


COOK ISLANDS

National Environment Strategic Action Framework 2005-2009

E KURA MANA TO TATOU AORANGI

DECEMBER 2004

E KURA MANA TO TATOU AORANGI

Titiro taku mata,
E kura, e kura, e kura,
Tei tae mai ki taku taringa
E kura tinitini, e kura manomano,
E kura tei akamou I te tumu enua
I rarangatu ei to taua ipukarea.

Kua orongaia mai oki to tatou Aorangi
E te mana kaka mate tutaki kore.
Nana oki i anga i te enua, te moana, te rangi,
I rarangatu ei koe, e au.

Nana oki i akaruperupe i to taua ipukarea,
Itiki ei i toou inangaro e toku inangaro.
Nana oki i oronga mai i te rito o to taua parataito,
I kite ei toou mata e toku mata.

Nana oki i oronga mai te ki ete mou,
I taanga'anga ei koe e au.

(Excerpt) Purua - Poem
Presented at the National Environment Forum 2004
by Ms. Piraki Daniel (Form One Student)
Avarua Primary School, Rarotonga, Cook Islands

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MINISTERIAL STATEMENT

This framework recognises the significance of sustainable development as we begin to come to terms with changing weather patterns, unchecked tourism development, increasing waste and contaminated lagoons, as well as struggling infrastructure and utility services.

In today's rapidly changing society, it is easy to become distracted by economic progress, and lose sight of the cultural and emotional bonds, and "mana" that comes from the land, waters and the natural resources gifted to us. For this reason, the exercise to review and refocus our efforts to protect, conserve and manage our environment is refreshing.

We have made a beginning by adopting the new National Environment Act in 2003. Having the National Environment Strategic Action Framework linked into the National Development Plan process, the National Millennium Development Goals programme for poverty alleviation, and the World Summit on Sustainable Development programmes is crucial in meeting our national goals and international obligations.

The efforts to empower our local communities by bringing people together and deciding on the future of our environment are central to the successful implementation of this strategy. It is what we do at the community and village level, and how we behave in our daily lives that would have the greatest impact on the sustainability of our basic means of livelihood, cultural values and environment. In that regard, I wish to acknowledge the generous contributions and support expressed by many people towards this strategy.

I welcome this National Environment Strategic Action Framework and hope that you will consider this plan as a useful vehicle to drive home the message as to the absolute importance of sustaining our resources, and protecting our environment for the benefit of successive generations of Cook Islanders to come.

The Honourable Sir Geoffrey Henry, K.B.E.

Deputy Prime Minister and Minister for Environment

Director's Message

It gives me great pleasure to co-present to you the NESAF as the main policy framework in managing our national physical environment. As environment is a key pillar in our sustainable development, this strategy will ensure that our people and island economies benefit from and give back to our environment through our best possible actions.

The NESAF replaced the 1992 NEMS as our leading environment policy framework for the next five years. Despite the lengthy period attributed to its implementation, the NEMS has been successful in establishing a solid foundation to further progress the management of our environment programmes. This achievement has not been easy and developed on the back of decreasing values in annual national budgetary appropriations. It is therefore my hope that our government and development partners will continue to commit the resources enthusiastically voiced during the 2004 National Environment Forum to support this strategy.

NES will distribute the NESAF widely to ensure that you become aware of our national intentions and the ways and means of implementing it. Steps have already been initiated through the National Capacity Self Assessment, Climate Change Second National Communication process, International Waters Programme, NBSAP and other sectoral and national programmes to implement the plan. As such, and on behalf of the National Environment Service, I welcome your continuous support and participation in working together with us throughout the successful implementation of this strategy. Let us 'Walk the Talk' together for Our Environment, Our Heritage.

Mr. Vaitoti Tupa.
Director
National Environment Service

Acknowledgement

Those who prepared this strategic framework are indebted to many people especially international stakeholders who gave significant assistance to the project. Gratitude is therefore expressed to the financial and technical contributions as well as moral support to the project that has come from the Cook Islands Government, New Zealand Aid (NZAID), Australia Aid (AusAID), UNDP and SPREP among others, who participated in the Forum.

The National Environment Forum (NEF) also wishes to acknowledge the blessing of the NESAF by the House of Ariki. Support from our NGOs, community groups and the private sector has been remarkable and we thank them for their assistance. This consultative process and framework are testimony that our partnership between Government Ministries, development partners and various stakeholders remains strong.

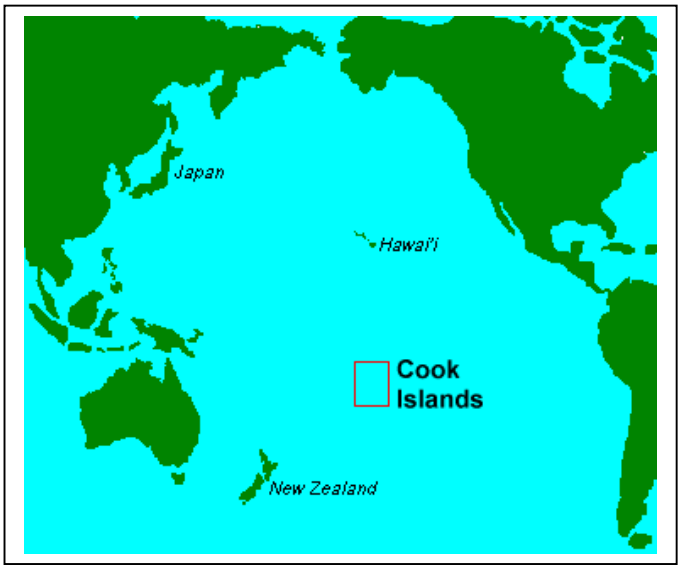
The National Environment Service's initiative and leadership in developing the NESAF and coordinating the national sector forum have been outstanding. Credit also goes to the Forum Steering Committee, whose guidance and advice has lead to a successful NEF preparation process and the completion of this strategy.

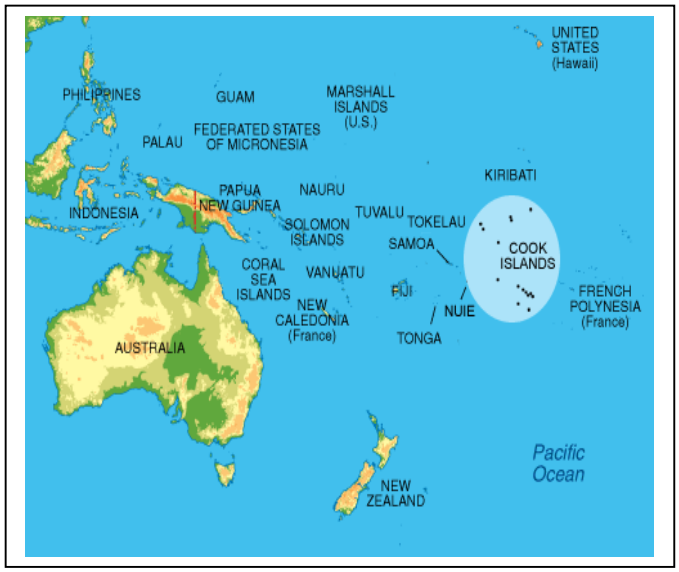
Special appreciation is expressed to the National Environment Service staff and other volunteers for their dedication and commitment to the project. We also extend our sincere thanks to Government ministries and sectoral leaders whose advice, data and information were freely given.

Finally, our gratitude goes to all individuals from both the public and private sectors who gave constructive criticisms and invaluable comments during the preparation of the NESAF, and the national environment forum.

Meitaki Maata e kia Manuia.

Figure 1: Maps of the Cook Islands, South Pacific





Acronyms

ADB	Asian Development Bank
AMMAG	Avana-Muri Marine Management Action Group
AUSAID	Australia Agency for International Development
BPOA	Barbados Programme of Action
CBD	Convention on Biodiversity
CHARM	Comprehensive Hazards and Risks Management
CITES	Convention for the International Trade of Endangered Species of Wild Fauna and Flora (animals and plants)
DWW	Department of Water Works
EIA	Environmental Impact Assessment
ES	Environment Service
GDP	Gross Domestic Product
GEF	Global Environment Facility
HRD	Human Resources Development
IWP	International Waters Program
MMR	Ministry of Marine Resources
MOH	Ministry of Health
MOW	Ministry of Works
NBSAP	National Biodiversity Strategy and Action Plan
NSDP	National Sustainable Development Plan
NDMO	National Disaster Management Office
NEF	National Environment Forum
NEMS	National Environment Management Strategy
NESAF	National Environment Strategic Action Framework
NGOs	Non-Government Organisations
NZAID	New Zealand Agency for International Development
ODS	Ozone Depletion Substance
OMIA	Office of the Minister for Outer Islands Administration
PATA	Pacific Area Tourism Association
PICCAP	Pacific Island Climate Change Assistance Program
PIREP	Pacific Island Renewable Energy Project
POPs	Persistent Organic Pollutants
REAP	Rarotonga Environmental Awareness Program
SPREP	South Pacific Regional Environment Programme
SOPAC	South Pacific Applied Geoscience Commission
TAU	Te Aponga Uira o Tumu-te-Varovaro
TCA	Takitumu Conservation Area
TIS	Taporoporoanga Ipukarea Society
TTT	Taau Taku Tita (Maori connotation to express recycle and re-use)
UNCCD	United Nations Convention for Combating Desertification
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WSSD	World Summit for Sustainable Development
WWF	World Wide Fund for Nature

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Executive Summary

Background

The mandate for developing the National Environment Strategic Action Framework 2005-2009 was given by the Environment Act 2003. The framework provides guidance and direction for achieving sustainable social and economic progress for the Cook Islands by utilising our natural resources and environment wisely. It aims to sustain efforts generated from growing environmental awareness to protect, conserve and manage our environment and natural resources.

Intricately linked to the NESAF for its successful implementation (and vice-versa), is the National Development Plan (NDP) which represents both the national strategies on Millennium Development Goals (MDGs) and National Sustainable Development Strategy.

The framework was formulated with support from the recommendations of several national forums and relevant national assessment reports such as the Barbados Programme of Action (BPOA) and World Summit on Sustainable Development (WSSD) as well as the 1993 National Environment Management Strategy.

The NESAF is also an attempt to make international obligations under Multilateral Environment Agreements (MEAs) meaningful and applicable at the national and community levels.

The appointment of the National Environment Council to oversee and bring all islands under the jurisdiction of the Environment Act is vital. It will work with the islands' environmental authorities and island councils including the private sector, government departments, community groups and donors to implement the NESAF.

Overview of Target Programmes, Priority Areas and Strategic Actions

The NESAF focuses on three Target Programmes including Management of Natural Resources; Pollution Prevention and Waste Management; and Climate Change, Variability, Adaptability and Mitigation. The Institutional Support Mechanisms, and Implementation and Monitoring programmes provide administrative and implementation support to the Target Programmes.

There are four strategic goals of the NESAF, which are:

Goal 1:	**Enhance the management, protection and sustainable use of our natural resources.**
Goal 2:	**Reduction and prevention of environmental degradation from waste and all forms of pollution.**
Goal 3:	**Increase resilience by strengthening national capacities for climate change, variability, adaptation and mitigation**
Goal 4:	**Improve our institutional support and implementation mechanisms to manage our environment in a sustainable manner.**

TARGET PROGRAMMES

NATURAL RESOURCES MANAGEMENT

Goal 1: ***Enhance the management, protection and sustainable use of our natural resources.***

Biodiversity, Species and Ecosystems Management
The management of national biodiversity resources including protection, conservation and providing for their sustainable use will be the focus of this programme. Initiatives will include the implementation of community and national programmes related to biodiversity protection, conservation and management of identified species and ecosystems that will be managed by local communities.

Strategies adopted include encouraging the strengthening of biosecurity and biosafety programmes, promote policies and regulations to reduce spread of invasive and harmful species; integration of biodiversity management into national and sectoral legislation, policies, plans and programmes.

It is proposed that government develop, adopt and implement the following legislations: Biosecurity Act, National Research Foundation Act, Intellectual Property Rights Act, and Copy Rights Act over the period.

Land Use and Resources Management
There is concern about the increasing risks of land degradation as a result of unchecked development such as land fills and transfer of inappropriate soils types and rocks to other areas. Increasing soil erosion especially around the foreshore and slopes where development is concentrated, needs to be managed properly. Our historical, heritage sites and landmarks will also be identified for protection and conservation.

Ocean, Coastal and Foreshore Resources Management
Increasing impact from land-based development, pollution and resource exploitation is putting pressure on fisheries stock and causing stress to coastal and marine areas. This has led to health concerns, especially at sites on Rarotonga with poor water quality as a result of high nutrient discharge levels. The NESAF will address these problems with water quality monitoring programmes, assessing carrying capacities of ecosystems and implementing remedial activities around problem areas. In addition, a lagoon management plan for Aitutaki will be developed. Furthermore, the NESAF will also adopt a beach profiling programme using GIS mapping for all islands, establish Turtle Sanctuaries on our atolls and develop a management plan for the Whale Sanctuary.

Freshwater Resources Management
Greater planning and co-ordination between local island administrations, Water Works, Environment, Agriculture and Health agencies are vital if water catchments areas, water resource management, water policies and water supplies on all islands are to be sustainably used.

The NESAF will pursue the development and adoption of a National Water Resources

Management Policy by 2007. This process will include revising and updating the Rarotonga Water Works Ordinance 1960.

Improving the number of nationals trained for water quality assessments, testing and monitoring is also a national priority.

WASTE MANAGEMENT AND POLLUTION PREVENTION

Goal 2: Reduction and prevention of environmental degradation from waste and all forms of pollution.

Economics and Development
The NESAF will support sustainable economic growth through protection, conservation and management of natural resources, determining the carrying capacity of all Vaka on Rarotonga and identified islands, and specific environment or ecosystems, and minimising negative impacts from development progress. Sectoral development milestones will be based and guided by the carrying capacity of each island's environment and benefits levels to communities.

Waste, Sanitation and Water Quality Management
A formalised and active National Integrated Waste Management Plan will be introduced to guide waste management collections, disposal and recycling operations and programmes. All islands must have a waste management plan with operational landfills for the safe disposal and management of solid and liquid waste. Establishment of pollution waste monitoring programmes through regular auditing under the National Environment Service will be a priority activity.

CLIMATE CHANGE, VARIABILITY, ADAPTABILITY AND MITIGATION

Goal 3: Increase resilience by strengthening national capacities for climate change, variability, adaptation and mitigation

Climate Change, Variability, Adaptation and Mitigation
A National Hazards Risk Assessment and an inventory of all past, present and planned climate change programmes and activities in the Cook Islands will be completed and reported to the National Environment Council for further action. A strategy possibly using the CHARM (Comprehensive Hazard and Risk Management) tool within government, non-government and community programme activities will be developed and implemented by the NESAF. Gradual integration of renewable energy systems into national energy generation capacities will be facilitated. Preparations of a GEF project proposal will be submitted to ADB for the design and construction of appropriate coastal protection system for Avatiu and Avarua townships. The NESAF will complete and submit a Second National Communication Plan to the UNFCCC.

INSTITUTIONAL SUPPORT MECHANISMS

Goal 4: Improve our institutional support and implementation mechanisms to manage our environment in a sustainable manner.

The Environment Act 2003 is now effective for the islands of Rarotonga, Aitutaki, Atiu and Mitiaro. The NESAF will ensure that all islands are registered and protected under the Environment Act.

It is also important that processes for integration of environmental considerations into national economic and social development policies, plans and programmes are strengthened. This will include amendment of the Environment Act 2003 to expand the role of the National Environment Council by 2006 to oversee implementation of the NESAF.

The NESAF have proposed to hold regular consultation and timely reporting process between national government, outer islands and stakeholders through mechanisms such as the National Environment Forum.

The critical role that a national environment information management system and research facilities play in monitoring, planning and policy support cannot be ignored. Appropriate environment and resource data and information must be collected, analysed and characterised for planning and management purposes.

Training and education opportunities must be given to all environmental stakeholders to improve their ability to implement the NESAF and at local levels, manage their community projects.

The framework will seek to develop new environmental initiatives and increase the percentage of annual funding support by our development partners including GEF contributions to national programmes.

Implementation and Monitoring

The National Environment Service will provide secretariat services to the National Environment Council and also be responsible for enforcement of the National Environment Act. The forum agreed for the National Environment Council to be responsible and accountable for the administration of the NESAF. All stakeholders are responsible for the implementation and monitoring of the NESAF, including the National Environment Service.

The **estimated total costs** of the NESAF, spread over five years amounts to NZ$20.755 Million.

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1 FUTURE CONTEXT FOR OUR ENVIRONMENT

The National Environment Strategic Action Framework (NESAF) 2005-2009 will map out future environment policy directions for the nation, while shaping the way we will do things in our daily lives and how we will behave in our communities for the future benefit of our environment and people.

1.1 "E KURA" (*The gift*)

In defining where we are heading in the future, the National Environment Forum recognised and endorsed the setting of the VISION with environmental sustainability as primary focus. The vision is also a platform calling for collective responsibility in managing our environment as we move forward. As proud guardians, we pledged to maintain the qualities of the "kura," (gift) that will continue to provide for successive generations of Cook Islands people the basic means of livelihood and the broadest of opportunities to lift their standard of living.

1.2 Guiding Principles

In his key note address to the National Environment Forum 2004, Michael (Mike) Tavioni stated that looking after the environment is not just a job or a hobby, but a way of life for all of us. As such, the following guiding principles, in describing our peoples' future expectations and common purpose to enhance our livelihoods and communities, reflects a vision of responsibility for looking after our way of life.

- **Equal Responsibility**
  All Cook Islanders have equal responsibility for looking after our environment
- **Natural Resources Utilisation and Management,**
  We will use and manage our precious and diverse natural resources in a sustainable manner
- **Values consistent with our Traditional and Cultural Practices,**
  We will retain positive aspects of our cultural heritage, and traditional values and practices to guide us in enhancing and sustaining the qualities of our environment that will make our children proud owners in the future.
- **Innovative and Exciting Means,**
  We will continue to adopt innovative and exciting mechanisms and technologies to improve ways of delivering our environmental programmes.
- **Rights of all Cook Islanders,**
  We will safeguard the customary rights as well as constitutional rights of all Cook Islanders for a healthy environment, and sustainable resource use and practices.
- **On-going Commitments by All,**
  All of our communities and people will provide uncompromising commitment to the better welfare of our environment and natural resources.
- **New and Strengthened Partnerships,**
  Our partnerships within Government, and between government and the Aronga Mana, Island Councils, business community, NGOs, local communities, regional and international organisations will be based on good

governance principles and empower our people to actively participate in decision making processes pertaining to environmental management.

- **Meaningful Actions at every level of Cook Islands society,**
  Many of our communities are aware and talk of the need to protect and conserve our environment, but remain inactive. It is therefore a challenge for all of us to actually act on what we preach to achieve the common goal of environment sustainability.
- **Equitable Sharing of Benefits**
  All Cook Islanders must be given the opportunity to equally share and enjoy the benefits from the utilisation, protection, conservation and management of our environment and natural resources.
- **National enabling environment**
  We will strengthen and improve our planning, policies, regulatory and administrative regimes to support our environmental and related programmes.
- **To Ensure Access to Healthy and Resilient Ecosystems**
  We will endeavour to prepare, adapt and manage our ecosystems and the influences impacting on them to ensure that our environment, communities and livelihoods remain healthy, safe and sustainable into the future.

1.3 Stakeholders Commitments

Given the critical importance of proper environmental management to the Cook Islands future development, all Cook Islanders are urged to support the implementation and monitoring of this strategy. The NESAF is empowering all of us to gain stewardship of our natural resources, to change our ways of doing things for the better, and increase the involvement of all citizens in decision making processes for our environment.

1.4 Processes for NESAF

The overall mandate for the formulation of the NESAF was given by the National Environment Act 2003.

As one of the three pillars of sustainable development, the NESAF structure and process (Appendices 1& 2) representing the environment component were formulated to draw support from the National Sustainable Development Plan (NSDP). The NSDP represents both the national strategies on Millennium Development Goals (MDGs) and National Sustainable Development Plan. The MDG 7th Goal of ensuring environment sustainability to help reduce poverty is well reflected in this strategy. The NESAF consulted the National Development Forum (November 2003) outcomes and reports; two National Assessment Reports from the review of the Barbados Plan of Action (BPOA) and World Summit on Sustainable Development (WSSD); the 1993 National Environment Management Strategy and the recent SPREP and Asian Development Bank medium term Environment Strategic Action Frameworks for 2005-2009.

Additionally, processes for the development of the NESAF draws support from various reports and workshops undertaken by the National Environment Service over the last four years. These include Biodiversity Workshops and a Strategic Action Plan, National Biosafety Workshop, and related Climate Change, Variability and Adaptation Workshops, International

Waters Programmes, the national report of the Pacific Islands Renewable Energy Programme and other relevant national reports.

The NESAF is also an attempt to make international obligations under Multilateral Environment Agreements (MEAs) meaningful at the national and community levels. The NESAF preparation process is necessary – to assess the future requirements of human and technical capacities, financial resources, stakeholders involvement, synergies and contradictions with existing environmental related policies, public information and education needs, and so forth [Velasquez et al, 2002].

The strategy was reviewed in draft form by all national stakeholders, by circulating it widely for commentary three (3) weeks before the National Environment Forum. Follow-up meetings with key stakeholders were held to discuss the NESAF before the forum. Another revised draft report was then compiled with inputs from stakeholders and submitted to the forum as a second draft and the main working paper. The NESAF was then discussed, clarified and endorsed by the first National Environment Forum.

Completion of NESAF was consistent with preparation of the National Budget 2005-06. Implementation and monitoring of the NESAF requires better co-ordination of activities which will be led nationally by the National Environment Service. Monitoring process will include annual reporting by sectors and key stakeholders. A one day National Forum will be convened at the end of the second year to discuss implementation progress and make amendments where necessary to strengthen the NESAF. A fourth year two days National Forum will be convened to reassess the current NESAF and prepare the next one.

1.5 NESAF Structure

The first chapter of the NESAF is an introduction to the VISIONARY process and the future context in which stakeholders will be implementing the strategy.

The main chapters considered the NESAF as it focussed on three (3) Target Programmes including; Management of Natural Resources; Pollution Prevention and Waste Management; and Climate Change, Variability, Mitigation and Adaptability.

Seven (7) priority areas were examined and the National Environment Forum recommended these to guide future policy directions: Biodiversity, Species and Ecosystems Conservation; Land Use and Resources Management; Ocean, Coastal and Foreshore Resources Management; Fresh Water Resources Management; Economics and Development; Waste Management, Sanitation and Water Quality; and Climate Change, Variability, Mitigation and Adaptability. These programmes are directly linked to ecological systems.

The fourth chapter presented was the Institutional Support Mechanisms which profile: Planning, Policy and Legislations; Finance and Administration; Capacity Building; Information, Communications and Technology; Partnerships; and International Obligations. This component emphasises the need to strengthen environmental management capacities and governance to make the implementation and coordination of priorities, activities and projects at both the national and community levels successful [King, 2001].

Finally, the Implementation and Monitoring chapter covers briefly the implementation schedule and monitoring aspects of the NESAF. A proposed budget is provided to guide the funding and resourcing of target programmes over the five years suggested.

1.6 National Environment Council

One issue that is likely to strengthen the implementation of the NESAF is the formation of the National Environment Council for the purpose of administering the NESAF. The council membership and function was stipulated in the national Environment Act 2003. The national council is important if we are to sustain leadership in managing our environment and delivery of the NESAF. Other environment authorities, councils and stakeholders will report their programmes and progress to the National Environment Council. The forum agreed for the National Environment Council to take responsibility and accountability for administering the NESAF as additional responsibility and its membership to begin with those islands already covered under the Act. This proposal will require an amendment of the Act.

Used Batteries Collection Site – remediation programme for recycling to New Zealand Nikao Dump, Rarotonga

Source: National Environment Service, Cook Islands

2 FOR OUR LOCAL COMMUNITIES

This framework is a testimony that our local communities share a common vision in confronting unprecedented challenges in the management and use of our natural resources, and that they are united in the protection and conservation of our environment.

2.1 NESAF Vision Statement

"To achieve environmental sustainability through:

- **Equal Responsibility *for***
- **Natural Resources Utilisation and Management, *built on***
- **Values consistent with our Traditional and Cultural Practices, *through***
- **Innovative and Exciting Means, *whilst recognising the***
- **Rights of all Cook Islanders, *and promoting***
- **On-going Commitments by All, *through,***
- **New and Strengthened Partnerships, *for***
- **Meaningful Actions at every level of Cook Islands society, *and***
- **Equitable Sharing of Benefits, *with the support of a***
- **National Enabling environment**
- **To Ensure Access to Healthy and Resilient Ecosystems**

…for present and future generations."

2.2 Expected Strategic Environment Outcomes/Goals

Key challenges to be addressed in achieving the vision include pursuit of the following environmental goals which capture the essence of where we want our environment and communities to be in 2009 and beyond.

Strategic Goals

1. **Enhance the management, protection and sustainable use of our natural resources**
2. **Reduction and prevention of environmental degradation from waste and all forms of pollution**
3. **Increase resilience by strengthening national capacities for climate change, variability, adaptation and mitigation**
4. **Improve our institutional support and implementation mechanisms to manage our environment in a sustainable manner**

3 PROGRAMMES FOR STRATEGIC ACTIONS

3.1 NATURAL RESOURCES MANAGEMENT

Strategic Goal

Enhance the Management, protection and sustainable use of our natural resources

3.1.1 Biological Diversity, Species and Ecosystems Conservation

Issues and Challenges

The management of national biodiversity resources including protection, conservation and providing for their sustainable use will be the focus of this programme. Local communities and individuals especially women must gain economic benefits from their knowledge about the usefulness of biodiversity resources and species especially in the Outer Islands [McCormack, 2002].

Table 1 - Islands with reported coconut flat moth infestation

Numbe	Island	Date of Confirmation	
1	Rarotonga	October	2000
2	Aitutaki	July	2002
3	Atiu	August	2002
4	Mauke	November	2002
5	Mangaia	January	2003
6	Palmerston	March	2003
7	Mitiaro	November	2003

Source: Table 1 - Maya Poeschko, MOA, 2004

Endemic sp. Tanga'eo-Mangaian Kingfisher

Source: Lizzie Williams. 2004

The introduction and spread of invasive species (weeds and animal pests) through various mechanisms including man-made processes, machinery, and other animals and species, remains a concern. Recently, the illegal importation of palm has led to the devastation of coconut trees infested by coconut moth (Tables 1). The risks of further quarantine breaches will increase as visitor numbers to the country increase. In August 2003, an emergency response plan implemented in February 2002 by the Ministry of Agriculture saw the successful eradication of nine (9) Queensland fruit flies on Rarotonga since their discovery in

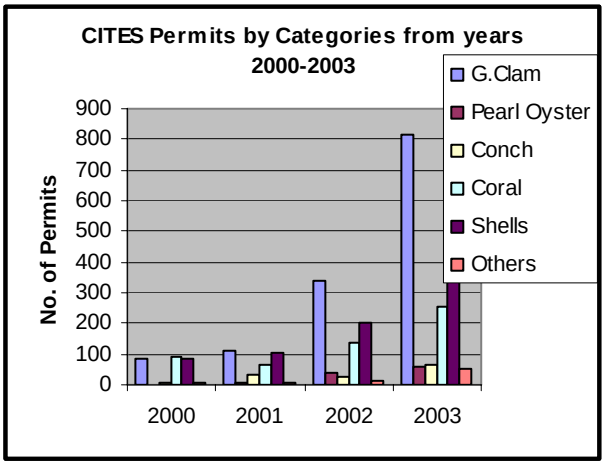
a quarantine surveillance trap in November 2001[Poeschko et al, 2004]. The conservation and management of highly representative ecological areas and endangered species of plants and animals including those under the CITES programme remains important (Figures 2 & 3).

Government should assist in facilitating commercial opportunities available for locals to negotiate for sustainable and fair exploitation of local resources by development partners or investors through the adoption of appropriate legislations, regulations, specific agency and investment opportunities.

In 2002, Space and Flynn suggested the introduction of strong quarantine regulations, enforcement and recommended 174 invasive species for inter-island quarantine, as well as recommendations for the management of 26 invasive species. Activities suggested include the development and implementation of management plans for areas most at threat, such as Suwarrow, Manuae and Takutea and other islands as well as species [McCormack, 2002].

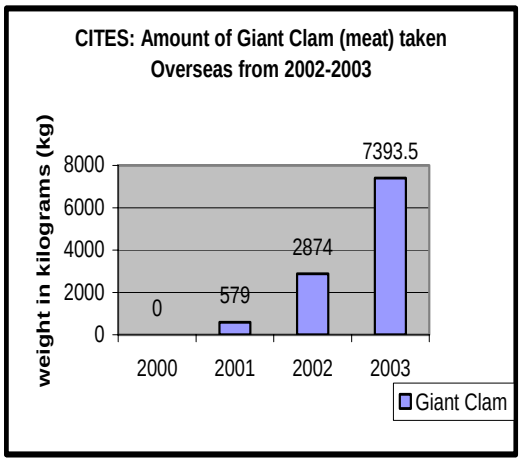
The Natural Heritage Project's database recording of 3,700 species is a significant achievement. It will continue to be updated and made accessible to schools and the general public [McCormack, 2002]. There is also a need to translate biodiversity information into layman terms, including Maori translation of names, especially where our local communities are involved.

Figure 2



Source: Environment Service, Cook Islands, 2004.

Figure 3



Source: Environment Service, Cook Islands, 2004.

Programme Objective

To equitably share the responsibility to protect, conserve, manage and use biodiversity, species and ecosystems sustainably, and to share the benefits fairly among all stakeholders

Key Strategic Actions

Endangered Species Management

Immediate Priorities

3.1.1.a) Develop a programme to survey and conserve the rarer plants used in herbal medicine (vai rākau).

3.1.1.b) Develop a programme to survey and conserve endemic animals and rare native animals, covering mammals, birds, and other animals.

3.1.1.c) Develop a programme to survey and conserve marine animals harvested for food or financial gain.

3.1.1.d) Develop a programme to survey and conserve the rarer varieties of Wetland Taro (Taro), Coconut Palm (Nū), and other traditional agro-varieties and agro-species.

Short term Priorities

3.1.1.e) Develop a programme to survey and conserve all endemic flowering plants and other endangered native flowering plants.

3.1.1.f) Extend the flowering plant programme (above) to include other types of plants that are endemic or native and endangered.

Long Term Priorities

3.1.1.g) Develop a programme to survey and conserve the rarer animals of agriculture and home.

Invasive Species Management

Immediate Priorities

3.1.1.h) Develop a programme involving all islands to survey invasive species in natural ecosystems and in the agro-ecosystem.

3.1.1.i) Develop a community-based programme to eradicate those invasive weeds and animal pests that are not yet widespread on particular islands.

3.1.1.j) Develop national programmes to assist with the control of the more serious invasive weeds and animal pests in both natural and man-modified ecosystems.

3.1.1.k) Undertake a multi-sectoral review of the control of trans boundary and inter-island movement of terrestrial and marine plants and animals, and of LMOs/GMOs (Living Modified Organisms / Genetically Modified Organisms), with a view to establishing an independent Biosecurity Agency.

Ecosystem Management

Immediate Priorities

3.1.1.l) Establish an independent Suwarrow National Park Authority to administer the Cook Islands' only national park on behalf of all the major stakeholders. A management group with the responsibility to conserve the atoll's wildlife, and to monitor and control revenue-generating activities.

3.1.1.m) Develop a programme to select areas to establish a national system of community-based protected areas to protect important terrestrial ecosystems.

3.1.1.n) Conserve important ecosystems through a system of protected areas with regulated and monitored activities.

3.1.1.o) Develop a programme to select areas to establish a national system of community-based protected areas to protect important reef and lagoon ecosystems.

Equitable Sharing of Benefits and Access to Biodiversity

Immediate Priorities

3.1.1.p) Establish an independent agency to encourage and manage research on biodiversity and its uses, and to ensure that there is an equitable sharing of benefits.

Management of Knowledge Related to Biodiversity

Immediate Priorities

3.1.1.q) A body should be established to review access to, and the processing of, knowledge on biodiversity and its use, especially medicinal use. This body

might be the same as that established to encourage, monitor and manage all research on biodiversity (see Equitable Sharing of Benefits and Access to Biodiversity).

3.1.1.r) The programme of the Natural Heritage Project to record all Cook Islands biodiversity with related scientific and traditional information should continue, and it should make such information available to the general public.

Biodiversity Awareness and Education

Immediate Priorities

3.1.1.s) A working group should be established to investigate ways to ensure that knowledge of biodiversity and its uses is adequately available to students and the general public.

3.1.1.t) NGOs should be encouraged to include knowledge of biodiversity where relevant.

Mainstreaming of Biodiversity

Immediate Priorities

3.1.1.u) A multi-sectoral working group should be established to review the policies and activities of Government ministries and agencies to ensure that they are consistent with a shared responsibility to maintain Cook Islands biodiversity and related knowledge.

Financial Resources and Mechanisms for Biodiversity

Immediate Priorities

3.1.1.v) Establish a Biodiversity Trust Fund to support the wide range of activities required to conserve Cook Islands biodiversity in an integrated and equitable manner.

Key Performance Indicators

A.1 Regular periodic reviews and reports including National Assessment Report of the NESAF.

A.2 National Biosecurity Act adopted by 2006 and Biosecurity agency established by 2008.

A.3 National Intellectual Property Rights Act and Copy Rights Act adopted and implemented by 2008.

A.4 Number of identified ecosystems and species with established carrying capacity levels, development guidelines and management plans

A.5 Estimated Areas (size) of contamination by spreading invasive species reduced as a result of effective control.

A.6 Number of active community and national programmes related to biodiversity protection, conservation and management of various species managed by locals.

A.7 Growing number of local enterprises and individuals especially women making an income-generated livelihood from biodiversity and related initiatives. E.g. eco-tourism activities and Maori medicinal practices.

A.8 Increased funding for Natural Heritage Trust programme and employment of local counterparts.

A.9 Greater awareness and use of Natural Heritage database.

A.10 Number of national parks and raui reserves with functional management plans established nationwide, including Rarotonga cloud forest, Suwarrow, Takutea and Manuae.

A.11 National Research Foundation Act adopted by 2006.

3.1.2 Land Use and Resources Management

Issues and Challenges

The rapid growth of development has revealed improper development of environmentally sensitive areas such as wetlands, sloping lands and the foreshore, mainly beaches. Over the last four years, 31% of developments on Rarotonga have been concentrated around the foreshore and 36% on sloping lands. Twenty one percent (21%) required EIA considerations.

One of three major public complaints often received by the Environment Service is illegal developments. The Environment Service Compliance and Enforcement Division highlighted in the National Environment Forum the need for engineering reports where there are relatively small scales developments which will have a significant physical impact on the environment such as excavations on sloping land and bridge construction. Environmental Impact Assessment reports are also required for developments that will have both a significant physical and social impact on the environment such as hotel development and public infrastructure developments (Figures 4 and 5).

The mining of sand and excavation of rocks for construction and other purposes must be monitored and managed. Impact from clay soil, sand and gravel fills on properties has not been assessed, especially for contamination of neighbouring lands, swamps, waterways including underground water lens and the lagoon [Rongo, 2004].

To combat land degradation, there is a need to adopt a balanced land management mechanism that will not undermine the rights of traditional land owners, traditional conservation practices, island customs and the land tenure system. It is important that all islands are covered by the Environment Act to ensure that all development projects follow environmental assessment and protection requirements. Enforcement of the law was found to be very weak in many sectors including land use and resource management.

The limited knowledge of traditional practices and lack of scientific and economic baseline information - especially where development is resulting in further degradation of these environmentally sensitive areas - is a major concern.

Figure 4:

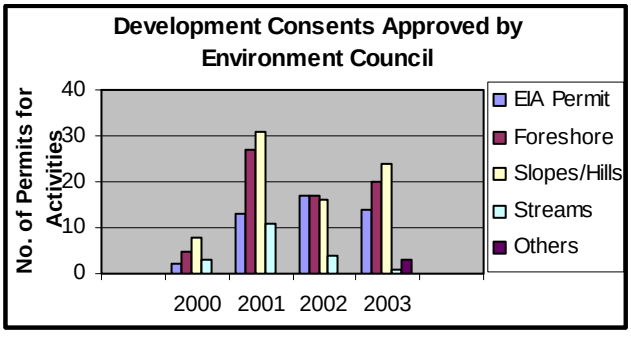
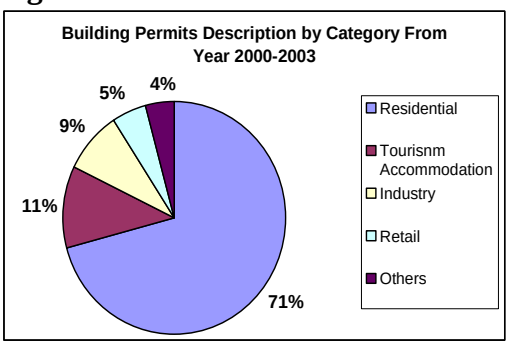


Figure 5:



Source: Figures 4&5 Environment Service, 2004.

Historical sites such as marae, burial sites, buildings and significant landmarks must be identified and designated for protection and conservation as part of our natural heritage programme [House of Ariki resolution, 2004].

The National Environment Forum proposed for a review and update of the Land Use Act and other encompassing regulations especially land zoning and relationship to the Environment Act 2003. It was also recommended that a Land Tenure Systems Act be drafted and for the recognition of islands by-laws.

Programme Objective

To manage the sustainable use of natural resources and the establishment of a network of ecologically representative national parks and reserves nationwide, without compromising stakeholders' rights as traditional landowners and undermining traditional conservation practices and customs.

Key Strategic Actions

Immediate Priorities

3.1.2.a) Strengthen the enforcement of regulations and legislations and educational programmes for the protection, management and promotion of land use or zoning activities, cultural values of our historical sites, Marae, burial sites and significant landmarks.

3.1.2.b) Revise and update the Land Use Act and land zoning regulations to cover land development activities not reflected in the Environment Act.

3.1.2.c) Development and adoption of a Land Tenure Systems Act and management plans which includes recognising Island bylaws and traditional land tenure systems.

Short Term Priorities

3.1.2.d) The application of good traditional practices on land use must be encouraged. These practices include annual planting of trees for replacement of ageing trees, especially coconut, tamanu, and other valuable timber trees.

3.1.2.e) Assessment of the impact of clay soils, sand, and gravel fill around foreshore areas, wetlands, and other areas where the fill does not match the site's natural soil environment and the monitoring of such activities.

3.1.2.f) Adoption of regulatory provisions aimed at all developments along the foreshore to facilitate public access to beaches and the foreshore area.

Key Performance Indicators

B.1	Regular periodic reviews and annual reports on land use and resource management related activities.
B.2	Number of islands with established guidelines/regulations for sand mining and transfer of soil, sand and gravel for filling of land.
B.3	Guidelines established and approved by all stakeholders for various land use and development.
B.4	Recognition of Ui Ariki and Aronga Mana, land owners in land use and development decisions.
B.5	Number of traditional practices adopted as national policies for conservation, protection and management of natural resources.
B.6	Percentage of communities participating in natural resources protection, conservation and management programmes.
B.7	Number of historical sites, natural heritage sites and landmarks designated for protection and conservation.

Trochus harvest-Rarotonga

Source: National Environment Service, Cook Islands

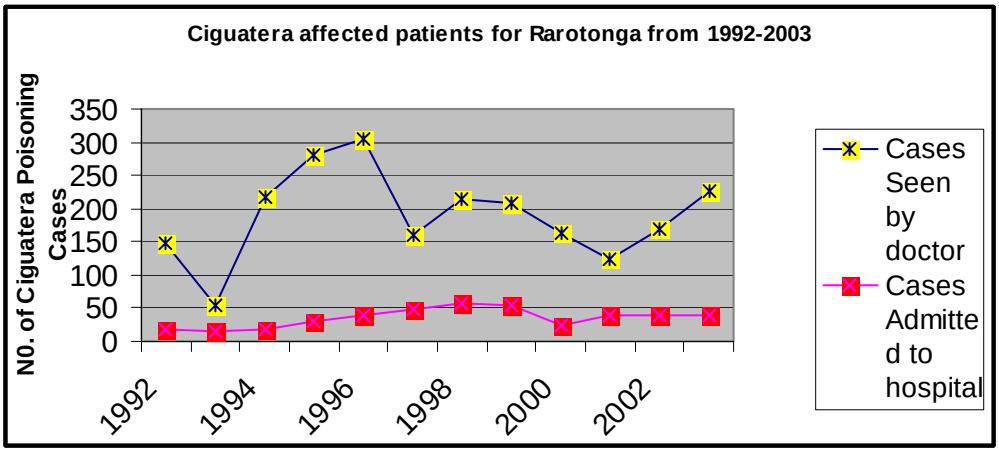
3.1.3 Ocean, Coastal and Foreshore Resources Management

Issues and Challenges

More and more buildings are now being constructed along the foreshore for tourism and tourism-related activities. These account for 63.8% of foreshore problems including 13% instances of erosion damage to properties and beaches as a result of landowners making major alterations to foreshore areas [Rongo, p. 28, 2004]. Community concerns have also been raised about loss of public access roads and pathways to the beaches as a result of foreshore development [NDP, 2003]. This NDP issue highlights the growing tension relating to the land tenure system and the distribution of benefits from land-related developments.

Concerns have been raised about environmental damage occurring around the areas where most tourists are concentrated. Discharges of nutrients from sewage, soil erosion, old landfills, and agricultural chemical and farming wastes are suspected of polluting our streams and coastal waters. The extended period of ciguatera fish poisoning on Rarotonga averaging 189 reported cases per year (estimated to be 10% of total poisoning cases-Raumea, 1998) from 1992 to 2003 [Ministry of Health statistic records](Figure 6), shows that algal blooms in the lagoon which are host to dinoflagellates carrying ciguatera toxins, could be sustained by factors other than climate influences. A Ministry of Marine Resources survey from 1994 to 1997 confirms Category Three (3) concentrations (very high risks; area close to fishing) of dinoflagellates especially around Titikaveka area (Appendix 8) [Raumea, 1998]. Recent health concerns within the Titikaveka foreshore and lagoon area reaffirmed the extent of the problem, brought on by over 30 years of environmental ignorance within our communities.

Figure 6:



Source: Ministry of Health, 2003.

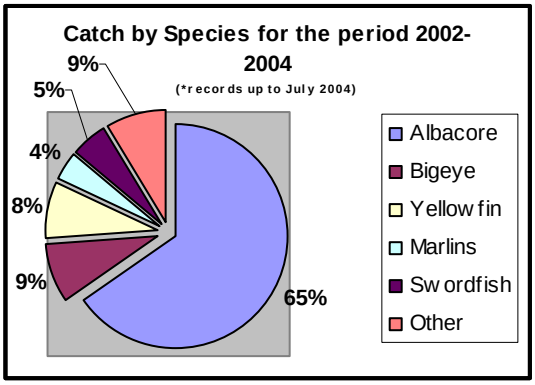
There are calls to strengthen the management and sustainable harvesting of fisheries resources in our lagoon and ocean due to excessive fishing such as uncontrolled giant clam harvesting in the past and recent growth in the long-line tuna fishery (Figures 7 and 8). Monitoring the welfare and health of pearl producing lagoons remains an important component of the Ministry of Marine Resources programmes. Environment Service CITES records show about 7.4 tonnes of giant clam (paua) meat were taken out of the country in 2003 (Figure 3), yet sustainable levels are not fully ascertained.

The pressing need for construction aggregates as demand from construction grows will affect sand and gravel deposits around our foreshore areas and beaches [Rongo, 2004].

Threats to the outer reef coral system from regular and increasing diving ventures and visiting cruise liners anchoring could cause damage to the corals. Population explosions of some species like taramea (Crown of Thorns) are causing an imbalance in reef ecosystems around areas in Rarotonga and need to be managed properly.

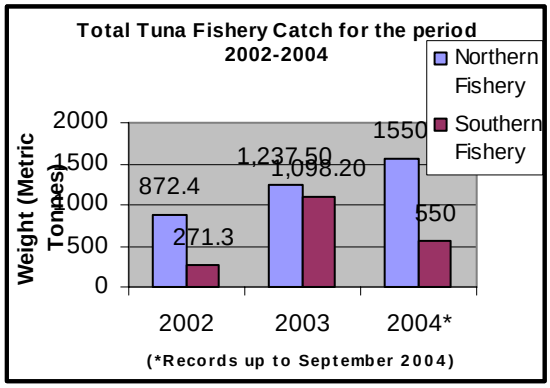
The increased risks to the sustainability of living marine resources and ecosystems as a result of these developments are yet to be fully understood and factored into our national planning processes. Harvesting of our marine resources needs to be monitored due to a history of destructive methods being applied by operators and fishers. The protection and conservation of turtles and whales have been declared as national priorities. It is also suggested that government strengthen regulations and incentives to allow quarry operators on Rarotonga and makatea islands to provide much needed construction aggregates for builders.

Figure 7:



Source: Ministry of Marine Resources, 2004

Figure 8:



Source: Ministry of Marine Resources, 2004

Programme Objective

To maintain the sustainable management and use of living and non-living marine resources and ecosystems in foreshore areas and all Cook Islands waters in order to enhance biological diversity and provide a full range of ecosystem services.

Key Strategic Actions

Immediate Priorities

3.1.3.a) Prepare a National Foreshore Policy together as well as coastal zone management plans for each island, taking into account the following information sources: the UNDP/SPREP-funded coastal zone management project; traditional knowledge of the people of each island; and the Rarotonga Environment Authority foreshore policy.

3.1.3.b) Establish a lagoon management plan for Aitutaki first and for the rest of Outer Islands to develop their own lagoon management plans after.

3.1.3.c) Develop a plan for the establishment and management of National Marine Turtle Sanctuaries on all atolls.

3.1.3.d) Implement land-based and foreshore remedial actions and long term management policies to deal with beach erosions, the discharge of nutrients and wastes.

3.1.3.e) To establish a national system of community-based protected areas (raui) to protect important reef, lagoon and foreshore ecosystems with tour guides.

3.1.3.f) Establish carrying capacity of commercial viable species within lagoon and reef systems from economic activities and sustainable levels of resource exploitation including controlled harvesting of trochus and paua (giant clam).

3.1.3.g) Expand scope for national water quality testing capacity and capability to include fresh water, waste water, lagoon and ocean water, air, soil, chemical and food analysis.

3.1.3.h) Control of taramea (Crown of Thorns) populations causing imbalance on reef ecosystems on all affected islands.

Short Term Priorities

3.1.3.i) Strengthen the management and monitoring of our ocean, lagoon fisheries and pearl farms and other marine species and stocks by all stakeholders.

3.1.3.j) Development, adoption and implementation of a National Whale Sanctuary management plan

Medium Term Priorities

3.1.3.k) Introduce regulations and enforcement resources for restriction of gill net fishing in lagoons on all islands.

3.1.3.l) Introduce harvesting quota system for selective fish and shellfish resources for all islands.

Long Term Priorities

3.1.3.m) Re-activate the coral and fish monitoring surveys of the Tu'anga Taporoporo in partnership with MMR for identified islands.

3.1.3.n) Adopt specific monitoring programmes for designated dives and tourism sites.

3.1.3.o) Establish a beach profiling programme using GIS mapping for all islands

Key Performance Indicators

C.1 Regular period reviews and annual reports related to ocean, coastal and foreshore resources management programmes.
C.2 New foreshore development guidelines and regulations being enforced by 2008.
C.3 Number of businesses identified, assessed and rated good and excellent for their business activities in relation to ocean, coastal and foreshore resources and environmental management.
C.4 Percentage of beach areas nationwide damaged by inappropriate development activities
C.5 Number of remedial activities undertaken for inappropriate development and for cleaning up land based dumping sites close to the lagoon.
C.6 Number of suspected sites of ciguatera toxin (fish poisoning) concentration and high nutrient discharges with active management and monitoring activities.
C.7 Reduction in number and regular monitoring of waste contaminated sites.
C.8 Established national GIS database and profiles of various ecosystems including beaches.
C.9 Improving databases and marine resources population stocks across sectors on ocean, coastal and foreshore resources including turtles and whales.
C.10 Adoption of national guidelines and improving reporting of water quality tests, meeting WHO at sites nationwide

Indiscriminate dumping of wastes is a common problem on our islands

Source: National Environment Service, Cook Islands

3.1.4 Freshwater Resources Management

Issues and Challenges

Given the limited land space, increasing construction of new roads, more clearing of vegetation, and building of new residential houses causing siltation from soil erosion within the fringes of water catchments zones, it is important that Government declare these areas as protected zones.

On the Outer Islands of Atiu, Mangaia and Mauke, the extensive cultivation of sloping lands and burning of fern-land escarpments has resulted in severe soil erosion, leading to the blockage of underground water outlets going through the makatea [Rongo, 2004]. Replanting of trees around water catchments areas and hills has been implemented for the last 20 years especially on Mangaia, Atiu, Mauke and Rarotonga for soil stabilisation.

Table 2: Forest Land Areas of the Cook Islands

Land Category	Area	
	ha.	percent
Coastal	4900	20.5
Makatea	5000	21.6
Other Natural Forest (water catchment)	4,500	20.5
Plantations (Water catchment)	1,100	4.6
other	7,800	32.8

Source: Oliver, USDA. 1999.

Unchecked development of wetland areas is causing the flow of streams, and storm water drainages to be altered. Blockages are leading to flooding of low-lying areas and other environmental problems along the foreshore and lagoon as a result of the loss of wetland functions [Rongo, 2004]. Disjointed activities and coordination processes for forestry, water catchments, wetlands, lagoon environment, water supply, waste water and solid waste disposals have also produced mixed results and limited understanding of the close relationships between water resources and the total island environment.

The Rarotonga Waterworks Ordinance 1960 urgently needs to be revised and updated to reflect today's community needs (per. comm. with Ata Herman, Secretary of Works and Ben Parakoti, Director of Water Works). It is also proposed that a comprehensive National Water Resources Management Policy be developed before the introduction of a National Water Resources Management Act to ascertain and address current and new water-related issues, regulations and institutional structures for the protection, conservation and management of water resources and catchment areas (per. comm. with Tenga Mana, Director of Technical Services, OMIA; Atatoa Herman, Secretary of MOW and Ben Parakoti, Director Water Works, MOW).

The national policy must also consider improvement of water supply systems, storage capacity, water quality monitoring and treatment, as well as network upgrades and consumer education. Policies for alternative water resources and storage such as introducing

compulsory building requirements for water tanks for all new buildings should be adopted [NDP, 2003].

Mitiaro have also requested for Lake Te Rotoiti for designation as protection site under the RAMSAR Convention.

Table 3: Rarotonga Water Intake-Catchment Area

Intake Names	Catchment (ha)	Elevation (m)	Filter Type	Trunk Main	Comm. Date
	(ha)				
Taipara	84	50	Filter-in stream	200mm	1988
Totokoitu	70	64.8	Open intake	150mm	1963
Avana	243	80.9	Open intake	250mm	1964
Turangi	118	72	Filter-in stream	200mm	1990
Matavera	82.5	65	On-bank chamber	200mm	1992
Tupapa	100.6	65	On-bank chamber	200mm	1992
Takuvaine	161	69	Filter-in stream	200mm	1990
Avatiu	135	80	Filter-in stream	150mm	1990
Muriavai	144	63.5	Open intake	150mm	1963
Rutaki	109	51	Filter-in stream	150mm	1989
Ngatoe	98.1	65	On-bank chamber	200mm	1994
Papua	163	49.3	Open intake	150mm	1965
Total	**1508.2**				

Source: Department of Water Works, Ministry of Works, 2004.

Programme Objective

To improve the protection, conservation and sustainable management of watershed and wetland resources to meet the current and future needs of ecological systems, communities, agriculture and industries for adequate supplies of quality water.

Key Strategic Actions

Immediate Priorities

3.1.4.a) Development and implementation of a National Water Resources Management Policy.

3.1.4.b) Revise and Update the Rarotonga Water Works Ordinance 1960 to address new issues such as user pays.

3.1.4.c) Strengthen planning and co-ordination between local island administrations, Water Works, Environment, Agriculture and Health agencies regarding water resource management, water policies and water supply on all islands.

3.1.4.d) Adoption of national guidelines for standards derived from international agencies to island conditions, particularly WHO standards for regular environmental water quality assessments and monitoring.

3.1.4.e) Introduce new policies for compulsory building requirements of water tanks and rainwater collection systems in all new building designs and construction.

3.1.4.f) Development of fresh water management plans for all islands.

Short Term Priorities

3.1.4.g) Empowerment of community leaders and committees to oversee and monitor compliance to freshwater management plans.

3.1.4.h) Assess the risks associated with competing economic interests and development growth encroaching on water catchment areas and wetlands

3.1.4.i) To declare water catchment areas on Rarotonga first and to be followed by other outer islands sites as designated Water Catchment Reserves for protection, conservation and management.

3.1.4.j) Development of by-laws in the Outer Islands and implement the Rarotonga Environment Authority policy for the watershed and wetland area protection, conservation and management.

Medium Term Priorities

3.1.4.k) Strengthen formal and non-formal education and community awareness and participation programmes for maintaining healthy watershed and wetlands.

3.1.4.l) Appropriate data collection for water resources assessment and monitoring.

Long Term Priorities

3.1.4.m) To strengthen forestry programmes and continue to assess their impact on sloping lands planted, soil erosion, and how best to use and manage that resource without compromising the water catchment reserves.

3.1.4.n) Capacity building with staff training of personnel at all levels of watershed and wetland resources management, including waste and storm water management.

3.1.4.o) Listing of Lake Te Rotoiti in Mitiaro under the RAMSAR Convention for protection.

Key Performance Indicators

D.1 Regular periodic reviews and annual reports on Fresh Water Resources related programmes

D.2 A National Water Resources Management Policy completed and implemented by 2007.

D.3 Rarotonga Water Works Ordinance updated by 2007.

D.4 Rarotonga Water Catchment Zone formally reserved by 2007.

D.5 Licensing system for (inland) tour guides established by 2006.

D.6 Percentage of land area designated as protected areas for watershed and wetlands protection and conservation under the Environment Act.

D.7 Percentage of wetlands and watershed areas damaged by inappropriate development activities

D.8 Percentage of wetlands reclaimed for housing development purposes

D.9 Number of forest and land use programmes active nationwide.

D.10 Improving management of water supply levels and lowering of consumption patterns per person

D.11 Number of local persons trained and active programmes for water quality assessment and monitoring, and watershed and wetland resources protection, conservation and management.

D.12 Adopting WHO standards to island conditions.

3.2 WASTE MANAGEMENT AND POLLUTION PREVENTION

Strategic Goal

Reduction and Prevention of Environmental Degradation from Waste and All Forms of Pollution

3.2.1 Economics and Development

Issues and Challenges

Unchecked tourism development on the island of Aitutaki highlights deficiencies nationally in the compliance and enforcement of the building code, health regulations regarding septic tanks, and Environment Act provisions in the outer islands. The Aitutaki Tourism Study made significant findings and established that 250 accommodation rooms be the sustainable capacity for the island's tourism industry [Phillips and Malcolm, 2003]. Their study also made recommendations to the Outer Islands Development Grant Fund suggesting a stop for funding of commercial construction in lagoons and motu, funding of additional boats for lagoon cruises, jet skis and power boats on Aitutaki.

There is increasing impact from growing numbers of resorts and household buildings within 30 metres of the high water mark [Rongo, 2004]. The ecological and economic risks posed by lagoon pollution, beach degradation and our island's high vulnerability to extreme weather and climate events highlights the need for better monitoring and management of current development efforts and projected economic growth (Figures 10 and 11)[Drollett, 2003].

There are environmental risks in increasing the number of high investment and large scale tourism facilities and operations such as the proposed Captain Cook and Captain Bligh Hiltons due to the high demand they place on natural resources and the way in which they generate pollution. This will lead to an increase in competition for limited local natural resources and an increase in importation of substitutes and other supplies [ADB, 2004].

Figure 9: Cook Is. Visitors Numbers

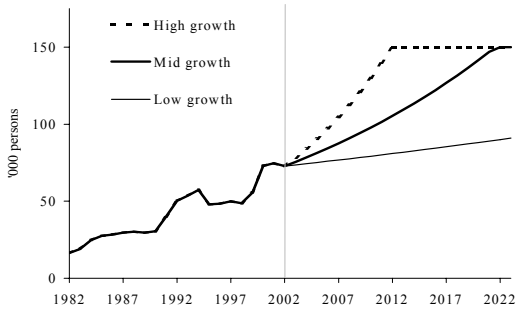
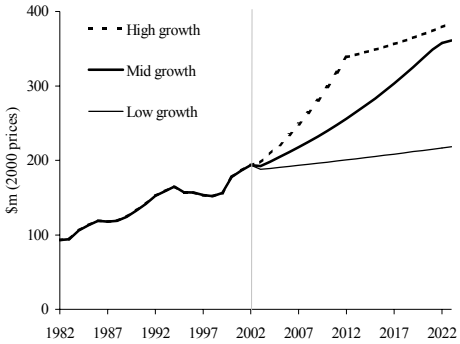


Figure 10: Size of Economy (Total Income)



Source: Figures 9 &10-Bredina Drollett, National Development Forum, MFEM, 2003.

General littering, especially on our roadsides, beaches and homes, is not only a threat to our health but also creates an image problem.

The risks of damage to local households, infrastructure, tourism, energy, water and production sectors of agriculture and fisheries have increased due to increasing climate variability and change, and the frequency of extreme weather events.

It is proposed that a study, similar to the Aitutaki Tourism Study [Phillips and Malcolm, 2003], be carried out for the rest of the Southern Group islands to determine their carrying capacity for tourist activities (tourism numbers currently at 87,856-Cook Islands Statistics Office, 2004). Government must set tourism expansion growth objectives and targets based on the carrying capacity of islands' environment and benefits to communities rather than volume of trade [ADB, 2004]. The development and adoption of the Cook Islands Tourism Industry Environment Charter is a major initiative and will reduce the negative impact of waste and tourism development on the environment (Te Tika Mataiapo, 2004).

All private sector businesses and government departments need to be committed to the use of environmentally friendly products, practices and services such as office electricity conservation and trash recycling programmes. As the biggest consumer of our natural resources, there is need to ascertain and determine a balance level of tourism sector revenue to be channelled back to pay for environment and natural resource development and consumption.

The importation and use of agricultural chemicals must be monitored, managed or encourage growers to reduce their use due to their long term impact on our environment from leaching of nutrients and poisonous compounds into the soil and waterways.

Policies and regulations with regards to heights of buildings, signage which affects the aesthetic natural beauty and cultural significance of our island environments - including our skylines - need to be formally adopted.

Programme Objective

To achieve sustainable economic growth through the appropriate protection, conservation and management of natural resources as well as minimising negative impacts from development progress.

Key Strategic Actions

Immediate Priorities

3.2.1.a) Implement the findings of the Aitutaki Tourism Study.

3.2.1.b) Encourage eco-tourism businesses with supportive management trainings, marketing and promotional activities especially for village based projects in the Outer Islands.

3.2.1.c) Improve monitoring controls and enforcement of regulations for the management of animal farms (e.g. pigs) and their waste

3.2.1.d) Review Government policy on increasing tourism development with a view to determining the carrying capacity for Vaka Puaikura, Takitumu and Te Au-o-Tonga, to be followed by other islands in phases according to development

priorities, and endorsed as main monitoring factor for tourism development until capacity of supporting elements and community benefit levels increases.

3.2.1.e) Vaka and Islands Councils to encourage more frequent community programmes such as the regular Tutaka, monthly cleaning of village roads, beaches and lagoons on all islands.

3.2.1.f) Adoption and implementation of the Tourism Industry Environment Charter.

3.2.1.g) All tourism accommodation units to operate accredited sewage septic and waste water treatment systems based on visitor numbers.

3.2.1.h) Establish computer models and technical expertise to make informed decisions (e.g. use of GIS) on development activities

3.2.1.i) Place a two year moratorium to be effective immediately on construction of buildings on the motu and lagoon, and within 30m of the mean high water mark to assess and produce a management plan for the ecological economic risks associated with these types of foreshore developments.

3.2.1.j) Revise environmental impact assessment, regulations and codes to reflect new information and practices

3.2.1.k) Introduction of a fair and balanced `user pays' system to cover the establishment, management and operational costs of waste management projects while being mindful of low income earners of society.

3.2.1.l) Reactivate the General Licensing Authority and strengthen the Development Investment Board Code to include environmental accreditation as part of their licensing approval and/or foreign investment conditions in the DIB Investment Code.

3.2.1.m) Review regulations for importation of motor vehicles.

Short Term Priorities

3.2.1.n) Growers to adopt integrated pest management systems and practices, alternative production systems and crops such as hydroponics and organic farming.

3.2.1.o) All buildings to operate accredited sewage septic and waste water treatment systems.

3.2.1.p) Conduct survey and identify Rarotonga households first for houses that need their septic systems to be upgraded to meet existing standards or de-sludged and for this to be recorded and monitored during the Tutaka.

3.2.1.q) Strengthen the Public Health Act provisions associated with septic tank regulations and enforcement as well as monitoring capability for compliance.

Medium Term Priorities

3.2.1.r) Implement PATA environmental related guidelines for tourist businesses

3.2.1.s) Encouraging importers to bring into the country ozone friendly and biodegradable products.

3.2.1.t) Establish regulations, policies, and guidelines related to restriction of building heights and sign construction and placement around our communities and islands.

3.2.1.u) Strengthen the Pesticide Board and implementation of the Pesticide Act

3.2.1.v) Strengthen the Ministry of Work's regulations and Building Code standards as well as ability to enforce compliance associated with environmentally sensitive and vulnerable areas.

Key Performance Indicators

E.1 Regular periodic reviews and reports on Economic and Development programmes related to the environment.
E.2 Completion and implementation of a National Waste Management policy and regulations by 2007.
E.3 Regulations and policies adopted and implemented for building heights and signage.
E.4 Carrying capacity of Rarotonga Vaka and specific environment or ecosystems established for tourism numbers and activities.
E.5 Number of project sites and landscape identified to have been damaged by inappropriate developments.
E.6 Increasing number of health, construction, agriculture, retailing and other industry projects with approved policy compliance status.
E.7 Percentage of infrastructure and economic development projects, businesses and sites rated with good or excellent environmental practices and services.
E.8 Improvement in water quality, roadsides, quarantine and beach standard reports.
E.9 Number of active monitoring systems and databases for economic development programmes.

Aitutaki Pearl Beach Hotel - Over water, on motu and foreshore development will require careful considerations in the future.

Source: National Environment Service, Cook Islands

3.2.2 Waste, Sanitation and Water Quality Management

Issues and Challenges

Management plans, policies and regulations for solid and sewage waste systems need to be adopted urgently. Since operations started in 2002, the Rarotonga Recycling Centre has shipped to New Zealand about 223 tonnes of glass, 33 tonnes of aluminium cans and 19 tonnes of plastic bottles (Figure 11) [Rarotonga Recycling Centre, 2004]. Emerging recycling concerns include the processing of packaging materials used for imported products as consumption levels increase (Figure 12). The disposal of used vehicles and parts, heavy machinery and equipment and bulky household wastes such as iron roofing and whiteware goods requires proper storage/recycling facilities and operational support, especially on Rarotonga and Aitutaki. Recently, 3943 kilograms of persistent organic pollutants (POPs) (mainly pesticides) were identified and collected from several islands and are ready to be shipped to Australia for proper disposal [SPREP$_1$, 2003].

Limited availability of land for waste disposal and management purposes and a growing awareness of negative impacts from pollution and contamination of resources will continue to worry our communities [NDP, 2003], [Rongo, 2004]. Contamination of underground water lens and lagoons from discharge of nutrients from old dump sites is an ongoing concern.

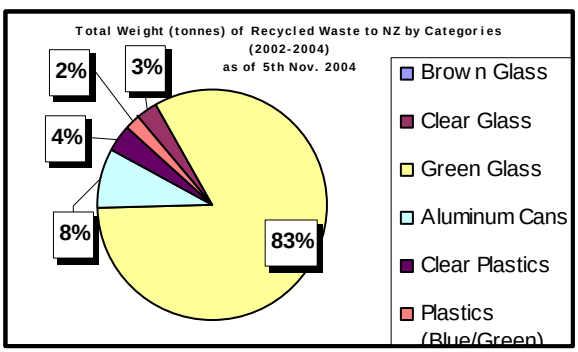
There is a need for adoption and implementation of management plans, policies and regulations for solid and liquid waste systems.

Policies for monitoring, handling, storage and repatriation of industrial hazardous and dangerous goods including persistent organic pollutants (POPs), ozone depletion substances (ODS) and radioactive wastes, must be adopted.

Old dump sites should be identified and assessed for risks of environmental damage and long term impact.

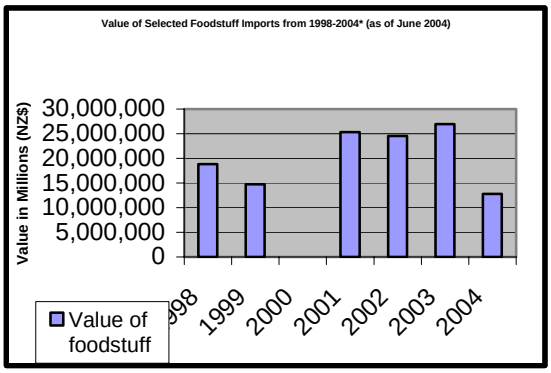
Initiatives by Government and Island Councils such as the provision of drop off sites, waste recycling bins and proper waste bins for domestic waste collections, together with education and awareness programmes, will reduce the amount of domestic and business wastes generated.

Figure 11: Recycled Waste to New Zealand



Source: Rarotonga recycling Centre, 2004

Figure 12: Value of Imported Foodstuff



Source: Cook Islands Statistics Office, June 2004

Outstanding requirements for the sustainable management of waste include the provision of ongoing training, improving the monitoring and management capability of the Environment Service, Public Health and Ministry of Works, OMIA, Marine Resources and waste disposal and recycling operators, as well as importers of hazardous goods [OPM, 2003]. The lack of data for monitoring the impacts of waste and pollution on the environment of all islands need to be addressed for planning purposes.

Programme Objective

Enhance waste management, pollution prevention and adoption of best practices and appropriate technology to improve our environment, sanitation and water quality to meet community needs.

Key Strategic Actions

Immediate Priorities

3.2.2.a) Adopt and implement the National Integrated Waste Management Plan by all stakeholders, including the private sector, to support implementation of appropriate legislative and regulatory frameworks, standards, guidelines and programmes to deal with all waste issues *inter alia*, reduction, reuse, recycling, composting, land filling, incineration, and disposal of wastes of all descriptions including, persistent organic pollutants (POPs), ozone depleting substances (ODS), and hazardous waste.

3.2.2.b) Strengthen institutional capacities, infrastructure and waste management operations, including waste reduction initiatives, collection and treatment systems, proper storage and inventory, processing and transportation, pollution control and cleanup.

3.2.2.c) Strengthen institutional capacities, especially administrative support operations including training in the area of enforcement, compliance, assessment, monitoring, advisory and reporting.

3.2.2.d) All islands to have a waste management plan for the safe disposal and management of solid and liquid waste.

3.2.2.e) Apply restrictions to the burning of toxic materials, such as plastics.

3.2.2.f) Strengthen regulations for the control and restriction of importation of hazardous chemicals including POPs.

3.2.2.g) Establishment of a National Waste Management Committee

Short Term Priorities

3.2.2.h) Adoption and enforcement of importation of goods and vehicle levies and taxes to assist funding of recycling centres and operations, repatriation and waste disposal programmes for imported goods.

3.2.2.i) Establishment of pollution waste monitoring programmes through regular auditing under the National Environment Service.

3.2.2.j) Strengthen the enforcement of regulations and follow-up monitoring as well as inspection of related environmental permits and approvals for compliance.

Medium Term Priorities

3.2.2.k) Improve and expand the "Taau, Taku Tita (TTT)" education and awareness programme to support waste management and promote zero waste efforts nationwide.

3.2.2.l) Prepare a programme aimed at securing land for future Rarotonga waste landfill and a sewage treatment plant each for Vaka Takitumu and Vaka Te Au-o-Tonga.

Key Performance Indicators

F.1 Annual reports completed that are related to waste management programmes including recycled materials exported.
F.2 A formalised and active National Integrated Waste Management Plan.
F.3 Number of islands with waste management plans
F.4 Percentage of GDP attributed to waste management initiatives
F.5 Number of permits, approvals, waste and pollution transgressions reported, investigated and satisfactorily resolved
F.6 Number of new initiatives adopted and active for management, processing, collection of levies and taxes and funding of waste and pollution prevention.
F.7 Number of people, businesses and institutions actively involved in waste management and pollution prevention programmes.
F.8 Amount of equipment and infrastructure attributed to handling and disposal of waste
F.9 Number of active monitoring systems and databases for an integrated waste management programme.
F.10 Number of people trained and training programmes for waste management operations and management.

Pilot wind power generation project site on Mangaia

Source: Energy Division (Te Uko Natura), MOW, Cook Islands

3.3 CLIMATE CHANGE, VARIABILITY, ADAPTATION AND MITIGATION

Strategic Goal

Increase Resilience by strengthening national capacities for climate change, variability, adaptation and mitigation

3.3.1 Adaptation and Mitigation of Climate Variability and Change

Issues and Challenges

Climate change is real and affecting us now. Our national vulnerability studies and international science is showing that because of increased green house gases polluting the atmosphere, global warming is causing changes in our environment. While the initial costs of improving our ability to cope with impacts of climate variability, climate change and sea level rise and disaster prevention can be high, the Cook Islands must make a commitment to better preparation and adaptation for climate changes as an investment towards medium to long-term economic savings [OPM, 2003]. The National Environment Forum acknowledged the need to address both: (1) the negative impacts through adaptation strategies such as a National Disaster Plan, and (2) the causes of climate change through reducing polluting greenhouse gas emissions. The National Environment Service will prepare a Second National Communications Report with GEF assistance over the next three years.

Resilience Building

A healthy environment and a prepared community will be better able to cope with climate change. It is therefore essential that we strengthen our understanding of the link between the hydrological cycles; variability of rainfall; El Nino/Southern Oscillation Cycle; increasing severe weather phenomenon; and climate change, using documented traditional knowledge and available data for national planning [Rongo, 2004].

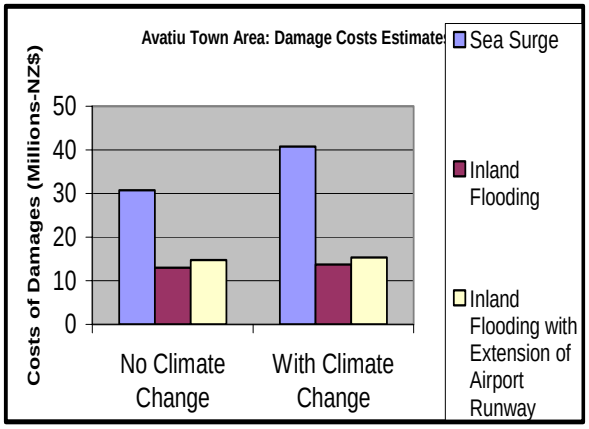
The severity of future natural hazards as result of climate change has and will continue to increase, for example predictions for aggregate costs of damages to the Avatiu area over the next 50 years from sea surge are approximately $40 Million (Figure 13 and Table 4) [per. comm. Dr. John Hay, Cook Islands-ADB CLIMAP Project, 2004].

Therefore it is important to monitor impacts like coral bleaching, shifting fish stocks, accelerated coastal erosion, loss of agriculture productivity, health issues (disease outbreaks, transmission and distribution, especially of mosquito carried diseases) and quality and quantity of freshwater resources for communities and tourism. This is especially crucial with regard to long-term impacts such as drought conditions, while we continue to strengthen early warning systems for unpredictable hazards such as storm surges, floods, and cyclones [OPM, 2003].

The National Environment Forum recommended that in order to respond to impacts climate adaptation programs be expanded to other outer islands such as rainwater harvesting,

environmental friendlier agriculture e.g. composting, hydroponics, organics and reforestation using traditional trees.

Figure 13: Avatiu: Extreme Hazards Damage Costs Estimates Over Next 50 years.



Source: John Hays, ADB CLIMAP Project, 2004

Table 4: Cyclone Wave Heights for Rarotonga

Open water wave height (average of top ten percent) associated with tropical cyclones recently affecting Rarotonga, CKI.

Cyclone (name and year)	Wave Height (m)
Charles (1978)	11
Sally (1987)	10
Val (1991)	14
Pam (1997)	14
Dovi (2003)	17
Heta (2004)	17

Source – Dorrell (per. Comm.)

Source: John Hays, ADB CLIMAP Project, 2004

Mitigating the Cause of Climate Change

Electricity generation and transport is the largest contributor to the polluting gases that cause climate change. Although minute on an international scale, the trend for increasing demand and costs of fossil fuel energy for the country is illustrated by Tables 5 & 6. Rarotonga energy consumption has increased significantly between 1996-2003 by 147%, compared to an increase of 52% between 1991 and 1995 and 127% between 1995 and 2000 [OPM. 2003]. Reducing global climate change requires minimising greenhouse gas emissions, through increasing efficiency of fossil fuel energy use as well as integration of renewable energy sources into the country's energy generation needs at the national level [SPREP$_1$, 2004].

Table 5 - Petroleum imports for 2003 and projections for 2013

	2003							2013		
Fuel	**KL**		**KT**	**TOE**	**GHG (tonnes)**	**GHG (Gg)**	**% of GHG**	**AAGR**	**GHG (Gg)**	**% of GHG**
Motor Spirit		4,683	3,418	3,726	11,708	11.7	*41.0%*	3%	15.7	*36.7%*
Aviation Gasoline		4.0	2.8	3.1	9.2	0.0	*0.0%*	0%	0.0	*0.0%*
Jet fuel	182		144	157	473	0.5	*1.7%*	2%	0.6	*1.3%*
Kerosene	1.0		0.8	0.9	2.8	0.0	*0.0%*	0%	0.0	*0.0%*
Distillate Fuel		5,945	4,996	5,395	16,052	16.1	*56.3%*	5%	26.1	*60.9%*
Lubricating oil		111	111	121	278	0.3	*1.0%*	5%	0.5	*1.1%*
LP Gas	1.2		0.6	0.7	1.9	0.0	*0.0%*	3%	0.0	*0.0%*
Total	*10,927*		*8,674*	*9,404*	*28,524*	*28.5*	*100.0%*		42.9	100.0%

Note: no data is available on lube oils so conversions are estimated

Source: SPREP$_2$, PIREP Project, 2004

Table 6 – TAU Generation, Fuel use and Sales 1994-2003

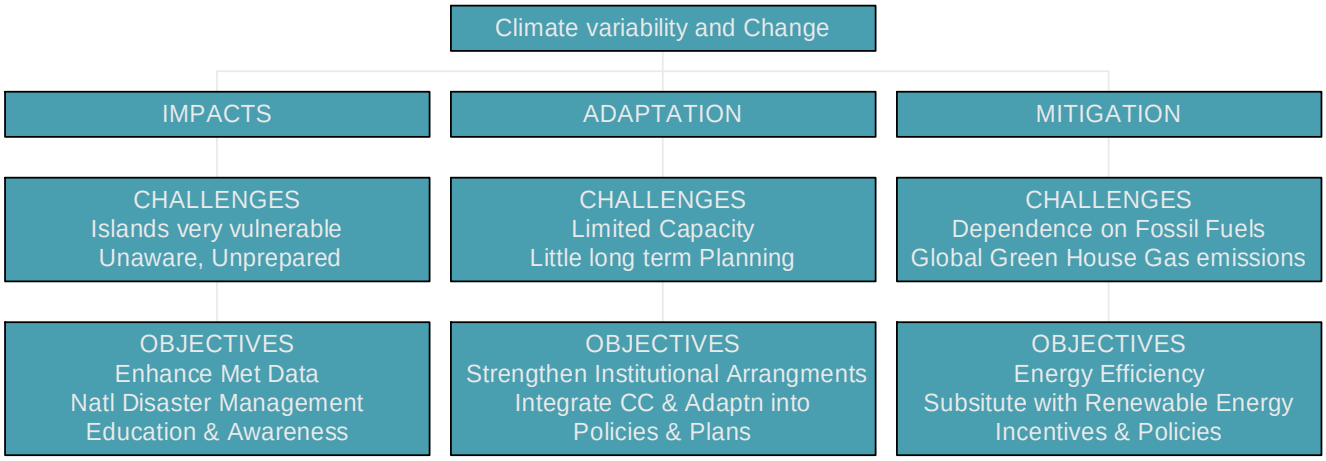
	Year 94-95	Year 95-96	Year 96-97	Year 97-98	Year 98-99	Year 99-00	Year 00-01	Year 01-02	Year 02-03
MW MD	2.90	2.93	3.00	2.90	3.15	3.54	3.66	3.91	4.40
Generated MWh	16,623	17,145	16,805	16,643	18,428	20,247	22,267	22,893	24,826
Fuel, kl	4,276	4,441	4,370	4,251	4,727	4,679	5,727	5,900	5,779
Billed MWh	Na	Na	Na	Na	16,474	17,873	19,231	20,249	21,987

Source: $SPREP_2$, PIREP Project, 2004

Capacity Building

Capacity building needs include continuous training of professional staff with a focus on broadening skills in engaging communities, using new technologies, developing prediction models and standardisation of tools and methods applied. Education and awareness programmes that consider local cultures and traditions are required to enable Cook Islanders to understand and adapt to climate change. Public and private sector capacity limitations in renewable energy expertise and knowledge are barriers to the widespread use of energy efficiency measures in the Cook Islands [$SPREP_2$, 2004]. Furthermore, there is a need to improve the forward planning capacity of local energy providers to prevent adoption of policies based on crisis management, which locks limited capital and capacity into fossil fuel energy and technology.

Figure 14: Proposed National Climate Variability and Change Programme Structure
(Source: National Environment Service, 2004)



Programme Objective

Integration of climate change adaptation and mitigation considerations into national planning, policies and actions to address unacceptable risks to the natural environment and economy, including those arising from natural hazards such as extreme weather events, climate variability, climate change and sea level rise,.

Key Strategic Actions

Immediate Priorities

3.3.1.a) A full time National Climate Change coordinator to be appointed within the host institution to coordinate and mainstream climate change activities, including the Second National Communications programme.

3.3.1.b) Climate Change Country Team (CCCT) and related functions to be institutionalised as part of the [National Sustainable Development Committee], including all relevant stakeholders, traditional leaders, non-government organisations, and the private sector.

Short Term Priorities

3.3.1.c) Completion of a comprehensive national hazard risks analysis and assessment, and development and adoption of a National Disaster Preparedness strategy possibly using nationally appropriate tools within government, non-government and community programme activities.

3.3.1.d) Strengthen current weather and climate observation network and information gathering and sharing to include all inhabited islands.

3.3.1.e) Enhancement and integration of early warning systems for climate related disasters such as drought, storm surge, cyclones and other extreme events into our development planning systems.

3.3.1.f) Continue to manage and monitor climate related risks leading to disease outbreaks, transmission and distribution.

3.3.1.g) Preparations and development of project proposals for funding for the design and construction of appropriate coastal protection systems from flooding and storm sea-surge damages e.g. for Avatiu and Avarua townships.

3.3.1.h) Develop policies that take into account climate risks in future development planning.

Medium Term Priorities

3.3.1.i) Identify and monitor climate related risks through vulnerability assessments, which look at links with coral bleaching, crown of thorns, fish poisoning and algal blooms,

3.3.1.j) Develop appropriate community based adaptation programmes to increase ability to cope with climate change impacts e.g. traditional management/raui/land-based pollution source treatment measures.

3.3.1.k) Conduct assessment of national greenhouse gas emissions

3.3.1.l) Reduce emissions of polluting gases and decrease the use of imported petroleum fuels, through improved consumer education, improved use of renewable energy, better energy generation efficiency, energy conservation, elimination of non-renewable energy subsidies, and public education.

3.3.1.m) Provide incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects.

3.3.1.n) Address information gaps and needs to develop and submit Second National Communication Plan to UNFCCC

3.3.1.o) Capacity building and development is needed in the private and public sectors to regularly carry out greenhouse gas inventories and a full programme of energy efficiency measures including audits, design of efficiency improvements, and specification of energy efficient components to carry out those improvements, installation of those components and monitoring of the results.

3.3.1.p) Increase community awareness and education at all levels in our communities for climate change related risks including water, coastal, food security and health concerns through participatory approaches, ongoing media campaigns, promotions and advocacy programmes.

3.3.1.q) Develop a database and monitoring systems to gauge effectiveness of marine resources, agricultural and health adaptation programmes on food security levels and disease management programmes

Key Performance Indicators

G.1 Number of progress reports of related climate change programmes.

G.2 Understanding of climate related observations and measurements, and awareness of climate change and sea-level rise impacts to be quantified through the number of new climate change related policies and projects implemented nationally.

G.3 Number of communities participating in climate change and adaptation activities

G.4 National Hazards Risk Assessment and an inventory of all past, present and planned climate variability and change programmes and activities in the Cook Islands report completed

G.5 Development of database on activities and traditional knowledge related to climate change and adaptation practices and processes

G.6 Stakeholder input into climate change planning

G.7 Percentage of GDP representing national infrastructure damage from natural disasters and climate change impacts

G.8 Percentage of GDP reflecting value of renewable energy investments nationwide

G.9 Percentage of GDP representing fossil fuel consumption for energy nationwide

G.10 In-country training workshops on relevant climate change issues

G.11 Access to national and international technical expertise (increased roster of experts)

G.12 Number of climate related initiatives and policies adopted and assimilated into national planning systems.

4 INSTITUTIONAL SUPPORT MECHANISMS

Strategic Goal

Improve our Institutional Support and Implementation Mechanisms to Manage our Environment in a Sustainable Manner

4.1 Planning, Policies and Regulations

Issues and Challenges

The National Environment Forum acknowledges the experiences of Aitutaki on development and environment management under the Environment Act. It was recommended that all islands adopt the Environment Act for the sake of the environment as a whole and each island to tailor the provisions or by-laws for each island and oversee how the environment service and structure is put in place on each island.

It was noted that unstable government, unstable policies and political horse trading will lead to compromising the environment. This will lead to unstable policies and affects implementation or requirements of the Environment Service and programmes.

The Act recognises the uniqueness of each island's traditions and traditional resources management practices. The National Environment Act 2003 is now effective for the islands of Rarotonga, Aitutaki, Atiu and Mitiaro.

In spite of the publicity created by environment awareness programmes through media releases, damage to the environment continues despite years of repeated warnings. One of the pressing issues concerns the weaknesses in implementing structures and enforcement of regulations and policies across sectors [King, 2001]. Some members of the public are also circumventing the Environment Service or Ministry of Works regulatory and compliance processes by consulting the Minister for Environment or Works for favours and influences.

Introduction of user pays policies, especially for domestic waste collections, landfill and sewage treatment systems on all islands beginning with Rarotonga and Aitutaki must be adopted to cover operational, management and site acquisition and preparation costs.

It is also important that processes for integration of environmental considerations into the national economic and social development policies, plans and programmes are strengthened [King, 2001].

Representatives from the House of Ariki and National Women's Council have expressed their concern of limited number of traditional leaders and women in environmental, cultural and land use decision making roles especially in processes influenced by government.

Programme Objective

Strengthened management, implementation and mainstreaming of environmental policies including adoption of the Cook Islands Environment Act and associated regulations with full compliance across all sectors and islands.

Key Strategic Actions

Immediate Priorities

4.1.a) Application and enforcement of all provisions of the National Environment Act 2003 to all the islands of the Cook Islands, and having consistency with each outer islands by-laws.

4.1.b) The Environment Service to assist all Outer Islands preparations of their by-laws and process leading to their coming under the Act.

4.1.c) Strengthen coordination between Ministries with regulatory functions aimed at strengthening enforcement, administrations, operations and resources sharing to improve performance and compliance.

4.1.d) Strengthen the application of Environmental Impact Assessments (EIA) for all development activities

4.1.e) Strengthen and promote stewardship of natural resources and environmental management thru appropriate education programmes, by-laws, regulations and management plans

4.1.f) Establishment of a National Environment Council by 2006 to oversee administration of the Environment Act and NESAF. This requires amendment to the Environment Act provision for additional Council role.

4.1.g) Strengthen the Islands' Environment Authorities through development of appropriate legislations and bylaws, policies, plans, administration support, adequate resource and wider stakeholder representations

Short Term Priorities

4.1.h) Ensure that all Islands are registered under the National Environment Act.

4.1.i) Improve technical expertise and decision making processes for planning, policy and regulatory functions.

4.1.j) Establish and implement regular consultation and reporting process between national government, outer islands and stakeholders through mechanisms such as the National Environment Forum and National Development Plan.

4.1.k) Develop and implement appropriate indicators, standards and guidelines for environment sustainability

Key Performance Indicators

H.1 Key stakeholders Annual Performance Reports
H.2 ES Annual Business plan
H.3 Annual progress reports for WSSD, BPOA and MDG.
H.4 All Outer Islands have an Island Environment Authority and bylaws that are consistent with the provisions of National Environment Act 2003.
H.5 All key legislations for environmental regulatory agencies updated for environmental concerns.
H.6 Numbers of new environment management plans, policies and guidelines adopted and implemented nationwide
H.7 Percentage of national environment policies reflected in the National Development Strategy

Atiu wharf inundated by Cyclone Heta wave surges

Source: Atiu Island Administration, Atiu, Cook Islands

4.2 Finance and Administration

Issues and Challenges

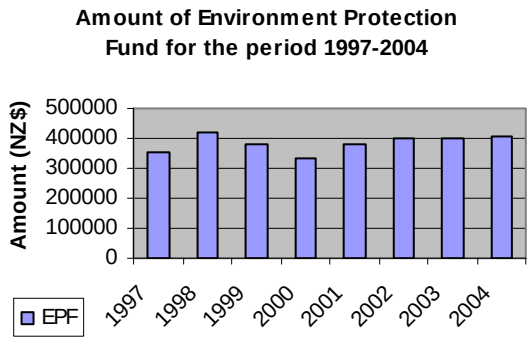
The Environment Protection Fund has become the most active funding mechanism for environment-related activities such as domestic rubbish collection for Rarotonga and the management of the dump site, and provides support funds for environment activities on all islands (Figures 15 &16).

Introduction of user pay policies is essential, especially for domestic waste collection, landfill and sewage system treatment on all islands, beginning with Rarotonga and Aitutaki. These must be adopted to cover waste operations, management and site acquisition and preparation costs.

Government needs to improve the adoption and collection of levies and fees related to natural resources consent and economic rent. Increasing growth sectors with emerging environmental problems such as transportation (especially motor vehicles), and retail wastes need to be assessed for the introduction of new taxes and levies to cover the cost of waste management. Appendix 7 highlights the Government's contribution to the environment sector from 1999 to 2003.

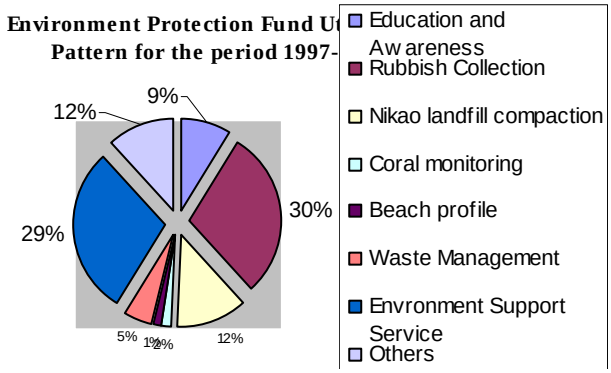
There is also a need to strengthen the relationship with development partners including the local private sector regarding funding and sponsorship of environment programmes. This would include the building of national capacity to access international funding sources such as GEF to finance national programmes.

Figure 15:



Source: Figures 14 & 15-National Environment Service

Figure16:



Programme Objective

To secure long term financial stability for all environmental sector programmes

Key Strategic Actions

Immediate Priority

4.2.a) Facilitate access to small grant GEF appropriations for country programmes especially community projects.

4.2.b) Government to make commitment and provide annual budget support to Island Councils to enable the Island Administrations and Island Environment Authorities to carry out its environmental programmes.

Medium Term Priorities

4.2.c) Establish policies and guidelines for access to the Environment Protection Fund for community use.

4.2.d) Adoption of economic rental, cost recovery measures and user-pays mechanisms for development of natural resources and waste collection, disposal and recycling.

Key Performance Indicators

I.1 Key stakeholders annual financial reports

I.2 Percentage of annual national Budget Appropriation directly earmarked for environmental related programmes.

I.3 Increasing number of revenue from levies and taxes related to the environment

I.4 Percentage of GDP attributed to the consumption and development of natural resources including biodiversity and species utilization.

I.5 Percentage of total funding received annually from external sources for environmental programmes.

I.6 Number of new funding mechanisms created or accessed for national environment programmes.

Nikao Dump – Availability of land for future waste landfills could be a problem on Rarotonga

Source: National Environment Service, Cook Islands

4.3 Capacity Building, Training and Education

Issues and Challenges

Developing the skills of Cook Islanders to carry out the important tasks related to target programmes is always a challenge. It is therefore important that the outcomes of the National Capacity Self Assessment (NCSA) programme are followed through. We note the need to train and provide opportunities for local individuals, communities, youth business and businesses to explore income generating activities using local resources and knowledge about their environment.

The building up of our national technical and scientific capacity and capability in environmental and related fields such as health, engineering, marine, agriculture, law, and construction continues to be difficult due to limited availability of qualified personnel.

Mainstreaming of environmental issues within the formal and informal education and vocational training curricula is part of the overall capacity building programme. Schools will be encouraged to strengthen school environmental programmes from early childhood to senior school students.

Programme Objective

To ensure the implementation of capacity building initiatives including the National Capacity Self Assessment recommendations focused on the target programmes and developed through or in partnership with the Ministry of Education, Ministry of Health, Ministry of Marine Resources, Ministry of Agriculture, National Department of Human Resources Development, Environment Service, Donors and the NGOs.

Key Strategic Actions

Immediate Priorities

4.3.a) Improved training opportunities for personnel in environmental related science and technical areas

4.3.b) Promote the use of facilitators, community groups and youths in community awareness programmes on environmental issues and conducting training and conservation initiatives for young people to enhance their skills in environmental management.

4.3.c) Widely accept and use technical modelling tools to assist in decision making process for the environment

4.3.d) Strengthen the enforcement capacity of the Tu'anga Taporoporo, Department of Health, Marine Resources and MOW compliance divisions and their counterparts in the outer islands for the purpose of conservation, protection and management of environmentally sensitive areas.

Short Term Priorities

4.3.e) Implement Environment Service HRD strategy.

4.3.f) Incorporate environmental training as a priority into the National HRD Strategy

4.3.g) Develop national capacity to coordinate and facilitate access to GEF to support environment related programmes.

4.3.h) Introduce and incorporate environmental subjects at all levels of school curriculum.

Key Performance Indicators

J.1 Number of training and capacity building programmes delivered to local communities and youth groups.

J.2 Percentage of new modelling tools applied in environmental related programmes locally.

J.3 Increasing number of scholarships related to environmental science and other related technical applications

J.4 Increasing number of trained locals and community groups with environmental project management skills.

J.5 Number of professional staffing positions including technical posts within key environmental related programmes filled by locals.

J.6 Number of schools adopting environmental related programmes apart from normal school environmental curriculum programmes

J.7 Number of NCSA recommendations implemented.

Land reclamation (including wetlands) around Rarotonga is a common sight and worrying trend.

Source: National Environment Service, Cook Islands

4.4 Information, Communication and Technology Management

Issues and Challenges

The promotion of information sharing using clear communication strategies and channels is important to enhance environmental awareness and education programmes. Other challenges in environmental management via ICT programmes include the transfer of expertise, knowledge, technology, maintaining equipment, consistency and quality of data, completion of audit and inventories of environmental resources and programmes.

The placement of remote sensing monitors and gauges in our expansive waters will also enhance our long term vulnerability assessments, monitoring and risks management programme through improved data compilation, analysis and characterisation, as well as management through established databases and sharing of information.

At the National Environment Forum, stakeholders acknowledged the research priorities, monitoring and surveillance programmes of the Ministry of Health and will require an appropriate institutional framework to promote action, avoid duplication and facilities among scientific and technical working groups for research and data collection. The forum recommended establishing an appropriately funded national research facility for climate and health issues for the monitoring promotion of environmental health concerns.

Programme Objective

Improve understanding of environmental challenges and operational effectiveness of intervention programmes through effective communication, an improved information distribution system and use of appropriate technologies.

Key Strategic Actions

Immediate Priorities

4.4.a) Develop and promote a national environment information management system and service (e.g. environment information programmes, libraries, website, computer networks and databases, distance education)

4.4.b) Promote the application and development of technologies and models such as remote lagoon monitoring systems and GIS mapping to assist with decision making.

Short Term Priorities

4.4.c) Establish a National Environment Quality Monitoring and Health Research Facility.

Medium Term Priorities

4.4.d) Conduct training programmes for technical data analysis and characterisation.

Long Term Priorities

4.4.e) Strengthen collaborative efforts for marine education programme by Marine Resources, Education, Tourism and Tu'anga Taporoporo to improve the distribution of information into the schools as well as to the general public.

Key Performance Indicators

K.1 Percentage of communities and schools involved in environmental awareness, promotional and conservation programmes

K.2 Percentage of environmental databases and reports accessible to and useable by the general public.

K.3 Percentage of new technologies and models adopted and utilised in everyday decision making by senior managers in the public, private sector and communities.

K.4 Number of new and locally relevant environmental publications and brochures developed annually.

K.5 Increasing number of nationals trained in information and media productions.

K.6 Number of stakeholders involved in senior decision-making processes.

K.7 National Research Laboratory Facility completed for environmental, marine resources, agriculture, health and private sector use

Local environmental educational programmes includes children painting competitions

Source: National Environment Service, Cook Islands

4.5 Partnerships

Issues and Challenges

NGOs, youths and community groups have made positive contributions to national policy development and strengthening of the Environment Service by acting as 'watchdogs' of government activities over the past decade. Groups such as Taporoporoanga Ipukarea Society (TIS), WWF-Cook Islands, Avana-Muri Marine Management Action Group (AMMAG), Rarotonga Environment Awareness Programme (REAP) and the Takitumu Conservation Area (TCA) Trust have provided communities with a platform for lobbying for government and international support on specific public environment issues such as the declaration of the island of Suwarrow as a national park, and Kakerori (Rarotonga Flycatcher) Protection Project.

Our relationship with our international development partners' continues to be strong with NZAID, CIDA and other organisations, such as SPREP, UNDP, SOPAC and the SPC participating locally in infrastructure development and community based programmes. While regional and international organisations, and foreign governments continue to lend support to national environmental programmes (Table 7), there is need to coordinate and prevent duplication of effort in order to maximise the impact from using limited resources.

Table 7.

DONOR CONTRIBUTIONS TO ENVIRONMENT SECTOR FOR THE PERIOD 1999-2003

(All amounts in NZ$)		1999	2000	2001	2002	2003	Total
UNDP-GEF	Envi. Service		206,000	400,000			**606000**
UNDP-NBSAP	Envi. Service				136,187	213,338	**349525**
UNDP-Int. Wate	Envi. Service				136,583	160,482	**297065**
UNDP-NCSA	Envi. Service					39,142	**39142**
UNDP-Trina	NDMO			22,723			
UNEP-Biosafety	Envi. Service					143,260	**143260**
FORUM SEC.	NDMO			20,382			
SPREP	Envi. Servic	65468	120,000	50,000	1,999,974	156,568	**2392010**
NZAID	Envi. Service		300,000	100,000			**400000**
	Met. Servic	70,000	60,000	20,000			**150,000**
ADB	Envi. Service		100,000	250,000			**350000**
	Waste (MO	500,000	440,000	2,100,000			**3040000**
Total		**635468**	**1226000**	**2963105**	**2272744**	**712790**	**7767002**

Source: Aid Management Division, MFEM, 2004.

Programme Objective

To maintain strong and productive working relationships and partnerships with all relevant sectors, organisations, institutions and development partners resulting in timely and complete fulfilment of the national environmental goals.

Key Strategic Actions

Immediate Priority

4.5.a) Continue to maintain good working and diplomatic relationship with regional organisations, international organisations and foreign governments and donor agencies.

4.5.b) Facilitate implement the NESAF strategies through various initiatives including GEF mechanisms and country specific strategies.

Short Term Priorities

4.5.c) Facilitate increased cooperation and coordination between development partners for best practices and information sharing in order to reduce duplication of efforts and resources.

4.5.d) The tripartite partnership between government, businesses and environmental NGOs is strengthened through: Sharing of information, equal and active participation in decision making, equal recognition without political biases and disparities.

Medium Term Priorities

4.5.e) Facilitate training and education opportunities for environmental NGO administrators in basic environmental principles and management practices appropriate to the Cook Islands to improve their ability to manage local projects.

Key Performance Indicators

L.1 Percentage of national environment programmes supported and managed by NGOs

L.2 Number of new environmental initiatives and percentage of annual funding support by our development partners.

L.3 Number of funding and technical support assistances identified and awarded annually by our development partners

4.6 International Obligations

Issues and Challenges

The Cook Islands, as with other small island developing states, are particularly vulnerable to natural as well as environmental disasters which could have severe implications on our natural resources. Because of these common problems, Government felt that by signing the various international agreements, declarations and action plans, we would be able to access funding assistance, receive technical expertise, undertake training, participate in meetings where decisions are made, etc (Moekaa, 2004).

Government has also received assistance to implement a number of programmes currently undertaken by the Environment Service – International Waters Programme, National Biodiversity Strategy Action Plan (NBSAP), biosafety, and climate change. In becoming a party to these multilateral environment agreements or other international arrangements, Government has been able to address some of a number of pressing environmental issues of concern to us.

Table 8. Obstacles in MEA-Implementation in the Cook Islands

□Lack of awareness by politicians of the significance of international environmental issues for the national/local context
□Absence of sufficient regional cooperation in the South Pacific, despite the effective role played by SPREP
□Missing legal framework for environmental issues;
□Many government agencies do not regard environmental issues, let alone MEAs, as part of their agenda
□The Ministry of Works and Energy, although officially not responsible for any MEA, undertakes a number of activities which feed into exisitng MEA obligations (e.g. CBD, CCD and FCCC).
□The natural heritage data base, which seeks to identify and document Cook Islands' plants and animals, actually implements many of the obligations under the Biodiversity Convention and yet no linkage seems to exist between the natural heritage programme and other biodiversity initiatives in the Cook Islands;
□A number of environmental NGOs operating in the Cook Islands undertake community conservation and education projects in isolation of the implementation of particular MEAs;
□High costs for attendance at MOPs or COPs, as they are often held in Europe or North America where the Cook Islands has limited diplomatic presence.

Source: Velasquez et al. 2002.

The Cook Islands must play an active role in relevant activities related to Multilateral Environment Agreements (MEAs) already adopted. This means that Government must make a commitment to secure and provide resources to allow the Environment Service and NGOs as well as community groups to deliver the programmes in the NESAF. Additionally, we must develop our national capacity and capability to manage these MEAs. Linking of policies and MEA-implementation must go together with adjustments in institutional

frameworks, the sharing or shifting of competencies, joint awareness raising and capacity development, and regional coordination [Velasquez et al, 2002]. This is aimed at helping us pursue sustainable development strategies in all its economic, social, and environmental dimensions.

It is also suggested that the Cook Islands be selective in our adoption of further international conventions or MEAs to ensure that these translate to beneficial activities and support local programmes. Table 8 highlights some of the constraints and difficulties the Cook Islands faced in implementing the signed MEAs. This is also to ensure that our limited resources are appropriated to priority programmes.

Programme Objective

To ensure that our national obligations and commitments to international agreements are met and, where appropriate, exceed the requirements of all relevant environmental instruments, including associated policies

Key Strategic Actions

Short Term Priorities

4.6.a) Assess the impact of MEAs on environmental programmes and national economy

4.6.b) Ensure that the Cook Islands participate and be represented in forums and programmes related to international obligations developments.

4.6.c) Harmonise, where appropriate related MEAs to ensure that inter linkages are addressed such as reporting requirements and regulatory processes.

Medium Term Priorities

4.6.d) Established a stringent vetting process to ascertain and approve proposed international conventions for adoption.

4.6.e) Strengthen our national reporting processes.

4.6.f) Continue to strengthen and facilitate training opportunities and capacity development exercises of nationals and programmes on MEAs.

Key Performance Indicators

M.1 Number of relevant and renewed international commitments and agreements related to MEAs.

M.2 Number of new environmental initiatives and percentage of annual funding support by our development partners.

M.3 Number of technical support assistances identified and awarded annually by our development partners

M.4 Annual reporting of achievements and shortfalls for compliance and fulfilment of obligations, multilateral agreements and programmes

M.5 Timely national reports submitted.

5 IMPLEMENTATION AND MONITORING

5.1 Implementation and Monitoring

Issues and Challenges

The piecemeal and disjointed approach to addressing environmental problems in the past, has contributed to weaknesses in the implementation, enforcement, monitoring and management of our environmental programmes and regulations. Furthermore, the limited amount of information and data to assist in monitoring progress emphasised serious risks to planning and implementation efforts.

The sector must demonstrate environmental leadership and encourage other sectors to improve their environmental performance and full compliance with the National Environment Act as well as related regulations and bylaws.

The timeline set by the new Environment Act for a regular stakeholders' consultation meeting regarding reporting of progress made and revising NESAF directions, is a welcome change. Intervention responsibilities and processes need to be discussed and agreed to by national stakeholders and local community interests in order to reduce stalemates over projects as a result of disagreements.

All stakeholders would share responsibilities to implement and monitor the NESAF. The National Environment Council will be responsible and accountable for the administration and management of the NESAF.

Government needs to be very committed to the cause and ensure that the Environment Service office is properly resourced and functioning well (Herman, T., 2004). The National Environment Service will provide secretariat services to the National Environment Council.

Programme Objective

Adoption of an integrated system of implementation, monitoring and reporting on the National Environment Strategic Action Framework (NESAF) 2005-09 effectiveness regarding the state of the environment and resources, at island and national levels

Key Strategic Actions

Short Term Priorities

5.1.a) Establishment and activation of baseline systems including databases for monitoring progress of NESAF.

5.1.b) Improve communications and coordination of all environment functions and natural resource conservation activities, including implementation at all levels (national, outer islands and local communities).

5.1.c) Ensure that all stakeholders are well resourced and trained to implement the NESAF.

5.1.d) Establishment and adoption of Annual National Environmental Awards, giving recognition to exceptional achievements and undertakings for the environment.

5.1.e) Annual reporting of status of the environment to Parliament and National Environment Service Reports.

Medium Term Priorities

5.1.f) Adopt capacity building initiatives for the following regulatory Ministries and institutions:

- National Environment Service;
- Public Health Department;
- Ministry of Works - Building Controllers Office;
- Ministry of Works - Water Works Division;
- Ministry of Works – Land Survey Division;
- Ministry of Works – Waste Management Unit;
- Ministry of Works – Energy Division;
- Ministry of Agriculture; and
- Ministry of Marine Resources;
- Ministry of Transport;
- Crown Law Office;
- Meteorological Office;
- National Disaster Management Office;
- Natural Heritage Trust;
- Vaka Councils;
- Island Councils;
- Traditional Leaders
- NGOs
- Private sector importers

5.1.g) Conduct a one day national forum to report on effectiveness and progress of NESAF by December 2007.

Long Term Priority

5.1.h) Conduct a two to three days National Environment Forum to report on progress and prepare the next NESAF by December 2009.

Key Performance Indicators

N.1 Number of monitoring and reporting systems developed to gauge the progress in implementing activities in the NESAF.

N.2 Annual assessments and reports returning either good or improving results of NESAF goals achievements.

N.3 Annual assessments of viability and continuous effectiveness of performance indicators

N.4 Establish and implement processes for review and updating NESAF

N.5 National recognitions for exceptional achievements within and beyond the NESAF influence awarded to people, institutions and communities.

N.6 Number of successful stakeholders' consultations and forums held that are linked to the NESAF.

N.7 Integration and progress reporting of NESAF into the NDP and other sectoral strategies.

5.2 Proposed NESAF Budget

The total cost of the NESAF programmes amounts to NZ$20.755 million. There were 154 programmes spread over five years of implementation. Seventy five (75) programmes are scheduled for implementation during fiscal years (FY) 1 and 2, while forty one (41) programmes were earmarked a short to medium term priorities and will be addressed from 2006-2007. Thirty eight (38) programmes are deemed medium to long term priorities and will be addressed and reviewed during the later part of the NESAF from 2007-2009, pending progress in addressing pressing concerns during FY 1 and FY2.

The immediate to short programmes will cost NZ$9.395 million while the medium to long term programmes will cost NZ$11.360 million.

There are projects proposed for GEF funding such as the coastal protection system for Avarua/Avatiu Central Business District (CBD) and a National Research Facilities programme.

Agencies and sectors responsible for the implementation have been identified and given the tasks of addressing various programmes. The onus for funding of NESAF programmes must be carried by responsible stakeholders. Communities and individuals must take more responsibility for paying the costs of these programmes and not just expect the government to take care of it. Government resources should go to address infrastructure and technical support programmes. The private sector should increase their contributions to the NESAF programmes in areas such as training and waste management including recycling.

The Environment Protection Fund will continue to cover costs of several programmes including support of the National Environment Service and the administration of the NESAF on behalf of the National Environment Council.

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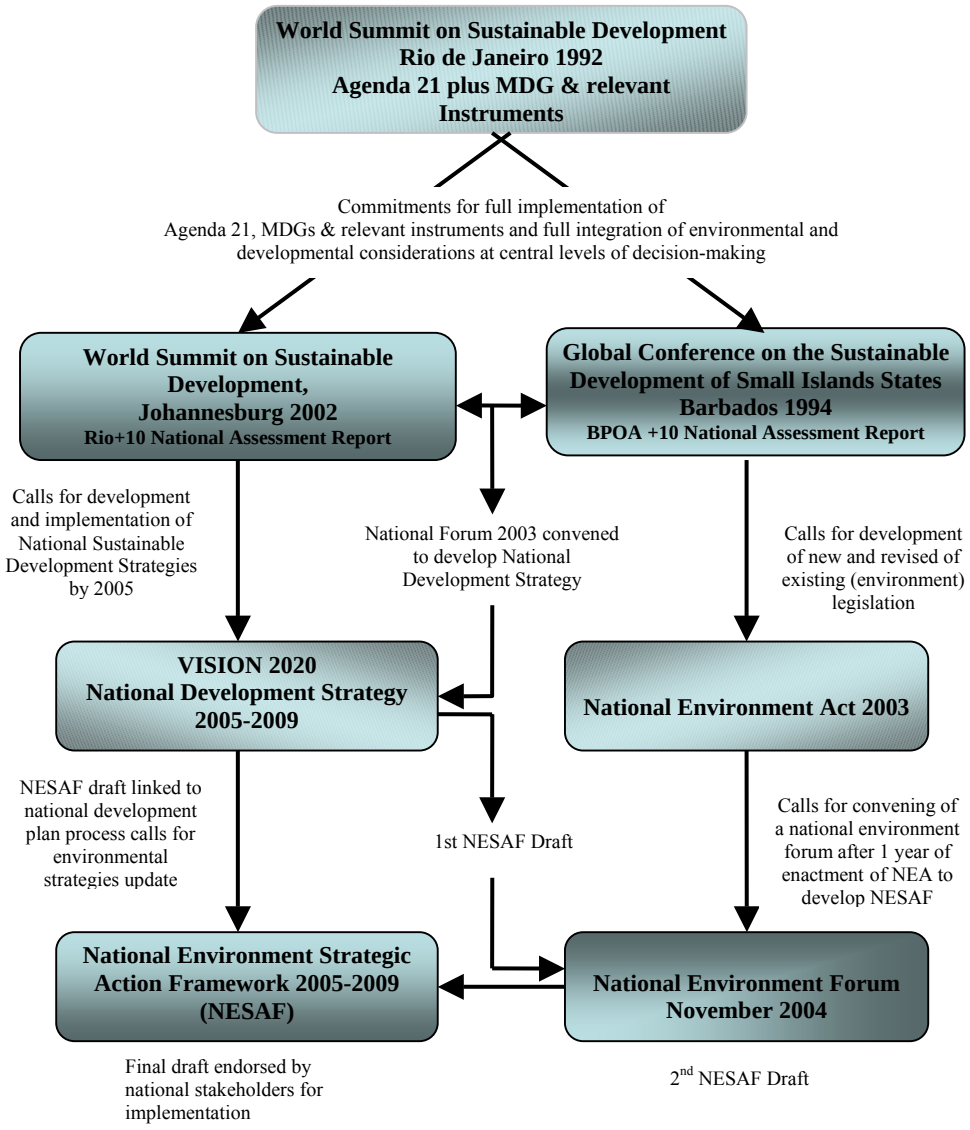
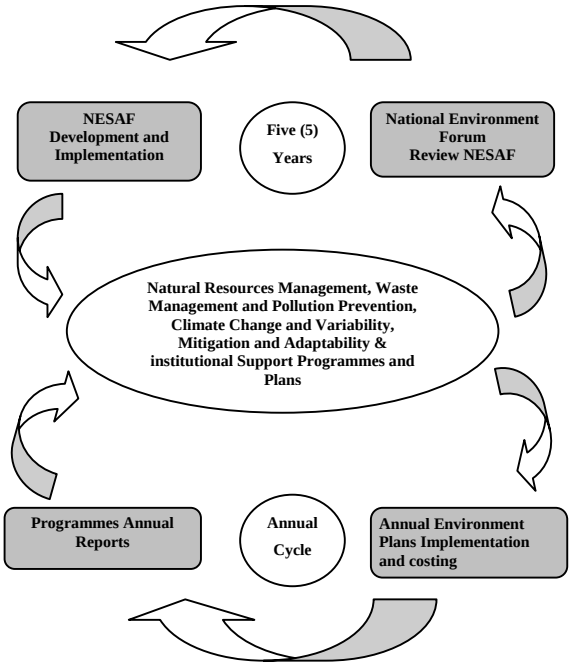
Appendices

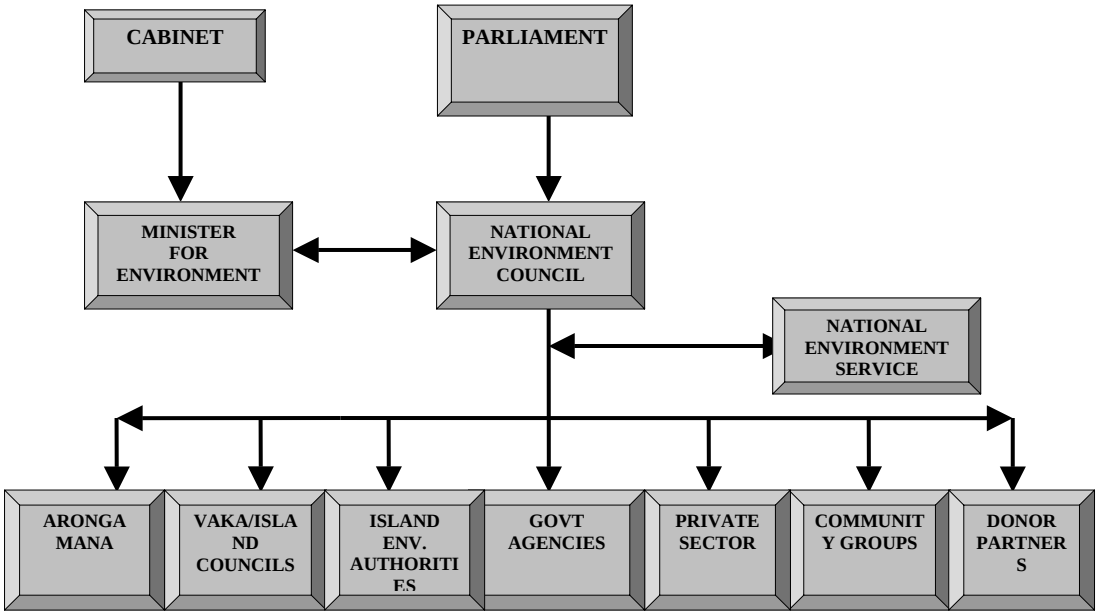
Appendix 1 NESAF Strategy Formulation Process



Appendix 2: NESAF Development Cycle



Appendix 3: Proposed NESAF Implementing Structure



Appendix 4: Cook Islands Legislations related to the Environment.

Current Environment related Cook Islands Legislations and Regulations	**Date Enactment**	**Administering Agency/Sector**
1. The Plant Act	1973	Agriculture
2. The Animals Act	1975	Agriculture
3. The Animals Importation Regulations	1978	Agriculture
4. The Animal Disease Prevention Regulations	1982	Agriculture
5. the Plant Quarantine Regulations	1993	Agriculture
6. The Container Importation Regulations		Agriculture
7. The Domestic Quarantine Regulations		Agriculture
8. Pesticide Act		Agriculture
9. Marine Resources Act	1989	Ministry of Marine Resources
10. Public Health Act	2004	Ministry of Health
11. Cook Islands Environment Act	2003	Nat. Environment Service.
12. International Departure Tax Act – amendment to form Environment Protection Fund	1984	Nat. Environment Service
13. Natural Heritage Trust Act	1999	Nat. Heritage Trust
14. Marine Pollution Prevention Act		Ministry of Transport
15. Land Use Act		Ministry of Justice
16. Rarotonga Water Ordinance	1960	Ministry of Works
17. Building Control & Standards Act	1991	Ministry of Works
18. Building Control & Standards Regulations	1991	Ministry of Works
19. National Building Code	1992	Ministry of Works
20. Supportive Services Act	1973-74	Ministry of Works
21. Energy Act	1998	Ministry of Works
22. Outer Islands Local Govt. Act	1987	OMIA
23. Motu Development Act of Rarotonga	2003	Justice

Appendix 5. Multilateral Environment Agreements Applicable to the Cook Islands

Multilateral Environment Agreements	**Status**
1. Climate Change (UNFCC)	Ratified
2. Kyoto Protocol	Ratified
3. Ozone Layer Convention (Vienna)	Ratified
4. Montreal Protocol	Ratified
5. Copenhagen Amendment	Ratified
6. Basel Convention	Ratified
7. Waigani Convention	Ratified
8. POPs Convention (Stockholm)	Ratified
9. UNCLOS (Law of the Sea)	Ratified
10. SPREP Convention	Ratified
11. World Heritage Convention	Signed
12. Convention on Biological Diversity	Ratified
13. Biosafety Protocol	Signed
14. Desertification (CCD)	Ratified
15. Apia Convention	Ratified

Source: Velasquez et al. 2002, Tania Temata, Environment Service, Cook Islands, 2004.

Appendix 6. Physical Features of the Cook Islands

Island	Island Type	Area (km^2)	Maximum Elevation (m)	Principal Habitats
Southern:				
Rarotonga	High volcanic	67	652	Strand vegetation, extensively modified coastal forest & wetlands, fernlands, cloud forest, inland forest
Mangaia	Raised coral	52	169	Makatea forest, wetlands modified by agriculture, fernlands, cloud forest, inland forest, freshwater lake
Aitutaki	Volcanic & coral	18	124	Strand vegetation, lowland forest greatly modified by agriculture, salt marsh wetlands
Atiu	Raised coral	27	72	Makatea forest, wetlands greatly modified by agriculture, freshwater lake, fern lands
Mauke	Raised coral	18	29	Makatea forest, wetlands greatly modified by agriculture, fern lands
Mitiaro	Raised coral	22	15	Makatea forest, wetlands greatly modified by agriculture, freshwater lakes
Manuae	Atoll	7	10	Strand vegetation; significant seabird nesting sites
Takutea	Sand cay	1	5	Strand vegetation; seabird & turtle nesting sites
Northern:				
Penrhyn	Atoll	10	5	Strand vegetation; seabird & turtle nesting sites
Manihiki	Atoll	5	5	Strand vegetation; seabird & turtle nesting sites
Pukapuka	Atoll	4	5	Strand vegetation; seabird & turtle nesting sites
Rakahanga	Atoll	4	5	Strand vegetation; seabird & turtle nesting sites
Nassau	Sand cay	1	9	Strand vegetation; seabird & turtle nesting sites
Suwarrow	Atoll	0.4	5	Strand vegetation; seabird & turtle nesting sites

Source: *Initial National Communication Under the UNFCCC* (Government of Cook Islands, 1999)

Appendix 7. Total Govt. Expenditure compared to NES (1998-2003)

Total Government Expenditure compared with National Environment Service Expenditure for activities for the period 1998-2003						
(NZ$ Millions)	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Cook Islands Govt.						
Revenue	49.6	58.5	64.7	73	72.1	74.3
Total Expenditure	49.5	57.2	64.2	68.6	68.2	67.3
Recurrent Expenditure	49.5	55.4	64.2	68.6	68.2	71.7
Recurrent per cent	1.0000	0.9685	1.0000	1.0000	1.0000	1.0654
National Environment Service						
Revenue	0.212	0.869417	0.531165	0.778768	0.99089	0.712891
Total Expenditure	0.212	0.500477	0.531165	0.778768	0.60089	0.727891
Recurrent Expenditure	0.212	0.500477	0.531165	0.778768	0.60089	0.727891
Recurrent percent	1	1	1	1	1	1
National Environemnt Service as per cent of total spending	0.0043	0.0087	0.0083	0.0114	0.0088	0.0108

Source: Cook Islands Budget Estimates, MFEM, Government of the Cook Islands.

Appendix 8. Cost Estimates of the NESAF 2005-2009

Key Strategic Actions	Number of Programmes				Costs Estimates (NZ$'000)					
	Immediate	Short	Medium	Long	2005	2006	2007	2008	2009	Total
Biodiversity, Species and Ecosystems Conservation	19	2	0	1	790	715	470	425	375	2775
Land Use and Resources Management	3	6	0	0	155	200	185	140	80	760
Ocean, Coastal & Foreshore Resources Management	8	2	2	3	405	395	325	290	290	1705
Fresh Water Resources Management	5	5	2	3	200	105	195	195	160	855
Economic and Development	12	4	5	0	575	440	335	215	200	1765
Waste, Sanitation and Water Quality Management	7	3	2	0	1020	955	1200	1155	1155	5485
Climate Change, Variability, Mitigation & Adaptation	2	6	9	0	40	510	435	270	190	1445
Planning, Policy and Regulations	7	4	0	0	400	385	280	280	280	1625
Finance & Administration	2	0	2	0	165	110	145	135	135	690
Capacity Building, Training & Education	2	2	0	0	210	220	145	100	100	775
Information, Communication & Technology Management	2	1	1	1	660	445	360	305	305	2075
Partnership	2	2	1	0	40	55	60	30	30	215
International Obligations	3	0	3	0	20	115	150	20	20	325
Implementation & Monitoring	1	4	2	1	15	50	95	0	100	260
Total	**75**	**41**	**29**	**9**	**4695**	**4700**	**4380**	**3560**	**3420**	**20755**

NESAF COSTS ESTIMATES AND PROGRAMME PROFILES FOR THE PERIOD 2005-2009										
Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Biodiversity, Species and Ecosystems Conservation										
Endangered Species Management										
UUUUUUUUUUUUUUUUUUUUUUUUUUUU UUUUUUUUUUUUUUUUUUUUUUUUUUUU UUUUUUUUUUUUUUUUUUUUUUUUUUUU UUUUUUUUUUUUUUUUUUUUUUUUUUUU UUUUUUUUUUUUUImmediate Priorities										
3.1.1.a) Develop a programme to survey and conserve the rarer plants used in herbal medicine (vai rakau).	PP1.1, PP1.2, PP2, PP4, PP5, PP6, PP7, PP8	2005-2006	A1, A3, A6, A7, A9, A10,A11	NGOs, Communities, IPR, MOA , ES, Nat. Heritage, Donors, Aronga Mana	50	40				**90**
3.1.1.b) Develop a programme to survey and conserve endemic animals and rare native animals, covering mammals, birds, and other animals.	PP1.1, PP2, PP4, PP5, PP6, PP7, PP8	2005-2009	A1, A3, A4, A6, A9, A10	NGOs, Communities, MOA , ES, Is. Councils, Is. Envi. Authorities, Aronga Mana, IPR, Donors	65	65	65	65	65	**325**
3.1.1.c) Develop a programme to survey and conserve marine animals harvested for food or financial gain.	PP1.1, PP2, PP4, PP5, PP6, PP7, PP8	2005-2006	A1,A3,A4,A6,A7	NGOs, MMR, ES, Donors, Private Sec., Communities	55					**55**
3.1.1.d) Develop a programme to survey and conserve the rarer varieties of Wetland Taro (Taro), Coconut Palm (Nu), and other traditional agro-varieties and agro-species.	PP1.1, PP1.2, PP2, PP4, PP5, PP6, PP7, PP8	2005-2006	A1,A3,A6,A11	MOA, NGOs, IPR, ES, Communities		50				**50**
Short term Priorities										
3.1.1.e) Develop a programme to survey and conserve all endemic flowering plants and other endangered native flowering plants.	PP1.1, PP1.2, PP2, PP4, PP5, PP6, PP7	2006-2007	A1,A3,A4,A6,A7 , A10,A11	MOA, ES, NGOs, IPR, Donors, Nat. Heritage. Private Sec.			50			**50**
3.1.1.f) Extend the flowering plant programme (above) to include other types of plants that are endemic or native and endangered.	PP1.1, PP2, PP4, PP5, PP6, PP7, PP8	2007	A1,A3,A4,A6,A7 ,A11	MOA, ES, NGOs, IPR, Nat. Heritage, Private Sec.			45			**45**

Long Term Priorities										
3.1.1.g) Develop a programme to survey and conserve the rarer animals of agriculture and home.	PP1.1, PP4, PP5, PP6, PP7	2008	A1	MOA, ES, IPR, NGOs				50		**50**
Invasive Species Management										
Immediate Priorities										
3.1.1.h) Develop a programme involving all islands to survey invasive species in natural ecosystems and in the agro-ecosystem.	PP1.1, PP1.2, P2, PP4, PP5, PP6, PP7	2005	A1,A2,A5,A6,	MOA, ES, NGOs MMR, Communities, Nat. Heritage, Private Sector, Donors	25	25				**50**
3.1.1.i) Develop a community-based programme to eradicate those invasive weeds and animal pests that are not yet widespread on particular islands.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7	2005	A1,A2,A5,A6	MOA, ES, NGOs, Is./Vaka Councils, Communities, MMR, Nat. Heritage, Private Sector, Donors	35	35				**70**
3.1.1.j) Develop national programmes to assist with the control of the more serious invasive weeds and animal pests in both natural and man-modified ecosystems.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7	2005	A1,A2,A5,A6	MOA, ES, NGOs, Is./Vaka Councils, Communities, Donors, Private Sector	85					**85**
3.1.1.k) Undertake a multi-sectoral review of the control of transboundary and inter-island movement of terrestrial and marine plants and animals, and of LMOs/GMOs (Living Modified Organisms / Genetically Modified Organisms), with a view to establishing an independent Biosecurity Agency.	PP1.1, PP1.2, PP2, PP3, PP4, PP5, PP6, PP7	2005	A1,A2,A5,A6,A11	MOA, ES, NGOs, Is./Vaka Councils, COC, Aronga Mana, Donors, MMR, MFAI, MFEM, Communities, Private Sector	65					**65**
Ecosystem Management										
Immediate Priorities										
3.1.1.l) Establish an independent Suwarrow National Park Authority to administer the Cook Islands' only national park on behalf of all the major stakeholders. A management group with the responsibility to conserve the atoll's wildlife, and to monitor and control revenue-generating activities.	PP1.1, PP3, PP4, PP5, PP6, PP7	2005	A1,A4,A6,A7, A10,A11	MMR, MOA, ES, NGOs, MFEM, MFAI, Communities, Donors, Nat. Heritage	45	45	45	45	45	**225**

3.1.1.m) Develop a programme to select areas to establish a national system of community-based protected areas to protect important terrestrial ecosystems.	PP1.1, PP2, PP4, PP5, PP6, PP7, PP8	2005-2006	A1,A2,A4,A6,A7 ,A10	ES, MMR, MOA, NGOs, Donors	40	40				**80**
3.1.1.n) Conserve important ecosystems through a system of protected areas with regulated and monitored activities.	PP1.1, PP3, PP4, PP5, PP6, PP7, PP8	2005	A1,A2,A4,A6,A7 ,A10,A11	ES, NGOs, MMR, Aronga Mana, Is./Vaka Councils, Communities, Private Sec.	65					**65**
3.1.1.o) Develop a programme to select areas to establish a national system of community-based protected areas to protect important reef and lagoon ecosystems.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7	2005-2006	A1,A2,A4,A6,A7 ,A10, A11	ES, NGOs, MMR, Aronga Mana, Is./Vaka Councils, Communities, Donors, Private Sec.	40	40				**80**
Equitable Sharing of Benefits and Access to Biodiversity										
Immediate Priorities										
3.1.1.p) Establish an independent agency to encourage and manage research on biodiversity and its uses, and to ensure that there is an equitable sharing of benefits.	PP1.2, PP2, PP3,PP4, PP6, PP7	2005-2009	A1,A3,A4,A6,A7 ,A11	Govt. Reps, National Research, IPR, Donors, NGOs, Aronga Mana	105	105	105	105	105	**525**
Management of Knowledge Related to Biodiversity										
Immediate Priorities										
3.1.1.q) A body should be established to review access to, and the processing of, knowledge on biodiversity and its use, especially medicinal use. This body might be the same as that established to encourage, monitor and manage all research on biodiversity (see Equitable Sharing of Benefits and Access to Biodiversity for same body).	PP1.2, PP2, PP3, PP4, PP6, PP7	2005	A1,A3,A4,A6,A7 ,A11	Govt. Reps. Natural Heritage, National Research, IPR, Donors, Aronga Mana	0					**0**
3.1.1.r) The programme of the Natural Heritage Project to record all Cook Islands biodiversity with related scientific and traditional information should continue, and it should make such information available to the general public.	PP1.1, PP1.2, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2009	A1,A3,A4,A5,A6 ,A7,A8,A9,A11	Natural Heritage, ES, OPM, National Research, IPR, Donors (same above)	115	115	150	150	150	**680**

Biodiversity Awareness and Education										
Immediate Priorities										
3.1.1.s) A working group should be established to investigate ways to ensure that knowledge of biodiversity and its uses is adequately available to students and the general public.	PP1.1, PP3, PP4,PP6,PP7	2005-2006	A1,A6,A7,A8,A9 ,A11	ES, MMR, MOA, NGOs, Natural Heritage Trust, MOE, Culture, national Libraries		25				**25**
3.1.1.t) NGOs should be encouraged to include knowledge of biodiversity where relevant.	PP4, PP6,PP7	2005-2006	A1,A6,A7,A8,A9 ,A11	ES, MMR, MOA, NGOs, Natural Heritage		25				**25**
Mainstreaming of Biodiversity										
Immediate Priorities										
3.1.1.u) A multi-sectoral working group should be established to review the policies and activities of Government ministries and agencies to ensure that they are consistent with a shared responsibility to maintain Cook Islands biodiversity and related knowledge.	PP1.1,PP2, PP3, PP4, PP6, PP7, PP8	2005-2006	A1	ES, OPM, MOA, Natural Heritage, National Research, MMR, Culture, NGOs, Communities		60				**60**
Financial Resources and Mechanisms for Biodiversity										
Immediate Priorities										
3.1.1.v) Establish a Biodiversity Trust Fund to support the wide range of activities required to conserve Cook Islands biodiversity in an integrated and equitable manner.	PP1.1,PP2, PP3, PP4, PP6, PP7, PP8	2005-2006	A1	Govt., NGOs, Communities, Private Sec., Donors, Aronga Mana		45	10	10	10	**75**
Total Costs					**790**	**715**	**470**	**425**	**375**	**2775**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Land Use and Resources Management										
Immediate Priorities										
3.1.2.a) Strengthen the enforcement of regulations and legislations and educational programmes for the protection, management and promotions of the cultural values of our historical sites, Marae, burial sites and significant landmarks.	PP1.2, PP2, PP3, PP6, PP7	2005-2006	B1, B2, B3, B4, B5, B6, B7,	Min. Culture, Vaka Councils, Island Councils, CI Tourism	80	45	45	45	45	260
3.1.2.b) Revise and update Land Use Act and land zoning regulations to cover land development activities not reflected in the Environment Act.	PP1.1, PP1.2, PP2, PP4, PP5, PP6, PP7	2005-2006	B1, B2, B3, B4	ES, Justice, MOW, OMIA, Donors		80				80
3.1.2.c) Development and adoption of a Land Tenure Systems Act and management plans which includes recognising Islands bylaws and traditional land tenure systems.	PP1.1, PP1.2, PP2, PP4, PP5, PP6, PP7	2005-2006	B1, B2, B3, B4	ES, Justice, MOW, OMIA	75	65				140
Short Term Priorities										
3.1.2.d) The application of good traditional practices on land use must be encouraged. These practices include annual planting of trees for replacement of ageing trees, especially coconut, tamanu, and other valuable timber trees.	PP5, PP7	2006-2009	B1, B3, B4, B5	MOA, NGOs, Community Groups		10	10	10	10	40
3.1.2.e) Assessment of the impact of clay soils, sands, and gravel fills around the foreshore areas and wetlands, especially where the fill does not match the site's natural soil environment and the monitoring of such activities.	PP1.1, PP1.2, PP2, PP3, PP5, PP6, PP7, PP8	2007-2008	B1, B2, B7	ES, MMR, Health, Community Groups			55	25	25	105
3.1.2.f) Adoption of regulatory provisions aimed at all developments along the foreshore to facilitate public access to beaches and the foreshore area.	PP2, PP4, PP5, PP6, PP7, PP8	2007-2008	B1, B2, B3	House of Ariki, Koutu Nui, Crown Law			75	60		135
Total Costs					**155**	**200**	**185**	**140**	**80**	**760**

Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Ocean, Coastal & Foreshore Resources Management										
Immediate Priorities										
3.1.3.a) Prepare a National Foreshore Policy together as well as coastal zone management plans for each island, taking into account the following information sources: the UNDP/SPREP-funded coastal zone management project; traditional knowledge of the people of each island; and the Rarotonga Environment Council foreshore policy.	PP1.1, PP1.2, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2009	C1, C2	ES, MMR, Is./Vaka Councils, Is. Env. Authorities, Aronga Mana	60	20	20	20	20	140
3.1.3.b) Establish a lagoon management plan for Aitutaki first and for the rest of Outer Islands to develop their own lagoon management plans after.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2006	C1, C2, C3, C10	ES, MMR, International NGO	45					45
3.1.3.c) Develop a plan for the establishment and management of National Marine Turtle Sanctuaries on all atolls.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2009	C1, C2, C8, C9	NGOs	45	45	45	45	45	225
3.1.3.d) Implement land-based and foreshore remedial actions and long term management policies to deal with beach erosions, the discharge of nutrients and wastes.	PP1.1, PP1.2, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2007	C1, C2, C4, C5, C7	Govt. NGOs, AMMAG	100	100	100			300
3.1.3.e) To establish a national system of community-based protected areas (raui) to protect important reef, lagoon and foreshore ecosystems with tour guides. (see Biodiversity)	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2006	C1, C2, C8, C9	ES, Govt, Communities	40	35				75
3.1.3.f) Establish carrying capacity of commercial viable species within lagoon and reef systems from economic activities and sustainable levels of resource exploitation including controlled harvesting of trochus and paua (giant clam).	PP1.1, PP1.2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2006	C1, C9, C10	MMR, Communities	40	35				75

3.1.3.g) Expand scope for national water quality testing capacity and capability to include fresh water, waste water, lagoon and ocean water, air, soil, chemical and food analysis.	PP1.1, PP1.2, PP3, PP4, PP5, PP6	2005-2006	C1, C6, C10	new Govt. Research Laboratory Committee, Donors	55	50				105
3.1.3.h) Control of taramea (crown of thorns) populations causing imbalance in reef ecosystems on all affected islands.	PP1.1, PP3, PP5	2005-2009	C1	Communities, NGOs, MMR, ES	20	20	20	20	20	100
Short Term Priorities										
3.1.3.i) Strengthen the monitoring of our ocean, lagoon fisheries and pearl farms and other marine species and stocks by all stakeholders.	PP1.1, PP1.2, PP3, PP4, PP5, PP6, PP7, PP8	2006-2009	C1, C3, C9, C10	MMR, Donors		20	20	20	20	80
3.1.3.j) Development, adoption and implementation of a National Whale Sanctuary management plan	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7, PP9	2006-2009	C1, C2, C8, C9	MMR, WRC, Donors		70	30	30	30	160
Medium Term Priorities										
3.1.3.k) Introduce regulations and enforcement resources for controlling and restriction of gill net fishing in lagoons on all islands.	PP2, PP4, PP5, PP6, PP7	2007-2009	C1, C3, C9	MMR, Fishing Clubs, Island Councils, Vaka Councils, Communities			45	15	15	75
3.1.3.l) Introduce harvesting quota system for selective fish and shellfish resources for all islands.	PP1.1, PP2, PP3	2007-2009	C1, C2, C9	Vaka Councils, Island Councils			45	15	15	75
Long Term Priorities										
3.1.3.m) Re-activate the coral and fish monitoring surveys of the Tu'anga Taporoporo in partnership with MMR for identified islands.	PP2, PP3, PP4, PP5	2008-2009	C1, C3, C9	ES, MMR				40	40	80
3.1.3.n) Adopt specific monitoring programmes for designated dives and tourism sites.	PP1.1, PP3, PP8	2008-2009	C1, C3, C9	MMR				30	30	60
3.1.3.o) Establish a beach profiling programme using GIS mapping for all islands.	PP1.1, PP2, PP6	2008-2009	C1, C2, C5, C8	ES, MOW				55	55	110
Total Costs					**405**	**395**	**325**	**290**	**290**	**1705**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings										
PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Fresh Water Resources Management										
Immediate Priorities										
3.1.4.a) Development and implementation of a National Water Resources Management Policy.	PP1.1, PP2, PP4, PP5	2005-2006	D1, D2, D3, D4, D12	MOW, ES-IWP, OMIA, Island Councils	90					90
3.1.4.b) Revised and Update the Rarotonga Water Works Ordinance 1960 to address new issues such user pays.	PP1.1, PP2, PP4, PP5, PP7	2005-2006	D1, D2, D3, D4, D9, D10, D12	MOW, ES-IWP, Vaka Councils	85					85
3.1.4.c) Strengthen planning and co-ordination between local island administrations, Water Works, Environment, Agriculture and Health agencies regarding water resource management, water policies and water supply on all islands.	PP1.1, PP4, PP6	2006	D1, D2, D3, D4, D5, D6, D8, D9, D10, D11, D12	MOW, ES-IWP, OMIA, Island Councils		40				40
3.1.4.d) Adoption of national guidelines for standards derived from international agencies to island conditions, particularly WHO standards for regular environmental water quality assessments and monitoring.	PP2, PP4, PP7	2006	D1, D2, D11, D12	Health, MOW, ES-IWP		45				45
3.1.4.e) Introduce new policies for compulsory building requirements of water tanks and rainwater collecting systems in all new buildings designs and construction.	PP2, PP4, PP7	2005-2006	D1, D2	MOW	25					25
Short Term Priorities										
3.1.4.f) Empowerment of community leaders and committees to oversee and monitor compliance to freshwater management plans.	PP4	2006-2007	D2	Communities			15			15
3.1.4.g) Assess the risks associated with competing economic interests and development growth encroaching on water catchments areas and wetlands on Rarotonga and Aitutaki	PP2, PP4, PP5	2006-2007	D1, D2, D3, D6, D7, D8, D9	ES-IWP,			45			45
3.1.4.h) To declare water catchments areas on Rarotonga and other islands as designated Water Catchments Reserves for protection, conservation	PP2, PP3, PP4, PP5, PP6, PP7	2006-2007	D1, D2, D6	ES-IWP, MOW, OMIA, Health, Communities			40			40

and management.										
3.1.4.i) Development of fresh water management plans for all islands.	PP2, PP3, PP4, PP5, PP6, PP7	2006-2007	D1, D2	OMIA, MOW, ES-IWP			40	40	40	120
3.1.4.j) Development of by-laws in the Outer Islands and Implement the Rarotonga Environment Authority policy for the watershed and wetland area protection, conservation and management.	PP2, PP6, PP7	2006-2009	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12	ES, Is. Councils/Aronga Mana		20	20	20	20	80
Medium Term Priorities										
3.1.4.k) Strengthen formal and non-formal education and community awareness and participation programmes for maintaining healthy watershed and wetlands.	PP3, PP4, PP7	2007-2008	D, D2, D9, D10, D11	ES-IWP, MOE, NGOs			15	15		30
3.1.4.l) Appropriate data collection for water resources assessment and monitoring.	PP1.1, PP3, PP6, PP7	2007-2008	D1, D2, D9, D10, D11, D12	ES-IWP, OMIA, MOW, MOH			20	20		40
Long Term Priorities										
3.1.4.m) To strengthen the forestry programmes and continue to assess their impact on the sloping lands planted, soil erosion, and how best to use and manage that resource without compromising the water catchments reserves and areas.	PP1.1, PP2, PP4, PP6, PP7	2008-2009	D1, D2, D3, D4, D5, D6, D7, D9	OMIA, ES-IWP, MOA, Communities				40	40	80
3.1.4.n) Capacity building with staff training of personnel at all levels of watershed and wetlands resources management, including waste and storm water management.	PP2, PP4, PP5, PP7	2008-2009	D1, D2, D3, D11, D12	OMIA, ES-IWP, MOA, Private Sector, Communities				25	25	50
3.1.4.o) Listing of Lake Te Rotoiti under RAMSAR Convention site for wet lands protection	PP5, PP6, PP7	2008-2009	D1,D11,D12	NGOs, Is. Councils, Aronga Mana, Communities				35	35	70
Total Costs					**200**	**105**	**195**	**195**	**160**	**855**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings										
PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Economic and Development										
Immediate Priorities										
3.2.1.a) Implement the findings of the Aitutaki Tourism Study.	PP1.1, PP3, PP4, PP5, PP7, PP8	2005-2009	E1, E4, E5, E6, E7, E8, E9	ES, Ait. Is. Council, COC, Private Sector, Tourism	70	55	55	55	55	290
3.2.1.b) Encourage eco-tourism businesses with supportive management trainings, marketing and promotional activities especially for village based projects in the Outer Islands.	PP1.1, PP2, PP4, PP7	2005-2007	E1, E4, E7	CI Tourism, Communities, COC	35	35	55	55	55	235
3.2.1.c) Improve monitoring controls and enforcement of regulations for the management of animal farms (e.g. pigs) and their waste	PP2, PP3, PP4, PP5, PP7, PP8	2005-2006	E1, E2, E4, E5, E6, E7, E8, E9	ES, MOA, COC, Farmers	35	35				70
3.2.1.d) Review Government policy on increasing tourism development with a view to determining the carrying capacity for Vaka Puaikura, Takitumu and Te Au-o-Tonga, and endorsed as main controlling factor for tourism development until capacity of supporting elements and community benefit levels increases.	PP2, PP4, PP5, PP7, PP8	2005-2006	E1, E2, E4, E5, E6, E7, E8, E9	ES, CI Tourism, COC, Donors	90					90
3.2.1.e) Vaka and Islands Councils to encourage more frequent community programmes such as the regular Tutaka, monthly village roads, beaches and lagoon cleanings for all islands.	PP3, PP4, PP7	2005-2009	E1, E2, E4, E8, E9	Vaka Councils, Island Councils, Church, Sports, MPs	35	35	35	35	35	175
3.2.1.f) Adoption and implementation of the Tourism Industry Environment Charter	PP2, PP4, PP5, PP6, PP7, PP8	2005-2009	E1, E4, E5, E7, E8, E9	Tourism Industry members, CI Tourism, NES	25	25	25	25	25	125
3.2.1.g) All tourism accommodation units to operate accredited sewage septic and waste water treatment systems based on visitors numbers.	PP2, PP7, PP8	2005-2007	E1, E2, E6, E8	Health, ES, COC, Service operators	15	15	15			45
3.2.1.h) Establish capacity for computer modelling and technical expertise to make informed decisions (e.g. use of GIS) on development activities	PP1.1, PP1.2, PP2, PP3, PP4, PP5, PP6	2005-2006	E1, E7, E8, E9	MOW, ES, MMR	50	50				100

3.2.1.i) Place a two year moratorium on construction of buildings on the motu and lagoon and within 30m of the high water mark to assess and produce a management plan for the ecological economic risks associated with these types of foreshore developments.	PP2, PP4, PP5, PP7, PP8	2005-2006	E1, E2, E3, E4, E5, E6, E8, E9	ES, COC, MOW	60					60
3.2.1.j) Revise environmental impact assessment, regulations and codes to reflect new information and practices	PP2, PP4, PP7, PP8	2005-2006	E1, E2	ES	35					35
3.2.1.k) Introduction of a fair and balance `user pays' system to cover the establishment, management and operational costs of waste management projects while being mindful of low income earners section of society.	PP4, PP6, PP7	2005-2006	E1, E2, E6, E9	MOW	20	20				40
3.2.1.l) Reactivate the General Licensing Authority and strengthen the Development Investment Board Code to include environmental accreditation as part of their licensing approval and or foreign investment conditions in the DIB Investment Code.	PP1.2, PP2, PP4, PP6	2005-2006	E1, E3, E4, E6, E7, E9	CI Tourism, COC	60					60
3.2.1.m) Review regulations for importation of motor vehicles.	PP1.1,PP2,PP6,PP7	2005-2006	E1,E2,E9	MFEM, CLO, ES, MOT	45	45				90
Short Term Priorities										
3.2.1.n) Growers to adopt integrated pest management systems and practices, alternative production systems and crops such as hydroponics and organic farming.	PP2, PP7	2006-2007	E1, E2, E4, E5, E6, E7, E8	MOA, Growers		15	15			30
3.2.1.o) All buildings to operate accredited sewage septic and waste water treatment systems.	PP2, PP7, PP8	2006-2007	E1, E2, E5, E6, E8, E9	Health, ES, MOW		20	20			40
3.2.1.p) Conduct survey and identify Rarotonga households first for houses that need their septic systems to be upgraded to meet existing standards.	PP1.1, PP2, PP3, PP4, PP5, PP7	2006-2009	E1, E2, E6, E8, E9	NGOs, Community Groups, (ES, Health)		30	10	10	10	60
3.2.1.q) Strengthen the Public Health Act provisions associated with septic tank regulations and enforcement as well as monitoring capability for compliance.	PP4, PP6, PP7	2006-2007	E1, E2, E6, E8, E9	Health		60				60

Medium Term Priorities										
3.2.1.r) Implement PATA environmental related guidelines for tourist businesses	PP2, PP4, PP6, PP7	2007-2009	E6, E2, E7, E8	CI Tourism, COC			25	15	15	55
3.2.1.s) Encouraging importers to bring into the country ozone friendly and biodegradable products.	PP6, PP7	2007-2009	E1, E2, E6, E7, E8, E9	COC			5	5	5	15
3.2.1.t) Establish regulations, policies, and guidelines related to restriction of building heights and sign construction and placement around our communities and islands.	PP2, PP4, PP7	2007	E1, E3, E8	MOW, ES, NGOs, Vaka Taunga			45			45
3.2.1.u) Strengthen the Pesticide Board and implementation of the Pesticide Act	PP6	2007-2008	E1, E5, E6, E7, E9	MOA			15			15
3.2.1.v) Strengthen the Ministry of Work's regulations and Building Code standards as well as ability to enforce compliance associated with environmentally sensitive and vulnerable areas.	PP2, PP6, PP7	2007-2008	E1, E2, E3, E5, E6, E9	MOW			15	15		30
Total Costs					**575**	**440**	**335**	**215**	**200**	**1765**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Waste, Sanitation and Water Quality Management										
Immediate Priorities										
3.2.2.a) Adoption and implement the National Integrated Waste Management Plan to support implementation of appropriate legislative and regulatory frameworks, standards, guidelines and programmes to deal with all waste issues inter alia, reduction, reuse, recycling, composting, land filling, incineration, and disposal of wastes of all descriptions including, persistent organic pollutants (POPs) and ozone depleting substances (ODS).	PP1.2, PP3, PP6, PP7, PP8	2005-2006	F1, F2, F3	MOW, Health, ES, COC, Service and Industry Operators,	95	45	45	45	45	275
3.2.2.b) Strengthen institutional capacities, infrastructures and waste management operations, including waste reduction initiatives, collection and treatment systems, recycling, proper storage and inventory, processing and transportation, pollution control and cleanup.	PP1.2, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2009	F1, F2, F6, F7, F8, F10	MOW, Health, ES, COC, Service and industry Operators	800	800	1000	1000	1000	4600
3.2.2.c) Strengthen institutional capacities, especially administrative support operations including training in the area of enforcement, compliance, assessment, monitoring, advisory and reporting.	PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2006	F1, F7, F8, F9, F10	MOW, Health, ES	25					25
3.2.2.d) All islands must have a waste management plan for the safe disposal and management of solid and liquid waste.	PP2, PP4, PP5, PP6, PP7	2005-2009	F1, F3	OMIA, ES, Health	35	35	35	35	35	175
3.2.2.e) Apply restrictions to the burning of rubbish especially toxic materials	PP1.1, PP5, PP6, PP7	2005-2009	F1, F5, F7, F9, F10	ES, MOH, Communities, NGOs	10	10	10	10	10	50
3.2.2.f) Strengthen regulations for the control and restriction of importation of hazardous chemicals including POPs.	PP1.1, PP6, PP7	2005-2006	F1, F2, F5, F6,F9, F10	ES, MOA, MOH, Pesticide Board, COC, MFEM	45					45
3.2.2.g) Establishment of a National Waste Management Committee	PP4, PP6	2005-2009	F6	MOW, OPM, MOH, NGOs, MFEM, ES	10	10	10	10	10	50

Short Term Priorities										
3.2.2.h) Adoption and enforcement of importation of goods and vehicles levies and taxes to assist funding of recycling centres and operations, repatriation and waste disposal programmes for imported goods.	PP2, PP4, PP5, PP6, PP7, PP8	2006-2009	F1, F4, F6	MFEM, ES, MOW, MOT		20	20	20	20	80
3.2.2.i) Establishment of pollution waste monitoring programmes through regular auditing under the National Environment Service.	PP5, PP6, PP7, PP8	2006-2009	F1, F2, F7, F9, F10	ES, NGOs, Health		20	20	20	20	80
3.2.2.j) Strengthen the enforcement of regulations and follow-up monitoring as well as inspection of related environmental permits and approvals for compliance.	PP1.1, PP3, PP4, PP5, PP6, PP7, PP8	2006-2007	F1, F2, F5, F9, F10	ES, Health, MOW		15	15	15	15	60
Medium Term Priorities										
3.2.2.k) Improve and expand the "Taau, Taku Tita (TTT)" education and awareness programme to support waste management and promote zero waste efforts nationwide.	PP3, PP4, PP7	2007-2008	F1, F7, F9, F10	NGOs			25			25
3.2.2.l) Prepare a programme aimed at securing land for future Rarotonga waste landfill and a sewage treatment plant each for Vaka Takitumu and Vaka Te Au o Tonga.	PP4, PP6	2007-2008	F1	Govt./Vaka Councils			20			20
Total Costs					**1020**	**955**	**1200**	**1155**	**1155**	**5485**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Climate Change, Variability, Adaptation & Mitigation										
Immediate Priorities										
3.3.1.a) A full time National Climate Change coordinator to be appointed within the host institution to coordinate and mainstream climate change activities.	PP1.2, PP6	2007-2009	G1, G6, G10, G12	ES	30	30	30	30	30	150
3.3.1.b) Climate Change Country Team (CCCT) and related functions to be institutionalised as part of the [National Sustainable Development Committee], including all relevant stakeholders, traditional leaders, non-government organisations, and the private sector.	PP6	2007-2008	G1, G2, G5, G6, G10, G12	ES	10					10
Short Term Priorities										
3.3.1.c) Completion of a comprehensive national hazard risks analysis and assessment, and development of a strategy possibly using CHARM (Comprehensive Hazard and Risk Management) tool within government, non-government and community programme activities.	PP1, PP2, PP4, PP5	2006	G1, G2, G4, G5, G7, G11, G12	NDMO, Donors		175				175
3.3.1.d) Strengthen current weather and climate observation network and information gathering and sharing to include all inhabited islands	PP1.1, PP4, PP5, PP6, PP7	2006-2009	G1, G2, G4, G5, G6, G10, G11, G12	MET		25	15	15	15	70
3.3.1.e) Enhance integration of early warning systems for climate related disasters such as drought, strom surge, cyclones and other extreme events into our development planning systems.	PP2, PP6, PP7	2006-2007	G1, G2, G4, G5, G7, G12	NDMO, MET		25	25			50
3.3.1.f) Continue to manage and monitoring climate related risks leading to disease outbreaks, transmission and distribution.	PP1.1, PP4, PP5, PP6, PP7	2006-2009	G1,G2,G3,G4,G5 ,G6,G10,G11, G12	MOH		25	25	25	25	100

3.3.1.g) Preparations and development of project proposals for GEF funding for the design and construction of appropriate coastal protection system for Avatiu and Avarua townships from flooding and storm sea-surge damages.	PP2, PP6	2006	G1, G4, G6, G11, G12	OPM, NDMO, CCCT, MOW		170				170
3.3.1.h) Development policies that take into account climate risks in future development planning.	PP1.1,PP2, PP6,PP7	2006-2007	G1,G6,G12	NDMO, MET, MOW, OMIA, TCI, OPM		60	25			85
Medium Term Priorities										
3.3.1.i) Identify and monitor climate related risks through vulnerability assessments which look at links with coral bleaching, crown of thorns, fish poisoning and algal blooms,	PP1, PP2, PP3, PP4, PP5, PP6, PP7, PP8	2005-2009	G1, G2, G4, G5	MMR, MOA, NGOs, ES			45	15	15	75
3.3.1.j) Develop appropriate community based adaptation programmes to increase ability to cope with climate change impacts eg. traditional management/raui/land-based pollutions source treatment measures.	PP1.1, PP4, PP6, PP7	2006-2007	G1, G2, G3, G4, G5, G6, G7, G10	CCCT, GEF				25	25	50
3.3.1.k) Conduct assessment of national greenhouse gas emissions.	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7	2006-2008	G1, G2, G3, G4, G5, G6, G7, G10	CCCT, GEF			25	25		50
3.3.1.l) Reduce emissions of polluting gases and decrease the use of imported petroleum fuels through improved consumer education, improved use of renewable energy, better energy generation efficiency, energy conservation, elimination of non-renewable energy subsidies, and public education.	PP4, PP5, PP7	2007-2009	G1, G6, G8, G9, G11, G12	MOW-Energy Div., MOE			25	25	25	75
3.3.1.m) Provide incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects.	PP4, PP6, PP7	2007-2008	G1, G8, G9, G10, G11, G12	CCCT			15	10	10	35
3.3.1.n) Address information gaps and needs to develop and submit Second National Communication Plan to UNFCCC	PP1.1, PP2, PP3, PP4, PP5, PP6, PP7	2007-2008	G1, G10, G11, G12	ES, MFAI, GEF			85			85

3.3.1.o) Capacity building and development is needed in the private and public sectors to regularly carry out greenhouse gas inventories and a full programme of energy efficiency measures including audits, design of efficiency improvements, and specification of energy efficient components to carry out those improvements, installation of those components and monitoring of the results.	PP2, PP3, PP4, PP5, PP6, PP7	2007-2009	G1, G2, G3, G4, G6, G10, G11	CCCT, GEF			45	35	35	115
3.3.1.p) Increase community awareness and education at all levels in our communities for climate change related risks including health concerns through participatory approaches, ongoing media campaigns, promotions and advocacy programmes.	PP7	2007-2008	G1, G2, G3, G6, G10	CCCT			10	10	10	30
3.3.1.q) Develop a database and monitoring systems to gauge effectiveness of marine resources, agricultural and health adaptation programmes on food security levels and disease management programmes.	PP1.1, PP2, PP4, PP6, PP8	2005-2006	G1, G2, G5, G6, G10	MMR, MOA, Health, ES			65	55		120
Total Costs					**40**	**510**	**435**	**270**	**190**	**1445**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Planning, Policies & Regulations										
Immediate Priorities										
4.1.a) Application and enforcement of all provisions of the National Environment Act 2003 to all the islands of the Cook Islands, and having consistency with each outer islands by-laws.	PP1.2, PP2, PP3, PP6, PP7	2005-2009	H1, H2, H4	ES, CLO, Vaka, MPs, Is. Council, Aronga Mana, Communities	135	50	50	50	50	335
4.1.b) The Environment Service to assist all Outer Islands preparations of their by-laws and process leading to their coming under the Act.	PP1.2, PP2, PP3, PP6, PP7	2005-2009	H1, H2, H5	ES, CLO, Vaka, MPs, Is. Council, Aronga Mana, Communities	45	45	45	45	45	225
4.1.c) Strengthen coordination between Ministries with regulatory functions aimed at strengthening enforcement, administrations, operations and resources sharing to improve performance and compliance.	PP4, PP6, PP7	2005-2009	H1, H3, H4, H5, H6	Nat. Policy and Planning Unit, ES	10	10	10	10	10	50
4.1.d) Strengthen the application of Environmental Impact Assessments (EIA) for all development activities	PP4, PP5, PP6, PP7	2005-2006	H1, H2, H5	ES	35					35
4.1.e) Strengthen and promote stewardship of natural resources and environmental management thru appropriate education programmes, by-laws, regulations and management plans	PP7	2005-2006	H1, H2, H3, H4, H5	ES, NGOs, Community Groups	10					10
4.1.f) Establishment of a National Environment Council by 2006 to oversee administration of the Environment Act and NESAF. This requires amendment to the Environment Act provision for additional Council role.	PP1.1, PP1.2, PP2, PP3, PP4, PP6, PP7, PP8	2005-2006	H1,H2,H5	ES, CLO, Vaka, MPs, Is. Council, Aronga Mana, Communities,, Nat. Env. Council	55	55	65	65	65	305
4.1.g) Strengthen the Islands' Environment Authorities through development of appropriate legislations and bylaws, policies, plans, administration support, adequate resource and wider stakeholder representations	PP1, PP2, PP3, PP4, PP5, PP6, PP7	2005-2009	H1, H2, H3, H4, H6	ES, Is Councils	110	110	110	110	110	550
Short Term Priorities										

4.1.h) Ensure that all Islands are registered under the National Environment Act. (funding covered by 4.1.a, 4.1b, 4.1.g)	PP1, PP2, PP3, PP4, PP5, PP6, PP7	2006-2007	H1, H2, H4	ES, Is Councils Aronga Mana	0	0	0	0	0	0
4.1.i) Improve technical expertise and decision making processes for planning, policy and regulatory functions.	PP2, PP4, PP6	2006-2007	H1, H2, H3, H6	ES		55				55
4.1.j) Establish and implement regular consultation and reporting process between national government, outer islands and stakeholders through mechanisms such as the National Environment Forum and National Development Plan.	PP6	2006-2007	H7	ES		15				15
4.1.k) Develop and implement appropriate indicators, standards and guidelines for environment sustainability	PP2, PP4, PP5, PP6	2006-2007	H1, H3, H4, H5, H6	ES, Govt.		45				45
Total Costs					**400**	**385**	**280**	**280**	**280**	**1625**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Finance & Administration										
Immediate Priority										
4.2.a) Facilitate access to small grant GEF applications for country programmes especially community projects.	PP2, PP6, PP7	2005	I1, I4,I5,I6	Communities, ES, MFAI, MFEM, UNDP	55					55
4.2.b) Government to make commitment and provide annual budget support to Island Council to enable the Island Administrations and Island Environment Authorities to administer its environmental programmes.	PP6	2005-2009	I1, I2, I3, I4, I5, I6	Island Councils, Island Environment Authorities	110	110	110	110	110	550
Medium Term Priorities										
4.2.c) Establish policies and guidelines for access to the Environment Protection Fund for community use.	PP6	2007	I1, I3, I4, I6	ES, Cabinet, OPM, EPF Committee			10			10
4.2.d) Adoption of economic rental, cost recovery measures and user-pays mechanisms for development of natural resources and waste collection, disposal and recycling.	PP2, PP4, PP5, PP6	2007-2009	I1, I2, I3, I4	MFEM, Audit, ES			25	25	25	75
Total Costs					165	110	145	135	135	690
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings										
PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Capacity Building, Training & Education										
Immediate Priorities										
4.3.a) Improved training opportunities for personnel in environmental related science and technical areas	PP2, PP4, PP6	2005	J2, J3, J5, J7	HRD, MOE, ES	65					65
4.3.b) Promote the use of facilitators, community groups and youth groups in community awareness programmes on environmental issues and conducting training and conservation initiatives for young people to enhance their skills in environmental management.	PP4, PP6, PP7	2005-2009	J1, J6, J2, J7	COC, NGOs, DONORS	20	20	20	20	20	100
4.3.c) Widely accept and use technical modelling tools to assist in decision making process for the environment	PP2, PP3, PP4, PP5, PP6	2005	J2, J5, J7	ES, MMR, MOW, Health	45					45
4.3.d) Strengthen the enforcement capacity of the Tu'anga Taporoporo, Department of Health, Marine Resources and MOW compliance divisions and their counterparts in the outer islands for the purpose of conservation, protection and management of environmentally sensitive areas.	PP1.1, PP1.2, PP3, PP4, PP5, PP7	2005-2009	J1, J4, J5, J7	ES, MMR, MOW, Health	80	80	80	80	80	400
Short Term Priorities										
4.3.e) Implement Environment Service HRD strategy.	PP6	2006	J1, J2, J3, J4, J5	ES		10				10
4.3.f) Incorporate environmental training as a priority into the National HRD Strategy	PP6	2006	J1, J2, J3, J4, J5, J7	ES, HRD		10				10
4.3.g) Develop national capacity to coordinate and facilitate access to GEF to support environment related programmes.	PP4, PP5, PP6	2006	J1, J4, J5, J7	ES, MFAI, MFEM, DONORS		55				55
4.3.h) Introduce and incorporate environmental subjects at all levels of school curriculum.	PP2, PP4, PP5, PP6, PP7	2006-2007	J3, J6, J7	ES, MOE, NGOs		45	45			90
Total Costs					**210**	**220**	**145**	**100**	**100**	**775**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Information, Communication & Technology Management										
Immediate Priorities										
4.4.a) Develop and promote a national environment information management system and service (e.g. environment information programmes, libraries, website, computer networks and databases, distance education)	PP2, PP4, PP6	2005-2006	K1, K2, K3, K4, K5, K6	ES, MMR, Culture, MOW	85	85	85	30	30	315
4.4.b) Promote the application of remote monitoring technology and models such as lagoon monitoring systems and GIS mapping to assist with decision making	PP2, PP3, PP4, PP5, PP6, PP7	2006-2007	K2, K3, K4, K5, K6	ES, Health, MMR, MOW	150	150	150	150	150	750
Short Term Priorities										
4.4.c) Establish a National Environment Quality Monitoring and Research Facility.	PP1, PP2, PP3, PP4, PP5, PP6, PP7	2006-2007	K2, K3, K7	Govt, OPM, GEF	425	125	125	125	125	925
Medium Term Priorities										
4.4.d) Conduct training programmes for technical data analysis and characterisation.	PP2, PP4, PP5	2007-2008	K2, K3, K5, K6, K7	Govt.		60				60
Long Term Priorities										
4.4.e) Strengthen collaborative efforts for marine education programme by Marine Resources, Education, Tourism and Tu'anga Taporoporo to improve the distribution of information into the schools as well as to the general public.	PP4, PP6, PP7	2008-2009	K1, K2, K3, K4	Govt, NGOs		25				25
Total Costs					**660**	**445**	**360**	**305**	**305**	**2075**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings										
PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Partnerships										
Immediate Priority										
4.5.a) Continue to maintain good working and diplomatic relationship with regional organisations, international organisations and foreign governments and donor agencies.	PP6	2005	L1, L2, L3	ES, MFAI	10					10
4.5.b) Facilitate implementation of NESAF strategies through various initiatives including GEF mechanisms and country specific strategies.	PP6	2005-2009	L1, L2, L3	ES, MFAI	30	30	30	30	30	150
Short Term Priorities										
4.5.c) Facilitate increased cooperation and coordination between development partners for best practices and information sharing in order to reduce duplication of efforts and resources.	PP6	2006	L1, L2, L3	ES, MFAI, MFEM		15				15
4.5.d) The tripartite partnership between government, businesses and environmental NGOs is strengthened through: Sharing of information, equal and active participation in decision making, equal recognition without political biases and disparities.	PP6	2006	L1, L2, L3	ES, NGOs, COC		10				10
Medium Term Priorities										
4.5.e) Facilitate training and education opportunities for environmental NGO administrators in basic environmental principles and management practices appropriate to the Cook Islands to improve their ability to manage local projects.	PP4, PP6	2007	L1, L2, L3	ES, NGOs, COC			30			30
Total Costs					**40**	**55**	**60**	**30**	**30**	**215**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
International Obligations										
Short Term Priorities										
4.6.a) Assess the impact of MEAs on environmental programmes and national economy	PP2, PP6, PP7	2006	M1, M2, M3, M4	ES, MFAI		50				50
4.6.b) Ensuring that the Cook Islands participate and be represented in Forums and programmes related to international obligations developments.	PP6	2005-2009	M1, M2, M3, M4, M5	ES, MFAI	20	20	20	20	20	100
4.6.c) Harmonise, where appropriate related MEAs to ensure that inter linkages are addressed such as reporting requirements and regulatory processes.	PP2, PP6	2006	M1, M2, M3, M4, M5	ES, MFAI		45				45
Medium Term Priorities										
4.6.d) Established a stringent vetting process to ascertain and approve proposed international conventions for adoption.	PP6	2007	M1, M3, M4	ES, MFAI			10			10
4.6.e) Strengthen our national reporting processes.	PP2, PP4, PP6	2007	M2, M4, M5	ES, MFAI			55			55
4.6.f) Continue to strengthen and facilitate training opportunities and capacity development exercises of nationals and programmes on MEAs.	PP2, PP4, PP5, PP6, PP7	2007	M2, M3, M4, M5	ES, MFAI			65			65
Total Costs					**20**	**115**	**150**	**20**	**20**	**325**
Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review										

Estimate Key Strategic Action Costs by Profile and Financial Year (NZ$'000)										
Key Strategic Action	**Prog. Profile**	**Time Frame**	**Key Indicators**	**Responsible Agencies**	**Costs Estimates (NZ$'000)**					
					2005	**2006**	**2007**	**2008**	**2009**	**Total**
Implementation & Monitoring										
Immediate Priorities										
5.1.a) Establishment and activation of baseline systems including databases for monitoring progress of NESAF.	PP6	2005-2006	N1, N2, N3, N7	ES, Govt.	15					15
Short Term Priorities										
5.1.b) Improve communications and coordination of all environment functions and natural resource conservation activities, including implementation at all levels (national, Outer Is., local communities).	PP6	2006-2007	N1, N2, N4, N6, N7	ES		10				10
5.1.c) Ensure that all stakeholders are well resourced and trained to implement the NESAF.	PP6	2006-2007	N1, N2, N4, N5, N6	ES, All stakeholders		10				10
5.1.d) Establishment and adoption of Annual National Environmental Awards, giving recognition to exceptional achievements and undertakings for the environment.	PP6, PP7	2006-2007	N2, N5	ES, Private Sector		15				15
5.1.e) Annual reporting of status of the environment to Parliament and National Env. Service Reports.	PP6	2006-2007	N2, N4, N6	ES		15				15
Medium Term Priorities										
5.1.f) Adopt capacity building initiatives for the following regulatory Ministries and institutions:	PP2, PP4, PP6	2007-2008	N1, N2, N3, N4, N5, N6	Govt.			65			65
5.1.g) Conduct a one day national forum to report on effectiveness and progress of NESAF by December 2007.	PP6	2007-2008	N4, N6	ES			30			30
Long Term Priority										
5.1.h) Conduct a two to three days National Environment Forum to report on progress and prepare the next NESAF by December 2009.	PP6	2008-2009	N4, N6	ES					100	100
Total Costs					**15**	**50**	**95**	**0**	**100**	**260**

Note: PP1.1-Exist Local Staff; PP1.2-New Local Staff; PP2-Consultant/Professional Advice; PP3-Equipment/Materials/Supplies; PP4-travel/meetings/consultations/trainings PP5-field trips/studies; PP6-Administration/communication/database; PP7-Promotion/publication/awareness/education; PP8-Monitoring/review