alien/invasive species



5. Research and Information on Biodiversity

OBJECTIVES

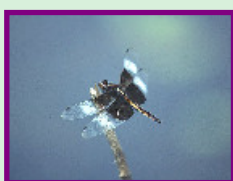
- To ensure timely availability and access by all to biodiversity information
- Establish national needs and priorities for biodiversity inventory and research
- Develop sub-projects for the prioritized national needs of biodiversity research
- Secure funding and research bodies to implement sub-projects
- Strengthen capacities of locally based institutions and Papua New Guineans in biological research and development.
- Vulnerability due to climate variability and climate change.
- Adaptation strategies for biodiversity.
- Sustainable land-use strategies
- Prevention and control of desertification.
- To develop the capacity to use genetic technologies to characterise PNG biodiversity and aid monitoring of illegal trade

PROJECTS

- National clearing house mechanism for biodiversity information
- National Biodiversity Inventory
- Climate Change
- Desertification
- The genetic characterization of important biodiversity groups/species of PNG
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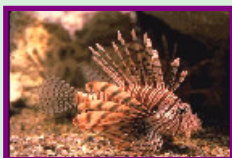
ACTIVITIES

- Develop a meta-database of biodiversity information sources (internal & external)
- Define and establish a national clearinghouse mechanism as a distributed network
- Develop standardized formats and establish guidelines on the responsibilities of storing, access, sharing and use of biodiversity information among local institutions involved in biodiversity issues
- Obtain the physical and human requirements for establishing a computer network between institutions involved in biodiversity issues
- Procure and install the physical infrastructure for the network and to train personnel for operating it within the stipulated guidelines
- Appoint a national centre (or several centres) to coordinate biodiversity



sity identification, survey and monitoring activities. The centre(s) could: strengthen other institutions or organizations involved in biodiversity work; provide guidance on the design and maintenance of national and provincial inventories; coordinate existing and new specimen collections; promote standardization of data collection and storage to ensure the comparability and transferability of information among databases; disseminate information on biodiversity to policy makers, natural resource managers, educators, and other parties;

1. Develop a database based on BIORAP and other relevant databases handling biodiversity data
 2. Preparation and implementation of a prioritized programme of biodiversity research for PNG
 3. Enhance contact with institutions outside PNG (e.g., the British Museum of Natural History, Kew Gardens etc.) to obtain information about those collections of PNG origin which are currently being held abroad
 4. Enhance the capacity of relevant national and provincial institutions to collect, store, analyse, and supply information on biodiversity, through the provision of funding, equipment, staff, and training
- Develop a position paper on research and development to show the intricate link between biodiversity research and national development
 - Introduce a national policy that encourages the government to provide research grants for biodiversity research and sustainable use
 - Review the research and development programs of PINBio and strengthen the programs
 - Strengthen existing collaborative biodiversity research between local institutions, and local and international institutions and organizations (cross-reference to MOUs/MOAs)
 - Establish species extinction rates
 - Review National Communication 1 and 2
 - Implement recommendations of National Communication 1 and 2
 - Implement Sustainable Land Use Management Strategy to control/prevent desertification
 - To train personnel in the field of plant and animal molecular genetics (especially DNA barcoding) through developing a strategic partnership with reputable international institutions
 - To establish a molecular genetics laboratory at the University of PNG and other Universities or research institutions



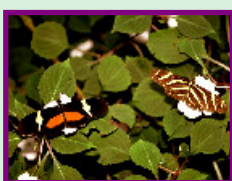
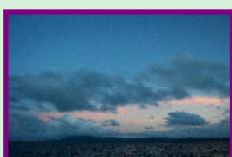
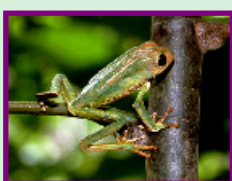
6. In situ and ex situ Biodiversity Conservation

OBJECTIVES

- Review the current national protected areas system in PNG
- Empower local communities and promote the full and active participation of landowners in biodiversity conservation programs
- Increase the number of protected areas to ten percent by 2010
- Rehabilitate and encourage better management of existing protected areas
- Develop a national conservation/ protected areas policy
- Design and utilize methodologies and indicators for monitoring and evaluating impacts
- Strengthen ex-situ programmes and their contribution to biodiversity conservation
- To document all ex situ conservation activities currently being pursued
- To develop a cohesive national network involving agencies engaged in ex situ conservation
- Select priorities in the light of PNG's specific cultural and social context.
- Develop demonstration projects to test selected priorities
- Develop regional (watershed/provincial) conservation programmes to integrate conservation activities and protected area management with regional (watershed/provincial) land use planning.
- Enhance the capacity of local communities and NGOs to conserve, manage, and sustainably use biodiversity.
- Ensure that protected areas and adjacent buffer zones are treated as a single planning unit. Of particular importance in this regard, is to support implementation of an integrated coastal zone management (ICZM) plan for the entire coast of PNG.
- Protect native species and habitats
- Linking development activities and EIA (application of EIA for resource management)

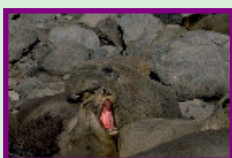
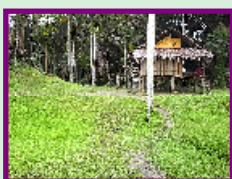
PROJECTS

- Developing a national system of protected areas
- Coordination and expansion of ex situ activities
- Develop watershed conservation programmes to integrate conservation activities and protected areas management with land use planning and marine resources use planning.
- Take measures to control invasive alien species of flora, fauna and microorganisms to prevent further introductions
- Biodiversity conservation outside Protected Areas



ACTIVITIES

- Implement the findings of RAPPAM (Rescue Plan)
- Strengthen the PAI (CASP) through the provision of human and financial and other resources to strengthen the project
- Initiate a review of the policy and legal framework on protected areas
- Devise a simple procedure for consultation with customary landowners for setting aside land for biodiversity conservation
- Identify relevant partners to assist in the setting up of new protected areas
- Identify funding for the establishment of new protected areas
- Identify a pilot project (PA) to implement some of the propositions in the NBSAP
- Adopt agriculture, forestry and fishery practices that will enhance biodiversity conservation
- Ensure that development personnel, land use planners, aid agencies and national, provincial and local level authorities have access to, and use biodiversity information in their work
- Develop a national policy on ex-situ conservation including biological national collections/ specimens.
- Compile a directory of existing ex-situ conservation initiatives, including herbaria, livestock breed farms, genome banks, germplasm collections, plant breeding centres, zoological gardens and private collections (link to data management)
- Identify priority species and genetic resources in need of further ex-situ conservation efforts. This should include an assessment of the need for captive breeding programmes for commercially valuable, threatened species of indigenous wild fauna and medicinal plants
- Supporting community-based ex-situ enterprise development (SME)
- Strengthen the capacity and scope of ex-situ conservation programmes through the provision of additional funding, equipment, and training
- Promote integration of ex-situ conservation efforts among institutions
- Ensure that institutions involved in captive breeding / artificial propagation of rare species set aside resources for rehabilitation schemes and for protection of natural habitats of those species
- Initiate measures to ensure that the collection of genetic resources from the wild does not endanger the survival of remaining wild populations.
- Review and implement the Watersheds Policy
- Develop provincial and local level working groups alerted to the requirements of this policy process.
- Develop marine protected areas policy
- Establish marine protected areas
- Implement fisheries and maritime laws
- Develop appropriate control mechanism
- Skills training
- Strengthening the EIA process through training
- Strengthen EIA through the implementation of the Environment Act 2000



7. Measures of sustainability in Biodiversity use and incentives and alternatives

OBJECTIVES

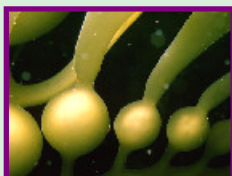
- Develop mechanisms to incorporate biodiversity values into National Accounting and decision making at different levels of government
- Strengthen inter-sectoral and National/Provincial coordination in Biodiversity Conservation and Management
- Create an integrated system of incentives and disincentives at the National and local level to encourage the conservation and sustainable use of biodiversity
- Promote biodiversity conservation
- Promote sustainable financing of protected areas
- To develop a policy and scanning proposal for bio-enterprises

PROJECTS

- Criteria and indicators for sustainability of biological resources
- Review of incentives and disincentives for conservation and sustainable use of biodiversity and the identification of sustainable economic alternatives to activities that threaten biodiversity
- Bio-enterprises initiative

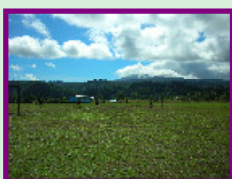
ACTIVITIES

- Develop, document, and adopt standardised criteria and methodologies for economic valuation of biodiversity, tailored to the requirements of individual decision-making agencies
- Initiate measures to “green” the system of national accounts (‘user-pay’)
- Create inter sectoral steering committees at both the national and provincial levels to oversee the implementation of the NBSAP
- Introduce a system of direct incentives to promote the conservation and sustainable use of biodiversity that could include the provision of subsidies to encourage communities to retain local cultivars and crop varieties, and to adopt practices such as Integrated Pest Management, agro-forestry, and multi-species cropping; the provision of grants for the protection of threatened species or habitats, and the restoration of degraded land; incentives to encourage ex-situ propagation/breeding programmes for traded species of wild plants and animals, in order to



reduce the drain on wild populations.

- Introduce a system of indirect incentives to promote the conservation and sustainable utilisation of biodiversity that could include tax exemptions or deductions for the conservation of particular habitats or species; tax reductions for the importation of equipment used in conservation programmes; and tax deductions for donations to conservation NGOs. Service-oriented incentives, designed to link community development programmes with the conservation of biodiversity. For example, communities living adjacent to protected areas could be accorded priority for public education programmes and technical assistance in agriculture, forestry, and other fields.
- Introduce a system of disincentives to discourage unsustainable utilisation and practices which deplete biodiversity. These could include e.g. increasing the size of fines for the violation of conservation laws; using fiscal disincentives (e.g. pollution and effluent charges) for activities which are damaging to biodiversity. This could also include the use of a “polluter pays” policy, requiring developers to take measures to mitigate the environmental damage caused by their activities
- Carry out a comprehensive review of GoPNG programmes and policies, to identify “perverse” incentives and suggest measures to ameliorate their impacts.
- Engage consultant(s) to scan bio-enterprise potentials, develop initiative documentation and potential development plans
- Promote and strengthen bio-industries (rural and island communities)
- Implement MTDS 2005-2010 and the MDG



8. Education and Public Awareness

OBJECTIVES

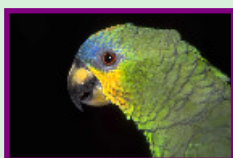
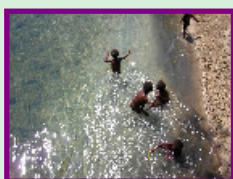
- Review and enhance national curricula which emphasises biodiversity's contributions to local and national welfare, emphasises biodiversity's contributions to the health of ecosystems, and tie ecological, economic, and social themes together to ensure that students of all schools receive formal instruction on the nature and value of biodiversity, and on the interrelationship between biodiversity and the environment
- Non-formal approaches may also be pursued, where these may help to reinforce concepts covered in the formal syllabuses.
- To train teachers to teach the course(s) on environment and biodiversity developed from the above
- To ensure that relevant material is available for guidance of students, lecturers, drafters of curricula and syllabuses, as well as producers of audio-visual and non-formal education aids, based on on-going monitoring and evaluation.
- To provide a vehicle for the rapid and effective dissemination of information on the role of biodiversity in maintaining the natural world and on ways of conserving biodiversity at all levels (genes, species and ecosystems).
- Ensure that development personnel, land-use planners, aid agencies and the national and provincial planning authorities have access to information about biodiversity. This should include information about the location of biological "hot spots" and rare and endangered species.

PROJECTS

- Enhance biodiversity conservation within the formal education system
- Training of teachers to teach courses on environment and biodiversity
- Preparation of instructional material for biodiversity education and awareness programmes
- Develop non-formal methods of promoting biodiversity education and awareness

ACTIVITIES

- Review the current curricula for biodiversity content
- Develop a strategy on biodiversity conservation and sustainable use education
- Develop linkages with Universities, Teacher training colleges, teachers and NGOs to prepare appropriate curricula and support materials



- Liaise with Universities and Teacher Training Colleges
- DEC conducting public awareness
- Develop linkages with Universities, teacher training colleges, teachers and NGOs to prepare appropriate curricula and support materials
- Encourage the role of the media and in particular radio, through easy access to the biodiversity information clearinghouse and regular information briefs, interviews and stories.
- Exploit the opportunity to link biodiversity themes with community assistance programmes, including primary health care programmes, primary education programmes and agricultural and forestry extension programmes. Integrate biodiversity concerns into the training curricula for rural development extension workers
- Develop biodiversity interpretive facilities, including field centres, at selected protected areas and interpretive programmes in all botanical gardens, zoos, herbaria, genebanks, natural history museums, etc
- Develop affordable, popular, accessible, and comprehensive field guides to the birds, animals, and flora of PNG
- Encourage public-private partnerships in the above activities, including partnerships between educational and environmental authorities, between the government, NGOs and churches, with international collaboration where appropriate



9. Monitoring, Evaluation and Adaptive Management of NBSAP

OBJECTIVE

- Internally monitor and evaluate implementation of NBSAP on a regular basis
- Identify and commission an external independent evaluation of the implementation of the first half of the Plan period
- Make appropriate adaptive changes following the review.

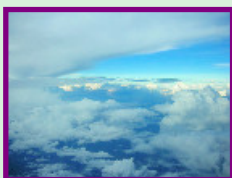
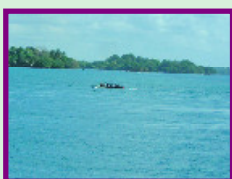
PROJECTS

- Monitoring, evaluation and adaptive management of implementation of NBSAP

ACTIVITIES

- Design and utilise methodologies and indicators for monitoring and evaluating the effectiveness and impacts of plan implementation within the first six months. Application of indicators over mid to long-term.
- Establishing of links for monitoring of the NBSAP (cf. MDG, NSDS) with PGs & LLGs, international and regional requirements

The above clearly sets out the major biodiversity conservation programmes that will be undertaken in PNG beginning in 2007 and beyond. The programmes are quite unique as they contain specific projects and activities that will be undertaken in a programme and also the financial costing for each of these activities. The indicative costings provided by the matrix serve as a guide to the government and its partners in their planning for biodiversity conservation initiatives.



Acknowledgment:



Dr Wari-lea Iamo
Secretary

On behalf of the Department of Environment and Conservation I would like to acknowledge the contributions of all the many stakeholders and individuals who participated and contributed to the formulation and adoption of this National Biodiversity Strategy and Action Plan. Our special thanks to the Department of Environment and Conservation, Papua New Guinea Institute of Biodiversity and Conservation International for facilitating and funding this initiative.

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