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Report No: 35969-KI

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE

GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$1.80 MILLION

TO THE

REPUBLIC OF KIRIBATI

FOR AN

ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

May 4, 2006

Rural Development and Natural Resources Sector Unit
East Asia and Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective at Appraisal - December 12, 2005)

Currency Unit	=	AUD
1 AUD	=	US$.075
1 US$	=	AUD 1.34

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AMAK	All Women of Kiribati (national women's association)
APL	Adaptable Program Loan
AusAID	Australian Agency for International Development
CCA	Climate Change Adaptation
CCST	Climate Change Study Team
DCC	Development Coordination Committee
ECD	Environmental Conservation Division (MELAD)
EEZ	Exclusive Economic Zone
EU	European Union
GEF	Global Environment Facility
GoK	Government of Kiribati
IC	Island Council
IWP	International Waters Program
KANGO	Kiribati Association of NGOs
KAP	Kiribati Adaptation Program
LDC	Least Developed Country
MCIC	Ministry of Commerce, Industry and Cooperatives
MCTTD	Ministry of Communications, Transport and Tourism Development
MEA	Multilateral Environmental Agreements
MELAD	Ministry of Environment, Lands and Agriculture Development
MEYS	Ministry of Education, Youth and Sports
MFAI	Ministry of Foreign Affairs and Immigration
MFED	Ministry of Finance and Economic Development
MFMRD	Ministry of Fisheries and Marine Resources Development
MHMS	Ministry of Health and Medical Services
MISA	Ministry of Internal and Social Affairs
MLPID	Ministry of Line and Phoenix Island Development
MPWU	Ministry of Public Works and Utilities
MOP	Ministry Operational Plan
NAPA	National Adaptation Programme of Action
NASC	National Adaptation Steering Committee
NBSAP	National Biodiversity Strategy Action Plan
NDS	National Development Strategies
NGO	Non Governmental Organization
NEPO	National Economic Planning Office
NZAID	New Zealand Agency for International Development
OB	Office Te Beretitenti (Office of the President)
OI	Outer Island
PICCAP	Pacific Islands Climate Change Adaptation Program

PMU	Project Management Unit
POPs	Persistent Organic Pollutants
SAPHE	Sanitation, Public Health and Environment Improvement Project
SDGIK	Strengthening Decentralized Governance in Kiribati (UNDP)
SIL	Sector Investment Loan
SNPRA	Strategic National Policy and Risk Assessment Unit
SOPAC	South Pacific Applied Geosciences Commission
SPREP	South Pacific Regional Environment Programme
UNCBD	United Nations Convention on Biodiversity
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

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KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

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MAP IBRD #33427

KIRIBATI

ADAPTATION PROGRAM PHASE II - PILOT IMPLEMENTATION PHASE (KAP II)

PROJECT DOCUMENT

EAST ASIA AND PACIFIC

EASRD

Date: April 5, 2006 Country Director: Xian Zhu Sector Manager/Director: Hoonae Kim Project ID: P089326 Focal Area: Climate change Lending Instrument: Specific Investment Loan	Team Leader: Idah Z. Pswarayi-Riddihough Sectors: General water, sanitation and flood protection sector (60%);General public administration sector (25%);General agriculture, fishing and forestry sector (15%) Themes: Vulnerability assessment and monitoring (P);Climate change (P);Natural disaster management (P);Other environment and natural resources management (P) Environmental screening category: Partial Assessment

Project Financing Data

[ ] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 0.00
Proposed terms:

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	2.32	0.00	2.32
GLOBAL ENVIRONMENT FACILITY	0.73	1.07	1.80
AUSTRALIA: AUSTRALIAN AGENCY FOR INTERNATIONAL DEVELOPMENT	0.83	0.66	1.49
NEW ZEALAND, GOV. OF (EXCEPT FOR MIN. OF FOR. AFFAIRS)	0.46	0.51	0.97
Total:	4.34	2.24	6.58

Borrower:
Republic of Kiribati
Kiribati

Responsible Agency:
Ministry of Finance & Economic Development
PO Box 67
Bairiki, Tarawa, Kiribati
Tel: 686 21660 Fax: 686 21307

Estimated disbursements (Bank FY/US$m)									
FY	6	7	8	9	10	0	0	0	0
Annual	0.02	0.38	0.50	0.65	0.25	0.00	0.00	0.00	0.00
Cumulative	0.02	0.40	0.90	1.55	1.80	1.80	1.80	1.80	1.80

Project implementation period: Start June 1, 2006 End: June 30, 2009
Expected effectiveness date: June 30, 2006
Expected closing date: June 30, 2009

Does the project depart from the CAS in content or other significant respects? [ ]Yes [X] No
Ref. PAD A.3

Does the project require any exceptions from Bank policies? [ ]Yes [X] No
Ref. PAD D.7
Have these been approved by Bank management? [ ]Yes [ ] No
Is approval for any policy exception sought from the Board? [ ]Yes [X] No

Does the project include any critical risks rated "substantial" or "high"? [X]Yes [ ] No
Ref. PAD C.5

Does the project meet the Regional criteria for readiness for implementation? [X]Yes [ ] No
Ref. PAD D.7

Project development objective ***Ref. PAD B.2, Technical Annex 3***
The key objective of the proposed Pilot Implementation Phase of KAP (KAP-II) is to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of climate risk awareness and responsiveness into economic and operational planning. Lessons learned from KAP-II would be used to plan the long-term national response to climate change envisaged for 2008/9 onwards, and would also be relevant to many other small island states around the world.

Global Environment objective ***Ref. PAD B.2, Technical Annex 3***
The global environmental objective of the KAP II is to assist the GoK in enhancing its capacity to plan and implement adaptation measures to the climate-related issues facing the country, which will also reduce the detrimental impacts of climate change on the fragile atoll ecosystems of Kiribati. This would be achieved by providing an essential transitional stage in preparation for the long-term national response to climate change, including pilots that will generate experience for wider application in Kiribati and other small island states.

Global benefits would include improved management, conservation, restoration and sustainable use of biodiversity, such as improved protection and management of mangroves and coral reefs which harbor a wide variety of fish - on which Kiribati is highly dependent.

Apart from reduced vulnerability to climate change, climate variability and sea level rise, national benefits would come from stabilizing ecosystems and improving productive capacity of mangroves and coral reefs which affect the availability of fish catch, thereby reducing economic vulnerability of those dependent on these activities and contributing to poverty reduction.

Project description *[one-sentence summary of each component]* ***Ref. PAD B.3.a, Technical Annex 4***
KAP-II aims to change the way Kiribati handles its planning and implementation of regular activities so that they better take account of climate risks. This requires progressive reinforcement of adaptation-related programs in the national Government's budget and sectoral plans, in combination with a process of participatory adaptation, involving island councils, NGOs, churches, communities,

and individuals. The priority adaptation investments supported by KAP-II will not only provide immediate results in terms of reduced vulnerability, but will also help to demonstrate and promote a climate-risk aware approach to planning and design of such activities. After KAP-II, these activities will be expanded as part of a continued adaptation program, both in scope and in terms of addressing additional sectors.

The project would have five broad components:

Component 1: Policy, planning, and information (US$ 1.17 million, of which US$0.81 million is financed from GEF). This component supports three core elements of all adaptation efforts in Kiribati. The first element is awareness raising and consultation. The second element is policy coordination and planning, including technical assistance for the new Strategic National Policy and Risk Assessment Unit in the Office of Te Beretitenti; capacity building in Integrated Coastal Zone Management among key government staff; continued mainstreaming into Ministry Operational Plans; and integration of adaptation into government development programs. The third element is to generate scientific climate risk information and refurbish the capacity of the Meteorological Office with new equipment and training of staff.

Component 2: Land use, physical structures, and ecosystems (US$ 2.17 million, of which US$0.40 million is financed from GEF). This component will contribute to reducing the vulnerability of the coastline including key public assets and ecosystems, shifting the coastal management practice from a reactive, single technique approach to repairing damage as it occurs, to a preventative and more technically varied risk mitigation strategy, including more attention for environmental sustainability. More specifically, the component would support technical assistance, workshops, and awareness materials for the development and application of improved risk diagnosis and response methods, and improvements in planning and permitting processes to guide coastal zone activities; finance design and construction guidelines, and apply them by implementing protective measures at a sample of public assets that are at risk; as well as finance the monitoring and pilot activities to protect and restore coastal ecosystems and biodiversity affected by climate change, climate variability and sea level rise, including the detrimental effects of current adaptation practices.

Component 3: Freshwater resources (US$ 2.16 million, entirely financed by AUSAID). This component includes the development and management of freshwater resources to reduce their vulnerability to climate variability and climate change. It will provide support for technical assistance, awareness materials, and workshops to update the national water policy, improve water resource management, and revise building codes to enhance opportunities for rainwater catchment and storage. On Tarawa, the component will also support the preparation of a master plan for water resources on Tarawa, as well as the implementation of pilot projects to identify and increase water resources in freshwater lenses; rainwater collection and storage systems at government and community buildings; and a public awareness and education campaign to change user attitudes. On the Outer Islands, the component will support water resource assessments as well as physical improvements in the water supply system in selected locations, and technical assistance to review the feasibility of non-polluting sanitation systems. Finally, the component will establish an Outer Island community development grant scheme for roof catchment and sanitation.

Component 4: Capacity at island and community level (US$ 0.55 million, of which US$0.31 million is financed from GEF). This component will provide technical assistance to the Ministry of Internal and Social Affairs (MISA) to include adaptation in the Outer Island Profiles, and training on climate risk management for local governments. Furthermore, it will finance a pilot program of small-scale

adaptation investments in two selected Outer Islands, identified through participatory planning and implemented directly by communities.

Component 5: Project management (US$ 0.39 million, of which US$0.23 million is financed from GEF). This project component will provide overall support to the project, including project management, accounting, procurement, and running costs of the Project management Unit. It will also support the mid-term and end-of project review of KAP-II in view of the continuing GoK adaptation efforts.

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***
The Environmental impacts of the project are expected to be small. There may be some small-scale construction associated with the project, but this is not expected to have major negative environmental consequences. As a result, the project has been rated Category B, requiring a partial EA. However, the increasing and cumulative effects of coastal infrastructure developments are likely to be important, and as such, it will clearly be advisable to initiate an environmental management program targeted at the coastal development sector. An integrated coastal management program would examine the current extent of climate change adaptation options and coastal construction activities and the impacts (both beneficial and adverse) experienced to date. The environmental management program should consider the preparation of a National EIA Training Program and a series of Codes of Environmental Practice for use during the planning, design, construction, and operation as well as maintenance of all roads and coastal works in Kiribati.

The two OPs triggered are OP4.01 and OP 4.12. Detailed studies and mitigation options have been prepared in both cases.

Significant, non-standard conditions, **if any**, for:
Ref. PAD C.7
Board presentation:

Loan/credit effectiveness:
None
Covenants applicable to project implementation:
None

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and Sector Issues *(see Annex 1 for details)*

The Republic of Kiribati is one of the most isolated Least Developed Countries in the world. With a population of almost 98,000 (2004 est.), it consists of 33 low-lying atoll islands spread over a vast area of 3.5 million km^2 of ocean in the central and western Pacific. GNI per capita was US$970 in 2004, but has been declining due to a decrease in revenues from fishing licenses in 2002-2004. Kiribati has one of the highest poverty rates in the pacific, and only 10 % of the population is formally employed in the cash economy. Nearly half of the population lives in South Tarawa, a highly dense area with a population growth of 3 percent per year. At current rates, the national population will increase by 55 % by 2025, placing even greater challenges on the fragile environment. The poor atoll soil offers little potential for agricultural development, but the immense area of ocean encompasses some of the richest fishing grounds in the world, and, together with revenues from a phosphate-derived trust fund, provides Kiribati with its most important source of revenue.

Kiribati is one of the most vulnerable countries in the world to climate change and sea level rise. Most of the land is less than 3 meters above sea level and on average only a few hundred meters wide, rendering retreat options untenable. The islands are exposed to periodic storm surges and to droughts, and are becoming increasingly vulnerable due to high population concentration, accelerated coastal development, and environmental degradation. The 2000 World Bank Regional Economic Report estimated that by 2050 up to 25-54 % of areas in Bikenibeu, South Tarawa and 55-80 % of Buariki, North Tarawa, could become inundated. Climate change and sea level rise could also severely affect the main Tarawa groundwater lens, increase the epidemic potential for dengue fever, decrease agricultural productivity, and divert critical tuna resources from Kiribati waters. Moreover, climate change is threatening the marine ecosystems around Kiribati, in particular through impacts on the coral reefs surrounding the islands, with implications for subsistence and small-scale commercial near shore fisheries, failure of the reef to act as an effective buffer of wave energy, and increased island instability as sediment resources decline. Overall, in the absence of adaptation, Kiribati could face economic damages due to climate change and sea level rise of US$8-$16 million a year by 2050, or 17-34 % of its 1998 GDP.

The Government of Kiribati ratified the UN Framework Convention on Climate Change (UNFCCC) in 1995, and continued to prepare an initial National Communication (1999) and National Implementation Strategy (2003), with support from the UNDP-GEF funded Pacific Island Climate Change Assistance Programme. Kiribati also participates in regional climate change cooperative activities, such as the Pacific Islands Framework for Action on Climate Change, Climate Variability and Sea-level Rise (2000). The Kiribati Adaptation Program (KAP) started in 2003 under World Bank/Japanese assistance, and has been merged with the UNDP-GEF-supported preparation of a National Adaptation Programme of Action (NAPA). The 2004-2007 National Development Strategies identified climate change as a key risk to economic growth, and provided the basis for the ongoing mainstreaming of adaptation in all relevant Ministry Operational Plans. The Government of Kiribati is also strongly committed to the other Multilateral Environmental Agreements (MEAs), including the Convention on Biodiversity and the Cartagena Protocol on Biosafety, the UN Convention to Combat Desertification, and the Stockholm Convention on Persistent Organic Pollutants.

Along with the other climate-related risks facing the country, Kiribati's ecosystems also experience extreme vulnerability, particularly of their plant, animal, soil and water resources, and their cultures as well their traditional resource-use systems to outside human induced disturbance and over-exploitation.

Given this, successful atoll development requires that the integrated aspects of the environment and social conditions, as well as external conditions - in relation to stability of global economic systems – are taken into account.

Ecosystems: Kiribati is home to a number of globally important marine biodiversity, including up to 200 species of coral; hundreds of fish species, including threatened species such as the Humphead wrasse (Cheilinus undulates) and Sicklefin Lemon Shark (Negaprion acutidens); and several threatened turtle species, such as the endangered green turtle (Chelonia mydas) and critically endangered Hawksbill turtle (Eretmochelys imbricata). Kiribati also provides a nesting area for a variety of birds, including vulnerable migratory species such as the Bristle-thighed Curlew (Numenius tahitiensis) and endangered species such as Kuhl's Lorikeet (Vini kuhlii) and Phoenix Petrel (Pterodroma alba). In addition to the effects of climate change, coastal degradation and poor mangrove and coral reef management are endangering habitats for this important biodiversity. In the absence of adaptation, these impacts would translate in the loss of globally important biodiversity, land degradation, loss of marine and coastal habitats and reduction in overall natural capital.

Status of threatened ecosystems: Marine resources are generally considered abundant. The state of abundance depends on the health of the corals, which is partly determined by the impacts of higher temperatures on the physical condition of corals. Coral bleaching has been observed in several parts of Kiribati, including the Gilbert Islands, particularly during El Niño episodes, which already feature the higher sea surface temperature that are expected to occur more frequently when climate change progresses. However, the extent and the severity of current coral bleaching are poorly known. With the assistance of GEF, through UNDP, Kiribati prepared its National Biodiversity Strategy and Action Plan (NBSAP) in 1998. Kiribati is presently also implementing the NBSAP Add-On Project, of which the expected outputs are: (i) extensive consultations with grassroots communities, as well as inter-island consultations with all islands of Kiribati (North, Central and South islands including the Line and Phoenix Groups); and (ii) a new NBSAP, for submission to the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) in early 2006. The baseline on the status of some of the biodiversity is still being established.

Given the potential threats of climate change to the biodiversity of Kiribati, KAP-II will contribute to biodiversity conservation in various ways, particularly by improving the attention and need for environmental sustainability as part of coastal protection and asset management strategies, and for activities that reduce beach mining; all of which are supported by strong participatory processes and public awareness campaigns. Moreover, KAP-II would assist in building a monitoring system, particularly for the coral reefs, which can also be adapted for other ecosystems, to strengthen the country's capacity to reduce the ecosystems' vulnerability; supplemented by enhanced access to new technologies in coral and ecosystem management (including through pilot experiments). The monitoring system is expected to help streamline sustainable integrated systems management into adaptation processes, building on governance aspects that will support the enabling environment needed to make such activities successful, and implementing the NBSAP objective of integrating biodiversity conservation into the national development process.

Target ecosystems: Target ecosystems are primarily coastal and near-shore marine habitats, particularly coral reef and mangrove systems, which harbor valuable biodiversity. Specific target areas and ecosystems will be selected during the first year of the project, once MELAD has assessed the existing information it has, and prioritized the ecosystems that are most easily supported by the KAP, and that would not be duplicated by other on-going efforts in the country.

2. Rationale for Bank involvement

The World Bank has been involved in climate change adaptation in Kiribati since 1999, when it funded a major study on vulnerability and adaptation for the Regional Economic Report 2000. Since that review, adaptation and risk management have become one of the pillars of the World Bank program in the Pacific, with support to five country-level projects[1] and regional strategic assistance. Together with other donors and regional organizations, the World Bank helped organize two High Level Adaptation Consultations in the Pacific in 2003-04, which concluded that adaptation needs to be mainstreamed into national development plans, policies and budgets. The preparation phase of the Kiribati Adaptation Program (KAP-I – see box below), which was the first World Bank pilot project fully dedicated to adaptation in the East Asia and Pacific Region, put those principles to practice. The Bank's role in adapting economic mainstreaming complements the ADB's program on macro-economic planning and water and sanitation, a UNDP project to strengthen decentralized governance, vulnerability mapping and planning activities funded by the European Commission, and GEF-funded activities to implement various Multilateral Environmental Agreements (see item C.1).

Kiribati Adaptation Program – Preparation Phase (KAP-I)

KAP-I, the preparation phase of the KAP, had two major objectives: (i) To mainstream adaptation into national economic planning; and (ii) to prepare a pilot Adaptation Project to reduce Kiribati's overall vulnerability to climate change, climate variability, and sea level rise.

More specifically, the project aimed to: (i) carry out a National Consultation – which involved all major stakeholders in Kiribati (government, NGOs, private sector, and communities) in reaching a consensus on national adaptation priorities and strategies to be mainstreamed into national economic planning, budget, and sectoral plans. It also helped stakeholders discuss their roles in implementing adaptation options; (ii) raise Public Awareness - summarise and convey reliable information on adaptation and risk management to (a) high-level policy makers; and (b) the general public. This was achieved through simple briefings and seminars for Ministers and Parliamentarians on desirable policy measures, traditional meetings, radio scripts, and the production of an information video; (iii) build Capacity in Risk Management, introducing SOPAC's Comprehensive Hazard and Risk Management process to Kiribati. CHARM is a process of capacity building and planning that incorporates disaster and climate risk management into national development planning; (iv) mainstream Adaptation into National Economic Planning – incorporating and institutionalizing the recommended mainstreaming activities into Government planning processes, procedures and regulations. This activity built upon the results of the national consultation and capacity building to effectively incorporate adaptation and risk management into economic planning, including the National Development Strategy, sectoral strategies, and public expenditures; and (v) undertake a Social Assessment, to (a) ensure that the national consultation is fully participatory; (b) produce an assessment of traditional adaptation options; (c) produce a checklist of social issues relevant to the Implementation Phase and ways to address them. Implementation of KAP-I has been successful and the project is expected to close within the first quarter of 2006.

Given its combination of LDC and small island status, extreme vulnerability and good progress in mainstreaming, Kiribati is ideally positioned to become one of the first countries to implement the new GEF Strategic Priority "Piloting an Operational Approach to Adaptation". Lessons learned from this pilot are expected to become important for global strategies on adaptation investments, and help move

[1] Kiribati Adaptation Project Preparation, Tonga Cyclone Emergency Recovery Project, Samoa Cyclone Emergency Recovery Project, and Samoa Infrastructure Asset Management Projects I and II.

internal incentives towards hazard risk prevention. KAP-II was accepted to the GEF's pipeline on July 12, 2004 and approved by the GEF Council on November 8-10, 2005.

Recognizing that adaptation is a long term concern, and as a direct follow-up to several studies and initiatives, and with support from the World Bank, the Government of Kiribati started the Kiribati Adaptation Program (KAP), with the key goal of reducing Kiribati's vulnerability to climate change, climate variability and sea level rise. The program is envisaged to involve the following phases. ***Phase I: Preparation*** *(2003-2005; on-going)* – is intended to mainstream adaptation into national economic planning, prepare a National Adaptation Programme of Action and design an intermediate pilot investments phase, KAP-II; ***Phase II: Pilot Implementation*** *(2006-2008)* is the focus of the current PAD. It aims to implement pilot adaptation measures, and consolidate the mainstreaming of adaptation into national economic planning; and ***Phase III: Expansion*** *(2009-2015)* would gradually scale up the investments piloted under Phase II to cover all major islands and vulnerable sectors of Kiribati. This phase may be eligible for funding under one or more of the three global funds for adaptation (LDC, Special Climate Change Fund and Adaptation Fund), complemented by baseline financing from the GoK's own budget as well as bilateral contributions. Care would be taken to ensure that there would be no duplication of activities funded under the GEF Strategic Priority and those funded under the global funds, should they be accessed. The progression of KAP phases is outlined in more detail in Annex 1.

3. Higher level objectives to which the project contributes

The Government of Kiribati's key objective is to "*enhance and ensure the equitable distribution of development benefits according to the principles of good governance*". The 2004-2007 National Development Strategies (NDS) highlight climate change as a key risk to economic development, and provides for consultation-based measures for climate change adaptation. It also emphasizes the need to care for the islands' fragile environment and for sustainable use of natural resources. On the other hand, the Bank's new Four-Year Strategy for the Pacific Islands, published in June 2005, identifies improved hazard risk management as one of the five pillars contributing to the economic growth and job creation. Thus, there is a strong justification for KAP-II in both the national and World Bank strategic priorities.

B. PROJECT DESCRIPTION *(See Annex 4 for further details)*

1. Lending instrument

The project is proposed as a Sector Investment Grant (SIL). An Adaptable Program Loan (APL) was considered, but for two reasons it was judged inappropriate: (i) GEF can no longer commit up front to co-finance all the phases of an APL, and although this policy does not close the door for subsequent phases, each phase must be developed independently. So although the full program may be articulated, proposals can only justify incremental cost financing for the Phase in question; and (ii) as the adaptation financing arrangements under the Least Developed Countries and/or Special Climate Change Fund – which Kiribati hopes to access for Phase III of the Program - are still evolving, it was better to prepare this distinct phase and reconsider the lending instrument at a later date.

Project development objective and key indicators

Project development objective

The key objective of the proposed Pilot Implementation Phase of KAP (KAP-II) is to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of climate risk awareness and responsiveness into economic and operational planning. Lessons learned from KAP-II would be used to plan the long-term national response to climate change envisaged for 2008/9 onwards, and would also be relevant to many other small island states around the world.

Global environment objective

The global environmental objective of the KAP-II is to assist the GoK in enhancing its capacity to plan and implement adaptation measures to the climate-related issues facing the country, which will also reduce the detrimental impacts of climate change on the fragile atoll ecosystems of Kiribati. This would be achieved by providing an essential transitional stage in preparation for the long-term national response to climate change, including pilots that will generate experience for wider application in Kiribati and other small island states.

Global benefits would include improved management, conservation, restoration and sustainable use of biodiversity, such as improved protection and management of mangroves and coral reefs which harbor a wide variety of fish - on which Kiribati is highly dependent.

Apart from reduced vulnerability to climate change, climate variability and sea level rise, national benefits would come from stabilizing ecosystems and improving productive capacity of mangroves and coral reefs which affect the availability of fish catch, thereby reducing economic vulnerability of those dependent on these activities and contributing to poverty reduction.

Key indicators include:

- the establishment of the Strategic National Policy and Risk Assessment Unit (SNPRA Unit) as the lead agency coordinating climate change adaptation and related strategic issues;
- the percentage of climate-affected programs in Ministry Operational Plans that reflect systematic climate risk management; and
- consistent use of best practice in the application of risk management, environmental assessment and options analysis to public infrastructure and vulnerability reduction measures.

The main biodiversity outcome would be the mainstreaming of biodiversity concerns into the overall Government development efforts to reduce vulnerability to climate change, climate variability and sea level rise, as reflected, particularly, in the third outcome indicator. Given the detrimental impacts of many of the ad-hoc coastal protection efforts, such mainstreaming provides major benefits in terms of biodiversity conservation. The environmental assessment process would prominently include attention for biodiversity, including, in relation to the additional threats posed to these biodiversity resources by climate change.

2. Project components

KAP-II aims to change the way Kiribati handles its planning and implementation of regular activities so that they better take account of climate risks. This requires progressive reinforcement of adaptation-related programs in the national Government's budget and sectoral plans, in combination with a process of participatory adaptation, involving island councils, NGOs, churches, communities, and individuals. The priority adaptation investments supported by KAP-II will not only provide immediate results in terms of reduced vulnerability, but will also help to demonstrate and promote a climate risk aware approach to planning and design of such activities. After KAP-II, these activities will be expanded as part of a continued adaptation program, both in scope and in terms of addressing additional sectors.

Component 1: Policy, planning, and information (US$ 1.17 million). This component supports three core elements of all adaptation efforts in Kiribati. The first element is awareness raising and consultation, including technical assistance to review and redesign frameworks and processes for participation and awareness at national and local level; two-yearly national consultations; regular adaptation-related participatory events; a newsletter, media releases, educational material; and an annual survey on public attitudes and awareness. The second element is policy coordination and planning, including technical assistance for the new Strategic National Policy and Risk Assessment Unit in the Office of Te Beretitenti; capacity building in Integrated Coastal Zone Management among key government staff; continued mainstreaming into Ministry Operational Plans; and integration of adaptation into government development programs. The third element is to generate scientific climate risk information and refurbish the capacity of the Meteorological Office with new equipment and training of staff.

Component 2: Land use, physical structures, and ecosystems (US$ 2.17 million). This component will contribute to reducing the vulnerability of the coastline including key public assets and ecosystems, shifting the coastal management practice from a reactive, single technique approach to repairing damage as it occurs, to a preventative and more technically varied risk mitigation strategy, including more attention for environmental sustainability. More specifically, the component would support technical assistance, workshops, and awareness materials for the development and application of improved risk diagnosis and response methods, and improvements in planning and permitting processes to guide coastal zone activities, including regulatory adjustments, awareness raising, and economic and environmental monitoring. Secondly, the component will produce design and construction guidelines, and apply them by implementing protective measures at a sample of public assets that are at risk, including the national hospital and vulnerable coastal areas. Thirdly, the component includes monitoring and pilot activities to protect and restore coastal ecosystems and biodiversity affected by climate change, climate variability and sea level rise, including the detrimental effects of current adaptation practices.

Component 3: Freshwater resources (US$ 2.16 million). This component includes the development and management of freshwater resources to reduce their vulnerability to climate variability and climate change. It will provide support for technical assistance, awareness materials, and workshops to update the national water policy, improve water resource management, and revise building codes to enhance opportunities for rainwater catchment and storage. Given that water management problems are most acute on the central island, Tarawa, the component will also support the preparation of a master plan for water resources on Tarawa, as well as the implementation of pilot projects to identify and increase water resources in freshwater lenses; rainwater collection and storage systems at government and community buildings; and a public awareness and education campaign to change user attitudes. On the Outer Islands, the component will support water resource assessments as well as physical improvements in the water supply system in selected locations, and technical assistance to review the

feasibility of non-polluting sanitation systems. Finally, the component will establish an Outer Island community development grant scheme for roof catchment and sanitation.

Component 4: Capacity at island and community level (US$ 0.55 million). This component will provide technical assistance to the Ministry of Internal and Social Affairs (MISA) to include adaptation in the Outer Island Profiles, and training on climate risk management for local governments. Furthermore, it will finance a pilot program of small-scale adaptation investments in two selected Outer Islands, identified through participatory planning and implemented directly by communities.

Component 5: Project management (US$ 0.39 million). This project component will provide overall support to the project, including project management, accounting, procurement, and running costs of the Project management Unit. It will also support the mid-term and end-of project review of KAP-II in view of the continuing GoK adaptation efforts.

3. Lessons learned and reflected in the project design

A number of key lessons are starting to emerge from KAP-I as well as from other hazard management initiatives in the Pacific:

- Climate change and sea level rise need to be treated as a major economic and social risk, and not just a long-term environmental problem.
- Addressing short-term vulnerabilities is the best strategy to prepare for long-term impacts.
- Adaptation should preferably focus on no-regrets strategies. Rather than site-specific structural solutions, adaptation should look for soft options, embedded in sustainable natural resources management.
- Adaptation needs to be housed within a high level coordinating Ministry, which needs to effectively coordinate investments across sectoral Ministries and influence national development planning.
- Adaptation needs to be fully integrated into national economic planning, and the preparation of sectoral plans and budgets.
- Adaptation investments need to be informed by a long-term process that links bottom-up consultation with top-down planning and policy.
- A well crafted, country-specific consultation framework is critical to ensure that community participation and awareness raising result in changes in behavior.

4. Alternatives considered and reasons for rejection

The 'do nothing' scenario: In the absence of adaptation, the economic, social and environmental impacts of climate change in Kiribati could be severe, with potential economic damages averaging US$8-$16 million a year, equivalent to 17 to 34 percent of the 1998 GDP (World Bank 2000 Regional Economic Report). Given these enormous impacts; the potential for adaptation to reduce them; the fact that most of the adaptation measures can be based upon no-regret approaches; and the Government of Kiribati's strong will to act now, the do-nothing scenario was rejected.

The "one-off adaptation investments" scenario: Another alternative would have been to focus only on a few specific adaptation investments, primarily in infrastructure. However, a programmatic approach was strongly preferred given that lessons from experience (in Kiribati and elsewhere) show that such one-off adaptation investments are generally not the most effective, and are often unsustainable. Using a programmatic approach allows measures to be integrated in government programs and be linked to regulatory changes and raising awareness to change public behavior; it also

allows institutional capacity to be built; lessons learnt to be used to refine follow-on activities; and successful pilots to be replicated.

C. IMPLEMENTATION

1. Partnership arrangements (if applicable)

The KAP-II project would be co-financed with the Australian Agency for International Development (AusAID) and the New Zealand Agency for International Development (NZAID), while the European Union will provide parallel financing. The project will be implemented in close collaboration with parallel initiatives being implemented and/or envisaged by UNDP and ADB, and several GEF-supported programs implemented by UNDP and UNEP.

Australian Agency for International Development (AusAID) and New Zealand Agency for International Development (NZAID): AusAID has released AUD$2 million into a Bank-managed trust fund to finance South Tarawa water planning, remedial actions and pilot projects, as well as Outer Islands assessments and systems upgrades for Climate Change Adaptation. NZAID is planning to contribute NZ$ 1.5 million to KAP-II, primarily for activities relating to coastal infrastructure. The Australian Bureau of Meteorology and New Zealand Meteorological Office will be closely involved in the upgrading of climate monitoring systems.

The European Union (EU): The EU would provide Kiribati a grant of Euro 2 million (implemented by SOPAC) to establish a environmentally sustainable source of aggregate from a naturally replenished site inside the lagoon, a necessary condition for the prohibition of the opportunistic beach mining that is severely increasing coastal vulnerability. KAP-II provides policy and planning support for the EU project, including environmental monitoring. The EU is also supporting a SOPAC-led program for Water Governance in Kiribati, which started in June 2005, and is being closely coordinated with the freshwater management component of KAP-II.

United Nations Development Programme (UNDP): UNDP is implementing a US$1 million program to Strengthen Decentralized Governance in Kiribati (SDGIK). KAP-II will benefit from the capacity building activities under this project, and duplication will be avoided through coordination by the Ministry of Internal and Social Affairs (MISA) and close collaboration with UNDP.

Asian Development Bank (ADB): The ADB has been financing the Sanitation, Public Health and Environment Improvement Project (SAPHE), composed of a US$10.24 million loan and US$ 1.5 million grant. SAPHE, which is drawing to an end, which comprises a sustained program of improvements in water supply, sewerage, solid waste management and environment conservation. The freshwater management activities in KAP-II will be closely coordinated with the remaining work under SAPHE, and take account of lessons learned. Coordination will primarily be through the Ministry of Public Works and Utilities. The ADB is also providing technical assistance to develop Outer Island Growth Centers in the Gilbert and Phoenix islands. There are clear linkages to adaptation to climate change, and the ADB has indicated it wants to coordinate closely with KAP to ensure optimal mutual benefits.

Global Environment Facility - United Nations Development Programme & United Nations Environment Programme (UNDP-GEF and UNEP-GEF): Kiribati is also undertaking several initiatives, supported by the GEF and implemented by UNDP and UNEP, to strengthen its capacity to implement various multilateral environmental agreements. Given the close interrelationships between

adaptation to climate change and proper environmental management of the fragile atoll environment, these initiatives closely fit the objectives and activities of KAP-II.

Besides the preparation of a NAPA, which has been closely integrated with KAP-I, **UNDP-GEF** is also supporting an add-on project to the National Biodiversity Strategy Action Plan (NBSAP) will help to implement a country driven Clearing House Mechanism for the UN Convention on Biodiversity (UNCBD), and identify capacity building needs for protection of national biodiversity. UNDP-GEF is also preparing a National Capacity Self-Assessment (NCSA) project, which consists of a self-assessment of the current capacity constraints to be able to address global and local environmental issues. As part of a regional UNDP-GEF supported International Waters Program (IWP), executed through SPREP, Kiribati established requirements for marine protected areas, sustainable coastal fisheries, and protection of freshwater resources; and undertook several community-based waste management pilots. **UNEP-GEF** is supporting Kiribati to prepare a National Biosafety Framework (NBF) under the Cartagena Protocol on Biosafety, and a National Implementation Plan (NIP) for the Stockholm Convention on Persistent Organic Pollutants (POPs). Close coordination, complementarily and derivation of mutual benefits between KAP-II and these other GEF-funded projects will be ensured through the Environmental Conservation Division (ECD) in MELAD, which is responsible for the implementation of all MEAs and related projects, but also provides technical support for interdepartmental climate change issues under KAP-II,. Furthermore, MELAD/ECD will be responsible for all KAP-II activities that involve environmental regulations and monitoring. The projects mentioned above primarily focus on analysis, awareness raising, and policy development. KAP-II's focus on implementation and close linkages to national economic planning will provide excellent opportunities for mainstreaming of global environmental issues through the coordinating mechanisms set up for adaptation to climate change.

2. Institutional and implementation arrangements *(see also Annex 6)*

Overall direction and coordination of the project will be provided by the Office of Te Beretitenti (Office of the President, OB) through the Strategic National Policy and Risk Assessment Unit (SNPRA Unit), which is being established within the OB. The Secretary of the OB will head the SNPRA Unit, and act as Project Director for KAP-II. In addition, the 2006 budget provides for two senior (Director or Deputy Secretary Level) policy positions within the SNPRA Unit. This capacity will be strengthened by KAP-II, which will provide for a third senior position (long-term consultant), responsible for coordination of adaptation and climate risk management throughout the government, and also act as the KAP-II Project Coordinator. The Project management Unit (PMU), which will carry out all day-do-day project management, is headed by the Project Manager, who reports to the Project Coordinator, and also includes a Finance/Accountant, a Procurement Officer, a more general Project Officer, and a Project Assistant. The quality of project implementation will be ensured by the attention and capacity built during KAP's preparation phase. KAP-I project management is currently carried out by an all I-Kiribati team, which has substantial experience in World Bank financial management, reporting and procurement procedures. Both the Project Manager and the Finance/Accountant are expected to continue in the PMU for KAP-II, thus ensuring continuity and retention of capacity. Specific components of KAP-II will be managed by key line ministries, in particular the Ministry of Environment, Lands and Agriculture (MELAD), the Ministry of Public Works and Utilities (MPWU), the Ministry of Internal and Social Affairs (MISA), the Ministry of Fisheries and Marine Resources Development (MFMRD), and the Ministry of Communications, Transport, and Tourism Development (MCTTD).

Project activity planning for implementation: At the higher level, activity planning would be at the level of the Ministry Operational Plans (MOPs), specifically to ensure that there is mainstreaming of adaptation at the operational level. The MOPs are a key planning tool for all Government Ministries and public enterprises; and benefit from outputs of the National Consultations. The MOPs, will incorporate the add-on investments of KAP-II. The enhanced MOPs to be implemented from 2006 represent the first generation of MOPs with comprehensive mainstreaming of adaptation priorities across all climate relevant programs in the key ministries.

Every year, a Program of Activities to be financed by the project will be prepared prior to implementation. The Program of Activities would be prepared by the PMU; and submitted to the OB/MFED and the Bank for concurrence, and shared with AusAID and NZAID for comments and suggestions. The Program of Activities must take into account the relevant Procurement Plan, which becomes an appendix. This one-time up-front non-objection should minimize delays in implementation. Exceptions that may require an additional step relate to large investment packages for which more complex economic analyses requiring a comparative cost-benefit analysis would be done; for example, the rehabilitation of the hospital and the causeway. Although the TA to be hired would be expected to carry out the required analyses, it is important that the National Economic and Planning Office (NEPO) in MFED, who routinely carry out such analyses, are consulted from the activities' inception stage.

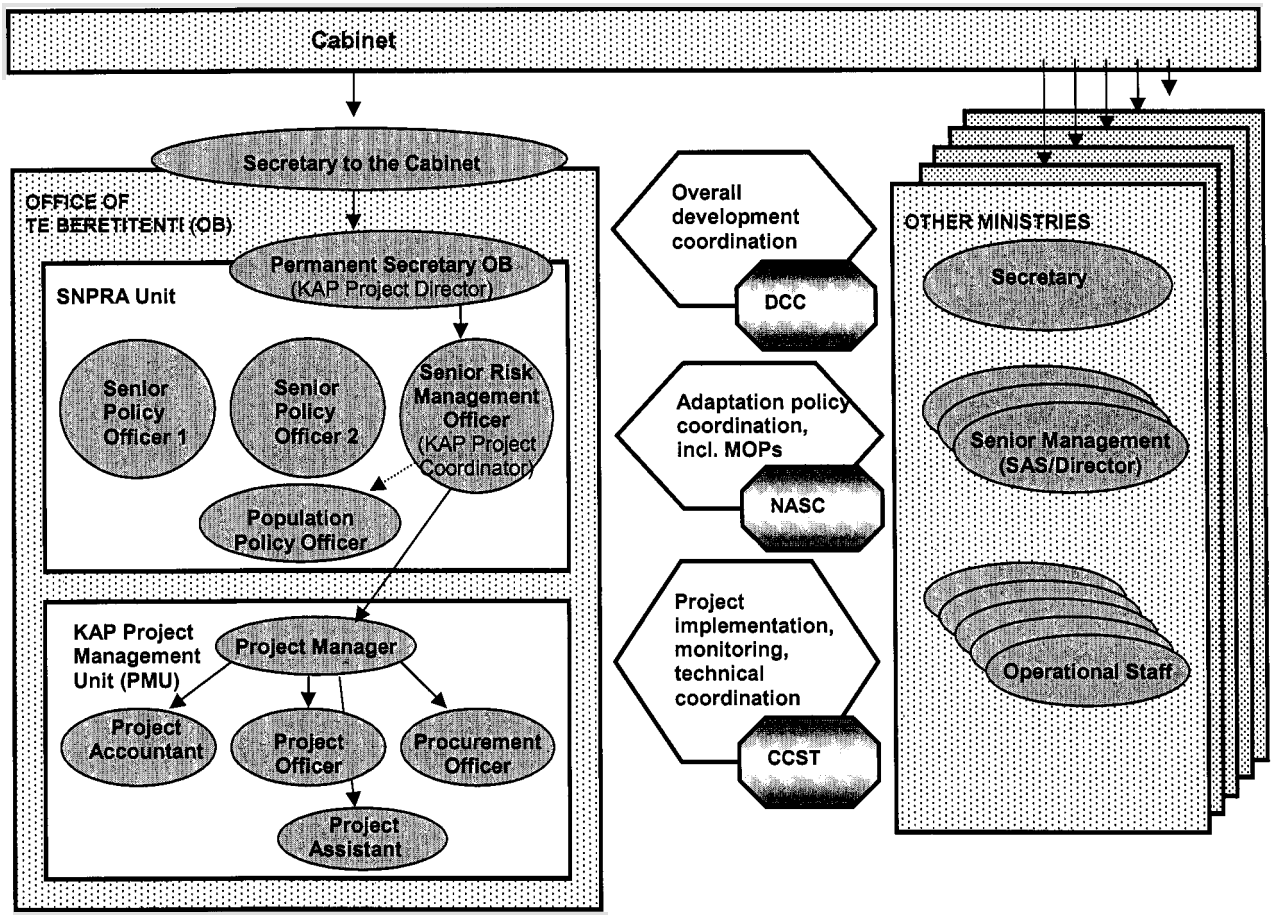
The *National Adaptation Steering Committee* (NASC), which was established during KAP-I, is responsible for promoting and monitoring coordination among project activities across the implementing agencies, including the utilization and sharing of technical expertise. The NASC is chaired by the Secretary (S) of the OB, and includes higher level officials from all key Ministries, as well as representatives of the Kiribati Council of Churches, the Kiribati Association of NGOs (KANGO), the national women's organization All Women of Kiribati (AMAK), and the Kiribati Chamber of Commerce. The NASC will continue to provide overall policy analysis, quality control and advice to the GoK on matters related to climate risk management, covering both NAPA and KAP-II issues and activities. The *Climate Change Study Team* (CCST), also established during KAP-I, contains technical officers from all key departments affected by climate risks. The CCST will continue to provide expert analysis and technical advice to the GoK on climate-related matters, as well as coordinate scientific activities relevant to the planning and execution of the NAPA and KAP-II.

Over the course of KAP II, the detailed institutional and implementation arrangements may evolve for various reasons, such as, the need to take account of new mechanisms for increasing consultation within various ministries in the GOK; the need to enhance coordination between stakeholders in general; and for other reasons that may require changes to be made to the existing coordination framework. For example, KAP II calls for the recruitment of a Project Coordinator, reporting directly to the Secretary of the Office of Te Beretitenti, who will monitor the implementation of KAP II and ensure regular consultation on a continuing basis with all key stakeholders, including OB, other GOK ministries and international donors.

In addition, the GOK recently established an Outer Island Project Coordinating Committee (OIPCC), chaired by the Secretary, Ministry of Internal and Social Affairs (MISA), and comprised also of the Secretaries of other Ministries delivering government services to outer islands. Under its terms of reference, the OIPCC meets monthly to review the status of projects in the outer islands; recommends follow-up actions as may be required on each project; ensures cost effective and efficient implementation of project related activities; ensures compliance of all projects with Government policies; and reports monthly to Cabinet on the status of all outer island projects.

In view of the foregoing arrangements, over the course of the project OB may review the scope, tasks and membership of existing coordinating mechanisms that support KAP II, to ensure that these mechanisms remain relevant and effective.

The institutional relationships are illustrated in the following diagram:



SNPRA: Strategic National Policy and Risk Assessment Unit

Funds flow: On receipt of funds, the Ministry of Finance and Economic Development (MFED) will warrant financial provision to the OB from the Development Fund in accordance with public finance law. The OB (through the PMU) will allocate resources to project components to fund specific project activities to be carried out in accordance with the annual Ministry Operational Plans (MOPs) of line ministries. These activities will appear in MOPs under the appropriate divisional programmes of ministries in substantially the same form as they appear in the Project Implementation Plan. The Ministry of Finance and Economic Development (MFED), and particularly the National Economic Planning Office (NEPO), will play an important role in the continued mainstreaming of adaptation into MOPs and the 2008-2011 NDS, MOPs monitoring, as well as in economic appraisal of adaptation options.

Regarding disbursement, project funds will flow through the Government's budget and accounting processes. The Government Number 4 Development Project Bank Account will be used to receive advance funds from the World Bank in AUD. Government Accounting systems will account for the advance at an aggregate level but detailed reporting will be provided through a parallel management information system maintained by the project implementation unit. There is also a need to ensure that adequate accountability mechanisms are established for pilot small-scale Outer Island adaptation investments and the proposed Outer Island grant scheme for community development for water and sanitation. As such, disbursements for these activities would take place only once Procedures Manuals for the implementation of these activities have been developed, and are of a quality satisfactory to the Bank. Two disbursement categories will be used for the project; one that will be followed by all the project, with the exception of the Outer Island community development grant scheme for roof catchment and sanitation (in support of the revolving fund for the OIs household scheme for roof catchment and sanitation), for which no disbursements would be allowed from the grant prior to the development and approval of an Procedures Manual, which demonstrates how the funds would be used and accounted for. Expenditure reporting will be against agreed annual activities which will determine eligibility.

3. Monitoring and evaluation of outcomes/results

Overall project monitoring and reporting will be the responsibility of the OB, while the day to day monitoring and evaluation activities would be carried out by the PMU in the SNPRA Unit. As almost all project activities will be integrated and reflected in regular Ministry Operational Plans (MOPs), project monitoring will primarily be based upon MOP progress reports with financial information provided by the PMU, complemented by project-specific results monitoring (see Annex 3). MOP progress reports are normally required at the end of Q2 (mid-year) and Q4 (end year), but for KAP-II-funded activities additional progress reports will be required at the end of Q1 and Q3. The half yearly and yearly reports would contain information on the project's progress; financial and physical, with an explanatory write-up. Quarterly reports from line ministries would be mainly on fund usage and will be collated by the PMU. A consolidated quarterly KAP-II progress report will be submitted to the NASC, Cabinet, MFED and the WB. The reports would be shared with AusAID and NZAID through the Bank. Quarterly reports will also contain implementation and work plans for the coming 6 months. Halfway and at the end of the project, an evaluation of the project will be conducted, primarily aimed at identifying lessons learned from the pilot implementation phase, which could be applied to the expansion of the Kiribati Adaptation Program. Both the PMU and the Island Development Committees will regularly monitor progress in the implementation of the small scale adaptation investments.

Implementation review missions will be carried out, at least twice a year, and they would provide an opportunity for the donors and the Government to review project progress; develop recommendations and an Action Plan based on which issues identified would be addressed. The World Bank would invite AusAID and NZAID to participate in the implementation review missions. Prior to commencing the missions the government and the donors would agree on the implementation aspects to be reviewed.

4. Sustainability and Replicability

Sustainability: There are three key factors that increase the potential for sustainability of the pilot adaptation investments. First, the national consultation and mainstreaming are directly linked to the national planning process. In KAP-I, the national consultation was used not only to derive inputs for

adaptation investment, but also to produce inputs to the 2004-2007 National Development Strategy and the Ministry Operational Plans. The national awareness and ownership of the concepts of vulnerability and adaptation obtained through the two National Consultations will also increase the likelihood of sustainability of activities implemented under the project. This close link is expected to continue in KAP-II: biennial National Consultations will bring key stakeholder groups together to share their experiences, refine priorities, and encourage policymakers to attend to adaptation issues. As bottom up planning and top down program formulation becomes progressively institutionalized within the national planning process (and given that many of the concerns of the Outer Islands relate directly to vulnerability reduction) adaptation investments and concerns are expected to flow naturally from this process.

Second, the proposed placement of KAP within the National Strategic Risk Management Unit under the umbrella of the Office of Te Beretitenti is expected to give it a permanent institutional 'home' with direct access to the Development Coordination Committee (composed of Secretaries of all Government Ministries) and with direct responsibility for risk management. The access and linkage to high level policy makers is an important asset if the Unit is to function at the level of coordination envisaged, in particular driving the preparation and monitoring of the MOPs and coordinating broader adaptation activities which transcend KAP-II, including donor and stakeholder efforts for adaptation.

Third, and with the exception of the island pilots, only adaptation investments which are clearly identified as national priorities in the Ministry Operational Plans will be funded. This, and the fact that the Government will be contributing a substantial proportion of the funding for these investments, ensures that the programs are fully institutionalized within the respective Ministries.

As earlier discussed, while the Government is expected to cover a substantial proportion of the costs of avoiding maladaptation (under the baseline scenario), the alternate scenario assumes that a more complete treatment of these options will be carried out. The expectation is therefore that, the absolute Government contribution to sectoral investments is likely to be higher in KAP-II than in the future, given that much of the initial investment will focus on current vulnerabilities and avoidance of maladaptation. And if climate change impacts intensify, the need for incremental financing may also be higher in the future. However, the process of mainstreaming adaptation which was piloted under KAP-I would help ensure that baseline investments would concurrently increase to cover current-day mal-adaptation, thereby increasing the overall sustainability of the program. Moreover, the priority investments proposed for financing will be activities that entail significant incremental development costs in helping Kiribati adapt to the long-term effects of climate change and sea level rise that fit within a coherent project that will also deliver global environmental benefits.

Importance of technical assistance to implementation and sustainability: The project contains a relatively high share of technical assistance, which is unavoidable given the current limited technical capacity to address climate change. KAP-I provided the building blocks for engagement with the communities and prioritization of adaptation strategies. KAP-II will build on this base to increase capacity for implementing the strategies identified in KAP-I, including integration into regular work in the key line ministries. Furthermore, the awareness and behavior change activities that were started under KAP-I need to be expanded and approached more systematically to address the issues identified under the scoping consultations under KAP-I, to generate a real behavioral change (partly co-aligned with better provision of alternative solutions to adaptation-related problems, such as beach mining). Once all of these processes are in place, and government staff has implemented adaptation-related programs as part of their regular responsibilities within their Ministries' MOPs, they should be able to continue to apply these improved standards in their work. Furthermore, 85% of the total TA time is

allocated to national consultants, coupled to limited inputs of international TA for initial training of these national consultants and their government counterparts. In this way, the capacity built in national consultants will remain available to the government.

Replicability: Through the KAP, Kiribati would be one of the first countries in the world to pilot adaptation implementation. Hence, lessons learned from KAP (some of which are listed in section B.3) will be highly relevant for other Least Developed Countries and small island economies.
The proposed project, the soon to close KAP-I, the NAPA preparation, and various pieces of World Bank supported sector work have included many provisions for the sharing of lessons learned. In the past years, the Government of Kiribati has been invited to present the project at the UNFCCC COP in Buenos Aires and at the pre-UNFCCC SBI LDC consultations about the LDC fund. Lessons learned have also been incorporated in a World Bank supported Risk Management Policy Note prepared for the Pacific region, targeting high level decision makers in the Pacific and the donor community. As part of the dissemination of the Policy Note, participatory country level profiles will be prepared and discussed with interested countries, the results of which should enrich the NAPA preparation process, and/or adaptation in the countries selected.

At the national level, lessons learned from KAP-I and the NAPA have already contributed significantly to the preparation of the Climate Change Adaptation (CCA) strategy that was recently adopted by the Cabinet, and will now be used as a planning tool for future adaptation activities in the country, including mainstreaming into the MOPs. These lessons will certainly also contribute to the AusAID/NZAID country assistance strategy that is being prepared; and is expected to pay ample attention to population policies and urban renewal issues (both of which are closely linked to Kiribati's adaptive capacity in the face of climate change).

KAP-II also includes provisions for periodic evaluations to inform the expansion phase of the adaptation program, as well as other pilot adaptation initiatives in the region and beyond. KAP-II would also include substantial domestic replicability, as it would provide the foundation for scaling up and expanding the pilot adaptation investments to the national level under the expansion phase (KAP-III).

5. Critical risks and possible controversial aspects

Risks	Risk Mitigation Measures	Risk Rating with Mitigation
Failure or delay in establishing SNPRA Unit by the OB, MFED and PSO. As specified in GoK's 2005 CCA strategy statement, adaptation depends on strong, politically-supported, focused and effective co-ordination by the newly-established SNPRA Unit under the umbrella of the OB for its success	A clear recognition and commitment from the responsible agencies to the importance of a timely creation and staffing of the SNPRA Unit. Once established, the SNPRA Unit should provide continued advocacy to sustain public and political support for systematic CCA. The OB is responsible for the creation of the SNPRA Unit.	L
Failure to secure support and collaboration of key CCA Ministries and the community. An unambiguous spokesperson or standard-bearer for CCA (and so for KAP-II) within the political government does not as yet exist.	Continue to advocate and build on the widespread concern about possible effects of climate change. Capacity building and advocacy work to create a whole-of-government- and indeed, whole-of-community-collective will to adaptation. The OB, through the SNPRA Unit would lead the policy dialogue; and the	M

	Ministries through their MOPs would contribute to coordinated CCA activities.	
Failure to strengthen the capacity, motivation and funding of local government – an important issue, given that much of the physical response needed to adapt to climate change lies within the ambit of face-to-face contact of households, communities and enterprises with agencies of government	Develop effective, responsive local government capacity to manage CCA across the country, by building the necessary capacities in local government – activities which have already began with the assistance of UNDP and MISA through their long-term program, to which additional resources will be allocated under KAP-II to reinforce and assist this process.	M
That *serious storm damage or prolonged drought* during the period of KAP-II may force GoK to take short-term remedial action for humanitarian and political reasons, that would divert resources and public support away from the longer-term and ultimately more cost-effective ways of reducing vulnerability being developed under this CCA-based KAP-II	Build capacity of the agencies to be mentally and physically prepared to respond promptly to deal with immediate catastrophes, even while developing and proving longer-term solutions—using appropriate technical designs in the immediate response that enable integration of the necessary short-term repairs into the longer-term climate-proof upgrade process.	S

6. Grant conditions and covenants

Effectiveness conditions: The GEF Grant will include as a condition of effectiveness:

- that the DCC would approve the project and ensures its incorporation into the FY06 budget
- adoption of the Project Implementation Plan acceptable to the Bank by the government
- adoption of the draft Operations Manual for the project and the pilot small scale OI adaptation investments schemes procedures manual acceptable to the Bank by the government.

Financial covenants:

- The PMU shall maintain a management information system acceptable to the Bank as a supplement to the Government's accounting system
- The project financial statements shall be audited by auditors acceptable to the Bank and on terms of reference acceptable to the Bank
- The audits shall be conducted in accordance with International Standards on Auditing (ISA) as issued by the IFAC and on terms of reference acceptable to the Bank
- The annual audited statements and audit report shall be provided to the Bank within six months of the end of each fiscal year and at the closing of the project
- No disbursements in support of the revolving fund for the Outer Island community development grant scheme for roof catchment and sanitation would be allowed from the grant prior to the development and approval of a Procedures Manual, which demonstrates how the funds would be used and accounted for.

Other covenants:

- Prepare and submit a report of the monitoring and evaluation results at mid-term
- Take all measures necessary to ensure that the Project is implemented in full compliance with the provisions of the Strategic Environmental Assessment and the Project Implementation Plan and Operations Manual in a timely manner.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

Economic benefits will derive from improved environmental management, including the reduction in coastal zone degradation, improved water resources management; and a reduction in loss of biodiversity, habitats, and fish resources. In addition, the intended outcome is that Kiribati will be equipped with the field-tested engineering designs, information, analytical capacity and technical know-how needed to adapt successfully to climate change in the years ahead. Through the use of these better technologies, public investments should require less maintenance as they become better able to withstand climate variability, climate change, and sea level rise. There are also additional benefits expected from the development and implementation of alternative livelihoods by the communities, which should eventually result in a better standard of living for the beneficiaries. A more comprehensive economic analysis can be found in Annex 14.

Fiscal impact: because the majority of the activities to be funded are already included as part of the MOPs, the project would not represent a significant additional fiscal burden for the country. Instead, the project simply provides the additional financing that allows the government to expand and reorient the existing programs to reduce vulnerability to climate change. The Government has already identified provisions in the budget for the existing programs at an estimated cost of US$ 2.3 million, which represents 35% of the total project cost of US$ 6.6 million (including contributions by GEF, AusAID and NZAID). Medium term fiscal impact of the project is likely positive as lessons learned are applied in design standards and coastal protection and building practices, as well as the priority national investments themselves. The use of improved methodologies should result in better adaptation to climate variability, climate change, and sea level rise, thus reducing costs to respond to those impacts. With respect to coastal land use, this should result in longer life spans and lower maintenance for key public assets. Furthermore, the priority national investments in the water sector should reduce the disease burden and associated health service costs related to poor water quality.

2. Technical

KAP-II will build upon technical guidance developed during KAP-I, including state-of-the-art assessments of adaptation options for coastal management and the water sector. In addition, the project will compile a comprehensive climate risk profile, which will build upon the current set of climate scenarios for Kiribati. The upgrading of the Meteorological Office will include the purchase and upgrading of meteorological measurement instruments which will be used to gather key data needed for monitoring and early warning. For coastal management, the initial phase of the project will provide additional resources to refine approaches for preventative rather than responsive coastal management, based upon well-established methodologies for integrated coastal zone management and integrated assessment of adaptation options. Climate-proofing of public assets will in particular include analysis of soft, i.e., non-engineering solutions. Design parameters for protective works will be based upon field work and study of oceanographic data. The sustainable lagoon-based aggregate extraction is part of an associated EU-SOPAC project, which will provide the appropriate TA to update a 1998 feasibility study, including extensive technical and environmental assessments before any physical investments are undertaken. In the water sector, most investments will be based upon well-established technologies while more experimental pilot activities – particularly the groundwater recharge and the feasibility study for an artificial water lens, which were based on successful examples in other atolls – will require further technical inputs and evaluation for application in Kiribati. *The small-scale* adaptation activities at the community level are guided by a clear Procedures Manual for the pilot small-scale adaptation

investments, which describes the participatory planning that should result in activities that are technically robust and can be implemented largely on the basis of local knowledge. Lessons learned from the island adaptation pilot activities will be used to update the Procedures Manual, which could subsequently be used for all the islands of Kiribati. Such updates might include changes in positive and negative lists that define the scope of the potential investments, or specific technical guidance on the implementation of particular activities. All pilot investments in KAP-II will be closely monitored and lessons learned will be documented and taken into account in the design of expanded adaptation investments after KAP-II.

3. Fiduciary

Accredited senior specialists assessed the government's financial management capacity during program preparation and found that satisfactory and acceptable systems are in place to ensure smooth implementation of the project. The core financial management arrangements for the project will make use of the Government of Kiribati's financial management and budget systems supplemented by a parallel information system to provide the necessary level of detailed reporting. In order to maintain the Parallel information system the PMU will require one additional staff member shortly after the commencement of the project. With regards to procurement, the general procurement assessment shows that additional procurement capacity is needed. In particular, it was noted that the National Procurement Act is quite recent (October 2002), and the implementing agency has no dedicated procurement staff. And although capacity has been built in the KAP office under the ongoing KAP-I project, this has been limited to recruitment of individual consultants and procurement of goods. Under the proposed project, the procurement scope will be significantly expanded, as will the level of interaction with other government agencies. Briefly, the following activities to strengthen implementation have been agreed: (a) planning ahead for procurement activities; (b) contracting of a Procurement Officer in the PMU; and (c) contracting of a Procurement Specialist (to assist in capacity development).

4. Social

Key social issues relevant to the project objectives and social development outcomes

Improving the ability of the I-Kiribati to adapt to the stresses presented by changes as a result of climate change is the key social outcome expected under the project. The main strategy for achieving this is to improve the ability of people at the local level to interact with officials at island and national level in ways that allow integration of local level concerns and strategies with island and national level responses. In this respect, KAP-II is building upon a series of National Consultations and a Social Assessment (SA) that examined traditional Kiribati society, land tenure patterns, social and cultural organization, political organization and patterns of social and cultural adaptation over time, including in-depth case studies of five islands.

Participatory Approach

The key stakeholders are the people of Kiribati, local level groups, institutions and organizations, the Island level political and administrative structures and officials, national level institutions, civil society and donor agencies. The people of Kiribati at the local level have been involved in the design of KAP-II through national consultations and a social assessment during KAP-I (see above). The National Consultations brought together Chief Councilors, council clerks, government staff on the islands, unimwane representatives (traditional elders), women and youth from each of the islands of Kiribati. The first round of consultations resulted in a catalogue of the kinds of changes experienced over the last 20-40 years, traditional coping mechanisms; a preliminary assessment of areas where assistance would be needed; a strategy for further local level consultations; and a shared definition of vulnerability and adaptation. The second round of consultations resulted in prioritization of vulnerabilities; identification of adaptation strategies; and a classification of those strategies by level of urgency. Some urgent strategies could be undertaken by communities themselves, for the others the consultations designated responsibility to specific government ministries.

Consultations and collaborations with NGOs and other civil society organizations

The National Adaptation Steering Committee includes representatives from the Kiribati Association of Non-Governmental Organizations (KANGO), the national women's organization - All Women of Kiribati (AMAK), the Kiribati Council of Churches, and the Kiribati Chamber of Commerce. KANGO has participated in several visits to Outer Islands in order to consult with village level I-Kiribati to elicit their views and concerns with respect to climate change. NGOs and churches, which occupy a central social position in Kiribati society, are expected to play an important role in the design and implementation of the pilot small-scale Outer Island adaptation investments, as well as in the awareness raising and public consultation.

Institutional arrangements

Although it is unlikely there will be any substantial resettlement, the institutional arrangements for resettlement activities are described in the Resettlement Policy Framework. Institutional arrangements for the pilot small-scale Outer Island adaptation investments are described in a detailed Procedures Manual for that subcomponent, including the participatory process by which villages and communities will come to consensus through an inclusive process of local level discussion and debate concerning the most pressing concerns facing the community and means by which those concerns will be addressed. With the assistance of civil society organizations and the Island Project Officer, proposals for small-scale adaptation investment grants will be formulated and passed on to the Development Committee at the island level and, from there, to the PMU at the national level.

Both the PMU and the Island Development Committees will regularly monitor progress in the implementation of the small scale adaptation investments. The implementation of the MOPs will be monitored by each ministry on an ongoing basis. The M&E system for the resettlement and land acquisition aspects of the project is described in the Resettlement Policy Framework. A social assessment will be conducted towards the end of the implementation phase to determine the social development outcomes achieved under the project, and to identify lessons learned for further adaptation planning.

5. Environment

A Strategic Environmental Assessment (SEA) has examined the environmental issues that are likely to arise under KAP-II. As specific investments to be undertaken under KAP-II have yet to be designed, the SEA provides a general methodology for environmental screening of policies and plans; the preparation of environmental impact assessments for various kinds of potential activities, including how best to mitigate any possible negative consequences; and the monitoring of the implementation of the recommendations of those EIAs.

The project will have some environmental impacts, but in most cases these impacts are not likely to be substantial. In almost all cases the impacts are expected to be positive over the longer term. There is an established regulatory environment in Kiribati that mandates certain actions in the case of negative environmental impacts. The Environment Act of 1999 establishes an integrated system of development control, environmental impact assessment and pollution control. The Minister of Environment, Lands and Agricultural Development is responsible for the due administration and implementation of the Act. All development proposals of government ministries, island councils, private developers and non-government organizations must undergo the environmental screening procedures of the Environment and Conservation Division (ECD) as stipulated in the Environment Regulations 2001. The screening procedure requires all project proponents to apply for a permit to carry out a prescribed development. The application form will be reviewed by ECD to determine whether the proposal requires an initial environmental examination (IEE) or an EIS (a comprehensive EIA study). The EIA procedure allows for the project proponent to conduct its own EIA study and implement the ECD approved environmental management plan of project activities. The ECD would also provide monitoring measures for the proponent to implement and for which National Environment Inspectors would closely monitor environmental compliance of the project. Project activities in an Outer Island would undergo the same environmental screening system. The implementation, management and monitoring of the local project would be supervised by the Island Council, with possible assistance from ECD.

All subprojects under the Pilot Island Adaptation component and any major activity under the MOPs will undergo environmental screening to determine the likely level of environmental impact. Activities will be categorized in a way consistent with Bank OD4.01.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[x]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[x]
Pest Management (OP 4.09)	[ ]	[x]
Cultural Property (OPN 11.03, being revised as OP 4.11)	[ ]	[x]
Involuntary Resettlement (OP/BP 4.12)	[x]	[ ]
Indigenous Peoples (OD 4.20, being revised as OP 4.10)	[ ]	[x]
Forests (OP/BP 4.36)	[ ]	[x]
Safety of Dams (OP/BP 4.37)	[ ]	[x]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[ ]	[x]
Projects on International Waterways (OP/BP/GP 7.50)	[ ]	[x]

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

The Environmental impacts of the project are expected to be small. There may be some small-scale construction associated with the project, but this is not expected to have major negative environmental consequences. As a result, the project has been rated Category B, requiring a partial Environmental Assessment (EA). However, the increasing and cumulative effects of coastal infrastructure developments are likely to be important, and as such, it will clearly be advisable to initiate an environmental management program targeted at the coastal development sector. An integrated coastal management program would examine the current extent of climate change adaptation options and coastal construction activities and the impacts (both beneficial and adverse) experienced to date. The environmental management program should consider the preparation of a National EIA Training Program and a series of Codes of Environmental Practice for use during the planning, design, construction, and operation as well as maintenance of all roads and coastal works in Kiribati.

7. Policy Exceptions and Readiness

None.

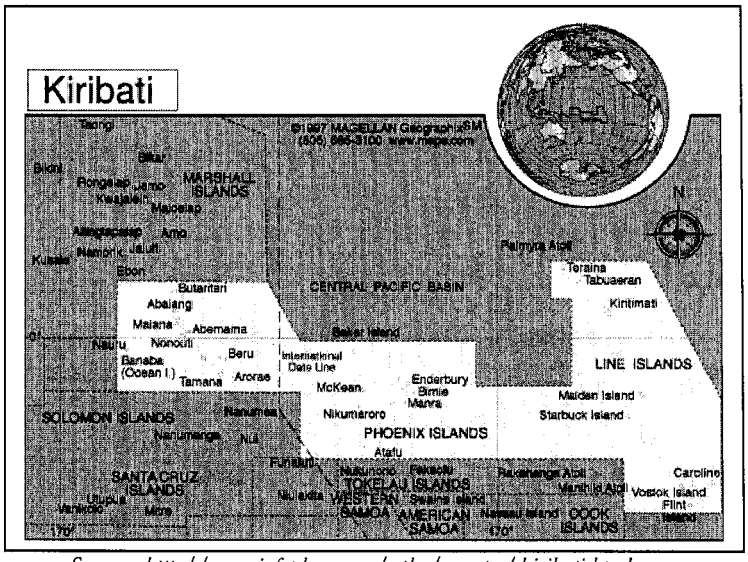
ANNEX 1: COUNTRY, SECTOR AND PROGRAM BACKGROUND

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Country background

Kiribati is one of the most isolated and vulnerable countries in the world. It consists of 33 low-lying atolls and small reef islands spread over a vast sea area of 3.5 million km^2 in the Western and Central Pacific. In total sea area, from East to West, Kiribati is nearly as wide as the continental United States, extending over 4,000 km and three island groups (Gilbert, Phoenix and Line Islands). The total land area, however, is only 726 km^2, supporting a population of almost 98,000 (2004 estimate). Half of the population lives in the capital atoll island of Tarawa (in the Gilbert Island Group), a densely populated area with a population growth rate of 3 % per year. The population shares a common cultural heritage and speaks one national language.

Fig. 1. Map of Kiribati, showing the extent of sea area and remoteness of the Outer Islands



Source: http://www.infoplease.com/atlas/country/kiribati.html

The poor atoll soil offers little potential for agricultural development apart from a few commodities such as copra. At the same time, the vast fishing area provides Kiribati with its most important source of revenue in the form of fishing licenses, which amounted to about 23 % of GNP in 2001-02. The total GDP of Kiribati was US$54.6 million equivalent in 2003 or about US$ 567 per capita. However, because seamen's remittances and fishing license revenues is a significant contributor to Kiribati's economy, GNI is a more relevant measure of income than GDP. The GNI per capita declined from US$1,040 in 1999 to US$970 in 2004, reflecting the contraction in GNI in 2002-04 due to a decline in fishing license revenues.

Official grants and loans amounted to US$58 million equivalent in the 2000-02 period, or 30 % of the Government's annual budget expenditures. Though fishing revenues vary from year to year, the Kiribati economy is stabilized by its Revenue Equalization Reserve Fund (RERF) derived primarily from phosphate revenues, which is used to balance the budget and was valued at US$335.7 million in end-2003. Official external reserves are equivalent to 8 times the annual imports.

The main challenge facing Kiribati at present is the high population growth, averaging 2.1 % a year in 1998-04. By 2025, at current rates, the population of Kiribati will grow to 140-145,000, with Tarawa – already densely populated – supporting at least 70,000 of this population. This would place tremendous added pressure on the already fragile atoll environment. The concentration of population in Tarawa is largely due to employment and livelihood opportunities. Currently, only about 10 % of the population is formally employed in the cash economy, and two-thirds of the jobs are provided by the public sector. This high reliance on the public sector for job security has been at the core of the Government's reluctance to privatize many of the 28 public enterprises. The Government is currently studying voluntary incentives to attract migration into Kiritimati (Christmas Island) in the Line Island Group (3,500 km east of Tarawa), which is under Government land. Though Kiritimati – the largest atoll in the world – comprises half of the land area of Kiribati, it lacks direct air links with Tarawa, and suffers from periodic droughts and poorly developed infrastructure.

Vulnerability

Kiribati is one of the most vulnerable countries in the world to the effects of climate change and sea level rise. Although it lies outside the cyclone path, most of the land is less than 3 meters above sea level and lies along a narrow strip surrounded by sea on both sides. The average width of urban Tarawa, for example, is just 450 meters (see Table 1).

Table 1 Kiribati Main Atolls – Population and Island Width

Atolls and islands	*Population (2000)*	*Widest widths (m)*	*Average widths (m)*
Makin	1,691	1700	600
Butaritari	3,464	1200	350
Marakei	2,544	2100	500
Abaiang	5,794	800	300
North Tarawa	4,477	1400	500
South (Urban) Tarawa	36,717*	2000	450
Maiana	2,048	1100	400
Kuria	961	3700	1,700
Aranuka	966	1600	770
Abemama	3,142	1200	710
Nonouti	3,176	900	400
Tabiteuea Nth	3,365	2300	700
Tabiteuea Sth	1,217	2000	650
Onotoa	1,668	940	420
Beru	2,732	1800	800
Nikunau	1,733	2600	1,300
Tamana	962	1100	900
Arorae	1,225	1100	800
Orona (Hull)	30	N/A	N/A
Teraina (Washington)	1,087	N/A	N/A
Tabuaeran (Fanning)	1,757	N/A	N/A
Kiritimati (Christmas)	3,431	39,000	7,245**

Sources: Lands and Survey Division (original); Government of Kiribati; IGCI (1999).
* www.worldtravelguide.net/data/kir/kir.asp ** *Minimum width of Christmas Island* (www.workersforjesus.com/31-mci.htm)

The islands are exposed to periodic storm surges with a return period of 14 years and to droughts during La Niña years (about once every 3-4 years). Rainfall above 3,000 mm per year (leading to floods) occurs once every 6-7 years. Added to natural vulnerability there is also considerable socio-economic vulnerability due to high population growth rates and in-migration into Tarawa, where semi-

permanent settlements, rate of development, and environmental degradation are already pronounced, and expected to accelerate in the near future.

The impacts of climate change are expected to be severe. In 1999-2000, the World Bank funded a study of vulnerability and adaptation in Tarawa, conducted by experts from the International Global Change Institute, the Government of Kiribati, the University of Otago, and Eco-wise Environment. The study found that climate change and sea level rise are likely to lead to severe incremental impacts, disrupting major economic and social sectors (Table 2). By 2050, in the absence of adaptation, Kiribati could experience potential economic damages of US$8-16 million a year, equivalent to 17-34 percent of the 1998 GDP.

Table 2. Potential Impacts of Climate Change, Variability and Sea Level Rise in Kiribati, 2050

Type of Impact	*Physical Impact*	*Annual Damages (in millions of 1998 US$)*	*Level of Certainty*
Impact on coastal areas:			
Loss of land to erosion		0.1-0.3	Low
Buariki (North Tarawa)	0.3 to 0.7%		
Bikenibeu (South Tarawa)	0.6 to 1.3%		
Loss of land and infrastructure to inundation		7-12	Low
Buariki (North Tarawa)	18 to 80%		
Bikenibeu (South Tarawa)	0 to 54 %		
Loss of coral reefs	10 to 40%	0.2-0.5	Very Low
Impact on water resources:			
Change in groundwater thickness (Bonriki lense)	19 to 38%	1-3	Low
Impact on agriculture: Agriculture Output Loss	Depends on rainfall scenarios; sea level rise would have negative impact	+	Low
Impact on public health:	Expected to increase	++	Low
Increased incidence of diarrheal disease	22 to 33%	+	Low
Increased epidemic potential of dengue fever	4.6 to 6.1 fold	+	Low
Increased incidence of ciguatera poisoning	Substantial: impact on subsistence	+	Very Low
Impact on public safety and the poor	crops/fisheries, increased crowding		
Potential increase in fatalities due to inundation and water-borne or vector-borne diseases	Expected to increase	+	Low
Total Estimated Damages		*>8-16+*	

Furthermore, the study suggested that 18 to 80 % of the land in Buariki, North Tarawa, and up to 54% of land in Bikenibeu, South Tarawa, could become inundated by 2050, though the effects of erosion are expected to be relatively small. The combined effect of sea level rise, changes in rainfall, and changes in evapotranspiration due to higher temperatures could result in a 19-38 % decline in the thickness of the main groundwater lens in Tarawa. Agriculture productivity – particularly for taro and pandanus – could decline due to storm induced saltwater intrusion into groundwater. Higher temperatures could also increase the epidemic potential for dengue fever by 22-33 %, increase the incidence of ciguatera poisoning and degradation of coral reefs, and divert critical tuna resources away from Kiribati waters.

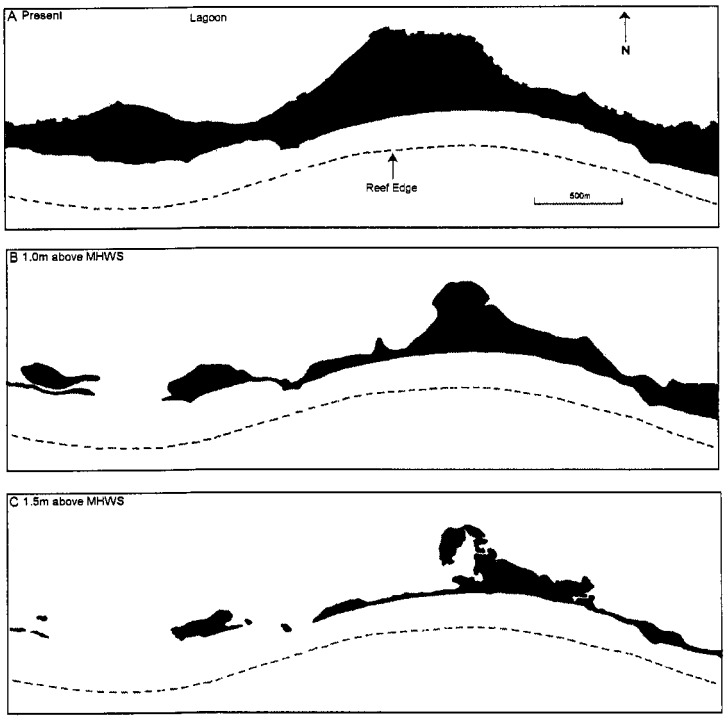


Fig. 2 – Projected Inundation of Bikenibeu Island (South Tarawa) under Worst-Case Scenario

Key
A: Present status
B: Residual island under a worst case scenario, 2100;
C: Residual island under worst case scenario and storm surge, 2100

Source: World Bank (2000).

Climate change scenarios

The Kiribati Climate Change Study Team recently adopted an updated set of climate change scenarios (see Table 3). However, all policy documents also recognizes that the main impacts of climate change will not be felt through changes in the annual mean temperature or rainfall, but through its effects on the variability, including return periods of particular storm surges, intense rainfall, or drought. Hence, climate change adaptation should be managed by addressing the full range of climate-related hazards, ranging from weather extremes to creeping hazards and long-term trends. KAP-II will provide for TA to prepare risk information that includes the whole spectrum of climate variability and climate change, including current return periods of various climate extremes (droughts, extreme rainfall, storm surges, etc), and projected trends therein.

Table 3. Initial planning assumption for climate change on Tarawa

	2025	2050	2100
Mean sea level rise relative to the level in year 2000	**+6 cm** (+3 to +10 cm)	**+14 cm** (+6 to +26 cm)	**+39 cm** (+12 to +83 cm)
Change in annual mean air temperature relative to year 2000	**+0.4 °C** (+0.3 to +0.5)	**+1.0 °C** (+0.8 to +1.4)	**+2.3 °C** (+1.3 to +3.5)
Change in annual mean rainfall relative to year 2000	**+3%** (+1% to +7%)	**+7%** (+2% to +17%)	**+15%** (+4% to +46%)

Climate Change Adaptation Strategy, 2005, from analyses by the Climate Change Study Team. The projections are based upon four emission scenarios (IPCC SRES A1Fl, A2, B1 and B2), and three climate models (CSIRO2, HadCM3, CCCma1/2). The ranges reflect the uncertainty in climate projections, partly inherent in the climate models, and partly due to uncertainties about future greenhouse gas emissions.

Country Strategy

The Government of Kiribati has shown nearly a decade of commitment to climate change adaptation. A national Climate Change Team was established in 1995 under the US Country Studies Program. The team continued its work under the GEF-funded Pacific Islands Climate Change Assistance Programme (PICCAP, under UNDP assistance), which supported the preparation of Kiribati's initial National Communication to the UNFCCC (submitted at the 5th Conference of the Parties in 1999), as well as a Climate Change National Implementation Strategy (NIS), issued in January 2003. In subsequent years, preparation phase of the Kiribati Adaptation Program, and the preparatory activities for the National Adaptation Programme of Action, provided further consultations and analyses that are currently guiding Kiribati's response to adaptation. In June 2005, the Government of Kiribati adopted the following formal Policy on Adaptation to Climate Change:

'Warming of the earth's climate, with an associated rise in sea level and an increase in the frequency and severity of extreme weather conditions, is currently occurring and is likely to continue through this century. The principal cause of these changes is the effect on the earth's atmosphere of emissions from economic activities in industrialized countries. International recognition of this has led wealthy nations to set up arrangements to help developing countries with the design and financing of national programmes of adaptation to climate change.

Kiribati is particularly vulnerable to the impacts of climate change, which constitute a major strategic risk to the economy and national well-being. The nature of the risk has to be specified and appropriate responses developed at national and local levels. Successive Governments of Kiribati have been active in global and regional consultations about the climatic changes taking place and how to deal with them. National expertise has developed and links have been established with the relevant regional and international institutions.

As Kiribati cannot escape climate change it must adapt to it. The adaptation process needs to give people the best possible chance of living decent lives during and beyond the period of climate change now foreseen. As the impacts of climate change reach into all aspects of life in Kiribati, broad public consultation and participation in planning and implementation are needed for sustainable responses. Many departments of government are involved, requiring both central policy co-ordination and clear delegation of responsibility for action. And as the precise speed and extent of future climate change is unknowable, adaptive responses themselves need to be risk-minimizing, flexible and progressive.

The current statement of National Development Strategies (NDS) 2004-7 identifies climate change as a major area of developmental concern. In Key Policy Area 1, Economic Growth, Issue 3 states 'Climate change brings potentially costly risks to economic growth', and calls for the development of participatory and cost-effective ways of minimizing and managing risk of loss from climate change-related events'.

The Government's policy aims in respect of climate change are therefore that:

- *(a) Kiribati should be mentally, physically and financially well prepared to deal with whatever climatic trends and events the future may hold;*
- *(b) this should be achieved through a coordinated, participation-based adaptation programme carried out by official and private agencies; and*
- *(c) external financial assistance should be obtained to meet the costs of the national adaptation programme."*

Along with this Policy Statement, the government adopted a more elaborate Climate Change Adaptation Strategy, which is implemented, among others, through the Kiribati Adaptation Program. The following sections highlight the background of the Policy Statement, Climate Change Strategy, the Kiribati Adaptation Program, as well as the current KAP-II project.

Regional context

That approach to adaptation taken in Kiribati, including the mainstreaming of adaptation into economic planning, is fully consistent with the *Framework for Action on Climate Change, Climate Variability and Sea Level Rise* in the Pacific Island Region (2000). Under the adaptation objective statement, the Framework lists the following key outputs:

- Mainstream effective and efficient climate change related risk management in national development plans, budgets, sectoral plans, policies and projects
- Implement integrated adaptation measures and policies at the national and/or community level
- Strengthen national capacity to deal with and respond to climate related issues and mainstream adaptation in national planning
- Disseminate information about climate related issues related economic and social implications to high-level policy makers as well as the general public.
- Enhance the methods to help ensure a more effective linkage between identified vulnerabilities and proposed adaptation measures.

The Government's approach is also consistent with the recommendations of the first and second Pacific Islands High Level Adaptation Consultations (2002 and 2003). The 2002 Nadi Communiqué, endorsed by the Pacific Island Forum, stated that "*climate change, climate variability, and sea level rise is not just an environmental, but also an economic, social, and political issue for Pacific Island countries*". The Communiqué recommended the following major principles in mainstreaming adaptation:

- Integrate risk management in the national development planning and budgeting process
- Strengthen capacity for risk assessment and risk management
- Strengthen capacity of the ministries of environment to perform macroeconomic and cost/benefit analyses
- Strengthen the capacity of the ministries of planning and finance to internalize the implications of environmental issues and incorporate adaptation and disaster management concerns into the budget and planning processes
- Strengthen institutional arrangements for high-level national coordination and the formulation of national policies, strategies and strategic plans
- Disseminate information about climate change and adaptation and related economic and social implications to high-level policy makers as well as the wider public
- Include risk assessment and risk management in the formulation of projects, programs and the development plan itself

The Kiribati Adaptation Program (KAP)

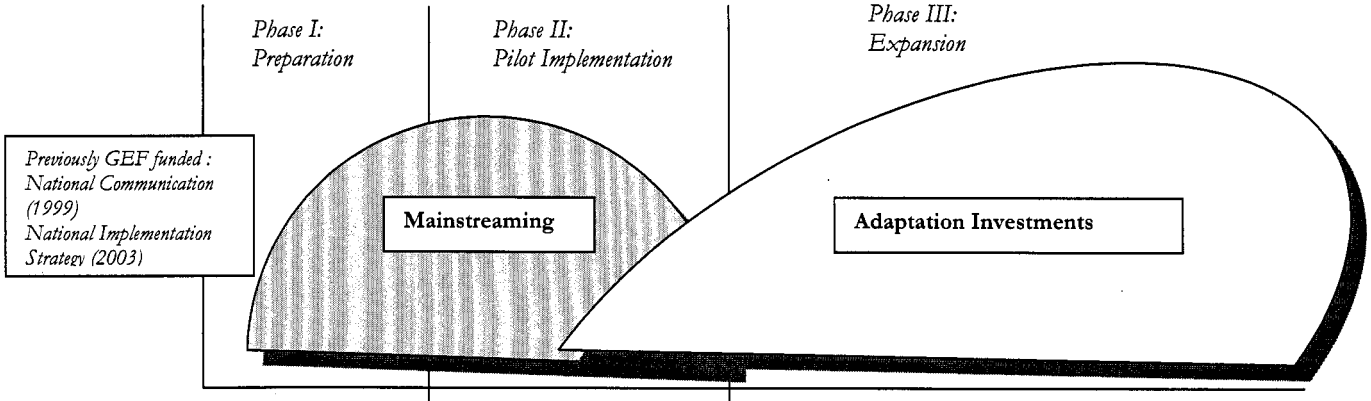
In 2003, as a direct follow-up of the 2000 World Bank Study and the regional developments mentioned above, the Government of Kiribati, with support from the World Bank, started the Kiribati Adaptation Program (KAP), with the key goal of reducing Kiribati's vulnerability to climate change, climate variability and sea level rise. The program is envisaged to involve the following phases:

- ***Phase I: Preparation*** *(2003-2005).* This phase aimed to mainstream adaptation into national economic planning, prepare a National Adaptation Program of Action and design an intermediate pilot implementation phase, KAP-II. All of these activities were based upon an extensive consultation and process, as well as several technical studies in key affected sectors. It is being

funded under a Japan PHRD Climate Change Initiative (US$645,580), a National Adaptation Programme of Action grant under the LDC fund (US$200,000), Government contributions (US$25,000), and a GEF PDF-B Grant (US$99,100).

- ***Phase II: Pilot Implementation*** *(2006-2008)* is the focus of the current PAD. It aims to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of awareness and responsiveness into economic and operational planning. This will be achieved through continued consultation and awareness raising; consolidation of the mainstreaming of adaptation into national economic planning; and implementation of pilot adaptation measures to address pressing adaptation issues while building capacity in key government ministries, local government and communities. Besides the Government of Kiribati's own contribution, it will be financed by the GEF's Strategic Priority "*Piloting an Operational Approach to Adaptation*", with cofinancing from AusAID and NZAID and parallel financing from the EU.

- ***Phase III: Expansion*** *(2009-2015)* would gradually scale up the investments piloted under Phase II to cover all major islands and vulnerable sectors of Kiribati. This phase may be eligible for funding under one or more of the three global funds for adaptation (LDC, Special Climate Change Fund and Adaptation Fund), complemented by baseline financing from the GoK's own budget as well as bilateral contributions. Care would be taken to ensure that there would be no duplication of activities funded under the GEF Strategic Priority and those funded under the global funds, should they be accessed. The progression of KAP phases is outlined schematically below.

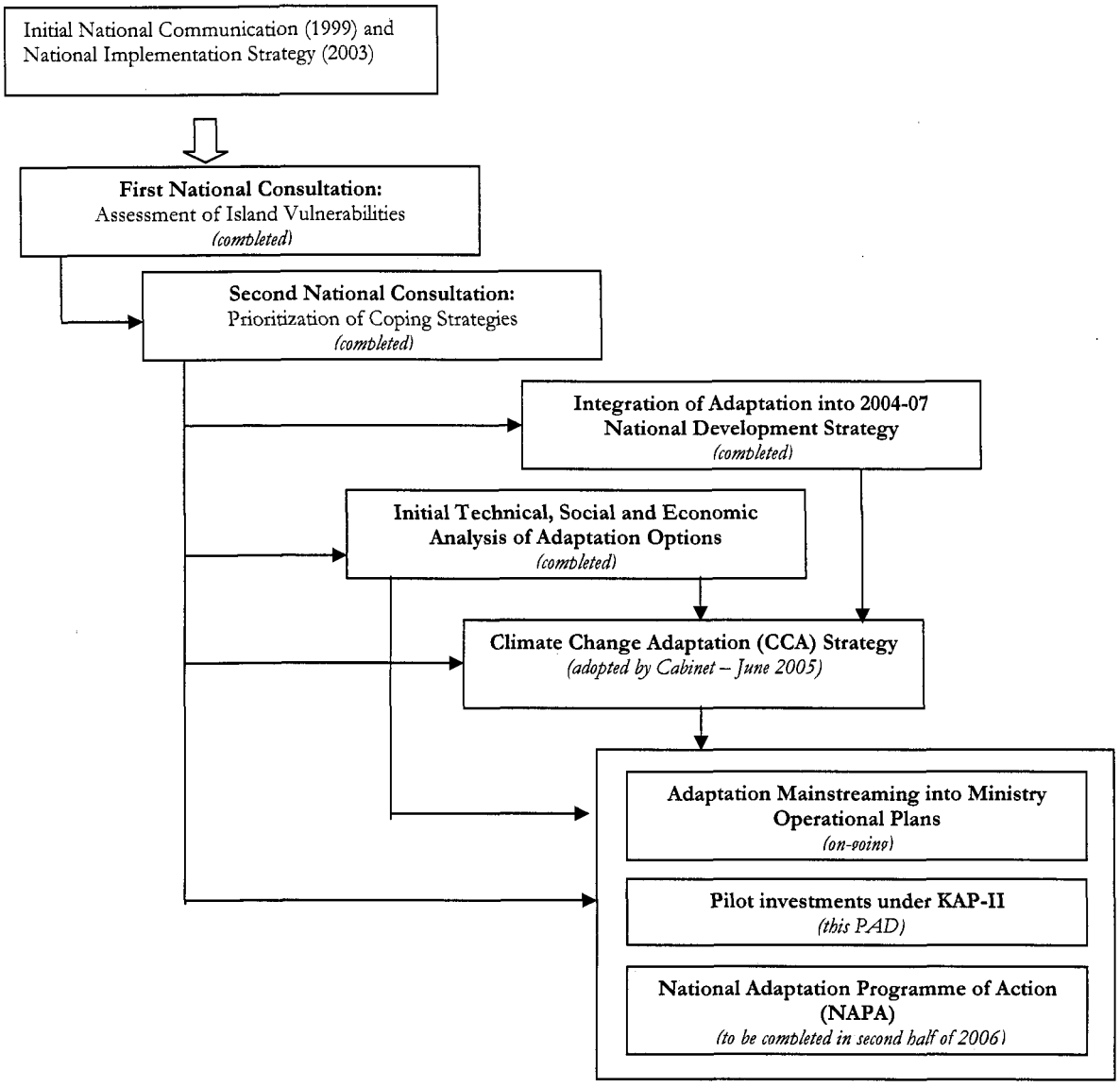


It is expected that external financing for mainstreaming will progressively decline as it is institutionalized into Kiribati's national economic planning, whilst financing for adaptation investments would be expanded to cover all critical islands and sectors. Successful mainstreaming would not imply that no further investment costs are required, only that adaptation response is integrated into regular

policy and implementation. Vulnerable countries like Kiribati are quite likely to see rising impacts and incremental development costs due to climate change, almost regardless of the effectiveness and sustainability of early adaptation measures. Mainstreaming is the best way to: (a) ensure that many low-cost adaptation measures are integrated into government policy and thereby become sustainable; and (b) ensure that the incremental investments needed to adapt to climate change are as effective and efficient as possible. For these investments, the Government of Kiribati hopes to gain support from the international community.

Results from KAP-I: Mainstreaming Adaptation into National Economic Planning

KAP-I has been closely linked with the preparation of the 2004-07 National Development Strategy and the Ministries' 2-3 years Operational Plans (funded partially through ADB assistance). It is also being coordinated with the preparation of the National Adaptation Programme of Action (NAPA) funded by GEF under UNDP execution. The process followed in mainstreaming is shown below:



National Consultations. Using established risk management tools (Comprehensive Hazard and Risk Management) developed by the South Pacific Applied Geosciences Commission (SOPAC), KAP-I held two major national consultations, which gradually built awareness and commitment for adaptation and climate change. The *First National Consultation*, held in the Gilbert and Line Island Groups from 23 of June to 15 August 2003, brought together Chief Councilors, government staff, clerks, *unimwane* representatives (traditional elders), women and youth from each of the islands of Kiribati. Key results included:

- Awareness that the changes they faced were not unique to their islands, but shared across the islands
- A catalogue of kinds of changes experienced over the last 20-40 years, and traditional coping mechanisms used to deal with those changes
- A preliminary assessment of areas where people felt they needed additional assistance in coping with their vulnerabilities
- A strategy to take results back to their islands for further local level consultations
- A shared and distinctively I-Kiribati definition of what is *vulnerability* and *adaptation*

The *Second National Consultation* (November-December 2003) included most of the same stakeholders from the First Consultation, but also Island Project Officers. Key results included:

- Prioritization of vulnerabilities identified by the island stakeholders
- Identification of adaptation (coping) strategies for the identified vulnerabilities
- A classification of adaptation strategies into (a) those which were urgent and could be undertaken by communities themselves; (b) those which were urgent and would require outside help, and (c) those which were less urgent and did not need to be addressed immediately
- Participants then assigned urgent adaptation strategies for which outside help was required to specific ministries for inclusion in their operational plans

Mainstreaming into National Development Strategy. The National Consultations were closely coordinated with the formulation of the 2004-2007 National Development Strategy. Meetings on adaptation were immediately followed by discussions on the NDS, involving many of the same stakeholders. As a consequence, adaptation issues are well integrated into the NDS, and climate change is recognized as one of the key issues potentially affecting economic growth.

In order to implement the NDS mandate to address that vulnerability, the I-Kiribati Cabinet recently also adopted the Climate Change Adaptation (CCA) Policy Statement and Strategy (see above),

With respect to the responsibilities of the national government, the CCA Strategy adopts a perspective of mainstreaming adaptation into national economic planning, as reflected in the structure of KAP-II. Furthermore, KAP-II provides the resources and technical assistance to establish the participatory planning process envisaged in the CCA strategy, and delivers the external financial resources to address, on a pilot basis, the additional cost of some of the priority adaptation investments identified under KAP-I.

Mainstreaming into Ministry Operational Plans. Mainstreaming at the operational level is being enhanced by using the outputs of the National Consultations to inform the formulation of the annual Ministry Operational Plans (MOPs). MOPs, which were introduced in 2004, are the key planning tool for all Government Ministries and public enterprises. They are coupled to the government's program budget

(which in this context includes all sources, i.e. recurrent plus development, in kind and cash), and subject to biannual progress reporting to monitor Ministry performance. While in 2004, only a few MOPs reflected adaptation priorities, the 2005 MOPs showed considerable attention for adaptation in many key programs. The 2006 MOPs, which will incorporate the add-on investments of KAP-II, will be the first generation of MOPs with comprehensive mainstreaming of adaptation priorities across all climate relevant programs in the key ministries. During KAP-II, this mainstreaming process will continue, and adaptation priorities in the key MOPs will be fine-tuned on the basis of further consultations and technical inputs. While specific pilot investment activities that are part of KAP-II will only appear in the MOPs for the years in which they are implemented, most of the mainstreaming of adaptation in MOPs programs will be based on recurrent budget resources, and are expected to become continuous components of relevant MOPs, fully sustainable after the end of KAP-II (although future specific adaptation investments in the expansion phase would again be added to the regular level of activity in the MOPs of affected Ministries).

Social, Technical and Economic Assessments. Under complementary KAP and NAPA funding, adaptation investments have been assessed and prioritized based on technical, social and economic merits (as summarized in Annex 4). In response to the concerns expressed by the national consultations, key technical and economic assessments focused on strategic options for coastal management and freshwater resources. As part of the coastal vulnerability analysis, KAP-I also supported a comparison of old (post World War II) maps to determine historical rates of island erosion. A comprehensive social assessment *"The Sun is Coming Closer to my Island"* was conducted based partially on fieldwork in five islands (Butaritari, Abemana, Kiritimati, Tamana, and Onotoa). As part of the GEF-PDF B preparation grant, an environmental analysis, regulatory review, land acquisition framework, further technical assessments, and preparation of a Procedures Manual for island investments have been carried out. The NAPA process is expected to result in a National Adaptation Program of Action in early 2006.

The basis for the design of KAP-II's pilot investments

KAP-II component includes a number of priority public sector adaptation investments in key vulnerable sectors, as identified and prioritized in the Ministries Operational Plans (MOP). By adding project funds to the Government budget for these investments, the project provides an incentive for a gradual uptake of adaptation-friendly investments and policies across the development planning of Kiribati.

KAP-I came at an opportune time, since 2004 marked the first year that MOPs were introduced in Kiribati. Each priority program in sectoral Ministries and public enterprises will have specific program indicators, and should be supported by the Ministry's program budget. These indicators, once developed, will also become the output indicators for KAP-II, thus ensuring that project monitoring is closely linked to the national budget.

The process for prioritization of adaptation investments is explained briefly below:

1. Identification of Coping Strategies

During the first national consultation, representatives from each of the islands identified the key changes (hazards) experienced over the past 20-40 years, and the coping mechanisms proposed to deal with these changes. An example is shown below:

Hazards	Impact	Coping Strategies
High storm surge	Inundation : water becomes brackish Erosion: reduction of land area	Construct wood embankment Plant mangroves; limit removal of aggregates

2. Adaptation Prioritization and Responsibility Allocation

During the second national consultation, island representatives rated the adaptation options and classified them into four categories:

A = Urgent adaptation options which can be done by communities themselves ("*things that we can do right away*")
B = Urgent adaptation options for which communities need assistance from the Government ("*things that we want to do right away, but for which we need assistance*")
C = Adaptation option that are less important/urgent ("*things that are somewhat less important/urgent*")
D = Adaptation options for which there is still no need or willingness to implement ("*things that we do not yet need or want to do*").

Only B category options were considered in the process of mainstreaming into the MOPs.

Adaptation Option	Priority Category	Rank	Category	Lead Ministry
Awareness raising	B	1	General	MELAD MCTTD/MEYS
Water Resources:			Water resources	
-Protect water wells	B	3		MPWU
-Assess available water	B	4		MPWU
-Water pumps and pipes	B	2		MPWU

3. Assessment of Potential Global Environmental Benefits and Incremental Development Costs

The priority adaptation options were then assessed on a preliminary basis against their potential global environmental benefits, and incremental development costs due to climate change. Not surprisingly, this analysis found that many adaptation investments with significant incremental development costs did not have significant global environmental benefits:

Adaptation Option	Global Environmental Benefits?	Global Development Costs?	Priority Category	Rank	Category	Lead Ministry
Awareness raising	Yes (High)	Yes (High)	B	1	General	MELAD MCTTD/MEYS
Water Resources:					Water Resources	
-Protect water wells	No	Yes (Med)	B	3		MPWU
-Assess available water	Yes (Low)	Yes (Med)	B	4		MPWU
-Water pumps and pipes	No	No	B	2		MPWU

4. Assessment of Type of Response Required

The adaptation options were then divided into five categories according to the nature of the response:

(1) Changes to government policies and strategies
(2) Changes to laws and regulations, with appropriate mechanisms to improve compliance
(3) Interaction of extension and information services with communities and households
(4) Formal engineering and construction works by Government, island councils and contractors
(5) Informal engineering and construction works by households and communities

5. Mainstreaming into the Ministry Operational Plans

The adaptation options were circulated to all relevant Ministries during the process of formulation of their Operational Plans, and facilitated by a team of consultants. The investments were checked against the Ministries key programs to ensure that they had a 'home'. The results are summarized in Table 4. The 5 major sectoral Ministries that would be most involved in implementing adaptation include:

- Ministry of Environment, Lands and Agriculture Development (MELAD)
- Ministry of Public Works and Utilities (MPWU)
- Ministry of Internal and Social Affairs (MISA)
- Ministry of Fisheries and Marine Resources Development (MFMRD)
- Ministry of Communication, Transport and Tourism Development (MLPID)

The Ministry of Health and Medical Services is closely involved in KAP, but will not be implementing specific investments during KAP-II. More in general, it is important to emphasize that KAP-II has been selective, and that a future expansion of the adaptation program will probably not only involve a scaling up of KAP-II's pilot investments, but also an expansion to other sectors. Examples include health (including vector-borne disease management) and agriculture – both sectors have clear adaptation issues, but were deemed less important want water and coastal protection (also because improvements in water and sanitation and coastal land use also address some of the key health and agriculture issues that were identified by the national consultations).

To date, the adaptation options emerging from the national consultation have been treated with respect among Government Ministries. Sectoral Ministries have raised no objections to the sharpening and intensifying of their response to the challenges of climate change. However, the prioritization of adaptation options has not yet penetrated very far down to the operational level. Part of the problem may be KAP's focus on "no regrets" options, rather than expensive, attention-catching solutions to climate change which can excite public imagination. KAP's approach is in effect an all-pervading but incremental, low-key process, eventually affecting all key aspects of the National Development Strategy. It is expected that this will be ultimately more effective than investing large funding in only a few high-profile investments.

6. Prioritizing and Specifying the Investments

The next steps in project preparation have been to prioritize specific adaptation investment, based upon the following criteria:

1.	Degree of adverse effects/vulnerability being addressed *(very high/ high/ medium/ low/ very low) (based upon risk/ vulnerability analysis)*
2.	Importance attached by the national consultations *(very high/ high/ medium/ low/ very low) (based upon rankings from national consultations)*
3.	Cost relative to benefits *(very high/ high/ medium/ low/ very low)*
4.	Timing/urgency *(immediate/ can wait/ unknown)*
5.	No-regrets *(yes/ no)*
6.	Environmental impacts *(yes/ some/ no/ unknown)*
7.	Culturally acceptable? *(yes/ probably/ maybe/ no – list potential problems)*
8.	Level of implementation *(generic/ sector-specific/ site-specific/ sector-and-site-specific)*
9.	Participatory *(bottom-up/ top-down/ both)*
10.	Synergy with poverty reduction *(yes/ some/ no)*
11.	Synergy with other multilateral environmental agreements *(yes/ some/ no)*

The outcome of this prioritization was used as an important input for the final design of KAP-II, which was based upon solid technical and economic assessments of the priority options. Finally, the nature of KAP-II's design added another, crucial criterion, namely that the investments had to fit within a MOP program identified by the leading Ministry, including allocation of resources from the government's recurrent budget. Furthermore, in addition to the priority investments, KAP-II includes support for continued participatory mainstreaming of adaptation, which will not only support the achievement and sustainability of the sectoral investments under KAP-II, but also involve a much wider set of actors in the adaptation process, and set the stage for the expansion of the adaptation efforts in Kiribati during KAP-III.

Furthermore, as can be seen in Table 4 below, many of the priority adaptation options identified by the national consultation involve regulatory reform or improved compliance to existing regulations. The legislative and regulatory review (funded by the GEF PDF-B) has recommended several changes to existing regulations and policies. All sectoral investments under KAP-II also include elements of regulatory reform, supported by provision of alternatives for destructive activities (such as beach mining) and awareness raising to foster behavioral change.

Table 4. Selected Adaptation Options Identified by Gilbert Island Representatives and Potential Inclusion into MOPs

Adaptation Option	*Type of Response*	*Global Environmental Benefits?*	*Incremental Development Costs?*	*Priority Category*	*Lead Ministries*	*Rank*	*Applicable MOP Program*	*Assessment of MOP commitment by August 2004*
Awareness								
Awareness raising about climate change	Extension Information	Yes (High, Climate Change)	Yes (High)	B	MELAD/ MCTTD MEYS	1	MCTTD – Provision of meteorological information to users MEYS – Curriculum development of resource centers	Method not clear. Needs an output on combining national efforts under NAPA and KAP.
Water Resources	Formal eng. and const. works						MPWU – Water Engineering Unit Design Rehabilitation and Implementation of Water Systems in the Outer Islands	
Protect water wells		No	Yes (Med)	B	MPWU	3		Actions by Island Councils within MPWU TA
Assess and locate available water on the island		Yes (Low)	Yes (Med)	B	MPWU	4		Major project included in water strategy, initial stage funding proposed under KAP-II
Water pumps and pipes to link good sources with settlement areas		No	Yes (Med)	B	MPWU	2		Up to 50% losses.
Desalination plant		No	Yes (Med)	B	MPWU	15		
Water conservation in piping systems		No	Yes (Med)	B	MPWU	8		As per above
Installation of freshwater tanks		No	Yes (Med)	B	MPWU	10		
		Yes (Low)	Yes (Med)	B	MPWU	26		
Inundation/Coastal Erosion								
Forecasting and early warning	Extens/Info	Yes (Med)	Yes (High)	A/B	MCTTD/ MELAD	12	MCTTD-Provision of meteorological inf. to users	Output of Met Service
Construct seawall with sloping face at seaward side	Formal. Eng.	No	Yes (Med)	B	MPWU	27	MPWU-Civil Eng. Services	Design point agreed by MPWU Standards includes bridged waterways, also planning retrofitting
Make sluicing gates	Formal Eng.	No	Yes (High)	B	MPWU	43	MPWU-Civil Eng. Services	
Plant mangroves	Extens/Info	Yes(High)	Yes (Med)	B	MELAD/	29	MELAD-Improving Env.	Needs additional output
Limit removal of aggregates	Reg.Changes	Yes(High)	Yes (Med)	B	MISA	46	Through Conservation and	Activity licensed but not controlled
EIA on coastal dev. activities	Reg. Changes	Yes(Low)	Yes (Med)	B	MELAD	47	Protection	Enforcement not fully effective
Prohibit types of development that destroy the environment (eg. seawalls, causeways)	Reg. Changes	Yes(High)	Yes (Med)	B	MELAD	49	MISA – Rural planning and coastal erosion	Total prohibition unrealistic – urban councils should provide advice and by-law enforcement
No reef blasting	Reg. Changes	Yes(High)	Yes (Med)	B	MELAD	58	MELAD – Improving Env.	Limited permits for maintaining existing passages
Agriculture								
Choose crops less sensitive to inundation and storms	Extens/Info	No	Yes (Med)	B	MELAD	32	MELAD-Extension Services and Agriculture Research	Include in agriculture extension outputs
Health								
Prevent fish poisoning by locating areas of toxic fish	Exten/Info	No	Yes (Med)	B	MFMRD	53		No specific reference to fish poisoning, needs output in community extension service at next MOP

Adaptation Option	*Type of Response*	*Global Environmental Benefits?*	*Incremental Development Costs?*	*Priority Category*	*Lead Ministries*	*Rank*	*Applicable MOP Program*	*Assessment of MOP commitment by August 2004*
Family Planning								
Family planning	Exten/Info	No	Yes (Med)	A	MHMS, household	21	MHMS	National population policy adopted, started end-August 2004
Overcrowding/Migration								
Voluntary resettlement to bigger Outer Islands, e.g. Kiritimati	Changes to Gov. policies	No	Yes (High, if due to sea	B	MISA/OB MLPID	23	MISA-Outer Island Development Growth	OB now responsible for Resettlement Committee
Develop Outer Islands	Ditto	No	level rise)	B	MISA/MCIC	35	Centers	Feasibility study by UNDP/ADB
Limit migration to Tarawa	Ditto	No	Ditto	B	OB	44		OB in charge, no concrete scheme
Town planning and enforcement of related legislation	Reg. Changes	No	Yes (Low)	B	MELAD	42-44	MELAD-Land Planning and Manag.	To include in Land Planning and Management
Migration to Australia/New Zealand	Changes to Gov. policies	No	Yes (High)	B	MFAI/MLHRD	9	OB-National Population Policy	Included in national pop. policy
Fisheries								
Control and limit catch	Reg. Changes	Yes(High)	Yes (Med)	B	MFMRD	40	MFMRD-Sustainable	Establish conservation areas,
Ban small-size fishing nets	Reg. Changes	Yes(High)	Yes (Med)	B	MFMRD	41	Use of Physical	Catching regulations under review
Manage licensing of foreign fisheries (also preventing destructive practices on reefs)	Reg. Changes	Yes(High)	Yes (Low)	B	MFMRD	48	Resources	Existing practice, enhanced awareness by MFMRD
Fish stock enhancement for depleting species	Changes to Gov. policies	No	Yes (Low)	B	MFMRD	51		Replenishment program from Tanaea breeding center
Waste Management								
Burying garden waste, other waste	Inf. Engineer.	Yes (Med)	Yes (Med)	B/A	MELAD	25	MELAD-Improving the Environment	Collaboration with MISA and local councils on extension
Awareness raising	Exten/Info	Yes (Med)	Yes (Med)	B	MELAD	28	through conservation	Ditto
Legislation for rubbish dumping	Reg. Changes	Yes (Med)	Yes (Med)	B	MELAD	38	and protection	Noticeable improvement in S. Tarawa, needs sustainability watching

Notes: Only priorities classified as "B" (urgent priorities which require Government support" are shown, since "A" type priorities (can be done by communities themselves) would be addressed in Component 2. Only shows priorities for which there are relevant Government programs. For a complete treatment of adaptation priorities, including those derived from the Line Islands consultations, see separate paper.

Types of Response Required: (1) Changes to government policies and strategies; (2) Changes to laws, regulations, with appropriate enforcement mechanisms; (3) Interaction of existing extension and information services with communities and households; (4) Formal engineering and construction works by government, island councils, and contractors; (5) Informal engineering and construction works by households and communities.

Priority Categories: B – Things we want to do right away, but for which we need help; A- Things we can and must do right away. The table does not show options classified only as A, C, or D (not urgent).

MCIC – Ministry of Commerce, Industry and Cooperatives; MCTTD – Ministry of Communications and Transport Development; MELAD – Ministry of Environment, Lands and Agric. Development; MFMRD – Ministry of Fisheries and Marine Resources Development; MHMS – Ministry of Health and Medical Services; MISA – Ministry of Internal and Social Affairs; MLPID – Ministry of Line and Phoenix Islands Development; MPWU – Ministry of Public Works and Utilities. OB – Office of Te Beretitenti.

Ranking of adaptation options is based on discussions of five working groups during the Second National Workshop.

ANNEX 2: MAJOR RELATED PROJECTS FINANCED BY THE BANK AND/OR OTHER AGENCIES

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

The Kiribati Adaptation Program is the first World Bank investment operation in Kiribati.

Project	*Sector Issue Addressed*	*Latest Supervision Ratings*	
		Implementation Progress	*Development Objective*
World Bank-managed: Kiribati Adaptation Project Preparation (KAP-I)	Adaptation Mainstreaming and Preparation of KAP-II	S	S
Other Development Agencies:			
ADB: Water Sector Technical Assistance *(on-going)*	Water sector policy and possible follow-up investment		
EU/SOPAC: Reducing Vulnerability in Pacific ACP States *(on-going)*	Vulnerability mapping; Possible future investment in coastal protection (under EDF)		
EU/SOPAC: Pacific Program for Water Governance	Assistance to improve freshwater resources management, including participatory planning		
UNDP: Outer Island Governance Assistance *(in preparation)*	Assistance to improve Outer Island governance		
ADB SAPHE project	Sanitation, Public Health and Environment Improvement		
UNDP/GEF, add-on project for Biodiversity Strategy Action Plan	Biodiversity conservation		
UNDP/GEF, National Capacity Self Assessment	Capacity to implement MEAs		
UNDP/GEF, through SPREP: International Waters project	International Waters		
UNEP/GEF, Persistent Organic Pollutants (POPs)	Persistent Organic Pollutants		
UNEP/GEF, Biosafety Framework	Biosafety		
ADB: TA related to potential development of Outer Islands Growth Centers	Feasibility of population resettlement (particularly to Kiritimati)		

ANNEX 3: RESULTS FRAMEWORK AND MONITORING

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Results Framework

PDO/Global Environmental Development Objective	Outcome Indicators	Use of Outcome Information
To develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of awareness and responsiveness into economic and operational planning.	SNPRA Unit established within first year of implementation as lead agency coordinating CCA and related strategies Percentage of climate-affected MOP programs that reflect systematic climate risk management Consistent use of best practice in the application of risk management, environmental assessment and options analysis, consistent with relevant defined strategic aims and policies, to public infrastructure and CCA vulnerability reduction measures	YR 1 gauge institutional progress YR 2 assess effectiveness and determine whether components need to be adjusted YR 3 feed results and lessons learned into design of continued GoK adaptation program
Intermediate Results One per Component	**Results Indicators for Each Component**	**Use of Results Monitoring**
Component One: Improved consultation, planning and coordination mechanisms to support CCA	**Component One:** Proportion of the adult population on Tarawa that is aware of CCA Number of NASC meetings with participation of Director/Senior Assistant Secretary or higher level officials of at least 4 key ministries Number of CCST meetings attended by technical officers of at least 6 key departments Number of schools that have incorporated climate risk management in their curriculum Number of church events that incorporate CCA messages Consultation and awareness raising activities reflect clear role for NGOs and women Climate risk profile produced and used in at least three major infrastructure investments	**Component One:** YR1/2/3: assess adjustments to be made to awareness raising and consultation activities YR3: assess evidence that awareness messages are resulting in the intended behavioral changes Yr3 : low incorporation of CCA messages or impact may indicate need to change the awareness message dissemination or incentives in the project YR2 : large number of Steering Committee meetings without the intended participants may indicate waning interest in topic or limited understanding on particular ministry's role in the CC agenda

Intermediate Results One per Component	Results Indicators for Each Component	Use of Results Monitoring
Component Two: Improved management of climate-related hazards to coasts, public assets and ecosystems	**Component Two :** Pilot investments are based on rigorous analysis of risk treatment options, including economic analysis, environmental and social assessment Frequency of flooding causing disruption of hospital services reduced to an acceptable return period Number of reports of coastal and marine ecosystem monitoring	**Component Two:** YR1/YR2 assess awareness of the communities to the need to reduce and or ban coastal aggregate mining YR2/3 develop acceptable and cost-effective options for climate proofing public assets YR2-3 compile lessons learnt from the various activities and use to improve design of new works, but also for use in the expanded climate proofing activities YR2/3 assess detail of coral monitoring for linkage to overall climate change agenda, but also to improved integrated ecosystem management
Component Three: Improved sustainability of freshwater resources	**Component Three:** National Water Strategy (NWS) adopted and reflected in MPWU MOP and PUB business plan Master Plan for water on Tarawa produced and reflected in MPWU MOP and PUB business plan Number of rainwater collection/storage facilities at government/community buildings Building code includes freshwater collection and storage as an objective Percentage reduction in water leakage in target area on Betio islet Number of water locations assessed and supply improvements implemented	**Component Three:** YR1/2 and 3 gauge adequacy in linkages in the preparation of the NWS, MP for Tarawa and ongoing consultations to ensure subsequent acceptability by all stakeholders YR 2/3 Assess whether the rainwater tanks are making a difference in increasing water availability YR 2/3 Gauge whether reduction in leakage is increasing water availability for families in target areas YR 2/3 Gauge capacity of local authorities in the use of building codes
Component Four: Improved capacity for CCA at island government and community level	**Component Four:** Number of Outer Island Profiles that contain climate risk information Number of Island Councils trained on CCA roles and responses Number of small scale adaptation investment grants awarded ent grants awarded for soft solutions	**Component Four:** YR 1/2/3 Gauge understanding of CCA in the OIs, and intensify awareness campaign if inadequate YR 2/3 Assess whether criteria to accessing the small scale adaptation investments are well understood and adjust as needed

Intermediate Results One per Component	Results Indicators for Each Component	Use of Results Monitoring
Component Five: Support for implementation of project activities	**Component Five:** KAP-II Project management integrated into SNPRA Unit in OB Percentage of project progress reports that are timely and reflect a good understanding of progress, critical issues, corrective actions, accountability for actions and timing. Lessons learned compiled for future adaptation program design	**Component Five:** YR 1/2/3 Gauge adequacy of facilities for the KAP-II office: human and equipment to support a robust M&E reporting system YR 1/2/3 Assess adequacy of the reporting system for the project in response to the various donor requirements

Arrangements for results monitoring

		Target Values			Data Collection and Reporting		
Outcome Indicators	**Baseline**	**YR1**	**YR2**	**YR3**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
SNPRA Unit established within first year of implementation as lead agency coordinating CCA and related strategies	None	Established	Ditto	Ditto	Annual	OB MOP	PMU/OB
Percentage of climate-affected MOP programs that reflect systematic climate risk management	TBD	20%	40%	60%	Annual	MOPs	OB/NEPO(MFED)
Consistent use of best practice in the application of risk management, environmental assessment and options analysis, consistent with relevant defined strategic aims and policies, to public infrastructure and CCA vulnerability reduction measures	None	n/a	All large pilot infrastructure constructed under the project	All large pilot infrastructure constructed under the project	Annual	Design documents	MPWU
Results Indicators for Each Component							
Component One:							
Proportion of the adult population on Tarawa that is aware of CCA	Survey in YR1	5%	20%	40%	Annual	Survey	OB/MISA
Number of NASC meetings with participation of Director/Senior Assistant Secretary or higher level officials of at least 4 key ministries	TBD	2	3	5	Quarterly	Minutes of NASC meetings	PMU/OB
Number of CCST meetings attended by technical officers of at least 6 key departments	None	8	8	8	Quarterly	Minutes of CCST meetings	PMU/OB
Number of schools that have incorporated climate risk management in their curriculum	None	0	5	10	Annual	Reports from MEYS	MEYS
Number of church events that incorporate CCA messages	None	5	10	20	Quarterly	Memo	KNCC representative in NASC
Consultation and awareness raising activities reflect clear role for NGOs and women	None	0	0	3	Annual	Climate risk profile Design documents	MELAD MPWU
Climate risk profile produced and used in at least three major							

Outcome Indicators	Baseline	Target Values			Data Collection and Reporting		
		YR1	YR2	YR3	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
infrastructure investments							
Component Two:							
Pilot investments are based on rigorous analysis of risk treatment options, including economic analysis, environmental and social assessment	None	n/a	All	All	Annual	Design documents	MPWU
Incidence of flooding causing disruption of hospital services reduced to an acceptable return period.	12 events pa	n/a	n/a	0 events, unless extreme conditions occur (i.e. with return period above defined acceptable level)	End of project	Hospital reports on flooding (+design documents for acceptable return period)	MHMS (+MPWU)
Number of reports of coastal and marine ecosystem monitoring	None	None	4	8	Quarterly	Monitoring reports	MELAD/MFMRD
Component Three: National Water Strategy adopted and reflected in MPWU MOP and PUB business plan	None	None	NWS Adopted	Ditto	Annual	Water Strategy, MPWU MOP, PUB business plan	MPWU
Master Plan for water on Tarawa produced and reflected in MPWU MOP and PUB business plan	None	None	MP Prepared	Ditto	Annual	Master Plan, MPWU MOP, PUB business plan	MPWU
Number of new rainwater collection/storage facilities at government/community buildings	0	0	10	20	Annual	Report by MPWU	MPWU
Building code includes freshwater collection and storage as an objective	None	None	BC amendments drafted	Ditto	Annual	Building Code	MPWU
Percentage reduction in water leakage in target area on Betio islet	None	0%	5%	20%	Annual	PUB reports	MPWU/PUB
Number of water locations assessed and supply improvements implemented	None	None	3	5	Annual	MPWU reports	MPWU

Outcome Indicators	Baseline	Target Values			Data Collection and Reporting		
		YR1	YR2	YR3	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Component Four: Number of Outer Island Profiles that contain climate risk information	TBD	4	8	12	Annual	Outer Island profiles	MISA
Number of Councils trained on CCA roles and responses	None	2	5	8	Annual	Training reports	MISA
Number of small scale adaptation investment grants awarded	None	2	10	16	Quarterly	NASC minutes	PMU/OB
Share of small-scale adaptation investment grants awarded for soft solutions relative to structural solutions.	n/a	n/a	30%	30%	Quarterly	PMU reports	
Component Five:							
KAP-II Project management integrated into SNPRA Unit in OB	None	Yes	Yes	Yes	Quarterly	Progress reports	PMU/OB
Percentage of project progress reports that are timely and reflect a good understanding of progress, critical issues, corrective actions, accountability for actions and timing.	None	60%	80%	100%	Monthly/Quarterly	Progress reports	PMU/OB
Lessons learned compiled (continuously) for future adaptation program design	None	n/a	Yes	Yes	Annual	Evolving report on lessons learned	PMU/OB

ANNEX 4: DETAILED PROJECT DESCRIPTION

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

The objective of KAP-II is to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of CCA awareness and responsiveness into economic and operational planning. This objective is derived from and governed by the national CCA strategy of June 2005. The objective does not require any additional major functions to be performed by GoK agencies beyond those already established or committed, but it requires performance of those tasks to be substantially expanded and improved. KAP-II's efforts will be directed towards changing how existing functions are carried out, by modifying the attitudes, skills and practices that govern how people interact with the climate, and strengthening technical and financial capacity for planning and implementing CCA measures.

KAP-II thus provides an essential transitional stage in working out the content of the long-term national response to climate change. It will form a developmental bridge in 2006-8 between the initial NAPA and KAP-I-sponsored national consultations and assessments of vulnerability and adaptation options, which have run through 2003-5, and the longer-term countrywide and unified application of CCA responses envisaged for 2008/9 onwards.

KAP-II's *outputs* will consist of changes to CCA-related institutional and operational arrangements, and the development and feasibility-proving of financial assistance schemes, design processes and physical works. The intended *outcome* is that Kiribati will have the information, analytical capacity and technical know-how needed to adapt successfully to climate change in the years ahead.

The project is designed to provide coordinated, mutually reinforcing and progress-monitored action to:

- strengthen the foundation for continued application of CCA-based approaches to development at national and local levels
- nurture long-term public support for and participation in CCA
- promote whole-of-government co-ordination in planning and operation of critical programs
- develop mutually supportive linkages between CCA and other key national development strategies
- prohibit land uses and activities that destabilize coastal zones and assist those that improve stability throughout Kiribati
- re-establish nation-wide weather monitoring and reporting
- implement the first phase of a long-term, CCA-inclusive, program of freshwater resource development and supply management
- develop cost-effective climate-proofing of public and private assets and apply the techniques to public assets at risk
- collaborate with other externally-funded interventions in CCA-related areas, *eg*, risk management, water strategy and building national planning capacity.

The project addresses those aims through activities in five components, namely:
1: Policy, planning and information
2: Land use, physical structures and ecosystems
3: Freshwater resources
4: Capacity at island and community level
5: Project management

The components are described below. The project design emphasizes the need for careful study of problems before undertaking solutions, and for analysis of the perceptions and attitudes governing people's behavior before designing interventions to change that behavior. Over the life of the project the balance of activities shifts progressively from surveys and analysis towards implementation of physical improvements.

1. Policy, planning and information

1.1. *Frameworks and processes for participation and awareness.* Much of CCA and KAP II are about changing people's attitudes and understanding about the climate and the environment in which social and economic activity takes place. Difficult and potentially unpopular choices lie ahead for governments and communities. The process by which important and sometimes complex issues are canvassed and decided needs to be carefully designed, so that the process itself builds trust and increases understanding among those involved.

This sub-component comprises the analytical review, and redesign if necessary, of the consultation and participation process in use in Kiribati to mobilise public support for major policy initiatives such as CCA. It is to be done as early as possible in the project, as it is intended to shape and inform several important consultative activities under this and other components. Provision is made for a combination of national and international expertise to review the current practice of consultative and participatory planning in Kiribati and propose changes where these appear necessary to improve its effectiveness.

1.2. *National consultation, participation and awareness.* One of the strengths of KAP II and its companion programme, NAPA, is the social and political foundation provided by two rounds of national consultations in 2002 and 2003. Insights gained there have helped to shape the KAP II programme here described. This sub-component aims to sustain and build on that foundation, creating greater and more competent awareness of climate change and variability, and appropriate responses, throughout the country. The activities will be planned and coordinated by the PMU within OB's SNPRA Unit, with close involvement from other members of the NASC, including KANGO, AMAK, and the Council of Churches. The design of the activities will be guided by the outputs of the preceding sub-component.

Four specific consultation-related activities have been identified during project design. These are:

1.2.1. *Two-yearly national consultations.* Further national consultations, with themes and content about aspects of CCA to be decided nearer the time, are provisionally scheduled for the third quarters of 2006 and 2008. This roughly straddles the expected 2007 national parliamentary election and four-yearly review and roll-forward of National Development Strategies.

1.2.2. *Regular CCA-based participatory events.* As the GoK's CCA strategy emerges in 2005-6 through KAP II, NAPA and the inclusion of CCA-related activities in MOPs, regular promotional and informational events will be organised with sporting, cultural and educational content and a clear CCA message. These will keep CCA in the public mind and convey useful information at several technical and political levels. Appropriate specialist advisers and trainers will be obtained as national and international consultants to OB's SNPRA Unit to work with the KAP II and NAPA office in preparing and implementing these events.

1.2.3. *Newsletter, media releases, and educational material.* It is expected that a regular CCA newsletter will be established, carrying global, regional and local CCA news and views. Interesting periodic and adhoc media releases will keep CCA in the public mind, and collaboration with MEYS's curriculum unit will lead to the inclusion of substantial and interesting CCA material in school curriculums. National and regional TA will be mobilized to assist in this activity.

1.2.4. *Annual survey of public attitudes and awareness.* The general level of CCA-awareness and attitudes to the prospect of changing life-styles and habits in order to adapt to CC will be surveyed annually, first to establish a baseline for measurement of change, and later to assess the impact both of KAP II and other deliberate interventions, and of climatic and other events. National and regional TA will be combined to design and execute this activity. The survey results will inform the design of campaigns and consultative/participatory activities for the overall adaptation efforts and at the specific component/activity level, e.g., management of freshwater resources in South Tarawa.

1.3. *Policy coordination and planning.* As GoK's CCA strategy points out, if CCA is to succeed it must reach into almost all parts of the public and private sectors, and actions across a wide field must be coordinated so as to complement and support each other. NDS2004-7 and the CCA policy and strategy also make clear that climate change is a key area of strategic risk for Kiribati. For these reasons GoK has decided to place responsibility for planning and co-ordinating CCA in the portfolio of OB and its SNPRA Unit. Similar strategic and risk-management considerations apply to population policy, with which CCA has a close intellectual and practical connection. At the same time the continued development, under the guidance of MFED's NEPO, of the MOP-based government operational planning and monitoring system—which still requires further attention —is necessary for the effective direction and control of GoK's manifold activities.

Four activities have also been identified in this sub-component, as follows:

1.3.1. Supp*ort NSRM in OB with overall responsibility for CC*A . The SNPRA Unit has been established by Cabinet decision in 2005, and will become operational in early 2006. Pressure on the new office will be immediate, as it has to take on 'strategic risk management' responsibility for CCA, population policy and disaster management, all of which are waiting for its establishment to provide them with an overseeing directorate. Integration of its own and other ministries' CCA responsibilities into the 2006 MOPs will be a priority concern of OB/SNPRA Unit, in coordination with the NEPO in MFED. Technical assistance is being provided to OB by AusAID. As KAP II funds become available and the SNPRA Unit gets into its stride the coordination, monitoring and reporting of CCA and KAP II progress will become a key activity.

1.3.2. *Development of risk diagnosis and response process.* Earlier in the design process this sub-component was perceived as mainly applicable to coastal zone management and climate-proofing of structures at risk. It is now given wider significance under Component 1, comprising the application of risk management techniques and disciplines to CCA issues generally, under the supervision of the SNPRA Unit. This involves changing the perceptions and attitudes of practical, technical persons to the problem of coastal zone management and asset protection under CC conditions.

The required shift is from a reactive, single-technique strategy of repairing damage as it occurs, to a preventive and more technically varied risk-mitigation strategy. Training and workshop activities for MELAD and MPWU technical staff under this sub-component should deliver the development and application of improved methods of CC-related risk diagnosis and response design. By linking this process to other sub-components of KAP II engaged with public consultation and participation it

should be possible to reach many more people, and influence attitudes about the application of CCA to many parts of national and community life.

1.3.3. *Support population and resettlement programmes.* The strong link between CCA and population policy is stressed in the CCA Strategy. KAP II will provide support to the implementation of GoK's population policy, which is also to be located in the OB/NSRM portfolio. The project will provide funding for long-term national and short-term international consultant personnel in 2006-8 to work with GoK staff and the national consultative and coordinating institutions concerned with population policy.

1.3.4. Support NASC and CCST. The two-tier structure of coordinating committees (NASC and CCST) has proven valuable in overseeing KAP I and ensuring that project design activities KAP I and NAPA do not become disconnected. It is important that this machinery is kept in good working order. KAP II makes provision for the costs of regular meetings of both NASC and CCST during the life of KAP II.

1.4. *Information for climate risk management.* KAP II aims to prepare people to adapt to climate change. To do this, good-quality information on the nature of climate change must be regularly made available in understandable form and given wide distribution in the context of consultative and participatory activities. Kiribati lacks base-line climatic data in suitable form for public education and use, and has no established process for producing, updating and disseminating such information. This sub-component will provide short-term international TA to work alongside MELAD staff to set up an appropriate system, and produce the base-line data in usable and up-datable form.

1.5. *Climate monitoring systems.* This small but important activity is to restore the national meteorological reporting system to operational effectiveness. It will take about six months to complete. KAP II provides funds for purchase of equipment and costs of training/retraining staff in its use. The project will be implemented by the GoK-funded Meteorological Division of MCTTD, assisted by TA organised in liaison with the World Meteorological Organisation under a regional programme to support national meteorological offices.

2. Land use, physical structures and ecosystems

This component is crucial to the long-term success of GoK's CCA strategy. It involves bringing about substantial changes in public understanding and attitudes to land use in coastal zones—effectively most of the land area of Kiribati. Activities in this component will make changes to the way GoK and local governments intervene to modify or prohibit behavior that threatens coastal stability and the security of public and private structures and other assets. They will include systematic analysis of coastal risks and causes of actual damage, leading to establishment of improved design parameters for coastal-zone construction and more cost-effective physical or behavioral responses to perceived risks. The component will include more focused and coordinated assessment of emerging risks to marine and land-based ecosystems, and identification of ways of enhancing their ability to adapt to climate change. The sub-components and key activities identified during project design are as follows:

2.1. *Integrating Climate Change Adaptation into Land Use Policies*

2.1.1. *Raise awareness, strengthen regulation and permitting.* The effectiveness of GoK's permitting operations, overseen by the Foreshore Management Committee, is identified as a cause for concern in the CCA Strategy.

Immediately, more intensive monitoring and measurement of existing beach mining activities, which collectively are removing substantial amounts of aggregate from South Tarawa beaches (while providing an important source of income for a significant number of households) is required to establish a baseline for change and enable the careful planning of tighter and more effective restrictions and eventual prohibition.

Not much later, the planned prohibition of beach mining in all but a very few situations (envisaged for mid-2007) will require stronger implementation and probably some revision of existing legislation, together with more effective co-ordination between national and local governments in South Tarawa. Strong political coherence and commitment, assisted by public education and attitude-changing activities under Component 1, will be needed to mobilise public support and carry through this crucial reform.

For this activity KAP II will provide national and regional TA to help MELAD revise, expand and carry out its planning and regulating tasks.

2.1.2. *Monitor environmental and economic impacts of aggregate mining project:* As the lagoon mining of aggregate (planned for late 2006) comes on stream its environmental impact will require close monitoring, and prompt feedback to enable any adjustments necessary to keep that impact at an acceptable level. This activity will provide a combination of international and locally recruited TA to set up effective monitoring and assist MELAD to carry it out.

2.2. *Improving protection of public assets.* This sub-component is aimed at increasing MPWU's capacity and versatility in confronting the impact of climate change and the existing exposure to risk of damage from severe weather) in respect of public structures—seawalls, port facilities, roads, airfields, schools, hospitals/clinics, houses and workplaces—and making this enhanced capability available to the public through the established permitting and public-advisory process. Two main activities are identified in this sub-component:

2.2.1. *Develop a systematic risk analysis/design response process and revised design parameters for coastal hazard protection.* Specific training activities are envisaged for MPWU professional and technical staff, conducted by international TA. Exercises and feasibility studies will demonstrate use of systematic risk analysis, and the costs and benefits of alternative design responses, including soft, ie non-structural, solutions.

Field investigations and study of oceanographic and other climatic data (see sub-component 1.4, above) will provide specific design parameters, eg for wave heights under storm conditions, that can be adjusted for changing climatic scenarios to help shape Kiribati engineering, structure-sitting and soft-solution designs and CCA strategies.

2.2.2. *Improve protection of key public assets at risk.* As design parameters for protective works emerge they will be applied to selected public assets in South Tarawa. Sufficient proving in an OI environment will also be carried out to demonstrate feasibility in more remote and less developed settings.

Reduction of flooding risk at the national hospital at Bikenibeu, incorporation of CCA factors in the design of the South Tarawa road upgrade project in 2006-7, the improved protection of one or more of the South Tarawa causeways, and the use of new seawall designs in economically significant locations, would all be covered in this activity.

The activity embodies sufficient flexibility of funding allocations to enable it to function as a contingency resource in case of damage from severe weather requiring urgent attention during the period of KAP II.

2.3. *Monitoring and sustaining coastal ecosystems.* Climate change is putting coastal ecosystems under pressure, but there is little specific information available on coastal ecosystems in Kiribati, nor on whether any changes are mainly attributable to CC, including shoreline movement, or to other factors such as increased pressure from human activity. This sub-component will enable the Environment and Conservation Division of MELAD and the Fisheries Division of MFMRD to undertake wider and more effective monitoring operations. It will combine international and national expertise to draw together information on the impact of climate change on coastal ecosystems and shorelines, set up monitoring systems and develop ways to analyse data and plan systematic responses to identified threats. Lump-sum provision is made for small investments in pilot schemes to protect endangered ecosystems identified during the monitoring activity.

3. Freshwater resources.

This component combines the normal operational commitments of MPWU and the water division of PUB with additional external inputs. These are to be financed by Australian aid through a trust fund established with the World Bank. This is expected to become operational at the start of 2006, several months before GEF funds become available. Additional inputs to be financed include national, regional and international TA and the purchase of equipment and services, including contracting of unskilled labour on water supply projects.

3.1. *Update water policy, standards and capabilities to include CCA.* This sub-component is directed to the whole country. Activities include development of a National Water Policy to provide a 20-30 year framework for freshwater resource planning; building capacity in MPWU and PUB to adopt a systematic, medium-term approach to water resource development and management incorporating information on climate variability and climate change; revision of national building codes to strengthen aspects relating to freshwater management (including rainwater) and sanitation; and development and promotion of guidelines on rainwater catchment, storage and use.

KAP II activities supporting development of the National Water Policy and other related activities are being defined in cooperation with the Kiribati component of the EU-funded, SOPAC-executed Pacific Programme for Water Governance

3.2. *South Tarawa water planning, remedial actions and pilot projects.* Pressure on the water resources and supply systems of Kiribati's main island is expected to increase under conditions of population growth, greater climate variability and continuing climate change. This sub-component will assist MPWU and PUB to prepare a master plan for water in Tarawa atoll, carry out assessments and pilot projects and studies to identify and increase available resources.

Funds will be provided to carry out intensive repairs and other measures to reduce losses from the installed systems. Activities aimed at increasing future availability of freshwater will include new approaches to obtaining access to known additional water reserves, pilot projects in rainwater collection and storage, and study of the feasibility of creating additional freshwater lens capacity by reclamation of land.

3.3.*Outer Islands assessments and public and private system upgrades.* Outer Islands freshwater systems are widely in need of repair and upgrading. Assessment, prioritization and design need to be promptly

followed by systematic improvement. This sub-component will enable this work to be undertaken incorporating climate variability and change factors. A grant scheme based on the success of a somewhat similar scheme in South Tarawa, to assist OI households to invest in rainwater catchment and storage—and possibly to install water-saving sanitation systems—will be piloted, and if successful, extended. As this sub-component develops momentum there will be scope for allocation and use of addition external funding from other donors who are interested in assisting OI development and welfare.

4. Capacity at island and community level

This component targets administrative and planning capacity at the sub-national level, which is critically important to the sustainability of CCA. With the help of a major UNDP project[2], MISA is currently initiating major efforts to improve island-level administration and community participation in governance.

Under that project 'island profiles' are being updated and expanded, spatial and statistical information is being put onto a GIS data base; and funds are being sought for OI 'growth centre' planning and investment. It is very important that these developments are all fully CCA-conscious and that island-level CCA design responses are well coordinated. The fullest possible development and use of GIS-based information on the physical condition of each island is potentially of tremendous CCA value.

At national level OB through its SNPRA Unit has oversight of the concern for coordination, sharing of information and collaboration in project planning and implementation. At island and local government level—including, very importantly, the urban governance of South Tarawa—responsibility will rest with MISA, assisted by KAP II funding and help with participatory planning and in collaboration with MELAD on coastal zone management.

Four sub-components identified in project design are briefly described below.

4.1. *Local consultations and participatory risk assessments.* Increased efforts at national level to improve public understanding of, and participation in, CCA will need to be backed up by similar efforts at island and community level. Provision is made for short-term international and longer P term/periodic national TA to assist in design and conduct of these efforts and for the cost of 5-10 meetings to support development and implementation of improved participatory methods in OIs and South Tarawa.

4.2. *Training in local government CCA roles and responses.* Councilors and staff will benefit from specific training in how to analyse situations arising from CC, and how best to use resources available to them in response. Provision is made for design and implementation of a training programme in selected OIs and South Tarawa. Programme content will also reflect activities taking place under other components of KAP II.

4.3. *Include CC vulnerability in OI profiles.* Provision is made for national and international TA to ensure that CCA-related information is captured and presented usably in the GIS-based OI profiles.

4.4. *Pilot small scale OI adaptation investments scheme.* This activity will test the feasibility of a grant scheme to assist small-scale CCA-related investments by communities in Outer Islands. Rules for eligibility and administration have been developed with WB guidance during KAP II project design, and are

[2] *Strengthening Decentralized Governance in Kiribati,* a US$1m project over three years

described in a Procedures Manual for this activity. Two Outer Islands are being selected for the pilot scheme, chosen to be representative of larger, more developed and smaller more remote locations. The scheme will be managed by MISA in accordance with the Procedures Manual.

5. Program management

5.1. *Operation of program management unit within OB.* It is intended to keep the KAP I program office in operation and have it seamlessly assume responsibility for KAP II (including the current project manager and the project accountant).

It will be particularly important to observe the procurement and reporting requirements of both GoK and WB, the latter acting on behalf of GEF, AusAID and NZAID. Provision is made for special training in procurement procedures and for the addition of a procurement officer and a general project officer to the program office staff from the start of 2006 for the life of KAP II.

5.2. *Program of activities.* A Program of Activities to be financed from the project will be prepared prior to implementation at the beginning of each year. Working on the basis of a Program of Activities should: (i) allow for the operationalization of a simplified reporting system; and (ii) speed-up implementation as activities for funding are planned for up-front and pre-approved by the Bank/OB and MFED and shared with AusAID and NZAID for comments and suggestions. The Program of Activities would be prepared by the PMU no later than mid-January of each implementation year. The Program of Activities must take into account the relevant Procurement Plan, which becomes an appendix.

Economic assessments for larger investment packages: For some larger investments to be funded under KAP II, comparative cost-benefit analyses are required; for example for the rehabilitation of the hospital and the causeway. Although the TA to be hired would be expected to carry out the required analysis, it is important that the National Economic and Planning Office (NEPO) in MFED, who routinely carry out such analyses, are consulted from the activities' inception.

5.3. *Review of KAP II.* Financial provision is made for mid-term and end-of-project reviews of KAP II.

ANNEX 5: PROJECT COSTS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Project Cost by Component

Project Cost By Component	*Local US $million*	*Foreign US $million*	*Total US $million*
Policy, planning and information	0.68	0.49	1.17
Land use, physical structures, and ecosystems	1.52	0.66	2.17
Freshwater resources	1.31	0.86	2.16
Capacity at island and community level	0.46	0.10	0.55
Project Management	0.29	0.10	0.39
Total Baseline Cost	**4.26**	**2.20**	**6.46**
Physical Contingencies	0.08	0.04	0.12
Price Contingencies			
Total Project Costs	**4.34**	**2.24**	**6.58**
Total Financing Required			

Project Cost by Financier *(estimated)*

Component	*GEF*	*AusAID*	NZAID	Government	*Total*
Policy, planning and information	0.81	0.00	0.00	0.37	1.17
Land use, physical structures, and ecosystems	0.40	0.00	0.76	1.05	2.17
Freshwater resources	0.00	1.44	0.00	0.70	2.16
Capacity at island and community level	0.31	0.00	0.06	0.19	0.55
Project Management	0.23	0.00	0.15	0.00	0.39
Total Baseline Costs	**1.74**	**1.44**	**0.97**	**2.31**	**6.46**
Contingencies	0.06	0.05	0.00	0.00	0.12
Total Project Costs (Estimated)	**1.80**	**1.49**	**0.97**	**2.31**	**6.58**

ANNEX 6: IMPLEMENTATION ARRANGEMENTS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Stakeholder Involvement

Key stakeholders in the project are all key actors who have a part to play in the long term mainstreaming of adaptation in national and local planning and policies. Strength of the KAP-I process has been the early mobilization of these stakeholders in a cooperative and coordinated process of awareness, consultation and strategy formulation. This coordination is expected to be a central element of all future phases of KAP as well.

At the island level stakeholders include village populations and subgroups that are actually experiencing the consequences and impacts of changes in their environment and quality of life, resulting from climate events. This includes households, extended household groups (*kainga*), traditional village institutions (such as the *unimwane* or traditional elder male decision making body), church groups (especially the Kiribati Protestant Church and the Catholic Church), women's and youth groups, and the village population as a whole, which congregates at the traditional village meeting houses, or *maneaba*. The social assessment and local level consultations mobilized these key groups in an initial assessment of vulnerabilities and possible coping mechanisms. Representatives from the *unimwane*, women's groups, and youth from key populated Outer Islands were present at the two National Consultations held in Tarawa (for Gilbert Island representatives) and Kiritimati (for Line Island Group representatives), where their concerns and recommendations were both shared with one another and communicated to the national level.

Other key stakeholders at the Island Level include the Island Council, island level church organizations, key subcommittees of the Island Council (particularly the Development Committee), and locally seconded representatives of central government (such as the head nurse of the island clinic, the Island Project Officer, agricultural officers and others). Many of these – and notably the Chief Councilor (elected head of the Island Council) and Chief Clerk – were participants at the National Consultations.

At the national level key stakeholders include:

- The National Government as a whole, as represented by the Office of Te Beretitenti, or *Beretitenti*, which also chairs the Cabinet.
- National Ministries, particularly those germane to climate change issues, including:
    - MFED – Ministry of Finance and Economic Development
    - MELAD – Ministry of Environment, Land and Agriculture Development
    - MPWU – Ministry of Public Works and Utilities
    - MISA – Ministry of Internal and Social Affairs
    - MFMRD – Ministry of Fisheries and Marine Resources Development
    - MLPID – Ministry of Line and Phoenix Islands Development
    - MHMS – Ministry of Health and Medical Services
    - MCTTD – Ministry of Communications, Transport and Tourism Development
- Other Ministries with indirect links to climate change adaptation:

- MCIC – Ministry of Commerce, Industry and Cooperatives
- MEYS – Ministry of Education, Youth and Sports
- MFAI – Ministry of Foreign Affairs and Immigration

- Civil Society, notably the Kiribati Association of NGOs (KANGO) and its constituent members, the women's organization All Women of Kiribati (AMAK) and the Council of Churches
- The private sector, as represented by the Kiribati Chamber of Commerce

These stakeholders have also been ongoing participants in the consultation and planning process, and have had several opportunities (as at the National Consultations) to interact with village and island-wide stakeholders from the Outer Islands. One of the key strengths of KAP-I has been its direct support for the National Development Strategy and MOPs as key tools for mainstreaming – the KAP consultants responsible for mainstreaming were also those assisting MFED with NDS and MOP development.

The processes of local and national consultation, as initiated in KAP-I, provide a unique opportunity in Kiribati for the development of an adaptation process based on actual needs as expressed from the lowest levels, communicated to and through island-wide bodies and institutions and incorporated at the national level through both policy and Ministerial Operating Plans. Ultimately each major island is expected to develop mechanisms by which decisions are made concerning adaptation priorities, and an assessment made concerning which measures can be implemented by people at the local level, which require assistance at the island-wide level (through, e.g., the Island Council or Island Church Councils) and which need to be communicated to the national level for inclusion in annual budgets. As such, the KAP process would go hand in hand with a strengthening of local governance and participatory planning processes, which is also expected to be assisted by a UNDP governance operation.

Finally, GEF, AusAID, NZAID, the World Bank and, by extension, other donors are important stakeholders both with respect to providing support for these processes, as well as by gaining experience on the modalities by which adaptation to climate change can be effectively mainstreamed into national development processes. The Kiribati experience is providing important lessons which are instrumental in the approach taken by global funding facilities with respect to such issues as incremental funding, and modalities of cooperation in addressing local and global issues related to climate change.

Coordination between NAPA and KAP and GEF Implementing Agencies

The preparation of Kiribati's National Adaptation Programme of Action (NAPA), supported by a Least Development Country Fund grant of US$200,000 has been closely linked to the preparatory work under KAP-I.

The merger of KAP and NAPA processes, though desirable from both the implementing agencies (World Bank and UNDP) as well as the Government, has not been an easy process. NAPA is sponsored by UNDP and executed by MELAD. KAP-Is sponsored by the World Bank and executed by MFED. This dual arrangement arose from both national and global forces.

Historically, climate change issues in Kiribati have been the mandate of MELAD (and its predecessor, the Ministry of Environment and Social Development). MELAD headed the national team under the Pacific Islands Climate Change Assistance Programme (PICCAP) and was responsible for preparing both the National Communications (1999) as well as the Climate Change National Implementation Strategy (2003). Global negotiations also favored UNDP as the GEF implementation agency for the National Adaptation Program of Action (NAPAs), and MELAD secured a NAPA grant in early 2004.

Whilst MELAD included the bulk of the technical expertise on climate change, it lacked the institutional leverage to influence the programs of other vital sectoral Ministries, such as Public Works, Internal Affairs, or Fisheries and Natural Resources. This was recognized both within in Kiribati, as well as regionally. During early consultations on KAP-I, it was therefore decided that the Office of Te Beretitenti would chair the KAP's Adaptation Steering Committee, and the Ministry of Finance and Economic Development would execute the project. This arrangement worked well in mainstreaming adaptation into economic planning, but it worked less well in mobilizing the technical experts necessary to prioritize MOP adaptation investments. In parallel, the NAPA team has mobilized to prepare a NAPA in accordance with strict UNFCCC guidelines.

The process of merging of the two teams has been approved by Cabinet as follows:

- The NAPA and KAP programs are merged and will result in a single national adaptation strategy covering a full range of responses at government, community and household levels; as well as a NAPA to communicate the most urgent and immediate needs to the UNFCCC.
- The KAP Steering Committee has been reestablished under a new name, National Adaptation Steering Committee (NASC), under the Office of Te Beretitenti. The KAP Project Management Unit will be the Secretariat for the Steering Committee. The NASC oversees the joint work program for the NAPA and KAP.
- The existing NAPA Team has become the Climate Change Study Team (CCST), the technical team for the unified program, reporting to the Steering Committee. The NAPA Management Unit has been acting as the Secretariat for the CCST.
- Two separate project management units have continued to exist to execute KAP-I funds (under MFED) and NAPA funds (under MELAD).
- The Office of Te Beretitenti is responsible for overall supervision of the unified climate change program.

These arrangements will need to be closely monitored with a view of ensuring a fully unified institutional arrangement for KAP-II and beyond (see next section).

Other GEF-funded projects in Kiribati include enabling activities for the Stockholm Convention on Persistent Organic Pollutants (POPs), in order to prepare a National Implementation Plan, as well as enabling activities for the UN Convention on Biodiversity, in order to prepare a National Biodiversity Strategy and Action Plan, and Country Report to the UNCBD (managed by UNEP and UNDP respectively, and implemented by the Ministry of Environment, Lands, and Agriculture Development, MELAD). Kiribati is also participating in the regional Pacific Invasive Species Management Project (managed by UNDP). Wherever overlaps between these projects and KAP could occur (for instance in the case of investments related to biodiversity conservation), close coordination would be sought by the continuous involvement of MELAD officials in the program.

Implementation Arrangements for KAP-II

The final implementation arrangements for KAP-II are as follows (see also the figure below):

Overall Coordination. The Office of Te Beretitenti (President) has overall coordinating responsibilities for KAP-II. Project management functions will be housed under the Strategic National Policy and Risk Assessment Unit (SNPRAU). The Secretary to the Office of Te Beretitenti, who also heads the SNPRA Unit, will act as Project Director. Besides her, the SNPRA Unit will have two senior policy officers (at Director level). The project will be contributing two additional senior policy level positions in the SNPRA Unit: a Senior Strategic Risk Management Officer (at Director level) who would act as Project Coordinator, and whose primary responsibilities would be policy and coordination matters related to KAP II and implementation of adaptation strategy; and a senior policy position to coordinate and plan action on population issues. The Project Coordinator would liaise with the PMU, which would consist of a project manager, a project accountant, a procurement officer, a general project officer, mainly charged with monitoring and reporting, and a project assistant.

An *Adaptation/Risk Management Steering Committee* (derived from the KAP-I National Adaptation Steering Committee, NASC) is responsible for promoting and monitoring coordination among project activities across the implementing agencies, including the utilization and sharing of technical expertise. The Steering Committee will be chaired by the Secretary for the Office of Te Beretitenti, and consist of senior officials from the main implementing agencies, and representatives of KANGO, AMAK, the Council of Churches, and the Chamber of Commmerce. The Steering Committee will report to the Development Coordinating Committee (DCC), a permanent body composed of Secretaries of all the Ministries, chaired by the Secretary to the Cabinet (based at the Office of Te Beretitenti).

The Steering Committee will be assisted by an inter-sectoral *Technical Team*, responsible for day-to-day technical coordination, and derived from the Climate Change Study Team (CCST). The Steering Committee and Technical Team would be expected to assisting the Strategic Risk Management Division not only in managing KAP, but also other hazard risk management initiatives in Kiribati.

The Office of Te Beretitenti, through the PMU, would be responsible for overall project financial management (following existing Government accounting and budget procedures), including audits, financial reporting and allocation of funds to components and activities identified in the MOPs.

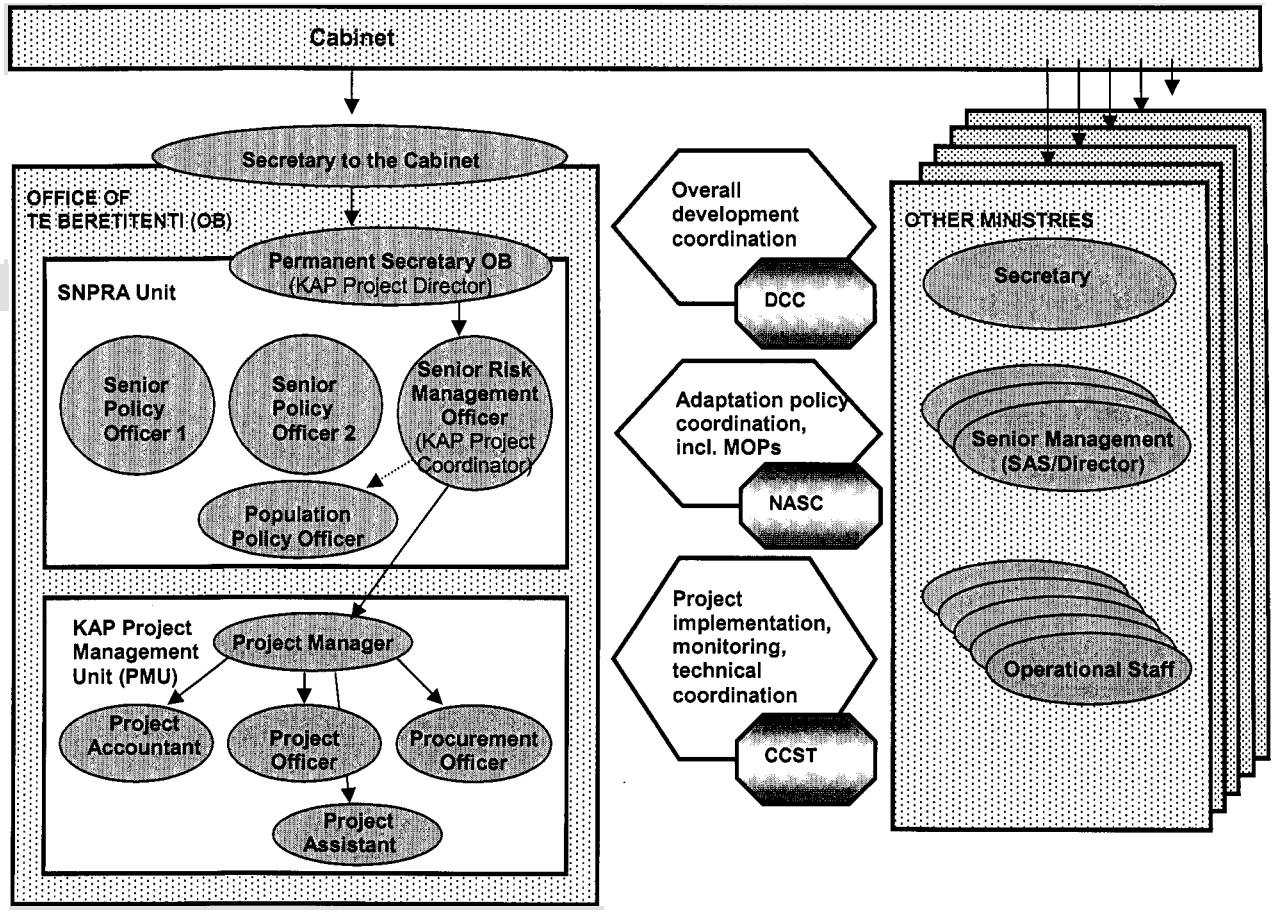
The *implementing agencies* will be the key ministries/departments involved in activities related to climate change and adaptation to climate change. This is expected to include primarily the Ministry of Environment, Lands and Agriculture (MELAD), the Ministry of Public Works and Utilities (MPWU), the Ministry of Fisheries and Marine Resources Development (MFMRD), the Ministry of Internal and Social Affairs (MISA), and the Ministry of Commerce, Transport and Tourism Development (MCTTD). Each of these agencies will be responsible for implementation of activities contained in their Ministry Operational Plans funded by the project. The PMU would support the line ministries by providing procurement, financial management, and project management services. The main implementing agencies would coordinate their activities through the Steering Committee and Technical Team, and would share and exchange technical expertise in any instance in which activities undertaken by one agency are likely to affect, or be affected by, areas addressed by another agency. MISA will be the leading agency for the Pilot Island Adaptation Component. KANGO and/or the Council of Churches will play an active role in facilitation and awareness. Mainstreaming into the

MOPs and the 2008-2011 NDS will be the joint responsibility of the SNPRA Unit and the National Economic Planning Office in the Ministry of Finance and Economic Development. Furthermore, the National Economic Planning Office (NEPO) will also play an important role in the provision of economic analysis for specific components of KAP-II, in particular the options analysis for adaptation investments.

The quality of project implementation will be ensured by the attention and capacity built during KAP's preparation. KAP-I project management is currently carried out by an all I-Kiribati team and they are experienced in Bank financial management, reporting and initial procurement procedures. This team is expected to continue in KAP-II, thus ensuring continuity and capacity retention.

Technical oversight will be done at three levels: First, through the national Technical Team (currently CCST) and Steering Committee (currently NASC) under the Office of Te Beretitenti, which reports directly to the Secretary to the Cabinet. Second, the project includes a budget for mid-term and end-of-project review to assess the progress of implementation in the pilot islands and sites chosen by the national adaptation investments. Results of this technical audit would be used to adjust and improve subsequent implementation. Finally, the World Bank will exercise close oversight of the national investment. In order to do so, the World Bank will evaluate options to minimize travel costs to pilot island sites, including, *inter alia*, contracting out detailed supervision in advance of regular biannual supervision missions.

Institutional Arrangements for KAP-II



ANNEX 7: FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

The desired outcome/result of project financial management (FM) arrangements is that project funds, including counterpart funds where applicable, will be used for the purposes intended. The identified financial management risk, is of the trust fund proceeds not being used for the purposes intended, and is a result of a combination of country, sector and project specific risk factors. Taking into account the risk mitigation measures proposed the FM **risk rating for this project is moderate**.

The Government of Kiribati (GoK) has expressed a strong preference for the project to follow the normal GoK processes for Development projects. The core FM arrangements for the project will make use of the GoK financial management and budget systems which have been assessed as reliable and robust but which cannot provide management reporting in sufficient detail for project monitoring purposes. A parallel information system will therefore be maintained to provide management information.

Project funds will flow through the Government's budget and accounting processes and be disbursed against a project code in the Development Budget. Advances will be made directly to the Government's Number 4 Bank Account (the development project bank account) and be accounted for as a virtual Special Account. The Government uses a warrant system to ensure that funds received are used for the purposes intended. Although the Number 4 Bank Account forms part of the overall Government cash position, the risk of advances being used to finance other short term needs of Government is low (GoK has reserves in excess of 5 times annual recurrent expenditures). There is a need to ensure that adequate accountability mechanisms are established for both the Outer Island Grant scheme and the Outer Island community development grant scheme for roof catchment and sanitation. The procedures for the Outer Island grant scheme have been established, while those for the Outer Island community development grant scheme for roof catchment and sanitation are to be developed during the first year of implementation. It is therefore recommended that no disbursements for the Outer Island community development grant scheme for roof catchment and sanitation be made until the project has submitted to the Bank a satisfactory Procedures Manual.

A single disbursement category will be used in each legal agreement which will significantly reduce the burden of reporting for the Government without negatively impacting on the Bank; however an additional disbursement category relating to the Outer Island community development grant scheme for roof catchment and sanitation will be required so as to allow monitoring of the proposed disbursement condition. Initially, disbursement on the project will be transaction based, however the legal agreements will contain provisions for the adoption of report based disbursement as it is expected that the implementing agency will reach the necessary standards of reporting and accounting rapidly.

Summary Project Description

The primary activities of the Project are: (i) to fund priority adaptation measures mainstreamed into the Ministerial Operating Plans of Key Sectoral Ministries; (ii) to fund pilot community based adaptation investments in two pilot islands according to a whole-island approach; (iii) to fund periodic national consultations, awareness, and consultation in islands targeted for the expansion phase; and (iv) to fund training, priority studies, and project management.

Implementing Entity

The project will be implemented by the Office of the Beretenti which is in the process of establishing a National Strategic Risk Management Unit. To reduce the incremental burden on the OB, a project management unit will be established (a feature carried over from the first phase of the project). The PMU will be responsible for processing of payments / budgets through the Government systems, maintenance of a parallel information system and ensuring that the two systems are reconciled. In addition, the OB may issue departmental warrants to the Ministry of Works for items that are to be procured using "Force Account". The PMU will assist the Ministry of Works in the proper acquittal of warrants issued.

The PMU located within the KAP1 project has a senior accountant responsible for the preparation of reports and the processing of payments – it has been agreed that this person will also be employed under KAP-II. Given the expected increase in the volume of transactions, a further member of staff will be added to the PMU to assist in general project implementation, including financial management.

Risk Analysis

The table below summarizes the risk analysis. With the appropriate risk mitigation measures as outlined the overall **risk assessment is moderate**.

			1. ACTION PROPOSED		
Risk	***Rating***	***Comment***	Action	Responsibility	Due Date
Inherent Risk					
Country Level	Substantial	The Bank has not undertaken any diagnostic work on the country Public Financial Management Systems. Although the Government produces a timely balanced budget for Parliamentary Approval, accounts have not been published for a number of years. There is evidence of some fiscal stress building which is reflected in levels of drawdown from the RERF[3] which may not be sustainable.			
Entity Level	Low	Provided that staffing is adequate and sufficient office space is provided	Carry over KAP1 staffing into KAP2 and recruit an additional finance staff member	GoK	Within 3 months of effectiveness
Project Level	Moderate	The project is relatively small but includes both a community based grants scheme and would also introduce a revolving fund	Procedures Manual for the community based grants scheme and the revolving fund	GoK	Before disbursement is permitted for either of these activities
Control Risk					
Budgeting	Low	In order to use Government Systems the project has to be approved by the Development Coordination Committee prior to incorporation into the FY06 budget	DCC Approval and incorporation into budget	GoK	Effectiveness
Accounting	Low				
Internal Control	Moderate	The proposal is to use already well defined Government systems. However there is a slight concern that the controls for Outer Islands are not implemented in accordance with documented procedures. Of particular concern, is the inadequacy of the controls in the supply chain to Outer Islands.	Transaction based disbursement to begin with Ministry of Works to assume responsibility of supply chain to Outer Islands	GoK / World Bank Ministry of Works	Appraisal 3 months after effectiveness
Funds Flow	Low				
Financial Reporting	Low	Reports will be against agreed annual action plans which in turn will determine expenditure eligibility			
Auditing	Low	Audit will be undertaken by the Auditor General			

[3] RERF is the Revenue Equalization Reserve Fund – for FY05 this provided approximately 18% of recurrent revenue (Some AUD 20 million).

Budgeting

Prior to project effectiveness the GoK will approve the project through the Development Coordination Committee for incorporation into the FY06 budget document. Development projects are not subject to Parliamentary appropriation per se but once incorporated into the Budget Document, the Minister of Finance may issue warrants on receipt of funds from the Development partner.

On an annual basis there will be an agreed set of activities derived from the MOPs, against which the project would disburse.

Funds Flow and Disbursement Arrangements

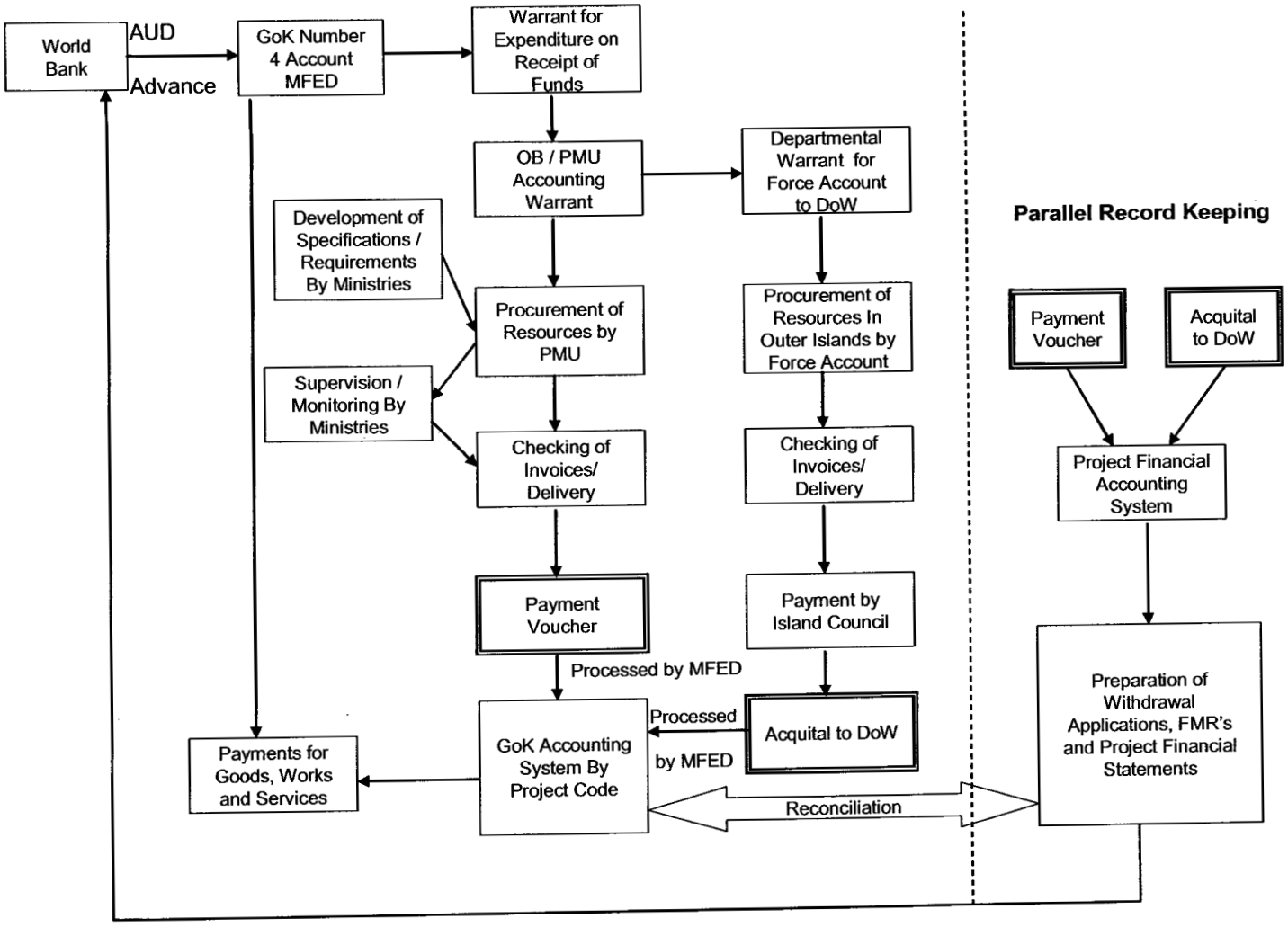
The diagram below summarizes the fund flow arrangements.

The Bank will advance funds in AUD sufficient to meet 4 months of expenditure to a virtual Special Account held in the GoK Number 4 Development Budget Bank Account. As there will be more than one legal agreement the authorized allocations will need to be determined for each agreement, but the aggregate should not exceed AUD 500,000. On receipt of funds, the GoK will issue the necessary warrants to the Office of the Beretenti who will then have the legal authority to expend the funds. The PMU will, in the first place, prepare monthly withdrawal applications on a transaction basis in order to replenish funds expended triggering another cycle of warrants etc. The legal agreements would provide for the transition of the project into report based disbursement – this would be expected to happen within the first year of the project life once reconciliation procedures between the Government accounting and project information system has shown them to be robust.

Country Financing Parameters have not been prepared for Kiribati. The disbursement percentage will be set at 100% but the legal agreements will specify that expenditure on certain items (Tax, insurance and inland freight) will not be eligible for financing from the Trust Funds. Moreover, the government will also be specifically endorsing to the Bank that they will not be charging these costs to the grants. A special case will be made in respect of the reasonable share of the safeguard costs incurred in making materials available on Outer Islands. The Bank recognizes that the use of commercial shipping lines by suppliers exposes both the supplier and the DoW to an unacceptably high level of risk of misappropriation (which cannot be insured against). In order to mitigate against this risk the Bank agrees that the DoW should assume responsibility for the supply chain to the Outer Islands through charter operations the costs of which would be covered under incremental operating costs.

A single disbursement category will be used in each legal agreement plus additional disbursement categories required for the monitoring of disbursement conditions – the need for additional disbursement categories was considered but in this case is not justified. The key in determining expenditure eligibility will be the annual activities list derived from the MOPs of Line Ministries.

KAP-II – Funds Flow and Reporting



Financial Reporting

The OB will be the implementing agency for the project and it is expected that the current project management unit will transfer to this office and operate under the SNPRA Unit. Given the increased volume of transactions and the requirement to administer the Small Grants Scheme it is recommended that an additional two staff members be recruited for the PMU (one who would be an experienced junior accounts person and the other acting in support of procurement). The PMU will therefore require additional working space and additional equipment (including access to the MFED Attaché accounting system – this could be through the existing OB link). Consideration was given to utilizing the existing resources available within the GoK accounts cadre to undertake the FM work. This would have placed an undue burden on the limited resources available which are already over stretched (and may be a cause of processing delays).

The Department of Works (DoW) will play an important role in the acquittal of activities on Outer Islands which will be managed through the issue of Departmental Warrants (DW) by the OB. The DW will be restricted to those items which are required to be procured under "Force Account" arrangements on Outer Islands which would typically include labor; local materials; local plant and equipment; and accommodation costs of supervisors. The PMU will need to be prepared to support the DoW in the process of acquitting these warrants as expenditures will not be eligible for inclusion on a WA until acquittal has been received. The DoW will also receive materials procured on their behalf and will be required to account for the use of these materials (a stock control system is already in place which is capable of accounting for materials at a Job level) – it will be a requirement that the DoW provides stock reports and a note will be included in the project financial statements indicating the levels of stock held.

The PMU will adapt the systems currently in place for KAP1 for use in KAP-II (a manual cash book supported by Quick Books accounts software) and this will provide the necessary financial information. Reports will be prepared on a quarterly basis and submitted to the Bank within 45 days of the quarter end. An additional requirement will be to show reconciliation as between the project information systems and the accounting records of Government (including reconciliation of the Virtual Special Account as represented by the Project Code within the Development Budget). The expenditure reports would be against the agreed list of activities for the financial year.

Accounting Policies and Standards - The accounting standard to be used will be Financial Reporting under the Cash Basis of Accounting as set out in the International Public Sector Accounting Standards (IPSAS).

Auditing

The Office of the Auditor General under the relevant legislation is mandated to audit the financial accounts of Government. KAP-II audited annual reports will be available to donors not later than 6 months after the end of each GoK financial year. The audit reports will be subject to the same scrutiny process as followed for other reports issued by the Office of Auditor General which includes tabling the reports in Parliament.

Supervision Plan

The overall rating for the project is moderate and it is envisaged that after the first year of operation FM supervision missions would be required at most on an annual basis.

ANNEX 8: PROCUREMENT ARRANGEMENTS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

A) General

Procurement for the proposed Project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Global Environment Facility Trust Fund Grant Agreement and the Australian Grant for Cofinancing Kiribati Adaptation Project Phase II. The general description of various items under different expenditure category is described below. For each contract to be financed by the Grant, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are to be agreed between the Recipient and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual Project implementation needs and improvements in institutional capacity.

I. Procurement of Works (US$ 0.6 million)

(a) International Competitive Bidding: ICB procedures shall be used for procurement of works estimated to cost US$100,000 or more per contract. Works planned for procurement through ICB include beach nourishment at national hospital, climate proofing causeway structure and climate proofing vulnerable infrastructure. The estimated cost of worked goods to be procured through this method is less than US$700,000.

(b) National Competitive Bidding (NCB): Works estimated to cost more than US$50,000 but less than US$100,000 per contract may be procured through NCB. The current legislation forms a sound basis for NCB and additional criteria for acceptability of NCB procedures are not considered necessary.

(c) Shopping (Small Works): The Project would finance a number of small works for rainwater collection/storage facilities at community buildings and rainwater collection for groundwater recharge. These works are estimated to cost less than US$ 50,000 each. Procurement of such small works shall be under lump-sum and/or fixed price contracts awarded on the basis of quotations obtained from at least three qualified domestic contractors in response to written invitations. The invitations for quotation shall include a detailed description of the works including basic specifications, the required completion date, and a form of agreement acceptable to the Bank, and relevant drawings where applicable. The award shall be made to the contractor offering the lowest price quotation for the work and who has experience and the resources to complete the contract successfully.

(d) Force Account: Construction by the use of the Recipient's own personnel and equipment will be used for activities that are unlikely to attract any bidders, in particular those in the Outer Islands (mainly physical improvements in the water supply system in selected locations under Component 3: Freshwater resources). Refer to Item B below for further details.

II. Procurement of Goods (US$ 0.6 million)

(a) International Competitive Bidding (ICB): ICB procedures shall be used for procurement of goods estimated to cost US$100,000 or more per contract. Goods planned for procurement through ICB include pipes and fittings for rehabilitation of Betio distribution and household plumbing system and solar pumps, pipes for water supply improvements. The estimated cost of goods to be procured through this method is less than US$ 400,000.

(b) National Competitive Bidding (NCB): Goods estimated to cost more than US$50,000 but less than US$100,000 per contract may be procured through NCB and include rainwater collection/storage facilities. The estimated cost of goods to be procured through this method is less than US$100,000. The current legislation forms a sound basis for NCB and additional criteria for acceptability of NCB procedures are not considered necessary.

(c) Shopping: Goods estimated to cost less than US$50,000 per contract may be procured through Shopping. The estimated cost of goods to be procured through this method is less than US$150,000.

(d) Direct Contracting: Procurement of standardized of equipment or spare parts, to be compatible with existing equipment, may justify additional purchases from the original Supplier. The estimated cost of goods to be procured through this method is less than US$ 80,000.

(e) Procurement from IAPSO: Computers and related equipment may be procured through the Inter-Agency Procurement Services of the United Nations (IAPSO). The estimated cost of goods to be procured through this method is less than US$100,000.

III. Selection of Consultants (US$ 2.0 millions)

The consultant's services would consist of survey and water resources assessment, which should be conducted by consulting firms. Due to the small national consulting industry, short lists of consultants composed entirely of national consultants shall not be applicable.

(a) Selection Based on Consultants' Qualifications (CQS): Regarding small assignments of routine nature, such as survey and assessment of simple nature, qualified consultant firms shall be selected through CQS method. The estimated value of consultants selected through CQS method would not exceed US$ 0.25 million.

(b) Individual Consultants: Approximately fifty individual consultants would be procured under the Project. They should be selected through a comparison of qualifications of at least three qualified consultants among those who have expressed interest in the assignments or have been approached directly. The total estimated cost of the individual consultants to be selected through a competitive process is US$ 1.8 millions. In addition, with appropriate justifications and after concurrence by the Bank, individual consultants may be selected on a sole-source basis in exceptional cases, such as (i) tasks that are a continuation of previous work that the consultants have carried out and for which the consultants were selected competitively, (ii) assignments lasting less than six months; and (c) when the individual is the only consultant qualified for the assignment. Based on the proposed Procurement Plan, selection of consultant to produce climate / weather / sea level risk

information and selection of consultant who will provide training at the Meteorological Office may be done on a sole-source basis.

IV. Small-Scale Adaptation Grants (US$ 0.4 million)

The project will finance a number of activities under the Capacity at Island and Community Level Component and it will be carried out with the active participation of local communities. A Procedures Manual (Pilot Outer Islands Investments Scheme Procedures Manual) for this component, with rules for eligibility and the procedures for selection and disbursement of the grants, including appropriate fiduciary and safeguard measures have been developed. The remoteness of the pilot islands is a major issue from an implementation perspective and due to these characteristics, special arrangements were considered. The selection criteria and the process for allocation, sample agreements, procurement and disbursement of the grants shall be in accordance with the Procedures Manual and the following procedures:

(a) Community Participation

i. **Goods**: Most goods consist of rehabilitation materials and other related consumables.

- **Direct contracting**: Because of the small size of the individual purchases and since a comparison of prices may not be practical due to quality and distance considerations, procurement of materials costing US$2,500 or less per contract may be through direct contracting from local markets or suppliers.

- **Shopping:** Except as provided above, for goods that are estimated to cost US$15,000 or less per contract, a comparison of three quotations shall be required. There will not be contracts above US$ 15,000.

ii. **Works:** Most grants involve only minor rehabilitation works necessary for small repairs and adjustments or water and sanitation arrangements.

- **Direct contracting**: Because of the small size of the individual contracts and since a comparison of prices may not be practical, procurement of works costing US$2,500 or less per contract may be through direct labor.

- **Procurement of Small Works**: Except as provided above, for works estimated to cost US$ 20,000 or less per contract, a comparison of quotations shall be required. Procurement of such small works shall be under lump-sum, fixed price contracts awarded on the basis of quotations obtained from at least three qualified domestic contractors in response to written invitations. The invitations for quotation shall include a detailed description of the works including basic specifications, the required completion date, and a form of agreement acceptable to the Bank, and relevant drawings where applicable. The award shall be made to the contractor offering the lowest price quotation for the work and who has experience and the resources to complete the contract successfully. If three qualified contractors are not available within the community area, the contract may be awarded on basis of two quotations or awarded directly to a sole qualified contractor. There will not be contracts above US$ 20,000.

iii. **Individual Consultants:** Services to be provided by local consultants will involve training and workshops and will follow the individual selection procedures on the basis of comparison of qualifications.

- **Sole Source**: Because of the small size of the individual contracts and since a comparison of three qualified candidates may not be practical, then selection of individual consultants costing US$2,500 per contract or less may be through Sole Source.

- **Comparison of three qualified candidates:** Except as provided above, for individual contracts that are estimated to US$10,000 or less per contract a comparison of three qualified candidates shall be required. There will not be contracts above US$10,000

V. Operational Costs (US$ 0.4 million) This item would include communications, utilities, stationary, transportation, accommodation and allowances. The procurement of such items would follow implementing agency's administrative procedures.

B) Assessment of the agency's capacity to implement procurement

Procurement activities will be carried out by the Project Management Unit, which will be under the supervision of the Office of the President/ Office of Te Beretitenti (OB). An assessment of the capacity of the Implementing Agency to implement procurement actions for the project has been carried out by Cristiano Nunes (EAPCO) in July, 2005 and updated by Bisma Husen (EAPCO) in December 2005. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement and other Government Agencies.

Based on the assessment, the procurement risks are considered to be "High". This is mainly due to the weak procurement capacity. In order to mitigate the risks, the following actions were recommended:

- At least one staff should be designated as the Procurement Assistant. Provisions should be made for his/her training in international procurement.
- A Procurement Specialist, with qualifications acceptable to the Bank, should be recruited to provide support to the Project, for a time commensurable with the project procurement load. He/she would also be responsible for assisting the Deputy Secretary and mentoring the Procurement Assistant, organizing record keeping, preparing procurement documents, helping in evaluation of bids/proposals, and contract supervision and management
- The Operations Manual should include a Procurement Section, providing step-by-step process for managing procurement. It should also include the Procedures Manual for the Pilot Island Adaptation Component, where community based procurement is envisaged.

With regards to the utilization of Force Account, the Ministry of Public Works and Utilities (MPWU) would be responsible for carrying out physical improvements in the water supply system in selected locations under component 3. MPWU has had previous experiences with Force Account and the Task Team found it to have the overall capacity to implement such activities. Nevertheless, risks were identified and mitigation actions were included under the Project's design. Technical assistance for construction supervision has been included. Also, the use of Force Account would have to be managed through Departmental Warrants (DW) issued by the OB, so that productivity controls are in

place. The PMU would monitor MPWU's performance and ensure that warrants are properly acquitted. The MPWU would also manage any necessary storage of construction materials and, as a result, it has been established that MPWU would provide detailed reports accounting for the use of these materials to the OB (a stock control system is already in place which is capable of accounting for materials at a job level).

C) Procurement Plan

The Recipient, at appraisal, developed a Procurement Plan for Project implementation which provides the basis for the procurement methods. This plan has been agreed between the Recipient and the Project Team on December 23, 2005 and is available at the Office of the President/ Office of Te Beretitenti (OB). It will also be available in the Project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual Project implementation needs and improvements in institutional capacity.

D) Frequency of Procurement Supervision

In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended a yearly supervision mission to visit the field to carry out post review of procurement actions.

E) Prior Review Thresholds

(a) Prior review by the Bank of Goods and Civil Works will include: (a) all International Competitive Bidding; (b) first two contracts implemented through Force Account; and (c) first two contracts awarded on the basis of NCB. The remaining procurement will be subject to post review.

(b) Prior review by the Bank of consultant services will involve: (a) prior review of all Terms of Reference regardless of the estimated value; (b) contracts greater than US$100,000 equivalent for consultant services provided by firms, (c) selected contracts for individual consultants (on an exceptional basis and based on a specific request from the TTL. To be indicated in the procurement plan); and (d) all Single Source Selection and Sole Source, regardless of value. Other procurement of consultant services will be subject to post review.

(c) All the prior review contracts will be stated in the Procurement Plan

Attachment 1

Details of the Procurement Arrangement involving international competition

1. Goods and Works.

(a) Goods and Works contracts estimated to cost above US$ 100,000 per contract and all Direct Contracting will be subject to prior review by the Bank.

(b) List of contract Packages (no PQ and Domestic Preference applied):

Goods

Ref No.	Description	Cost (US$ equiv.)	Component	Procurement Method	Bank's Review	Completion Date	Notes
GD7	goods: pipes and fittings for rehabilitation of Betio distribution and household plumbing system – Component 3.2.5	190,000	3.2.5	ICB	Prior Review	30-Jan-07	
GD10	solar pumps, pipes, etc. for OI water supply upgrades - Component 3.3.2	190,000	3.3.2	ICB	Prior Review	29-Jan-07	

Works

Ref No.	Description	Cost (US$)	Component	Procurement Method	Donor Review	Bid Opening / Bid receipt	Notes
WK1	beach nourishment at national hospital (indicative) - Component 2.2.2	190,000	2.2.2	ICB	Prior Review	11-May-07	
WK2	climate proofing causeway structure (indicative) - Component 2.2.2	228,000	2.2.2	ICB	Prior Review	11-May-07	
WK3	climate proofing vulnerable infrastructure (indicative) - Component 2.2.2	199,120	2.2.2	ICB	Prior Review	11-May-07	

2. **Consulting Services.**

(a) List of Consulting Assignments with short-list of international firms.

Ref No.	Description	Cost (US$)	Component	Procurement Method	Donor Review	Sign Contract	Notes
FS1	9ppm nTA4 to supervise surveys (3+3+3) + 30ppm nTA2 to carry out surveys (3surveys*2month*5persons) - - Component 1.2.4	54,720	1.2.4	CQS	Prior Review	1-Nov-06	
FS2	6ppm to supervise surveying (2+2+2) + 30ppm nTA2 to carry out survey (3surveys*2month*5persons) - Component 3.2.2	47,880	3.2.2	CQS	Prior Review	1-Nov-06	
FS3	4ppm water int'l resource assessment crew (2 persons) + 4ppm local crew for water resource assessments (incl. per diems) - Component 3.2.3	77,520	3.2.3	CQS	Prior Review	1-Oct-06	
FS4	2ppm water resources assessments on OI (possibly same as firm as 3.2.3) + 12ppm local support for OI water resources assessments - Component 3.3.1	56,240	3.3.1	CQS	Prior Review	1-Oct-06	

(b) Consultancy services estimated to cost above US$ 50,000 per contract and Single Source selection of consultants (firms) for assignments regardless of the amount involved will be Subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: None

ANNEX 9: SAFEGUARD POLICY ISSUES

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Introduction:

This annex reviews the social and environmental safeguards issues germane to the Kiribati Adaptation Project II, and notes steps taken during project preparation and to be taken during project implementation to carry out the fiduciary responsibilities with respect to safeguards policies.

There are two safeguards policies triggered under the project. These are OD 4.01: Environmental Assessment, and OP 4.12: Resettlement. This annex will deal with each in turn.

A. Resettlement

Following the National Consultations, the CCST identified 10 priority areas for Kiribati with respect to adapting to climate change: awareness, water resources, inundation/coastal erosion, health impacts, agriculture, family planning, fisheries, waste management, overcrowding, and miscellaneous other options. Implementation of subprojects in these areas in the pilot islands may require some small amount of land acquisition and possible small-scale resettlement of affected people. Therefore a Resettlement Policy Framework has been developed that identifies the principles to be followed in the event of land acquisition, resettlement, and compensation based on Kiribati's legislation, and the Bank's policy on involuntary resettlement.

The purpose of the Resettlement Policy Framework is to provide guidance for the process and intended outcomes of resettlement plans and activities to be applied to subprojects during subproject implementation. The overall principle of the Resettlement Policy Framework is to ensure that those people whose livelihoods or assets are directly affected by the project realize benefits as a result of project implementation and that all steps are taken to minimize negative impacts on them.

Institutional Arrangements

The MELAD (Ministry of Environment, Lands and Agricultural Development) is the lead agency responsible for co-coordinating planning and implementation of lands acquisition and resettlement. The Ministry formulates and manages the resettlement budget and pays compensation to the affected people after the Lands Management Division (LMD) has carried out a survey of the assets and trees on the site. The LMD is also responsible for surveying the house sites. The MELAD provides the secretariat for the Resettlement Committee.

The Resettlement Committee was established by the GoK to deal with the resettlement of Tabuaeran, Teraina and Kiritimati islands. The Committee is responsible for developing guidelines, eligibility criteria, plans, strategies and priorities for the GoK resettlement schemes. The Committee is therefore involved in the planning and implementation of resettlement schemes. The Committee makes recommendations to the Cabinet for consideration and approval. The Committee is a high-level body consisting of the main GoK stakeholders under the chairmanship of the Minister of Environment Lands and Agricultural Development. The members include the Minister and Secretary of the Ministry for Line and Phoenix Development (MLPD), Secretary MELAD, Secretary Ministry of Internal and Social Affairs, Director of Lands Management, Director of Environment and Conservation Division, Director of Ministry of Education, Youth and Sport, an Economist from the Ministry of Finance and Economic Development, Chief Health Inspector, Chief Councilor (Betio Town Council), and the Chief Councilor (TUC).

The existing Resettlement Committee has the experience and the capability to deal with general resettlement issues, and it can also adequately handle any proposed lands acquisition and resettlement for the KAP. The resettlement plan for the Resettlement Committee is drawn as a joint effort by the principal GoK stakeholders, including the Lands Management Division and the Environmental and Conservation Division of the MELAD.

The MELAD has the expertise to draw up resettlement plans in line with the Bank's RAP procedures, and it is recommended that the MELAD, in conjunction with the other GoK key stakeholders, and the respective Island Councils and communities, is given responsibility in drawing up either the RAPs or the settlement plans for each island community. The participation of island community representatives is crucial both in the planning and implementation stages of these resettlement plans, as noted further below.

The Resettlement Process

Targeting and provision of information are critical to attaining the overall goals of the Project with particular reference to the project clientele. The objective is to disseminate information about the project to the potential affected population. On those islands where it is planned that subprojects will be implemented, an initial meeting should be held before any subprojects are prepared in which Island residents meet together at the Island Council maneaba. The purpose of this meeting will be to:

- Provide an overall explanation of the project and its objectives;
- Discuss the possible impacts with respect to land acquisition and resettlement;
- Explain that all land will be acquired voluntarily, the general nature of compensation and resettlement assistance to be provided, and the mechanisms for filing and assessing grievances for activities under the project;
- Explain the general process for preparing and submitting proposals for subprojects. The details of this process are discussed in the Procedures Manual for the pilot small-scale adaptation investments.

Subproject Preparation and Screening

On each island the Island Project Officer will be the key official who will work with villages and groups within villages to prepare subproject proposals under the project. Once villages decide on a subproject proposal and the proposal is prepared in a form that can be submitted for evaluation, the proposal will be passed on to the Island Development Committee. The process of evaluation by the IDC is discussed in detail in the Procedures Manual for the pilot small-scale Outer Island adaptation investments. As a part of this process, for each subproject identified for possible funding under KAP-II a screening process should be carried out to identify the impact of the subproject with respect to land acquisition, resettlement, livelihood interruption or other impacts on livelihood and/or assets that will trigger the resettlement policy framework. It is expected that in most cases the impacts on the affected people will be minor – that is, either no people are displaced and less than 10% of their productive assets are affected, or fewer than 200 people are displaced. In such cases an Abbreviated Resettlement Action Plan will be prepared. It is expected that most subprojects under KAP-II will require Abbreviated Resettlement Action Plans. Where this is not the case, a full Resettlement Action Plan must be agreed and implemented.

Consultations

Consultations with the local residents will be an ongoing feature of the process of subproject formulation, submission, approval, implementation and monitoring, and will include consistent attention to resettlement, land acquisition and related issues.

Consultations with potential affected people will be an important part of this process. Such consultations will begin with the information and awareness meetings that take place before any subproject proposals are prepared, and continue through the life of the project. The people must be informed about their options and rights pertaining to resettlement, consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives, and provided prompt compensation at full replacement for loss of assets because of the project (OP 4.12 para.6a). A consultation framework will be developed for each subproject that will outline exactly how the process of discussion and negotiation will take place.

Survey

As a part of the preparation of subproject proposals, a survey will be conducted to identify the likely impact of the subproject with respect to land acquisition and resettlement. This survey will be carried out under the direction of the IPO on each island for each subproject. The results of this survey will be included in the subproject proposal submission provided to the Island Development Council. The proposal submission will need to include the following information:

1. For any voluntary contributions of individual land without compensation, a consent form which includes the name of the land donor/s, and details of the contribution (type, size, location, specified period of use etc. as appropriate). This should be signed (or thumb-printed) by the land donor/s (including the male and female heads of the household involved), and the chairperson of the Council of Unimane.
2. For land contributions against compensation, a consent form which includes the name of the land donor/s, details of the contribution (type, size, location, specified period of use etc. as appropriate), and details of the agreed compensation arrangements. This should be signed by the land donor/s (including the male and female household heads), a nominated representative of the group making the subproject proposal, and the chairperson of the council of elders (the unimane).
3. Where the land donated is communal land, these forms can be signed on behalf of the village by a recognized village leader.

For sub-projects where land is donated or provided against compensation, the Island Development Council will take the following steps during its appraisal of proposed sub-projects:

i) verify with the land donor/s that the donation is indeed made on a voluntary basis, that the donor/s is/are the legitimate owner/user of such lands, and that the land donor/s is/are fully informed of the nature of the sub-project and the implications of donating the property;

ii) assess that the land donor does not suffer a substantial loss affecting his/her economic viability as a result of the arrangement. Where there is substantial loss the sub-project cannot be approved as proposed (the amount donated should usually not exceed 10% of his/her land or assets without appropriate compensation);

iii) assess that the compensation arrangements are appropriate. The compensation should be roughly equivalent to traditional compensation arrangements. Where demands are excessive, compensation inappropriate and/or the land donor and the community cannot agree, the IPO and/or Community Facilitators will encourage alternative sites or arrangements. The sub-project will not be approved for funding by a Small Grant until suitable alternative sites are

identified and land has been voluntarily made available through the process described above. If no suitable land is made available through the Voluntary Land Contribution process, the sub-project would not be further processed.

Disclosure of the RAP to the Affected People

A public meeting will be held in each affected village to inform the affected people about the resettlement and compensation issues. Once a Resettlement Action Plan is completed, a public meeting will be held to disclose the exact contents of the RAP to the affected people.

Sign Compensation Contract and Pay Compensation

The final step of resettlement implementation is agreement of all parties to the compensation and related arrangements, and payment of compensation, if necessary. Alternative forms of compensation, such as allocation of land and employment opportunities, will also be explored.

Source of Funding

The project will be responsible for funding all resettlement and land acquisition related expenses. Funding arrangements are discussed in more detail in section 4.

Grievance Redress Mechanism

The mechanisms for redressing grievances will also be presented and explained to the affected population in a public meeting. Affected people will be given opportunities to review the survey results and compensation policies during the resettlement planning and implementation. The first step in any grievance procedure will be negotiation at the village level between the affected persons and island representatives, particularly with the IPO and, through the IPO, with the Island Council. If this does not lead to a satisfactory arrangement, the grievance will be forwarded to the Project Management Office for adjudication. If this does not result in agreement the affected people shall have the right to pursue the grievance through the court system.

Monitoring

It is the responsibility of the GoK to make an assessment to determine that the objectives of the resettlement instrument has been achieved. The Bank requires that both an internal and external monitoring of the project's progress be undertaken. The details of the monitoring processes are discussed in Section 12.

This section has covered the basic approaches to be taken in the event of resettlement and/or land acquisition under the project. For a more complete discussion of these issues please refer to the Resettlement Policy Framework in project files.

B. Environment

Introduction

A Strategic Environmental Assessment was done as part of the preparation of KAP-II. The SEA was examined the environmental issues that are likely to arise under the Kiribati Adaptation Program Phase II, and particularly under Component 1, Priority National Adaptation Investment, and Component 2, Pilot Island Adaptation, and makes recommendations concerning how best to undertake environmental assessment of these activities to mitigate any possible negative consequences. As the specific activities to be undertaken under KAP-II have yet to be designed, the strategic assessment provides a general methodology for environmental screening of policies and plans, the preparation of environmental impact assessments for various kinds of potential activities and the monitoring of the implementation of the recommendations of those EIAs.

The CCA Strategy: Rationale and Aims

The key policy document covering adaptation to climate change in Kiribati is the Climate Change Adaptation Strategy. The CCA Strategy aims to strengthen Kiribati's ability to handle climate change by action under eight broad headings: integration of CCA into national planning; external financial and technical assistance; population and resettlement; governance and services; freshwater resources and supply systems; coastal zones and structures; marine resources; and survivability and self-reliance

As part of the preparation process for KAP-II a number of "soft" community options and interventions have been identified as likely areas for possible subprojects:

- Planting schemes for coastal erosion control, including, e.g., mangrove replanting or expansion, coastal land reforestation, planting of ironwood plants ("te nikabubuti", "te aroua", etc.) and other steps to stabilize coastal and foreshore areas.
- Marine protection strategies such as coral replanting and protection schemes and establishment of marine conservation areas
- Widening of channels for wetlands flushing.
- Water and sanitation improvements, such as relocation or protection of communal drinking sources, water tank construction and guttering, water pumps and pipes for distribution, etc. Materials would be provided by the grant funding, while labour and other inputs would be provided by the community or relevant groups.
- Replanting of food plants and trees or introduction of additional kinds of agricultural products and practices, restoration of inundated large community or extended families babai pits.
- Planting suitable trees around houses
- Community or village waste management system
- Control of vector-borne disease.
- Other projects not mentioned but which fall within GEF focal area of conserving biodiversity, reducing adverse climate change, and protecting international waters.

Environmental Management

It is clear that many of these options will have environmental impacts, though in most cases these impacts are not likely to be substantial, and in many, if not most, the longer term consequences will be positive. There is an established regulatory environment in Kiribati that mandates certain actions in the case of negative environmental impacts. The Environment Act 1999 provides for and establishes an integrated system of development control, environmental impact assessment and pollution control for Kiribati. The Minister of Environment, Lands and Agricultural Development is responsible for the due administration and implementation of the Act. All development proposals of government ministries, island councils, private developers and non-government organizations must undergo the environmental screening procedures of the Environment and Conservation Division (ECD) as stipulated in the Environment Regulations 2001. The screening procedure requires all project proponents to apply for a permit to carry out a prescribed development. The application form will be reviewed by ECD to determine whether the particular proposal requires further environmental study in the form of an initial environmental examination (IEE) or an EIS (a comprehensive environmental impact assessment [EIA] study) report. The EIA procedure allows for the project proponent to conduct its own EIA study and implement the ECD approved environmental management plan of project activities. The ECD would also provide monitoring measures for the proponent to implement

and for which National Environment Inspectors would closely monitor environmental compliance of the project.

A CCA project activity in an Outer Island would undergo the same environmental screening system where the initial application and subsequent regulatory activities are handled through the Environment and Conservation Division. Implementation, management and monitoring of the local project would be supervised by the Island Council involved, with possible assistance from ECD.

The central EIA unit of the ECD can best take on the role of referee and watchdog responsible for issuing regulatory and technical guidelines, resolving interagency conflicts, disseminating information, and the like. Under the guidance of the central EIA agency, however, primary responsibility for infusing environmental values into project-identification and development activities should remain with line ministries, sectoral agencies, Island Councils and private businesses.

All subprojects under the Pilot Island Adaptation component and any major activity under the MOPs will undergo environmental screening to determine the likely level of environmental impact. Activities will be categorized in a way consistent with Bank OD4.01. A proposed project with likely significant adverse environmental impacts that are sensitive, diverse or unprecedented will require preparation of a full EIA with an Environmental Management Plan, consistent with the requirements for a Category A project under OD4.01. A proposed project with impacts that are site-specific; few if any of which are irreversible; and where mitigation measures can be designed more readily than for Category A projects will be treated consistent with Category B projects under OD4.01. A project with few or minimal environmental impacts will be treated in a manner consistent with Category C projects, and will generally entail only initial environmental screening.

Key Institutional Players in Environmental Assessment and Monitoring

Planning and implementing CCA Strategies involves many ministries and agencies with different technical specializations. Recent institutional changes and developments have helped to streamline and coordinate activities among those ministries and agencies. Central policy coordination will be provided by the Office of Te Beretitenti (OB) through the recently established division of Strategic Risk Management. A technical working group designated the Climate Change Study Team (CCST) is currently based in the Ministry of Environment, Lands and Agricultural Development (MELAD) and chaired by a senior MELAD official. This group is made up of national climate change specialists and officials from the most concerned ministries. CCST monitors climate change nationally and globally and assesses the vulnerability of islands and investments or activities to climate-related risks. CCST reports to the National Adaptation Steering Committee (NASC), which is chaired by the Secretary to the Office of Te Beretitenti (OB) and includes senior officials from concerned ministries and representatives of churches, the national women's organization and non-government organizations. NASC reports to and advises OB, and through OB it advises Cabinet on CCA matters. Cabinet decisions are advised to NASC and implemented by responsible ministries.

Responsibility for operational planning and the carrying out of activities to implement CCA strategy will lie with the relevant technical ministries and public enterprises, but all such activities must undergo environmental scrutiny as stipulated in the national environmental screening procedures. These implementing agencies are Ministry of Public Works and Utilities (MPWU) (water, infrastructure and public buildings), the Ministry of Environment, Lands and Agriculture Development (MELAD) (external liaison on climate change, environmental management and regulation, agricultural extension), and MISA (support to Local Government in urban areas and Outer Islands), Ministry of Communications, Transport and Tourism Development (MCTTD) (telecommunications, weather and climate monitoring and weather forecasting). Each ministry's operational commitments will be found in the relevant programs in its Ministry Operational Plan

(MOP), while the appropriation of local funds and allocation of external aid to these purposes will be found in the Annual GoK Budget.

At practical level coordinating committees will be established as required by the appropriate ministries. The Foreshore Management Committee of MELAD, with inter-ministry membership, is expected to assist MELAD to discharge its environmental regulatory and permitting functions relating to seawalls and foreshore structures. Generally, the regulatory functions of MELAD and other agencies concerned with land use and structure design appear to be frequently bypassed by Government developers. This strategy will require the overhaul of arrangements for co-operation among regulatory agencies and Government ministries to close loopholes through which unexamined developments can slip, and to avoid unnecessary processing delays or variations in standards.

Improving the capacity and effectiveness of local government is crucial to implementing this CCA strategy. Many of the services that most directly affect people's ability to handle climate variability and change fall naturally to be delivered at local government level, both in urban areas (South Tarawa) and the Outer Islands. Building standards and densities, waste disposal, land planning and permitting, land reclamation and community coastal defenses are all within the remit of local government. Kiritimati, where national government has until now been responsible for everything, is now moving towards provision of services by local government.

Government of Kiribati is taking steps (not for the first time, but with an increased sense of urgency) to strengthen capacity at local level and to equip local governments with more and better information on CCA and related issues. The CCA project under design for submission to GEF includes a small grants scheme to assist island-level CCA-driven investments, and the possibility of aid to construct community storm refuges in certain islands is discussed in the strategy statement.

Public Consultations

Two Kiribati Adaptation Program documents provide extensive coverage of the National Adaptation Consultation, a crucial element of the process of agreeing on national adaptation priorities and benchmarks and the mainstreaming of adaptation into economic planning. There were two national consultation workshops conducted in South Tarawa but with participation from all Outer Island representatives, including 28 community consultations in 4 islands, and one consultation on Kiritimati covering the Line and Phoenix Islands. The documents 'Report on the Second National Consultation held at Otintaai Hotel, Bikenibeu, from 3rd to 6th November 2003' and 'Social Assessment Final Report' document the inputs and opportunities for vulnerability reduction by the various stakeholders themselves that do reflect the real national priorities which will have local support once the priorities that are identified need to be implemented.

A process of continuing consultation implies a commitment by the authorities to listen to the insights and concerns of people and communities and to make a credible and relevant response. The first national CCA consultations in 2003, conducted as a joint NAPA-KAP exercise, were necessarily broad-based. With the backing of this strategy statement, future consultations can focus on a few priority concerns, and can aim at identifying activities and investments and allocating responsibility for taking action. Funds for the continuing consultative process will be provided in the GoK Annual Budget, using both local and external funding. Agreed action by GoK on concerns identified in this way will appear in the appropriate MOPs.

Project Assessment

A simple impact matrix was formulated to review the broad environmental implications of the various project proposals. The matrix is shown in Appendix B of the SEA and helps to compare the broad environmental implications across the various projects and provides guidance in identifying possible

cumulative impacts, and interactions between projects that might create enhanced impacts or other problems, such as hazards. It can also be used to examine the distributional aspect of impacts, that is, who is winning and who is losing from the overall set of projects.

The assessment explicitly differentiates between the construction phase of the projects and their subsequent operational phase. It is clear that many, if not all the proposed projects are likely to have adverse effects at the construction stage. These are mainly impacts such as noise, disruption of daily social and economic activities and the exposure of soil to rainfall and coastal erosion processes during the construction period.

Most of the adverse effects fall on the local people and the marine environment, which is entirely as expected; given the CCA projects will take place in coastal areas. There are some indirect effects in the rural and urban sectors mainly due to the sand mining and dredging operations which provide aggregate for road and other infrastructure construction. The environmental reserve, by preserving a major area of comparatively unmodified coastal area (e.g. North Tarawa Conservation Area), is the only project that would impinge directly on terrestrial and marine natural ecosystem components (soil, fauna and flora). It can also be considered to have long term benefits for the marine environment since it is a permanent reserve set aside to compensate for the loss of lagoon reef ecosystems due to the growing number of lagoon reef disturbances

In terms of cumulative impacts, the most obvious one is the combined effects of the construction phases of all or several projects if they were to be undertaken concurrently. Being in a comparatively small geographical area the construction impacts could be severe in any particular island. At Tarawa the disruption to traffic and pedestrian access, noise, dust, and the danger of a substantial increase in the volume of sediment drift within Tarawa Lagoon are a major consideration. Although the timetable for implementing projects is largely determined by the availability of funds, some thought could be given to the possibility of co-coordinating the construction phases of certain projects to minimize the potential for social and economic disruption and sedimentation transport. These cumulative impacts are likely to be much less severe in the Outer Islands where population density is considerably less and the number of activities will likely be less as well.

The marine environment is, not surprisingly, the major recipient of many of the possible adverse effects of the proposals, largely through the sedimentation problem. However, the combined benefits would be large if the proposals were effective. Reduced sewage from seepage and surface run-off, and reduced silting in the long term as a result of properly drained and sealed roads. At the same time, it must be recognized that a substantial contribution to the sedimentation problem comes from the activity of all coastal constructions (such as seawalls, causeways and dredging or reef extraction) pigs on beach backyards, removing ground vegetation over large areas and exposing surface soil to erosion by rainfall. A comprehensive approach to managing marine water quality and the sedimentation/erosion problem in South Tarawa lagoon, for instance, will have to include strategies for dealing with these issues. One way to tackle this is to involve the community in recognizing and solving the problems with the marine environment. Solutions to illegal reef reclamation and coastal infrastructure development will need to be initiated by the community and enforced by social pressure and sanctions if they are to be successful.

Impact Assessment Needs

All the Climate Change Adaptation (CCA) proposals would need closer scrutiny for their environmental implications, as stipulated under the Environment Act 1999 despite the efforts made in the ranking of adaptation options, to weigh up the benefits and disadvantages of the various climate change adaptation options.

For each proposed subproject under the Pilot Islands Adaptation component of KAP-II an environmental screening process should be undertaken. This process would determine the likely environmental impacts of the proposed activity, and could be overseen by MELAD, with the cooperation of the Island Projects Officer and the Island Development Committee. The initial screening would determine if the environmental impacts would be significant enough to merit further study.

If the impacts are considered likely to be significant, an Environmental Management Plan would be formulated to detail the manner in which the environmental consequences of the development would be mitigated. This EMP would form part of the subproject documentation and its implementation would be the responsibility of government though the various agencies responsible for the sectors in which the development will occur.

For those activities included in MOPs that might entail environmental impacts, in most cases the responsible ministry would be tasked with environmental screening in order to assess the likely environmental impacts of proposed activities. The ministries would be provided assistance as needed from the secretariat.

A social impact assessment might be considered for the general set of proposals that would alter the physical and social nature of Kiribati Islands. The change in location of coastal dwellings (being set back from the beach area, now with a protective seawall), the concentration of Government offices on Outer Islands, the breaking up of family and community units for resettlement purposes and the concept of zoning land for development. The nature and extent of the cumulative effects of these proposals may not be anticipated by the local community and a social impact assessment would be a useful vehicle to address any concerns that might be evident before the proposals go any further.

While not strictly an impact assessment, a study would be required to prepare a series of Codes of Environmental Practice (COEP) for the Government of Kiribati use during the planning, design, construction, and operation as well as maintenance of all infrastructure projects and coastal works in Kiribati. The codes would ensure that minimum environmental standards are met and that appropriate procedures are undertaken to reduce the environmental impact of various activities related to coastal works and services. Each of the phases of a coastal infrastructure project, i.e. planning, design, construction, and operation and maintenance are interrelated and have differing potential to effect (either adversely or beneficially) the environment.

The overall objective of the codes is to provide a pollution prevention approach to general coastal infrastructure works and services, establish guidelines for the mitigation of adverse environmental effects, and wherever possible indicate opportunities for environmental enhancement for, the planning, design, construction and operation and maintenance of the infrastructure projects.

It is intended that the development, approval, and subsequent adoption of the codes in conjunction with the identification of project specific issues and the preparation of management and mitigation plans for those issues will allow a reduction in the dependence on the conventional environmental impact assessment (EIA) system. Codes of Environmental Practice are identified within the framework of environmental assessment outlined in Kiribati's Environment Act 1999 and the Environment Regulations 2000.

Monitoring Requirements

The concept of sustainable development implies a concern to ensure that undesirable changes in the natural social environment are minimized. Impact assessment, at both the strategic and project levels, seeks to foresee such changes and to suggest appropriate modifications to the proposal in question, in order to avoid the changes predicted. However, forecasting possible changes is fraught with

uncertainty. Sustainable development must therefore, also include the monitoring function - to provide information on the actual state of the environment so that appropriate management responses can be formulated. This is an important issue. Increased economic activity in the primary sectors and in the marine environment will only be sustainable if that increased activity does not begin to damage the resources on which it is based. Monitoring is the only way this can be detected, which is the first step in developing a management response.

Therefore, environmental or resource inventories are necessary, which use indicator variables to characterize the current state of the environmental sector of interest. There are considerations about taking measurements that will allow for spatial and temporal characterization of existing variability, so that the inventories have to be designed carefully, on a scientific, statistical basis. Then monitoring activities have to be designed with equal care, the indicator variables are periodically measured and compared with the baseline values to provide the basis for detecting changes.

Monitoring priorities in relation to the CCA proposals (and not including strict economic performance monitoring) are:

(a) the marine ecological resources of Tarawa and around Outer Islands; water quality (turbidity, faecal coliform, etc.); indicator organisms (algae, benthic organisms, diversity of reef fish, etc.); habitat indicators (health and integrity of coral, etc.); and, sedimentation processes adjacent to settlements (and other local population centers).

(b) the physical resources; atmosphere (e.g. air quality and climate, average solar radiation, and wind speed); waves (for calculation of design wave height for seawalls and causeways the following parameters are required: wind speed, wind direction, effective fetch, wind duration); and, coastline topography to include beach profiles.

(c) the village community, age/sex make-up of the population, household structure, employment characteristics, health indicators, public order indicators, attitudinal indicators, and so forth.

Conclusions

The strategic environmental assessment identified a number of issues:

a) There is a basic sustainable development objective evident in the Government of Kiribati Climate Change Adaptation Policy, especially as expressed through the CCA strategies. However, there does not seem to have been any formal environmental assessment of development options during the early stages of the Kiribati Adaptation Program. Nor did there appear to have been any studies into such parameters as carrying capacities, environmental constraints, etc., that would indicate an environmental planning approach to the development policy.

b) The CCA strategies appear to favor a set of coastal infrastructure development options. At the same time there is no apparent attempt to integrate these development options into an institutional framework that specifically considers the wider coastal developmental planning and environmental implications for the nation. An integrated coastal management planning unit strategically placed in the appropriate ministry should plan, implement and monitor the climate change adaptation projects.

c) Most of the effects of the various proposed projects will probably fall on the local community and the marine environment. The construction phase of most proposed projects would probably lead to increased sedimentation transport in the marine environment, especially near the built coastal structures. Social and amenity impacts tend to be adverse in the short term and positive in the longer term; health and general welfare, in particular, are likely to improve

if the proposals are implemented. The combined social impacts of the various proposals affecting the host community, itself, could be quite marked.

d) Agricultural and fishing activities would probably benefit mainly from three proposals (road and causeway constructions, and sanitation and waste management). Local communities would benefit from all proposals.

In conclusion, the environmental consequences of the proposed climate change adaptation projects have not been closely examined in the CCA Strategy and nor have the wider environmental implications been considered in the CCA Policy. The nature of the proposals, constructing coastal structures, means that there are likely to be some environmental problems in the short term. The increasing and cumulative effects of coastal infrastructure developments are important, and it will be clearly advisable to initiate an environmental management program targeted at the coastal development sector. An integrated coastal management program would examine the current extent of climate change adaptation options and coastal construction activities and the impacts (both beneficial and adverse) experienced to date. The environmental management program should consider the preparation of a National EIA Training Program and a series of Codes of Environmental Practice for use during the planning, design, construction, and operation as well as maintenance of all roads and coastal works in Kiribati.

It would also be advisable to consider the environmental factors that would limit coastal development activities (environmental sensitivities, natural hazards, natural carrying capacities, etc.). Sedimentation and sediment transport play a crucial role in the coastal management sector (for instance, Tarawa), and consideration should be made to commission a sediment budget study of Tarawa Lagoon, as a start. In this way, the very features that support coastal development activities can be managed and protected in the longer term, to sustain the economic viability of the sector.

All CCA project proposals listed in the matrix would require closer environmental scrutiny through the conduct of project environmental impact assessment. A social impact assessment would be specifically required for the resettlement project, the decentralizing government to Outer Islands proposal and for the host community attitude to the proposed changes to their village landscape and functions.

Finally, there should perhaps be provisions in the CCA Strategy for monitoring key indicators of the marine and physical environment, but also the local host community to the CCA projects. The early detection of undesirable changes allows appropriate responses to be devised and implemented in time to avoid major damage to the environment, including the social fabric of the village and the whole island communities.

ANNEX 10: PROJECT PREPARATION AND SUPERVISION

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

	Planned	Actual
PCN review	09/15/2004	09/29/2004
Initial PID to PIC		10/07/2004
Initial ISDS to PIC		10/06/2004
Appraisal	01/30/2006	12/06/2005
Negotiations	03/14/2006	03/27/2006
Board/RVP approval	05/30/2006	
Planned date of effectiveness	06/30/2006	
Planned date of mid-term review	12/15/2007	
Planned closing date	06/30/2009	

Key institutions responsible for preparation of the project:

- The Ministry of Finance and Economic Development (MFED) was the institutional home for KAP-I, which represented the preparation phase of KAP-II. Furthermore, the National Economic Planning Office (NEPO) was responsible for mainstreaming of adaptation into the National Development Strategy and the MOPs, and has co-organized the national consultations.
- The Office of Te Beretitenti (OB) has provided the leadership for the National Adaptation Steering Committee, and has been responsible for policy coordination among key ministries, now to be institutionalized in the form of the SNPRA Unit.
- The Ministry of Social Affairs (MISA) has guided the development of component 4, on local governments and community-level adaptation activities.
- The Ministry of Environment and Agriculture Development (MELAD) has provided technical support to the adaptation efforts in Kiribati, and has led the preparation of the I-Kiribati NAPA, including the Climate Change Study Team, responsible for prioritization of adaptation options and establishing climate scenarios.
- The Ministry of Public Works and Utilities has guided the design of investments in the water sector and for coastal protection, including capacity building elements.
- The Kiribati Association of NGOs (KANGO), the Kiribati Council of Churches (KCC), the National Women's Organization (AMAK), and the Chamber of Commerce have all contributed through their participation in the National Adaptation Steering Committee and the consultations during KAP-I.

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Idah Pswarayi-Riddihough	Lead Natural Resources Management Specialist	EASRD
Sofia Bettencourt	Lead Operations Officer	AFTS1
Maarten van Aalst	Climate Change Specialist	EASRD
David Chandler	Senior Financial Management Specialist	EAPCO
Cristiano Costa e Silva Nunes	Procurement Specialist	EAPCO
Bruce Harris	Safeguards Specialist	EASSD
Robin Broadfield	Senior Regional GEF Coordinator	EASEN

Guzman Garcia-Rivero	Operations Advisor	EASRD
Hoonae Kim	Sector Manager	EASRD
Mark Wilson	Sector Director, East Asia and Pacific Rural Development	EASRD
Sudesh Ponnappa	Program Assistant	EACNF
William Paterson	Lead Infrastructure Specialist	EASTR
Melinda Good	Senior Counsel	LEGEA
Ian Noble	Senior Climate Change Specialist	ENVCF
Robert Watson	Chief Scientist and Senior Advisor	ESDVP
Cynthia Dharmajaya	Program Assistant	EASRD
Michelle L. Chen	Program Assistant	EASRD
Bisma Husen	Procurement Specialist	EACPO
Nurul Alam	Procurement Specialist	EACPO
Cristopher Bleakley	Senior Country Officer	EASNF
Cecilia Belita	Senior Program Assistant	EASES
Stuart Whitehead	Consultant	EASUR
Richard Croad	Infrastructure Specialist	Consultant
Ian Burton	Independent Scholar	Consultant
Mei Wang	Senior Counsel	LEGEA
Farid Mazhar	Paralegal	LEGEA
Patricia Kleystuber	Consultant	TFO
Josephine Masanque	Senior Financial Management Specialist	MNAFM

Bank funds expended to date on project preparation:

1. Bank resources: $80,676.92
2. Trust funds (GEF-PDF-B): $82,465.43
3. Total: $163,142.35

Estimated Approval and Supervision costs:

1. Remaining costs to approval: $50,000 - BB
2. Remaining costs to approval: $16,634.57 – TF :GEF PDF-B
3. Estimated annual supervision cost: $75,000

ANNEX 11: DOCUMENTS IN THE PROJECT FILE

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

1. Climate Change Adaptation Policy and Strategy Statement, 2005
2. KAP Social Assessment, 2004
3. Kiribati Adaptation Program II IBTF, 2005
4. Detailed Project Implementation Plan, which includes the following commissioned reports and handbook:
   - Procedures Manual for Small-scale Adaptation Investments on the Outer Islands
   - Coastal Protection Measures
   - Water Resources Investments
   - Legislative and Regulatory Review
   - Land Acquisition and Resettlement Policy Framework
   - Strategic Environmental Assessment
   - Economic analysis of adaptation to climate change
5. Various Project Preparation documents, including the Grant Agreements that funded preparation; mission reports
6. Procurement Plan, 2005
7. Kiribati KAP Risk Rating, 2005

ANNEX 12: STATEMENT OF LOANS AND CREDITS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

(No Information available)

Project ID	FY	Purpose	Original Amount in US$ Millions						Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
		Total:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

KIRIBATI
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

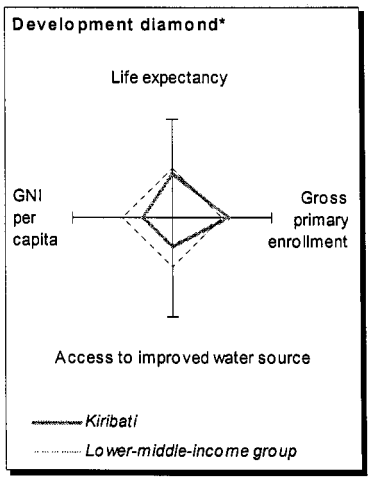
		Committed				Disbursed			
		IFC				IFC			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
	Total portfilio:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
	Total pending commitment:	0.00	0.00	0.00	0.00

ANNEX 13: COUNTRY AT A GLANCE

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

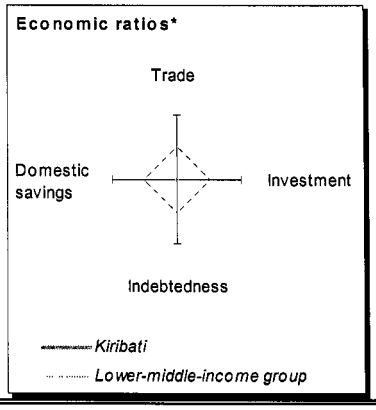
POVERTY and SOCIAL	Kiribati	East Asia & Pacific	Lower-middle-income
2002			
Population, mid-year *(millions)*	0.09	1,838	2,411
GNI per capita *(Atlas method, US$)*	810	950	1,390
GNI *(Atlas method, US$ billions)*	0.08	1,740	3,352
Average annual growth, 1996-02			
Population *(%)*	2.5	1.0	1.0
Labor force *(%)*	..	1.2	1.2
Most recent estimate (latest year available, 1996-02)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	39	38	49
Life expectancy at birth *(years)*	63	69	69
Infant mortality *(per 1,000 live births)*	50	33	30
Child malnutrition *(% of children under 5)*	..	15	11
Access to an improved water source *(% of population)*	48	76	81
Illiteracy *(% of population age 15+)*	..	13	13
Gross primary enrollment *(% of school-age population)*	128	106	111
Male	127	105	111
Female	129	106	110



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1982	1992	2001	2002
GDP *(US$ billions)*	0.03	0.03	0.04	0.04
Gross domestic investment/GDP	63.3	56.2	..	..
Exports of goods and services/GDP	9.1	12.5	..	..
Gross domestic savings/GDP	-44.1	-45.0	..	..
Gross national savings/GDP	60.3	117.3	..	..
Current account balance/GDP	..	21.4	..	..
Interest payments/GDP	..	..	..	..
Total debt/GDP	..	..	..	..
Total debt service/exports	..	..	..	..
Present value of debt/GDP	..	..	..	..
Present value of debt/exports	..	..	..	..

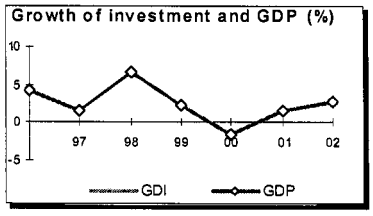
	1982-92	1992-02	2001	2002	2002-06
(average annual growth)					
GDP	0.2	2.8	1.6	2.8	..
GDP per capita	-2.0	0.5	-0.7	0.7	..



STRUCTURE of the ECONOMY

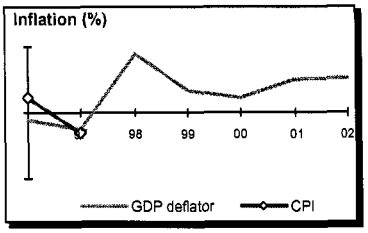
	1982	1992	2001	2002
(% of GDP)				
Agriculture	26.2	25.1	..	..
Industry	8.3	9.2	..	..
Manufacturing	2.0	2.1	..	..
Services	65.5	65.7	..	..
Private consumption	90.1	90.9	..	..
General government consumption	54.0	54.1	..	..
Imports of goods and services	116.5	113.8	..	..

	1982-92	1992-02	2001	2002
(average annual growth)				
Agriculture	1.7	..	..	..
Industry	1.2	..	..	..
Manufacturing	-0.9	..	..	..
Services	-0.7	..	..	..
Private consumption	..	..	..	..
General government consumption	..	..	..	..
Gross domestic investment	..	..	..	..
Imports of goods and services	..	..	..	..



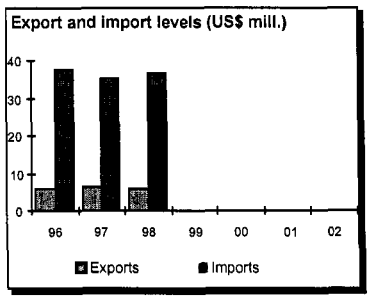
PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
Domestic prices				
(% change)				
Consumer prices	5.5	4.0	..	..
Implicit GDP deflator	7.4	3.1	2.4	2.7
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	..	..
Current budget balance	..	..	..	..
Overall surplus/deficit	..	..	..	..



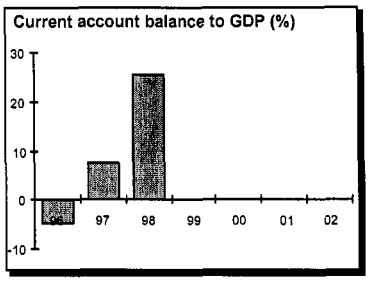
TRADE

	1982	1992	2001	2002
(US$ millions)				
Total exports (fob)	..	..	..	..
Copra	..	..	..	..
Fish	..	..	..	..
Manufactures	..	..	..	..
Total imports (cif)	..	..	..	..
Food	..	..	..	..
Fuel and energy	..	..	..	..
Capital goods	..	..	..	..
Export price index *(1995=100)*	..	..	..	..
Import price index *(1995=100)*	..	..	..	..
Terms of trade *(1995=100)*	..	..	..	..



BALANCE of PAYMENTS

	1982	1992	2001	2002
(US$ millions)				
Exports of goods and services	5	22	..	..
Imports of goods and services	31	55	..	..
Resource balance	-26	-33	..	..
Net income	6	13	..	..
Net current transfers	16	27	..	..
Current account balance	..	7	..	..
Financing items (net)	..	3	..	..
Changes in net reserves	3	-11	..	..
Memo:				
Reserves including gold *(US$ millions)*	..	..	..	..
Conversion rate *(DEC, local/US$)*	1.0	1.4	1.9	1.8



EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
(US$ millions)				
Total debt outstanding and disbursed	..	..	..	..
IBRD	..	..	..	..
IDA	..	..	..	..
Total debt service	..	..	..	..
IBRD	..	..	..	..
IDA	..	..	..	..
Composition of net resource flows				
Official grants	..	..	..	..
Official creditors	..	..	..	..
Private creditors	..	..	..	..
Foreign direct investment	..	..	..	..
Portfolio equity	..	..	..	..
World Bank program				
Commitments	..	..	..	..
Disbursements	..	..	..	..
Principal repayments	..	..	..	..

The 'Do Nothing' Scenario. A World Bank-funded study in 2000 indicated that in the absence of adaptation, the impacts of current climate change scenarios in Kiribati could be severe, disrupting major economic and social sectors. Up to 25-54 percent of areas in Bikenibeu, South Tarawa and 55-80 percent of Buariki, North Tarawa, could be inundated by 2050. The combined effect of sea level rise, changes in rainfall, and changes in evapo-transpiration due to higher temperatures could result in a 19-38 percent decline in the thickness of the main groundwater lens in Tarawa. Agriculture productivity - particularly for taro and pandanus - could decline due to storm-induced saltwater intrusion into groundwater lenses. Higher temperatures could also increase the epidemic potential for dengue fever by 22-33 percent, increase the incidence of ciguatera poisoning and degradation of coral reefs, and divert critical tuna resources away from Kiribati waters. Continued degradation is estimated to result in potential economic damages averaging US$8-$16 million a year, equivalent to 17 to 34 percent of the 1998 GDP.

Along with the other climate-related risks facing the country, Kiribati's ecosystems also experience extreme vulnerability, particularly of their plant, animal, soil and water resources, and their cultures as well their traditional resource-use systems to outside human induced disturbance and over-exploitation. Given this, successful atoll development requires that the integrated aspects of the environment and social conditions, as well as external conditions - in relation to stability of global economic systems – are taken into account.

Ecosystems. Kiribati is home to a number of globally important marine biodiversity, including up to 200 species of coral; hundreds of fish species, including threatened species such as the Humphead wrasse (Cheilinus undulates) and Sicklefin Lemon Shark (Negaprion acutidens); and several threatened turtle species, such as the endangered green turtle (Chelonia mydas) and critically endangered Hawksbill turtle (Eretmochelys imbricata). Kiribati also provides a nesting area for a variety of birds, including vulnerable migratory species such as the Bristle-thighed Curlew (Numenius tahitiensis) and endangered species such as Kuhl's Lorikeet (Vini kuhlii) and Phoenix Petrel (Pterodroma alba). In addition to the effects of climate change, coastal degradation and poor mangrove and coral reef management are endangering habitats for this important biodiversity. In the absence of adaptation, these impacts would translate in the loss of globally important biodiversity, land degradation, loss of marine and coastal habitats and reduction in overall natural capital.

Status of threatened ecosystems. Marine resources are generally considered abundant. The state of abundance depends on the health of the corals, which is partly determined by the impacts of higher temperatures on the physical condition of corals. Coral bleaching has been observed in several parts of Kiribati, including the Gilbert Islands, particularly during El Niño episodes, which already feature the higher sea surface temperature that are expected to occur more frequently when climate change progresses. However, the extent and the severity of current coral bleaching are poorly known. With the assistance of GEF, through UNDP, Kiribati prepared its National Biodiversity Strategy and Action Plan (NBSAP) in 1998. Kiribati is presently also implementing the NBSAP Add-On Project, of which the expected outputs are: the extensive consultations that have been undertaken with grassroots communities and inter-island consultations with all islands of Kiribati (North, Central and South islands including the Line and Phoenix Groups); and the production of a draft national report on Kiribati NBSAP, for submission to the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD). The baseline on the status of some of the biodiversity is still being established.

Given the potential threats of climate change to the biodiversity of Kiribati, KAP-II will contribute to biodiversity conservation in various ways, particularly by improving the attention for environmental sustainability as part of coastal protection and asset management strategies and activities to reduce beach mining, supported by strong participatory processes and public awareness campaigns. Moreover, KAP-II would assist in building a monitoring system, particularly for the coral reefs, but which can also be adapted for other ecosystems, to strengthen the country's capacity to reduce the ecosystems' vulnerability; supplemented by enhanced access to new technologies in coral and ecosystem management (including through pilot experiments). The monitoring system is expected to help streamline sustainable integrated systems management into adaptation processes, building on governance aspects that will support the enabling environment needed to make such activities successful, and implementing the NBSAP objective of integrating biodiversity conservation into the national development process.

Target ecosystem. Target ecosystems are primarily coastal and near-shore marine habitats, particularly coral reef and mangrove systems, which harbor valuable biodiversity. Specific target areas and ecosystems will be selected during the first year of the project, once MELAD has assessed the existing information it has and prioritized the ecosystems that are most easily supported by the KAP, and that would not be duplicated by other on-going efforts in the country.

The GEF Baseline Scenario. The 2004-2007 National Development Strategy recognizes the need to develop participatory and cost-effective strategies to manage the risks of climate-related events. Under the baseline sustainable development scenario, these measures would be limited to programs addressing current-day vulnerabilities, and measures which the government, communities and private sector could afford to reduce maladaptation: e.g. continued clean-up efforts and waste management in urban Tarawa; reduction of unaccounted-for-water in piping systems; protection and/or land reclamation for critical infrastructure; and population and settlement management to avoid unsustainable population growth in fragile areas; as well as efforts to enhance the government's capacity for planning and coordination.

The Alternative Scenario. The objective of the project is to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing the integration of climate risk awareness and responsiveness into economic and operational planning. In that context, the alternative scenario supported through GEF financing includes an expansion of selected climate-affected government programs to better address climate risks. These priority programs were identified using national criteria based on solid economic, environmental and social principles. Their expansion aims to address the incremental development costs for Kiribati (incurred and/or exacerbated due to climate change), even though they also yield additional short-term benefits. Many of these additional efforts also generate global environmental benefits by protecting ecosystems and biodiversity threatened by global climate change and/or current unsustainable ad-hoc response measures to climate-related impacts, particularly in relation to coastal management. Bilateral financing has been arranged to cover the additional costs of expanding other priority climate-affected programs where few global benefits are involved (such as in the water sector).

Under the alternative scenario, the GEF would finance the additional costs of expanding the baseline program to include those activities that also generate global environmental benefits. To ensure optimal effectiveness and sustainability, these activities would be fully integrated into the baseline outlined above. The GEF alternative would add the following critical elements:

Global benefits include: (i) strengthening of the Government's capacity to deal with the global environmental and sustainable development consequences of the increasing climate risks, by fully integrating adaptation into economic planning; (ii) better compliance with obligations stemming from the country's international commitments for the conservation and sustainable use of biodiversity resources in the country, even in the face of the new climate risks; (iii) conservation and sustainable use of aquatic biodiversity in globally important ecosystems, including through greater involvement of civil society and communities in the planning and management of the aquatic resources, and implementing actions that reduce the threat to coastal areas and coral reefs; (v) awareness raising among high-level policy makers as well as the wider public; (vi) development of tools and techniques that will result in sustainable management of climate change risks in an integrated and cost-effective manner.

The project is also likely to promote positive follow-up at the global scale, including the identification and promotion of alternative livelihoods to lower the levels of threat, as well as promote the development of new technologies and methodologies for improved adaptation including the approach to mainstreaming participatory climate risk management into economic planning.

More specifically, it is expected that the Government-funded baseline activities comprise about 35% of the total project, while bilateral donors provide another 38%. The GEF contribution thus makes up 27%, which will be used for activities that entail significant incremental development costs in helping Kiribati adapt to the long-term effects of climate change and sea level rise and fit within coherent programs that will also deliver global environmental benefits. The GEF portion of 27% is well within with the targets for cost-sharing of the Strategic Priority.

The GEF will provide a large share of the additional costs to improve the participatory planning and mainstreaming of climate change adaptation into government planning, part of component 1. These costs are assumed to be largely incremental since they would not need to be incurred in the absence of climate change. In the baseline scenario (without climate change), Kiribati might institutionalize bottom-up planning and coordination, but this would not need to include considerations of climate change adaptation.

For component 2, which deals with adaptation activities relating to land use, physical investments and ecosystem management (all guided by an integrated coastal zone management approach), the GEF would primarily fund the incremental activities related to awareness and sustainable coastal land use, as well as adaptation activities related to monitoring and conservation of coastal ecosystems that are threatened by climate change. Another part of this component, that which relates specifically to the protection of public assets such as the hospital, causeways, and other critical infrastructure; would be funded by NZAID.

Component 3, which deals with climate risk management relating to freshwater resources, will generate relatively limited global environmental benefits and will be funded entirely by AusAID.

The GEF would support a large part of component 4, which aims to enhance climate risk management by local governments and at the Outer Islands of Kiribati. These activities are unlikely to be funded under the baseline scenario, given that they are largely driven by concerns about increasing climate risks. The pilot small-scale adaptation investment scheme, which is included in this component, will probably contain a mixture of adaptation efforts, some of which may not generate global benefits; therefore, NZAID would contribute a substantial share of the cost of the scheme.

Furthermore, local communities would also contribute, largely in the form of labor and local materials.

The Project management component, consisting of project management and the review and compilation of lessons learnt of KAP-II to better prepare for the expansion of the adaptation program, would not have been needed in a baseline scenario, and would be funded jointly by the GEF and NZAID.

A summary of the proposed global and local benefits are presented below.

Global and local benefits of the proposed project

Measure	Global benefits	Local benefits
facilitating the establishment of a coordinated legal, institutional and operational framework (including policies and management options) to enhance the resilience of national biodiversity and natural systems by reducing their vulnerability to climate change	Improve coordination and implementation of global conventions	Maximize use of existing institutional assets
specific investment measures for conserving and restoring coastal ecosystems impacted by climate change;	Maintain ecosystem integrity	Maintain value of tourism attractions
reduction of pressures on biodiversity arising from habitat conversion induced by climate change impacts, through design and adoption of more effective land and buffer zoning, and countering of habitat fragmentation through establishment of marine and coastal protection corridors;	Protect biodiversity in coastal areas Protect feeding and staging grounds and prevent declines in populations of migratory birds. Protect marine biodiversity	Maintain eco-tourism assets
specific investment options that would reduce the impacts of climate change on coastal and marine resources, therefore addressing impacts on coastal and fishing communities;.	Reduce stress on coastal ecosystems Prevent reduction of staging, feeding and breeding grounds for fish.	Maintain fisheries
reduction of vulnerability of water resources through application of supply and demand measures, together with specific investments in infrastructure for water conservation;	Minimize impacts of alteration of water cycle on coastal flora and fauna.	Reduce water shortages for agriculture and human use, caused by changes in precipitation cycles and saline intrusion in aquifers

Without these measures, not only would the global benefits not be realized but the country would be potentially facing more severe impacts of climate change. Even with the implementation of adaptation measures the impacts of global climate change will severely affect these small island nations.

Economic Assessment

The economic assessment of a project, including an adaptation project, follows an established logic. It requires an estimate of the initial and operating costs of a range of project options; identification of the least-cost design over a defined planning period; quantification of project benefits and assessment of risks; analysis of where the costs and benefits will fall; and a comparison of costs and benefits to determine whether devoting resources to the project (and sacrificing other uses of the resources in so doing) is worthwhile. A fuller discussion of economic analysis as it relates to adaptation to climate change is provided in Annex 7 of the Project Implementation Plan.

A conventional economic analysis cannot presently be applied to KAP-II as a stand-alone project, though future adaptation projects that is likely to result from KAP-II can and will be analyzed in this way.

KAP-II's *outputs* will consist of changes to CCA-related institutional and operational arrangements, and the development and feasibility-proving of financial assistance schemes, design processes and physical works. The intended *outcome* is that Kiribati will be equipped with the field-tested engineering designs, information, analytical capacity and technical know-how needed to adapt successfully to climate change in the years ahead.

The difficulty with a conventional analysis of KAP-II is that although the project's estimated costs and financing plan are clear, KAP-II's delivery of its intended benefits is subject to two fundamental uncertainties. These relate to:

- quantifying the severity and pace of climatic change over the next 20-50 years and the associated risks that face Kiribati and its people, land and social and economic assets; and

- estimating the probable effectiveness of KAP-II in delivering changes in land use, protective structures for existing facilities, and a wide range of other measures that together over time may reduce climate risk and the related damage that the country and communities would otherwise suffer

The first uncertainty means that the value of damage that might be avoided by implementing the measures proposed in KAP-II cannot at present be quantified precisely enough for an orthodox economic appraisal. Earlier estimates [4] of the possible range of losses from climatic events reliably indicate only that these could be very large. As experience with climate-related threats to communities and infrastructure throughout the country grows, and data on the physical effects of the changing climate (rainfall patterns, storm severity, sea levels and temperatures) accumulate, a clearer valuation of the future damage that could be avoided through adaptation will emerge.

The second uncertainty is of immediate practical significance. The commitment and effort of the government, communities, and the private sector is critical to ensuring that KAP-II indeed has beneficial results. On the one hand, the expenditure of the project cost of US$6.6m over three years will yield few lasting benefits if stakeholders fail to utilize the capacity that the project is designed to create, in the form of a climate-aware planning environment, improved design and construction capability and more secure public assets. On the other hand, fully effective implementation of KAP-II would significantly reduce risks attributable to climate change and, further, would greatly reduce risks that are presently faced irrespective of climate change. The actual benefits of KAP-II will depend to a

[4] World Bank RER 2000, *Cities, Seas and Storms*

very large degree on the amount of sustained effort devoted to implementing the reforms that KAP-II calls for.

In recognition of these analytical constraints, the potential benefits of KAP-II by component are qualitatively described as follows:

Component	Sub-components (summarized)	Expected economic benefits
I. Policy, planning, and information	Participatory processes for awareness, consultations, information materials, policy coordination and development programs, information for climate risk management	Greater popular understanding and acceptance of the need to adapt to climate change, and of the risks of ignoring climate change in investment, habitation, and livelihood decisions; accumulation of information needed to assess climate change and its impact in Kiribati, leading to: • increasing implementation of climate-aware decisions by individuals and communities; • reduction of vulnerability and avoidance of damage at all levels of society
II. Land use, physical structures, and ecosystems	Adapting land use (strengthening regulation), improved environmental monitoring, climate-proofing public assets	Reduction in beach mining, more effective coastal hazard protection, protection for public assets, monitoring of ecosystems with effective response measures, leading to: • reduction of coastal erosion and avoidance of damage to coastal structures and ecosystems • maintenance of livelihoods that might otherwise be threatened by climate change • avoidance of disaster-induced limits to economic growth
III. Freshwater resources	Update water policy for climate awareness, implement climate-aware water supply planning in S Tarawa and the Outer Islands	Protection of existing and future public water resources to ensure sustainable supply throughout Kiribati, leading to: • avoidance of mounting public health costs due to insufficient or contaminated water supply • avoidance of productivity losses due to water supply-related public health impacts • support for private sector investment requiring reliable and safe water supplies
IV. Capacity at island and community level	Local consultations and participatory risk assessments, training in climate-aware local government administration, pilot schemes of adaptation projects in the Outer Islands	Similar to (I) above

V. Project management	Effective national coordination of KAP-II, project monitoring and review for later stages of implementation	Reinforcement of implementation of KAP-II programme elements at all levels of society, in the urban areas and in the Outer Islands, and periodic review of the project leading to: • timely changes in project emphasis as indicated by experience to ensure sustained maximum project benefits at least cost over a lengthy period of time • assurance that the project is being implemented to maximum feasible effectiveness to reduce climate risk to all groups and areas of Kiribati

It is important to note that although KAP-II's components and sub-components have been carefully chosen to deal effectively with risks associated with climate change, all of them would still be worthwhile even in the absence of climate change. Small communities living in atoll environments have always faced threats from severe weather. The processes of economic development and population increase are making such communities increasingly vulnerable to natural disasters, and will continue to do so even without climate change. The impacts of these pressures are clearly discernible in Kiribati. KAP-II has been designed so that there will be No Regrets in the future about expending the resource cost of the project even if the more extreme climate change predictions do not occur, or occur later than predicted.

Although the expected economic benefits in the above table cannot be quantified, there is a strong consensus among donors, the government, communities and individuals throughout Kiribati that they are significant, and that a do-nothing response to the threat posed by climate carries unacceptable risks. KAP-II calls for the expenditure of approximately US$6.6m. However, as roughly US$2.3m of this amount (the GoK contribution) represents resources that might have been spent anyway (with or without KAP-II), the net additional resources 'at risk' in the event of possible project failure is approximately US$4.3m provided through external support.

Conventional appraisal indicates that the expenditure of US$4.3m on a public investment project to manage climate risk should return a benefit, in the form of avoidance of damage that would have occurred without the project, worth about US$0.5m per year over 25 years, in order to yield a return against initial cost in excess of 12% (a rate commonly required by donors of public sector projects). As already noted, the climate-related risk that Kiribati currently faces, in the form of potential loss of lives and livelihoods, brakes on economic growth, climatic risk to and demand pressures on water supply resources and associated threats to public health and human productivity, loss of land area due to inundation and erosion, and undermining of infrastructure and restricted delivery of services, represent economic costs to Kiribati that are currently not measurable but are worth significantly more than US$0.5m annually.

KAP-II has the potential to establish a planning framework and momentum for the other elements of risk reduction that will avoid damage to Kiribati to a value greatly exceeding the minimum damage avoidance required to make the project a worthwhile investment. In this light, KAP-II is a potentially highly productive use of donor funds, albeit requiring a substantial counterpart commitment to implement permanent changes to planning procedures, land use regulations, and other measures affecting the entire population for the indefinite future.

Once the decision has been made to proceed with KAP-II, the most serious risk is the potential failure by the government and other stakeholders to utilize the capacity for climate-aware planning that KAP-II seeks to build, thus preventing the country from reaping the maximum or in the extreme case any, benefits from the project. On the positive side the project represents a clear opportunity to manage and substantially reduce climate risk, asserting a valuable degree of control over a threat that will otherwise seriously weaken the country's prospects.

ANNEX 15: STAP ROSTER REVIEW

AND RESPONSES TO WORK-PROGRAM ENTRY QUESTIONS

KIRIBATI ADAPTATION PROJECT - IMPLEMENTATION PHASE (KAP II)

Project Reviewer: **Ian Burton** - Independent scholar and consultant. Scientist Emeritus, Meteorological Service of Canada. Professor Emeritus University of Toronto.

KEY ISSUES

Scientific and technical soundness of the project

The conceptual basis for the design of this project conforms to current thinking about adaptation to climate change. It is now widely understood that adaptation to climate change should be fully integrated into the development process and that there should be very few or no "stand alone" adaptation projects. The project builds upon previous and ongoing work in the first phase of the Kiribati Adaptation Program, and takes a moderate step into implementation. It is encouraging to see that the framers of this project have resisted the temptation to rush into major construction or "concrete" adaptation, and have crafted a blend of actual adaptation measures on a small scale together with activities to increase awareness of climate change risks and appropriate responses, and with policy coordination and planning. Improvements in monitoring and observing capacity in both meteorological and ecological systems add further capacity building elements.

When completed this project will have strengthened the institutional and technical capacity for the implementation of adaptation measures; strengthened public awareness and understanding and hence public support for the necessary adaptation policies; and demonstrated practical adaptation measures in a small number of pilot projects. This will lay the ground work for a consideration of a more substantial adaptation program in KAP stage 3.

Identification of global environment benefits

The identification of global environmental benefits has been a stumbling block in the move towards an orderly process of adaptation to climate change under the UNFCCC. This project substantially overcomes the obstacles by the identification of benefits from the improved management, conservation, and sustainable use of integrated ecosystems and biodiversity in coastal land and water areas. This is part and parcel of the wider strategy of achieving sustainable adaptation, including the Outer Islands and the large marine resources surrounding Kiribati. To be sure there are also many adaptation benefits from the project that fall locally, but it is clearly impractical to draw a sharp line between these different kinds of benefits.

How does the project fit within the context of the goals of the GEF?

The project conforms to the objectives of the Special Priority for Adaptation, which is a new experimental window established to develop experience in the funding of actual and practical adaptation measures, or to go a step beyond planning and preparing to adapt. (In this sense the SPA and this project are an early example of Stage III adaptation as specified in UNFCCC/CP/1995/7/Add.1), and as envisaged in Convention Articles 4.1b and 4.4.

Regional context

The project is an exemplary design for adaptation to climate change and sea level rise is small islands. It is a ground breaking demonstration of how to integrate adaptation into the development process. Since Kiribati is isolate from its nearest neighbors there are no significant international issues.

Replicability of the project

This project is an important pilot and demonstration project for the incorporation of practical adaptation measures into development planning. It provides a model that could well be adopted by other small island nations. The principles being followed here extend in fact to al climate change adaptation projects and mutatis mutandis could be used in other much larger and non-island countries.

Sustainability of the project

Much of the project could be described as capacity building in the sense that Components 1 to 4 each contains measures for the change of practices in planning and implementation, reinforcement of existing programs, and institutional strengthening. Such new capacities are an essential requirement for any expanded adaptation program that may follow in KAP – 3. Even in the absence of a KAP 3, if some form of adaptation program is continued by the Government of Kiribati (and that seems probably given the involvement of the Office of Te Beretitenti) and given the demonstrated commitment to adaptation since 1999), then what has been generated by this project (KAP 2) will certainly be sustained and used. There may be some risk that a KAP 3 does not materialize and that the GoK loses its motivation and that therefore the enhanced capacity could wither and die. One safeguard against this is the public awareness element in the project and the high level of stakeholder involvement. Provided that this works as intended it will not be easy for the GoK to drop its adaptation commitments.

The benefits of the actual adaptation measures to be implemented under this project (eg. change in the pattern of coastal aggregate mining, fixing leaks in the water distribution system) can be expected to last subject to the normal requirements of maintenance.

Miscellaneous

This project is well connected and integrated with other focal areas, especially biodiversity, and contributes substantially to environmental management and sustainable development. One of its most attractive features is the way it combines project funding from several sources, (AusAID, NZAID, EU, UNDP, and ADB). The substantial majority of the funding for this project in fact comes from the GoK and the above donors, leaving a 27% contribution from GEF.

The project is unusual in the extent to which it involves community level leaders and stakeholders. It is an innovative and well designed project which may well be a key in pioneering a path to climate change adaptation which can be followed by others.

It is difficult for an expert from the STAP Roster who has never set foot in Kiribati to be completely confident in his assessment. Without being on the ground and meeting the personnel involved it is not possible to get a good "feel" for the project. Are the people in charge really capable, are they committed, and do they have a strong and sustained motivation? The project documents go just

about as far as is humanly possible to alleviate such concerns through the printed word.

WORK PROGRAM: COMMENTS FROM COUNCIL MEMBERS
(REFERENCE TO GEF/C.27/6)

Kiribati: Kiribati Adaptation Program - Pilot Implementation Phase (KAP-II)

COMMENTS FROM FRANCE

169. The Republic of Kiribati, with a population of 97,000, consists in 33 low-lying atoll islands spread over 3.5 million km² in central and western Pacific. Its population will increase by 40% by 2025 and it has limited agricultural resources, its main resources being its fish reserves. Kiribati is one of the most vulnerable countries of the world to climate change and sea level rise, most of the land being less than 3 meters above sea level.

170. Its environment is threatened in many ways: erosion of the sea shores, destruction of mangroves, diminution of fresh water resources, improper public and private building to prevent disasters, low preservation of fish and coral biodiversity.

171. The project aims at: (i) developing and demonstrating the systematic diagnosis of climate-related problems, (ii) designing cost-effective adaptation measures, (iii) continuing the integration of climate risk awareness and responsiveness into economic and operational planning.

172. The projects includes five complementary components: (1) "Policy, planning and information" to raise awareness, carry out consultation and plan population resettlement, whenever necessary, (2) "Land use, physical structures and ecosystems" to reduce the vulnerability of the sea-shore and key public assets by developing a risk mitigation strategy, (3) "fresh water resources" to reduce the vulnerability of fresh water resources to climate change, including an additional assessment of water resources in Outer Islands, (4) "Capacity building at island and community level" to train local government on climate risk management and support small scale participatory projects implemented by beneficiaries, and (6) "Program management" with the establishment of a PMU close to the Office of the President.

Comments

173. The project appears relevant to address the critical climate issues that the country has to face through a consistent adaptation program.

174. The project starts from a previous project carried out by the Word Bank; it demonstrates a good understanding of the specific environment issues of this kind of low lying islands with a growing population. The proposed components complement each others starting by a better understanding of the present environmental situation and its likely medium and long term evolution to make aware policy makers and local populations, then designing a practical strategy to protect the sea-shore and nearby waters. It includes a preparation to avoid future disasters attached to improper seashore public and private building and a series of local environment projects involving the local population.

175. The project appears well designed with its project management unit (PMU) installed close to the President Office within the National Strategic Risk Management Unit and regular links with the operational ministries have been planned to select jointly the adaptation projects to be financed.

176. The government is supportive of the project and has demonstrated during its last 10 years its commitment to climate adaptation policies. Another positive point is the significant financial support provided by New Zealand and Australia as well as the continuity of the involvement of the World Bank.

177. Actually, the project may seem a bit oversized for a very small country but we have to consider that it has a large replication potential in other Pacific or Indian Ocean islands and that the tools and solutions developed in this small state are likely to serve as a reference on adaptation policies to many other locations. A specific budget for capitalization and dissemination of the experience outside Kiribati has been consequently foreseen.

178. The cost of the project must be balanced in front of the economic cost of the "no action" option that will lead to major economic losses for the country (such as decrease of fishing activity and agricultural production, loss of land, destruction of public and private buildings, diminution of fresh water resources, loss of biodiversity, etc.).

179. A World Bank funded study in 2000 indicated that in the absence of adaptation, the impact of climate change scenarios on Kiribati may lead to the loss of 25% to 55% of the land surface in major islands and to a 20 to 40% decrease of the fresh water lens in Tarawa. This continued degradation was estimated to result to an economic damage averaging 17 to 34% of 1998 GDP.

COMMENTS FROM GERMANY

Comments

180. There is no doubt, that Kiribati is one of the most vulnerable countries in the world to climate change and sea level rise. The project proposal describes a number of useful measures, e.g. the protection, rehabilitation and management of mangroves. However, it does not clearly address the threat that by 2050 **large areas** (up to 25-54 % of areas in Bikenibeu, South Tarawa and 55-80 % of Bairiki, North Tarawa), **could become inundated** and how the project would address this, taking into account the expected **population increase**. It is also not clearly described, how it will be judged whether the proposed measures are really **cost-effective**. Under "Objectives", apart from reduced vulnerability to climate change, it is mentioned, that climate variability and **sea level rise could also be reduced**. It appears to be **unrealistic** for small islands to really have an impact on this. **The indicators are still vague and need to be refined**. Most of them describe the mere activities and not the **measurable impact**, which should be achieved.

Recommendation

181. Taking into account the above comments, Germany supports the proposal. Changes should be made during further planning steps and project implementation.

Responses to the questions:

1). If sea level rise does continue along the lines of the current worst-case scenarios, Kiribati may have to consider other options than the ones implemented under KAP-II. However, given the current uncertainties regarding how much sea level rise there will be and how the islands' ecology and morphology will respond to such changes, it is not appropriate for KAP-II to address that situation directly (by moving people, which would be highly socially disruptive, and/or structural coastal protection along the entire island, which would be prohibitively expensive and very damaging to the environment).

In any case, these threats are long-term. The strategy in Kiribati, in line with regional and international guidance, has been to link this agenda to immediate threats that are causing problems right now, but also contribute to reducing vulnerability over time. KAP-II contains several such no-regrets initiatives, which will also help reduce the long-term threat of inundation. For instance:

- the coastal component is promoting integrated coastal management, which will facilitate a better choice of options for coastal protection, which will on the one hand protect vulnerable pieces of coastline, and on the other hand help to keep the natural beaches healthy (which might be able to help accommodate some sea level rise);
- the regulation of beach mining is a crucial aspect, which will also help to reduce both long- and short-term threats; and
- furthermore, we do include a subcomponent on population policy, which might include encouraging people to move away from the most vulnerable and overpopulated parts of Tarawa (the main island, for which the study was done).

These short-to-medium-term no-regrets strategies for good coastal protection will be combined with strategic thinking about potential long-term options (which might eventually include relocation). Such thinking processes, including at the community level, will require a long time and should not be hurried.

2) It is also not clearly described, how it will be judged whether the proposed measures are really cost-effective.

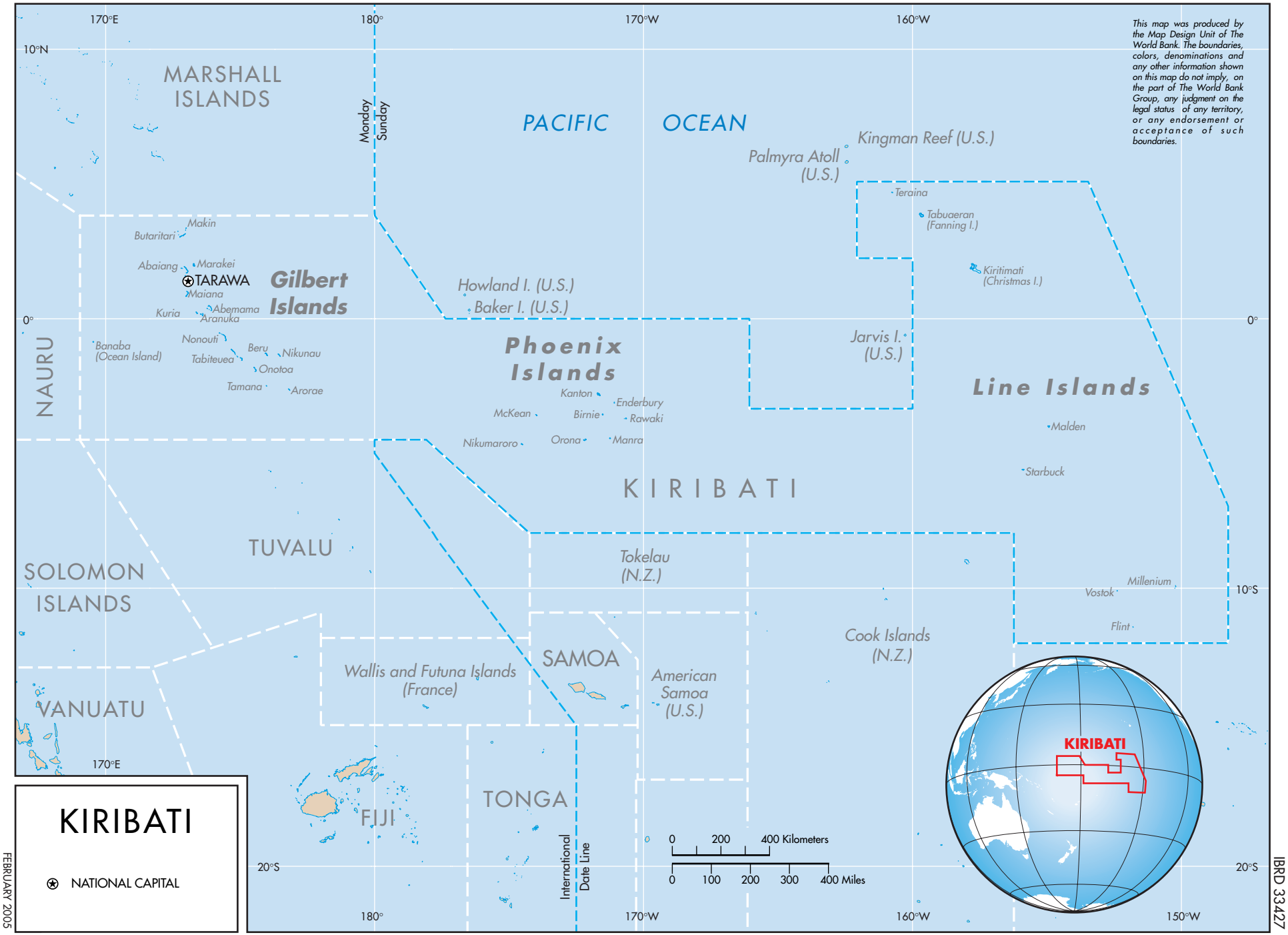
Cost-effectiveness of the various activities would be developed and decided on during the options analyses to be carried out at feasibility stage, and planned for all major work, such as the roads and hospital rehabilitation. In addition, the PAD, and the project Operations Manual specifically make mention that the technical specialists who would be carrying out the cost-benefit options analyses must do this in collaboration with the Ministry of Finance and Economic Development (MFED), who have a strong vested interest in ensuring cost-effectiveness, particularly given that the options used would be examined for replication on a wider scale. In addition, ensuring cost-effectiveness is an underlying principle for the project – which advocates for a no-regrets strategy compared to the potentially higher profile and more catchy option involving high cost infrastructure. This strategy, as is explained in Section 5 of the PAD: ***Mainstreaming into the Ministry Operational Plans*** has been one of the reasons for the slow integration of the KAP activities in the Ministry Operations Plans, by the implementing Ministries. Additional detail on the importance of cost-effectiveness of the project is included in Annex 14 of the PAD: Incremental Cost and Economic Analysis.

3) Under "Objectives", apart from reduced vulnerability to climate change, it is mentioned, that climate variability and sea level rise could also be reduced. It appears to be unrealistic for small islands to really have an impact on this.

This is probably a misunderstanding. The idea is to "reduce vulnerability to climate change, climate variability, and sea level rise. While it could be read as such, the project does not intend to reduce sea level rise or reduce climate variability, but to reduce vulnerability to climate change, vulnerability to climate variability and vulnerability to sea level rise.

4) The indicators are still vague and need to be refined. Most of them describe the mere activities and not the measurable impact, which should be achieved.

We have made some changes to the indicators to take this issue into account. However, it is important to clarify that the indicators that are being used are modest, because of the pilot nature of the project and the short implementation phase of the project. Significant efforts are being put towards changing attitudes of all stakeholders and starting up a few investments on a pilot phase. If the project is able to cement planning on a whole of government approach, as well as get attitudes of the key stakeholders to more systematically think of the impacts of carrying on with some of the detrimental activities, and accepting that there are better ways to achieving a result, then that would indeed be a great step forward for Kiribati. In that context, the indicators provide an important linkage to the eventual outcomes of the project, through the integration of risk management into the development planning and implementation of programs in all climate-affected sectors within the Government of Kiribati (GoK). For instance, the second outcome indicator "percentage of climate-affected MOP programs that reflect systematic climate risk management" provides a link to the Ministry Operational Plan (MOP) planning and monitoring arrangements of the GoK itself. If climate risk management is indeed reflected in the key MOPs, the monitoring of real project outcomes is transferred from the KAP project into the planning and monitoring system of the GoK, with specific indicators that may go beyond what the project can currently envisage. The present results indicators are mainly intended to monitor the process of getting to that situation of having sufficient awareness and capacity to achieve the broader objective of reducing Kiribati's vulnerability to climate change, climate variability and sea level rise.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170°E
180°
170°W
160°W
150°W
10°N
0°
10°S
20°S
MARSHALL ISLANDS
PACIFIC OCEAN
Monday
Sunday
Kingman Reef (U.S.)
Palmyra Atoll (U.S.)
Teraina
Tabuaeran (Fanning I.)
Kiritimati (Christmas I.)
Makin
Butaritari
Abaiang
Marakei
TARAWA
Maiana
Gilbert Islands
Kuria
Abemama
Aranuka
Howland I. (U.S.)
Baker I. (U.S.)
Jarvis I. (U.S.)
NAURU
Banaba (Ocean Island)
Nonouti
Beru
Nikunau
Tabiteuea
Onotoa
Tamana
Arorae
Phoenix Islands
Line Islands
Kanton
Enderbury
McKean
Birnie
Rawaki
Nikumaroro
Orona
Manra
Malden
Starbuck
KIRIBATI
TUVALU
Tokelau (N.Z.)
SOLOMON ISLANDS
Millenium
Vostok
Flint
Cook Islands (N.Z.)
SAMOA
Wallis and Futuna Islands (France)
American Samoa (U.S.)
VANUATU
FIJI
TONGA
International Date Line
0 200 400 Kilometers
0 100 200 300 400 Miles
KIRIBATI
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